Radio Test Report (WLAN)

Report No.:	RJBBUI-WTW-P21040655
Test Model:	RTL8852BE
Received Date:	Apr. 20, 2021
Test Date:	May 06 to June 16, 2021
Issued Date:	July 15, 2021
Applicant:	Realtek Semiconductor Corp.
Address:	No. 2, Innovation Road II, Hsinchu Science Park, Hsinchu 300, Taiwan
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
Test Location:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan

Table of Contents

Release Control Record

Issue No.	Description	Date Issued
RJBBUI-WTW-P21040655	Original release.	July 15, 2021

1 Certificate of Conformity

Product:	11ax RTL8852BE Combo module
Brand:	REALTEK
Test Model:	RTL8852BE
Sample Status:	Engineering sample
Applicant:	Realtek Semiconductor Corp.
Test Date:	May 06 to June 16, 2021
Standards:	ARIB STD-T66 (V3.7), MIC notice 88 Appendix 43 Certification Ordinance Article 2-1-19 RCR STD-33 (V5.4), MIC notice 88 Appendix 44 Certification Ordinance Article 2-1-19-2

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by : Phoenix Huang , **Date:** July 15, 2021

Phoenix Huang / Specialist

Approved by : , **Date:** July 15, 2021

Clark Lin / Technical Manager

2 Summary of Test Results

The EUT has been tested according to the following specifications:

Notice 88 Appendix 43 Reference	ARIB STD-T66 Ref.	Report Reference	Parameter	Test Results (Note)
General Provisions				
C	3.2 (4)	4.1	Frequency tolerance	C
D	3.2 (7)	4.2	Occupied bandwidth	C
E	3.2 (6)	4.4	Spurious emissions	C
Transmitting Equipment				
F	--	4.5	Antenna power	C
--	--	--	SAR	NA
Transmitting Antenna				
--	--	3.5	Type, configuration, etc. of transmitting antenna	C
--	--	3.5	Direction pattern of transmitting antenna	C
Receiving Equipment				
G	3.3 (1)	4.6	Spurious emissions of receiver	C
--	--	3.5	Refer to all articles for transmitting antenna	C
Operating Frequency 2400 to 2483.5MHz				
--	3.7 (1)	3.4	High frequency / modulation section cannot be opened easily	C
--	3.1 (1)	3.1	Communication method	C
--	3.2 (1)a	3.1	Modulation method	C
--	3.2 (1)a	3.1	Spread spectrum method	C
--	3.2 (2)	4.5	Antenna power	C
--	3.6 (2)	4.5	Absolute gain of transmitting antenna	C
--	3.6 (2)	--	Angular width of principal radiation (AWPR)	NA
--	3.2 (10)	4.9	Number of carriers within 1 MHz bandwidth in OFDM	C
--	3.2 (8)	4.3	Spreading bandwidth	C
--	3.2 (9)	4.3	Spreading factor	C
--	3.2 (11)	--	Frequency retention time (FH employed)	NA
--	3.4.1 (1)	4.8	Interference Prevention Function	C
--	3.4.1 (3)	4.7	Carrier Sense Capability	C

Note: 1. C = Conform NC = Not Conform NT = Not Tested NA = Not Applicable
2. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

Notice 88 Appendix 44 Reference	RCR STD-33 Ref.	Report Reference	Parameter	Test Results (Note)
General Provisions				
C	3.2 (3)	4.1	Frequency tolerance	C
D	3.2 (7)	4.2	Occupied bandwidth	C
E	3.2 (6)	4.4	Spurious emissions	C
Transmitting Equipment				
F	--	4.5	Antenna power	C
--	--	--	SAR	NA
Transmitting Antenna				
--	--	3.5	Type, configuration, etc. of transmitting antenna	C
--	--	3.5	Direction pattern of transmitting antenna	C
Receiving Equipment				
H	3.3 (1)	4.6	Spurious emissions of receiver	C
--	--	3.5	Refer to all articles for transmitting antenna	C
Operating Frequency 2471 to 2497MHz				
49.20(2); a	3.7 (1)	3.4	High frequency / modulation section cannot be opened easily	C
49.20(2); b	3.1	3.1	Communication method	C
49.20(2); c	3.2-4a.	3.1	Spread spectrum method	C
49.20(2); d	3.2-1	4.5	Antenna power	C
49.20(2); e	3.6-2	4.5	Absolute gain of transmitting antenna	C
49.20(2); f	3.2-8	4.3	Spreading bandwidth	C
49.20(2); g	3.2-9	4.3	Spreading factor	C
49.20(2); h	3.5-2	4.8	Interference Prevention Function	C
--	3.4.3	4.7	Carrier Sense Capability	C

Note: 1 C = Conform NC = Not Conform NT = Not Tested NA = Not Applicable

Note: 2. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

2.1 Test Instruments

For Carrier Sense test:

Description & Manufacturer	Model no.	Serial No.	Calibrated Date	Calibrated Until	Calibration Authority	Calibration Method
Spectrum Analyzer R&S	FSV40	101516	Mar. 08, 2021	Mar. 07, 2022	ETC	(c)
ESG Vector signal generator Agilent	E4438C	MY45094468	Nov. 18, 2020	Nov. 17, 2021	ETC	(c)
Power Meter Anritsu	ML2495A	1529002	July 22, 2020	July 21, 2021	ETC	(c)
Power Sensor Anritsu	MA2411B	1339443	July 22, 2020	July 21, 2021	ETC	(c)
DC Power Supply Topward	6603D	795558	NA	NA	NA	NA
AC Power Source Extech Electronics	6905S	1991551	NA	NA	NA	NA
True RMS Clamp Meter FLUKE	325	31130711WS	June 02, 2021	June 01, 2022	ETC	(c)
Power Combiner Mini-circuits	ZFRSC-123-S+	F698501347_02	Dec. 23, 2020	Dec. 22, 2021	BV CPS E&E	(d)
Power Divide Warison	WDIV-4R4029	0001	Jan. 11, 2021	Jan. 10, 2022	BV CPS E&E	(d)

Note:
1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.
2. Calibration method :

a) : Calibration conducted by the National Institute of Information and Communications Technology (NICT) or a designated calibration agency under Article 102-18 paragraph (1).

b) : Calibration conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Law (Law No. 51 of 1992) Japan Calibration Service System.

c) : Calibration conducted in foreign countries, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1).

d) : Calibration conducted by using other equipment that listed above from a) to c).

3. The power supply no evaluation calibrated, which used the digital multimeter to verify.
4. Tested Date: June 16, 2021

For other test items:

Description & Manufacturer	Model no.	Serial No.	Calibrated Date	Calibrated Until	Calibration Authority	Calibration Method
Spectrum Analyzer R&S	FSV40	100964	May 29, 2020	May 28, 2021	ETC	(c)
ESG Vector signal generator Agilent	E4438C	MY45094468	Nov. 18, 2020	Nov. 17, 2021	ETC	(c)
Power Meter Anritsu	ML2495A	1529002	July 22, 2020	July 21, 2021	ETC	(c)
Power Sensor Anritsu	MA2411B	1339443	July 22, 2020	July 21, 2021	ETC	(c)
DC Power Supply Topward	6603D	795558	NA	NA	NA	NA
AC Power Source Extech Electronics	6905S	1991551	NA	NA	NA	NA
True RMS Clamp Meter FLUKE	325	31130711WS	June 06, 2020	June 05, 2021	ETC	(c)
Power Combiner Mini-circuits	ZFRSC-123-S+	F698501347_02	Dec. 23, 2020	Dec. 22, 2021	BV CPS E&E	(d)
Power Divide Warison	WDIV-4R4029	0001	Jan. 11, 2021	Jan. 10, 2022	BV CPS E&E	(d)

Note: 1. The calibration interval of the above test instruments is 12 months and the calibrations are traceable to NML/ROC and NIST/USA.

2. Calibration method :

a) : Calibration conducted by the National Institute of Information and Communications Technology (NICT) or a designated calibration agency under Article 102-18 paragraph (1).

b) : Calibration conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Law (Law No. 51 of 1992) Japan Calibration Service System.

c) : Calibration conducted in foreign countries, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1).

d) : Calibration conducted by using other equipment that listed above from a) to c).

3. The power supply no evaluation calibrated, which used the digital multimeter to verify.

4. Tested Date: May 06 to 19, 2021

2.2 Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in TR 100 028-1.
This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Parameter	Uncertainty
Occupied Bandwidth	±960 Hz
Spurious emissions	±2.5 dB
Output power density	±1.2 dB
Out of band radiated power	±2.5 dB
Frequency Tolerance	±960 Hz

2.3 Modification Record

There were no modifications required for compliance.

3 General Information

3.1 General Description of EUT (WLAN)

Product	11ax RTL8852BE Combo module
Brand	REALTEK
Test Model	RTL8852BE
Status of EUT	Engineering sample
Nominal Voltage	3.3 Vdc from host equipment
Modulation Type	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM 256QAM for OFDM in 11ac mode and VHT20/40 in 2.4GHz 1024QAM for OFDMA in 11ax HE mode
Modulation Technology	DSSS, OFDM, OFDMA
Transfer Rate	802.11b: up to 11 Mbps 802.11a/g: up to 54 Mbps 802.11n: up to 300 Mbps 802.11ac: up to 866.7 Mbps 802.11ax: up to 1201.0 Mbps
Operating Frequency	**2.4GHz:** 2.412 ~ 2.484 GHz **5GHz:** 5.18 ~ 5.24 GHz, 5.26 ~ 5.32 GHz, 5.50 ~ 5.72 GHz
Number of Channel	**2.4GHz:** 802.11b: 14 802.11g/n (HT20), VHT20, 802.11ax (HE20): 13 802.11n (HT40), VHT40, 802.11ax (HE40): 9 **5GHz: (W52+W53)** 802.11a/n (HT20)/ac (VHT20)/ax (HE20): 8 802.11n (HT40)/ac (VHT40)/ax (HE40): 4 802.11ac (VHT80)/ax (HE80): 2 **5GHz: (W56)** 802.11a/n (HT20)/ac (VHT20)/ax (HE20): 12 802.11n (HT40)/ac (VHT40)/ax (HE40): 6 802.11ac (VHT80)/ax (HE80): 3
Rated RF Output Power Density	Refer to Note
Conducted RF Output Power Density	Refer to Note
Radiated RF Output Power Density	Refer to Note
Antenna Type	Refer to section 3.5
Antenna Connector	Refer to section 3.5
Accessory Device	NA
Data Cable Supplied	NA

Note:

1. The EUT has below HW SKU configuration, as below table:

SKU No.	Interface	Description
1	PCIe + USB	Single antenna port
2	PCIe + USB	Dual antenna port
3	PCIe + UART	Dual antenna port
Note: From the above HW SKUs, the worse case was found in **SKU No.: 2**. Therefore only the test data of the SKU was recorded in this report.		

2. Simultaneously transmission condition.

Condition	Technology	
1	WLAN 5GHz	Bluetooth

3. The EUT incorporates a MIMO function.

2.4GHz Band		
MODULATION MODE	**TX & RX CONFIGURATION**	
802.11b	2TX/1TX Diversity	2RX
802.11g	2TX/1TX Diversity	2RX
802.11n (HT20)	2TX/1TX Diversity	2RX
802.11n (HT40)	2TX/1TX Diversity	2RX
VHT20	2TX/1TX Diversity	2RX
VHT40	2TX/1TX Diversity	2RX
802.11ax (HE20)	2TX/1TX Diversity	2RX
802.11ax (HE40)	2TX/1TX Diversity	2RX
802.11ax (RU26/52/106/242/484)	2TX/1TX Diversity	2RX
5GHz Band		
MODULATION MODE	**TX & RX CONFIGURATION**	
802.11a	2TX/1TX Diversity	2RX
802.11n (HT20)	2TX/1TX Diversity	2RX
802.11n (HT40)	2TX/1TX Diversity	2RX
802.11ac (VHT20)	2TX/1TX Diversity	2RX
802.11ac (VHT40)	2TX/1TX Diversity	2RX
802.11ac (VHT80)	2TX/1TX Diversity	2RX
802.11ax (HE20)	2TX/1TX Diversity	2RX
802.11ax (HE40)	2TX/1TX Diversity	2RX
802.11ax (HE80)	2TX/1TX Diversity	2RX
802.11ax (RU26/52/106/242/484/996)	2TX/1TX Diversity	2RX
Note: All of modulation mode support beamforming function except 802.11a/b/g modulation mode.		

4. The power table as below table:

2TX				1TX			
Modulation Mode	Rated output power density (mW/MHz)	Conducted RF output power density (mW/MHz)	Radiated RF output power density (mW/MHz)	Modulation Mode	Rated output power density (mW/MHz)	Conducted RF output power density (mW/MHz)	Radiated RF output power density (mW/MHz)
802.11b (CH 1~13)	7.3	7.213	16.148	802.11b (CH 1~13)	7.3	7.263	16.26
802.11b (CH 14)	7.3	7.059	15.803	802.11b (CH 14)	7.3	6.968	15.599
802.11g	7.3	7.25	16.231	802.11g	7.2	7.163	16.036
VHT20	7.3	7.251	16.233	VHT20	7.2	7	15.671
VHT40	3.65	3.623	8.111	VHT40	3.6	3.632	8.131
802.11ax (HE20)	7.3	7.164	16.038	802.11ax (HE20)	7.2	7.097	15.888
802.11ax (HE40)	3.65	3.632	8.131	802.11ax (HE40)	3.6	3.607	8.075
802.11ax (RU26)	7.2	7.17	16.052	802.11ax (RU26)	7	7.213	16.148
802.11ax (RU52)	7.3	7.257	16.246	802.11ax (RU52)	7.3	7.263	16.26
802.11ax (RU106)	7.3	7.2	16.119	802.11ax (RU106)	7.3	7.213	16.148

5. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

3.2 Description of Test Modes

Operated in 2400 ~ 2497MHz band:

14 channels are provided for 802.11b:

Channel	Freq. (MHz)	Channel	Freq. (MHz)
1	**2412**	8	2447
2	2417	9	2452
3	2422	10	2457
4	2427	11	2462
5	2432	12	2467
6	2437	**13**	**2472**
7	**2442**	**14**	**2484**

13 channels are provided for 802.11g, 802.11n (HT20), VHT20, 802.11ax (HE20):

Channel	Freq. (MHz)	Channel	Freq. (MHz)
1	**2412**	8	2447
2	2417	9	2452
3	2422	10	2457
4	2427	11	2462
5	2432	12	2467
6	2437	**13**	**2472**
7	**2442**		

9 channels are provided for 802.11n (HT40), VHT40, 802.11ax (HE40):

Channel	Freq. (MHz)	Channel	Freq. (MHz)
3	**2422**	8	2447
4	2427	9	2452
5	2432	10	2457
6	2437	**11**	**2462**
7	**2442**		

Note:

1. The channels which were indicated in bold type of the above channel list were selected as representative test channel. Therefore only the data of the test channels were recorded in this report.

By means of test software (RTL8852B MP Toolkit V1.0.16) provided by manufacturer, the power levels during the tests were set according to the following codes:

2TX											
802.11b		802.11g		802.11n (HT20)		802.11n (HT40)		802.11ax (HE20)		802.11ax (HE40)	
Channel	Power Setting	Channel	Power Setting	Channel	Power Setting	Channel	Power Setting	Channel	Power Setting	Channel	Power Setting
1	15.5	1	16.75	1	17	3	17.25	1	17.25	3	17.25
7	15	7	16.75	7	17	7	17.25	7	17.25	7	17.25
13	15	13	16.75	13	17	11	17.25	13	17.25	11	17.25
14	16.75										

802.11ax (RU26)		802.11ax (RU52)		802.11ax (RU106)	
Channel	Power Setting	Channel	Power Setting	Channel	Power Setting
1	8.25	1	10.5	1	13.75
7	8.75	7	11	7	14
13	7.75	13	10.5	13	14

1TX											
802.11b		802.11g		802.11n (HT20)		802.11n (HT40)		802.11ax (HE20)		802.11ax (HE40)	
Channel	Power Setting	Channel	Power Setting	Channel	Power Setting	Channel	Power Setting	Channel	Power Setting	Channel	Power Setting
1	18	1	19.5	1	19.5	3	20	1	20	3	20.25
7	18	7	19.5	7	19.5	7	20	7	20	7	20.25
13	18	13	19.5	13	19.5	11	20	13	20	11	20.25
14	19.5										

802.11ax (RU26)		802.11ax (RU52)		802.11ax (RU106)	
Channel	Power Setting	Channel	Power Setting	Channel	Power Setting
1	11.25	1	13.75	1	17.25
7	11.75	7	13.75	7	16.75
13	11.25	13	13.75	13	17

3.3 Test Conditions

Test Conditions		Voltage (Vdc)
V_{normal}		3.3
$V_{max.}$	+10%	3.63
$V_{min.}$	-10%	2.97

Test modes are presented in the report as below:

Test Item	Test Conditions	Environmental Conditions
Frequency Tolerance	Chain 0	25 deg.C, 60 % RH
Occupied Bandwidth / Spreading Bandwidth	Mode 1 (2TX): Chain 0, Chain 1 Mode 2 (1TX): Chain 0	25 deg.C, 60 % RH
Spurious Emissions for Transmitter	Mode 1 (2TX): Chain 0, Chain 1, W Mode 2 (1TX): Chain 0	25 deg.C, 60 % RH
Antenna Power	Mode 1 (2TX): Chain 0, Chain 1, S Mode 2 (1TX): Chain 0	25 deg.C, 60 % RH
Spurious Emissions for Receiver	Mode 1 (2TX): Chain 0, Chain 1, S Mode 2 (1TX): Chain 0	25 deg.C, 60 % RH
S : Sum of each Chain, C : Use combiner, W : [Worst result] x [Number of antenna ports]		

Note:
1. For 20MHz bandwidth and 40MHz bndwidth bndwidth of RU mode, the worst case was found in **20MHz bndwidth.** Therefore only the test data of the mode was recorded in this report.
2. For RU mode only test Occupied Bandwidth, TX Spurious Emission and Antenna Power test items.

3.4 Assembly

The EUT is constructed as an 11ax RTL8852BE Combo module. The RF circuit was covered by metal shielding case, and the metal shielding case won't be easy to be opened.

3.5 Antenna Specifications

3.5.1 Antenna Gain

Ant. Set	RF Chain No.	Brand	Model	Ant. Net Gain (dBi)	Frequency Range (GHz)	Ant. Type	Connector Type	Cable Length (mm)
1	Chain 0	ARISTOTLE	RFA-27-JP326-MHF4300	3.5	2.4~2.4835	PIFA	i-pex(MHF)	300
				5	5.15~5.85			
				5	5.875~7.125			
	Chain 1	ARISTOTLE	RFA-27-JP326-MHF4300	3.5	2.4~2.4835	PIFA	i-pex(MHF)	300
				5	5.15~5.85			
				5	5.875~7.125			
2	Chain 0	ARISTOTLE	RFA-27-C38H1-MHF4300	3	2.4~2.4835	Dipole	i-pex(MHF)	300
				5	5.15~5.85			
				5	5.875~7.125			
	Chain 1	ARISTOTLE	RFA-27-C38H1-MHF4300	3	2.4~2.4835	Dipole	i-pex(MHF)	300
				5	5.15~5.85			
				5	5.875~7.125			

Note: The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

3.5.2 Antenna Pattern

Please refer to the attached file (Antenna pattern).

4 Test Results

4.1 Frequency Tolerance Measurement

4.1.1 Limits of Frequency Tolerance Measurement

Tolerance of frequency shall be +/- 50ppm

4.1.2 Test Setup

4.1.3 Test Results

802.11b / 802.11g / 802.11n (HT20) / 802.11ax (HE20)

Chain 0

Channel	Frequency (MHz)	V_{normal}		$V_{max.}$		$V_{min.}$	
		Carrier frequency (MHz)	Frequency tolerance (ppm)	Carrier frequency (MHz)	Frequency tolerance (ppm)	Carrier frequency (MHz)	Frequency tolerance (ppm)
1	2412	2411.984200	-6.550	2411.982320	-7.330	2411.981360	-7.728
7	2442	2441.980040	-8.173	2441.980240	-8.091	2441.979920	-8.222
13	2472	2471.979880	-8.139	2471.979960	-8.106	2471.979880	-8.139
14	2484	2483.980200	-7.971	2483.980000	-8.051	2483.979840	-8.115

* Channel 14 is only for 802.11b.

802.11n (HT40) / 802.11ax (HE40)

Chain 0

Channel	Frequency (MHz)	V_{normal}		$V_{max.}$		$V_{min.}$	
		Carrier frequency (MHz)	Frequency tolerance (ppm)	Carrier frequency (MHz)	Frequency tolerance (ppm)	Carrier frequency (MHz)	Frequency tolerance (ppm)
3	2422	2421.981080	-7.811	2421.980920	-7.877	2421.980600	-8.009
7	2442	2441.980920	-7.813	2441.980560	-7.960	2441.980520	-7.977
11	2462	2461.980840	-7.782	2461.980720	-7.831	2461.980480	-7.928

4.2 Occupied Bandwidth Measurement (99% power bandwidth)

4.2.1 Limits of Occupied Bandwidth Measurement

Item	Limit	Remark
Occupied bandwidth	<26MHz	For 802.11b, g, 802.11n (HT20), VHT20, 802.11 ax (HE20)
Occupied bandwidth	<38MHz	For 802.11n (HT40),VHT40, 802.11 ax (HE40)

4.2.2 Test Setup

4.2.3 Test Results (Mode 1)

802.11b

Chain 0

Channel	Frequency (MHz)	V_{normal}	$V_{max.}$	$V_{min.}$
		Occupied bandwidth (MHz)	Occupied bandwidth (MHz)	Occupied bandwidth (MHz)
1	2412	15.00	15.00	15.00
7	2442	15.00	15.00	15.00
13	2472	15.00	15.00	15.00
14	2484	19.60	19.60	19.60

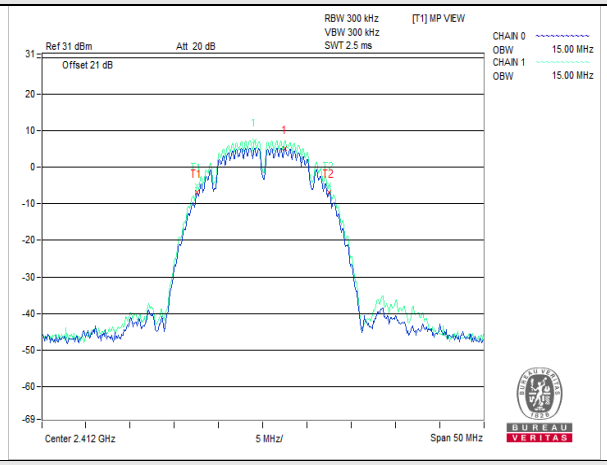
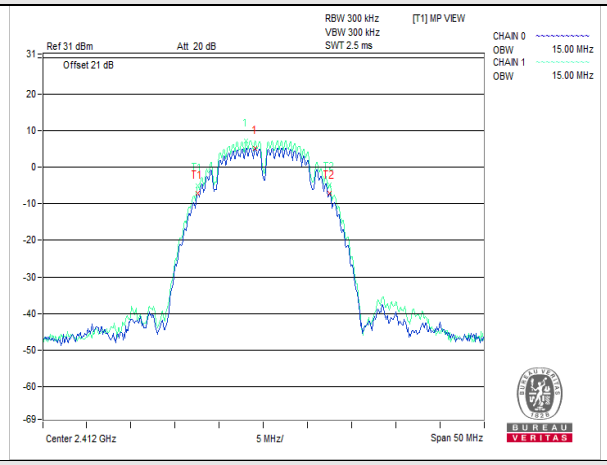
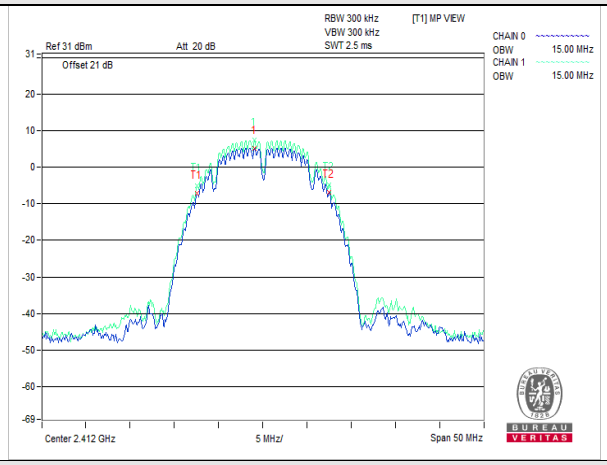
NOTE: For the test plots please refer to the below pages.

Chain 1

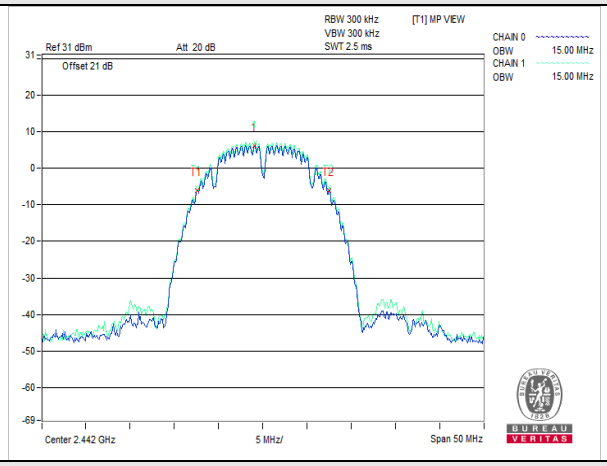
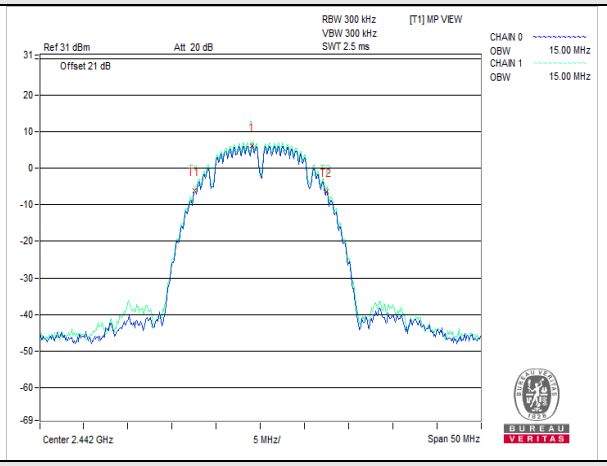
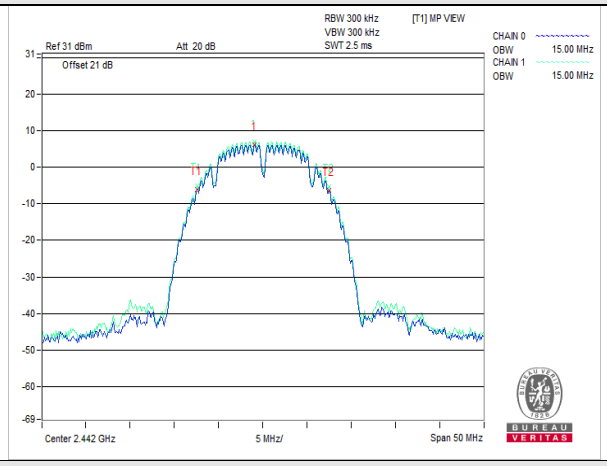
Channel	Frequency (MHz)	V_{normal}	$V_{max.}$	$V_{min.}$
		Occupied bandwidth (MHz)	Occupied bandwidth (MHz)	Occupied bandwidth (MHz)
1	2412	15.00	15.00	15.00
7	2442	15.00	15.00	15.00
13	2472	15.00	15.00	15.00
14	2484	19.60	19.60	19.60

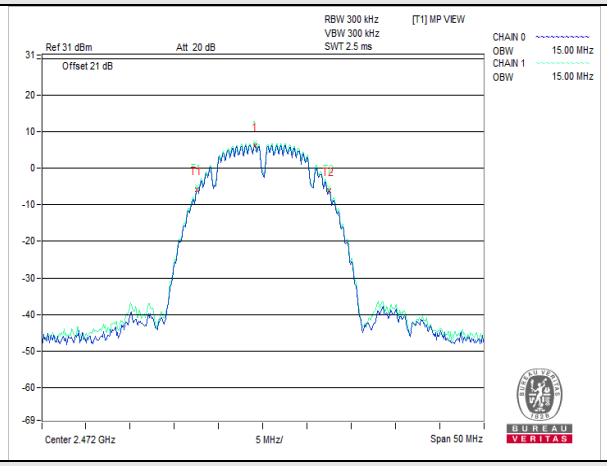
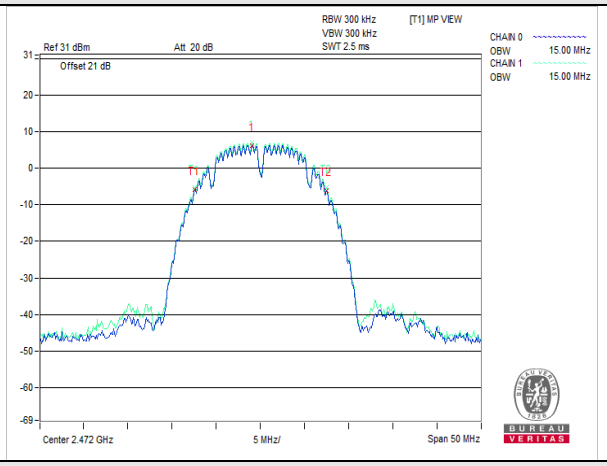
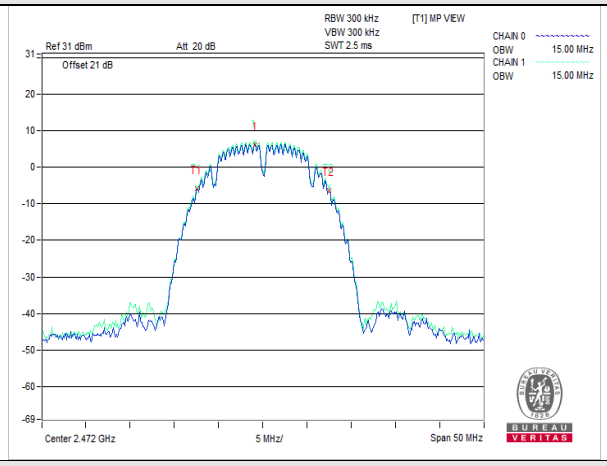
NOTE: For the test plots please refer to the below pages.

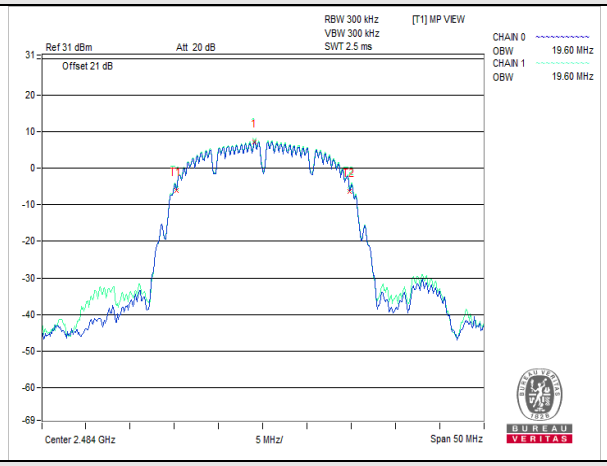
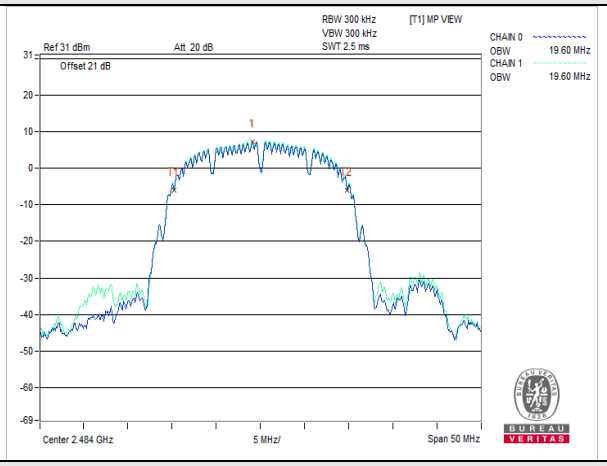
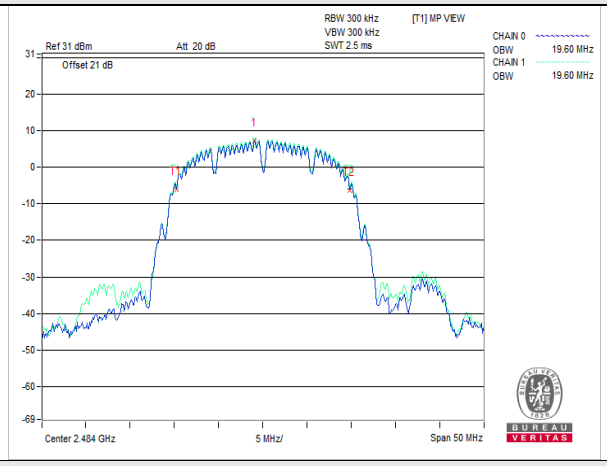
Graph

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	

CH 1 (2412MHz)

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 7 (2442MHz)	

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 13 (2472MHz)	

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 14 (2484MHz)	

802.11g

Chain 0

Channel	Frequency (MHz)	V_{normal}	$V_{max.}$	$V_{min.}$
		Occupied bandwidth (MHz)	Occupied bandwidth (MHz)	Occupied bandwidth (MHz)
1	2412	16.50	16.50	16.50
7	2442	16.50	16.50	16.50
13	2472	16.50	16.50	16.50

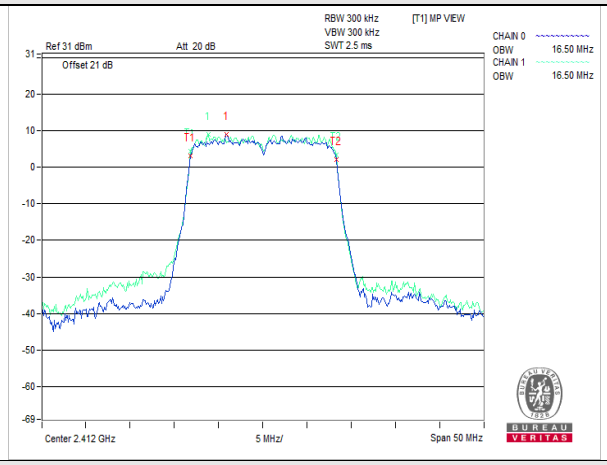
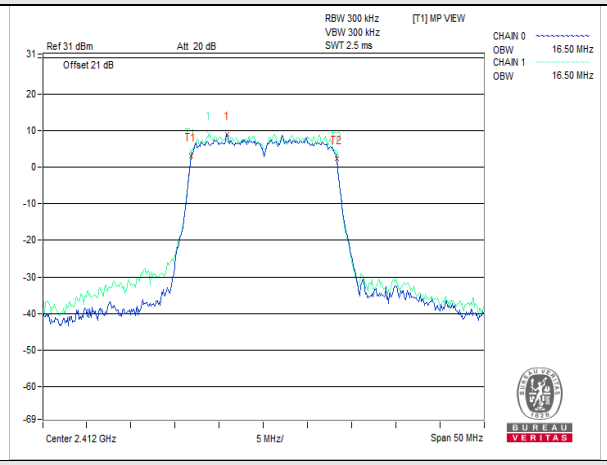
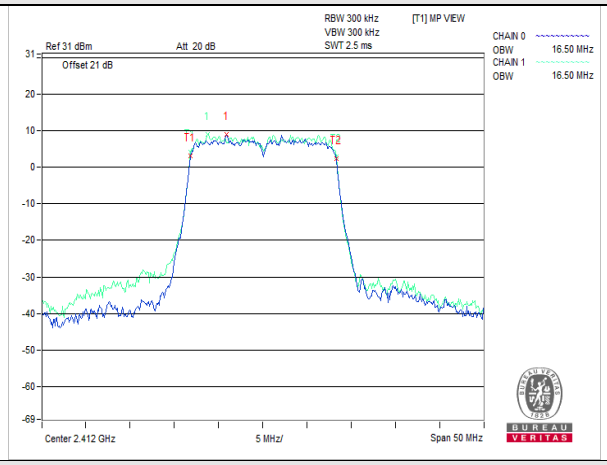
NOTE: For the test plots please refer to the below pages.

Chain 1

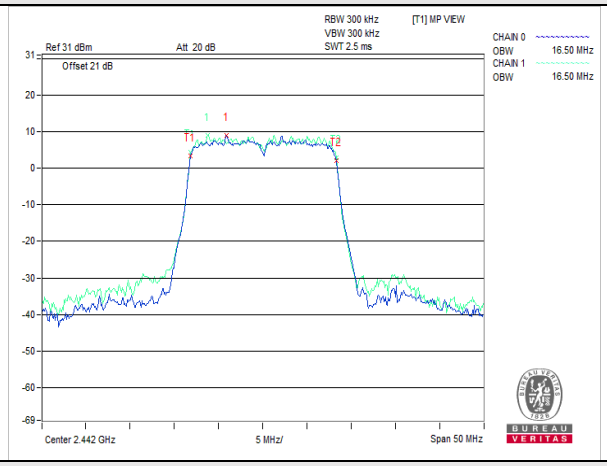
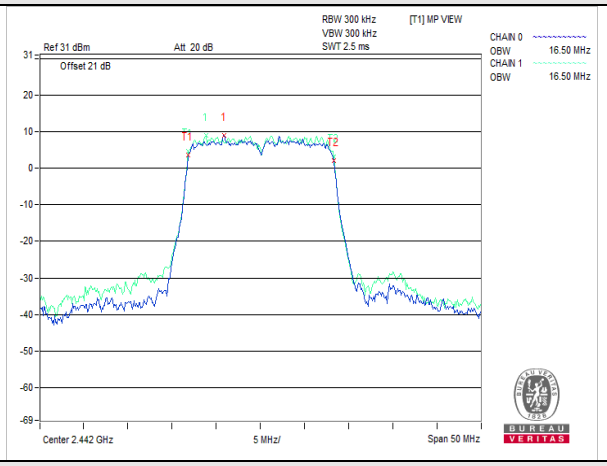
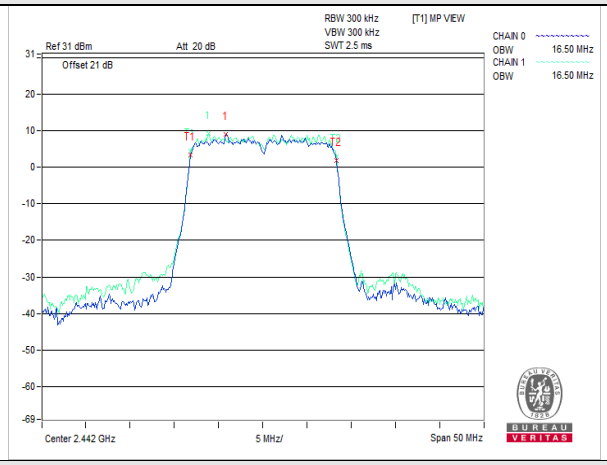
Channel	Frequency (MHz)	V_{normal}	$V_{max.}$	$V_{min.}$
		Occupied bandwidth (MHz)	Occupied bandwidth (MHz)	Occupied bandwidth (MHz)
1	2412	16.50	16.50	16.50
7	2442	16.50	16.50	16.50
13	2472	16.50	16.50	16.50

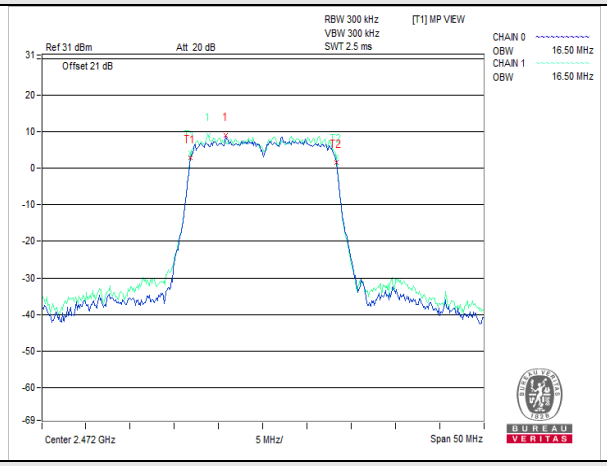
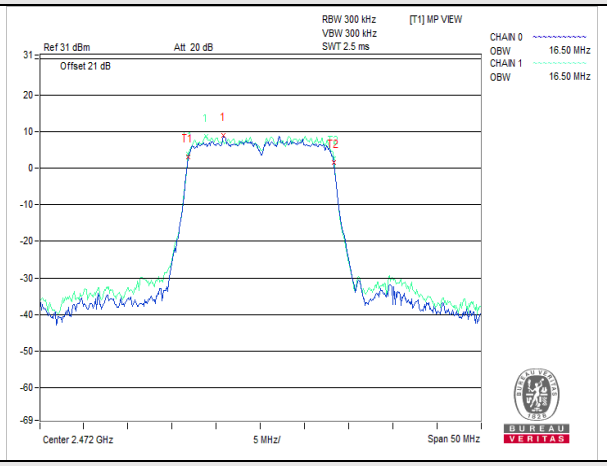
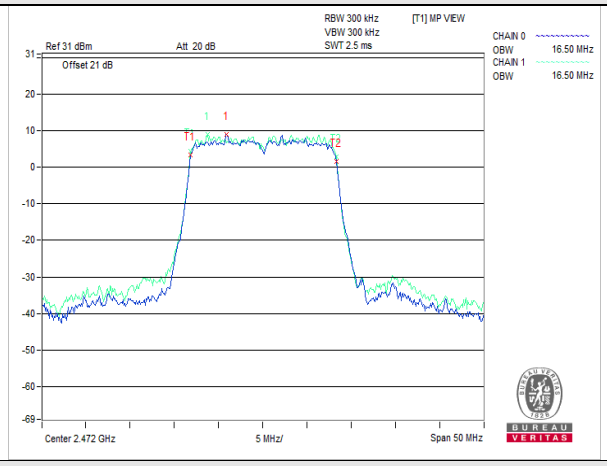
NOTE: For the test plots please refer to the below pages.

Graph

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	

CH 1 (2412MHz)

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 7 (2442MHz)	

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 13 (2472MHz)	

VHT20

Chain 0

Channel	Frequency (MHz)	V_{normal}	$V_{max.}$	$V_{min.}$
		Occupied bandwidth (MHz)	Occupied bandwidth (MHz)	Occupied bandwidth (MHz)
1	2412	17.60	17.60	17.60
7	2442	17.60	17.60	17.60
13	2472	17.60	17.60	17.60

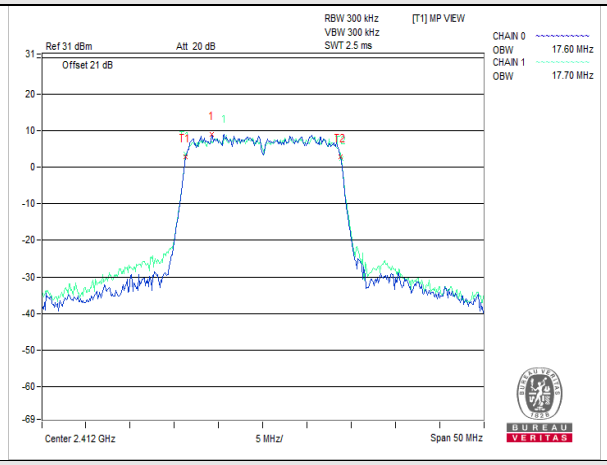
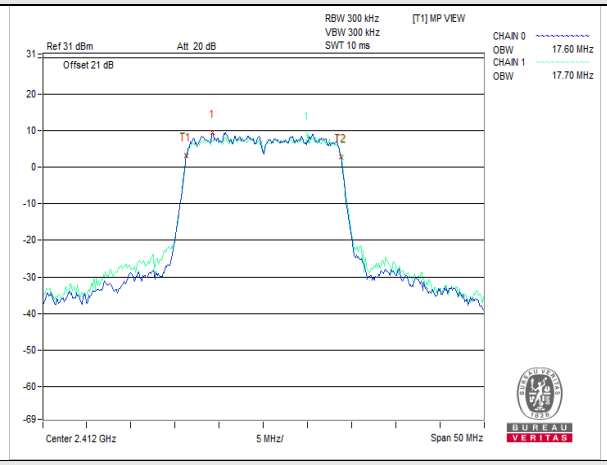
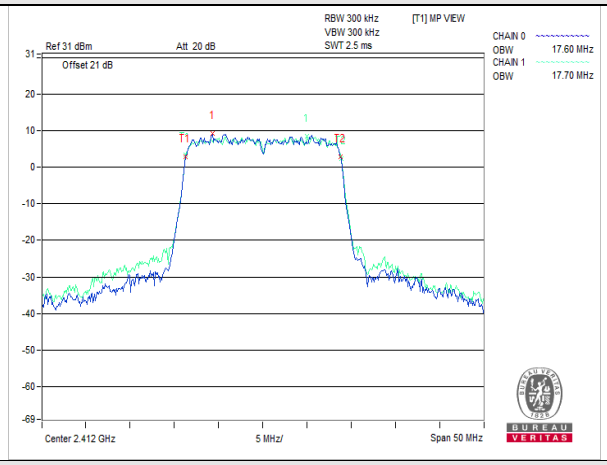
NOTE: For the test plots please refer to the below pages.

Chain 1

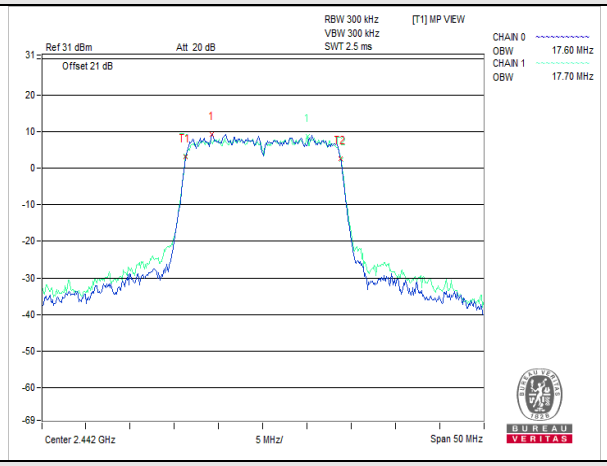
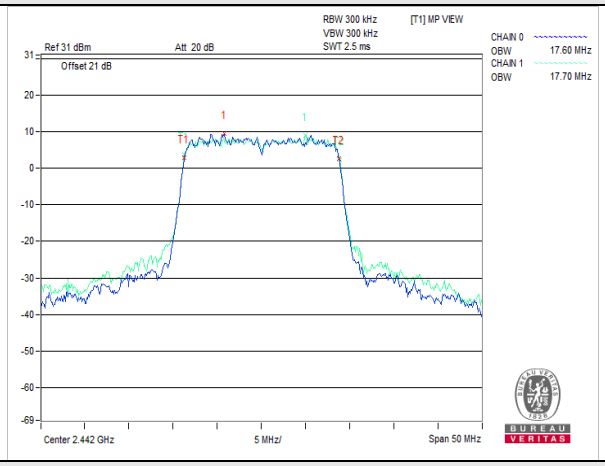
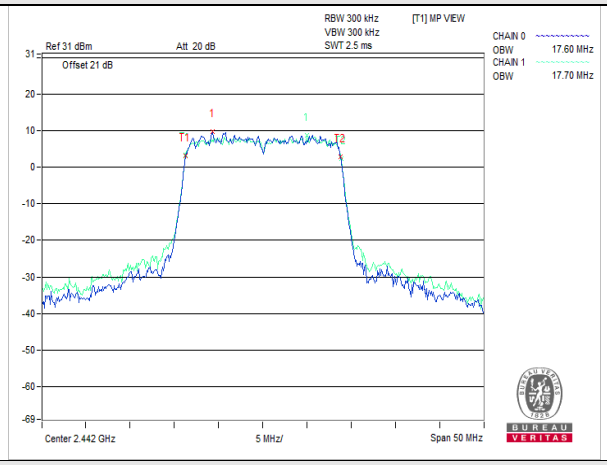
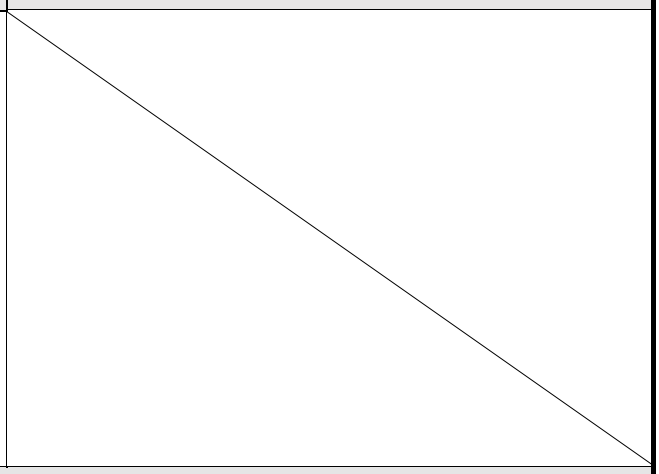
Channel	Frequency (MHz)	V_{normal}	$V_{max.}$	$V_{min.}$
		Occupied bandwidth (MHz)	Occupied bandwidth (MHz)	Occupied bandwidth (MHz)
1	2412	17.70	17.70	17.70
7	2442	17.70	17.70	17.70
13	2472	17.70	17.70	17.70

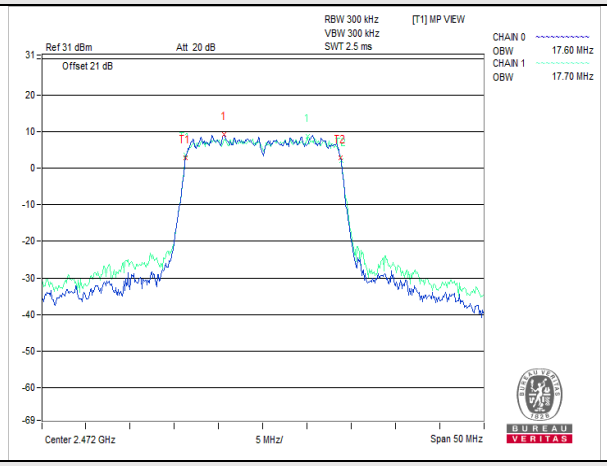
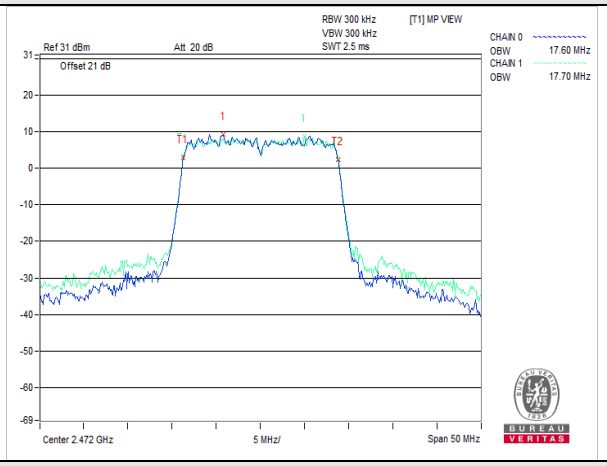
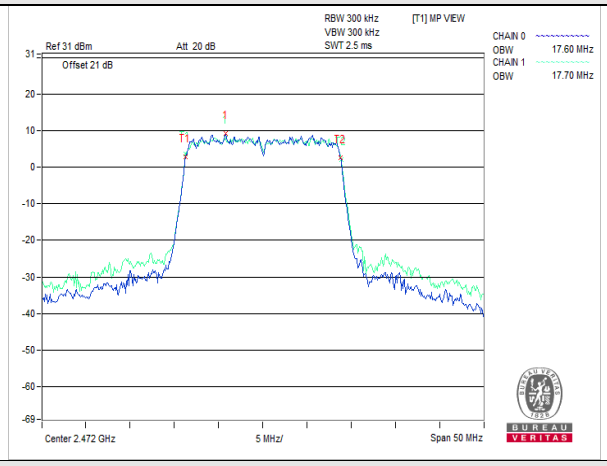
NOTE: For the test plots please refer to the below pages.

Graph

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	

CH 1 (2412MHz)

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 7 (2442MHz)	

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 13 (2472MHz)	

VHT40

Chain 0

Channel	Frequency (MHz)	V_{normal}	$V_{max.}$	$V_{min.}$
		Occupied bandwidth (MHz)	Occupied bandwidth (MHz)	Occupied bandwidth (MHz)
3	2422	36.20	36.20	36.10
7	2442	36.20	36.20	36.20
11	2462	36.20	36.20	36.20

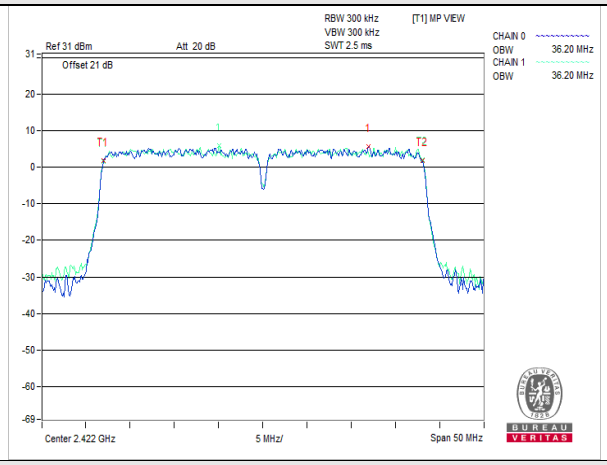
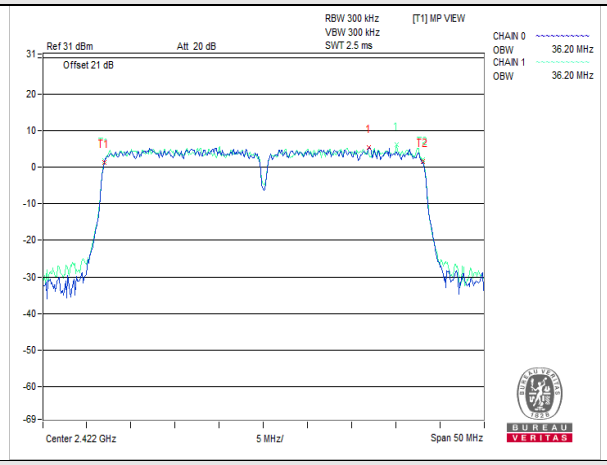
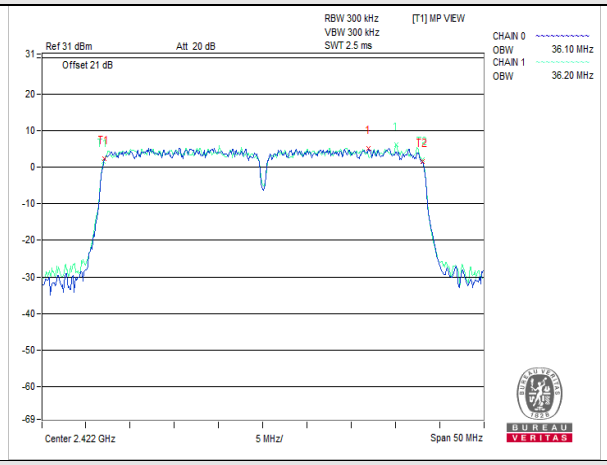
NOTE: For the test plots please refer to the below pages.

Chain 1

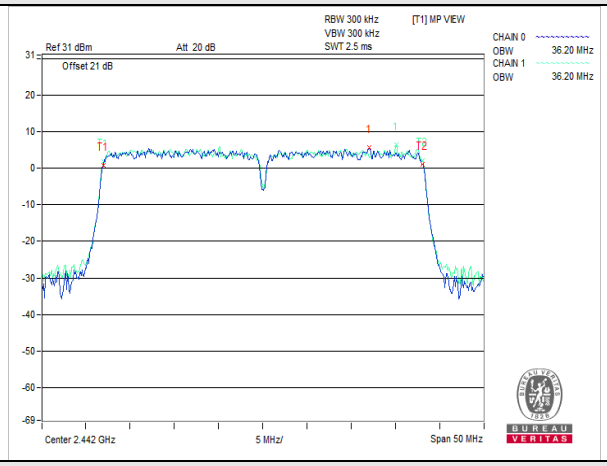
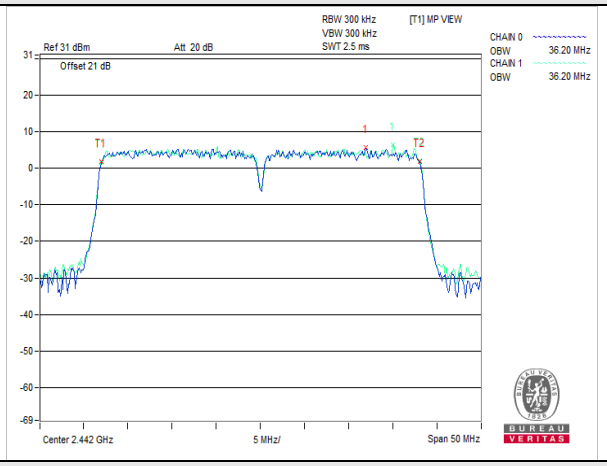
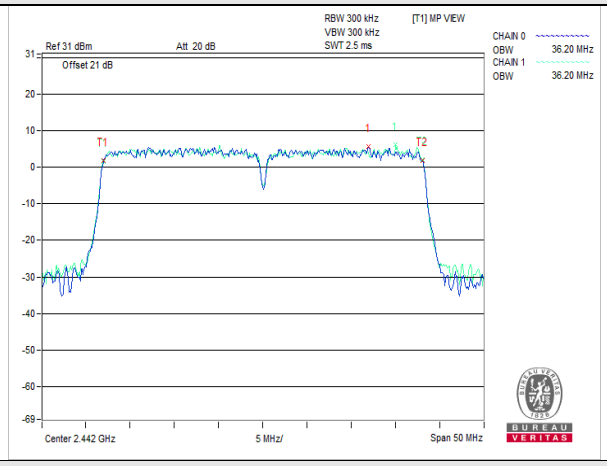
Channel	Frequency (MHz)	V_{normal}	$V_{max.}$	$V_{min.}$
		Occupied bandwidth (MHz)	Occupied bandwidth (MHz)	Occupied bandwidth (MHz)
3	2422	36.20	36.20	36.20
7	2442	36.20	36.20	36.20
11	2462	36.20	36.20	36.20

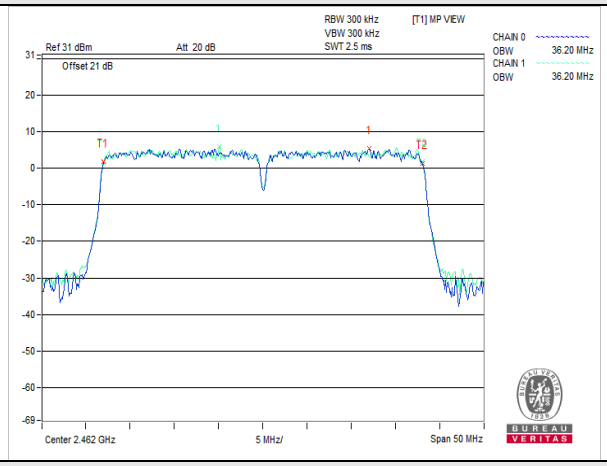
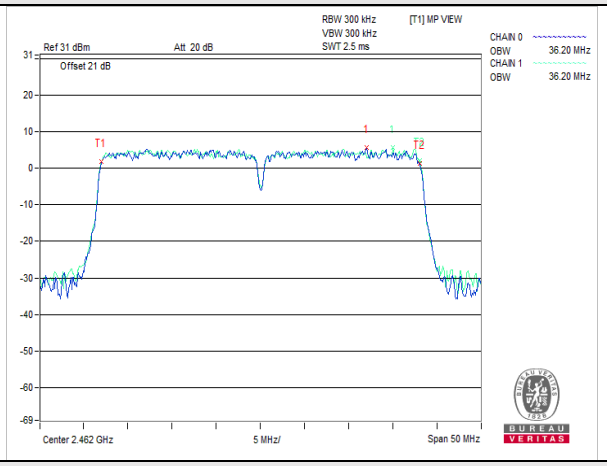
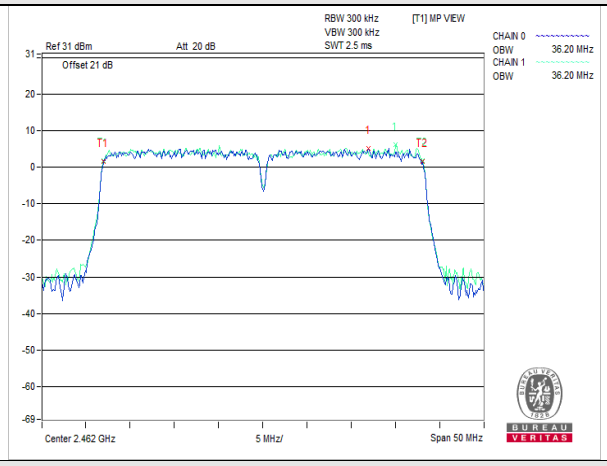
NOTE: For the test plots please refer to the below pages.

Graph

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	

CH 3 (2422MHz)

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 7 (2442MHz)	

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 11 (2462MHz)	

802.11ax (HE20)

Chain 0

Channel	Frequency (MHz)	V_{normal}	$V_{max.}$	$V_{min.}$
		Occupied bandwidth (MHz)	Occupied bandwidth (MHz)	Occupied bandwidth (MHz)
1	2412	19.00	19.00	19.00
7	2442	19.00	19.00	19.00
13	2472	19.00	19.00	19.00

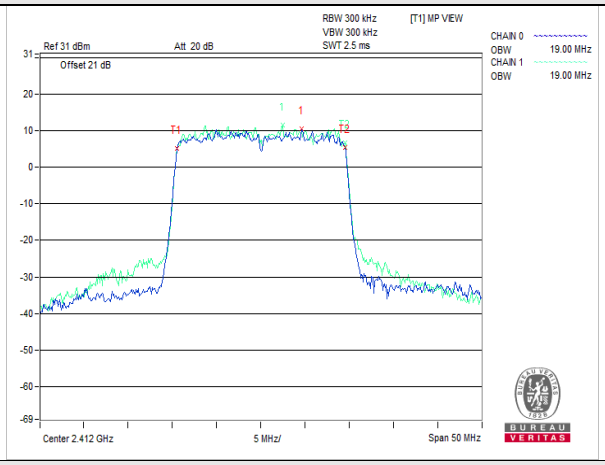
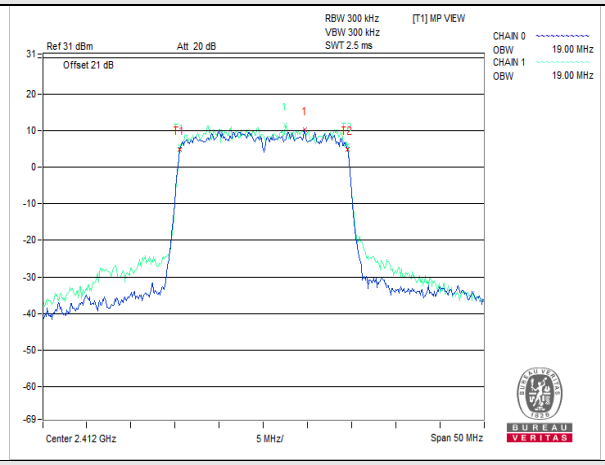
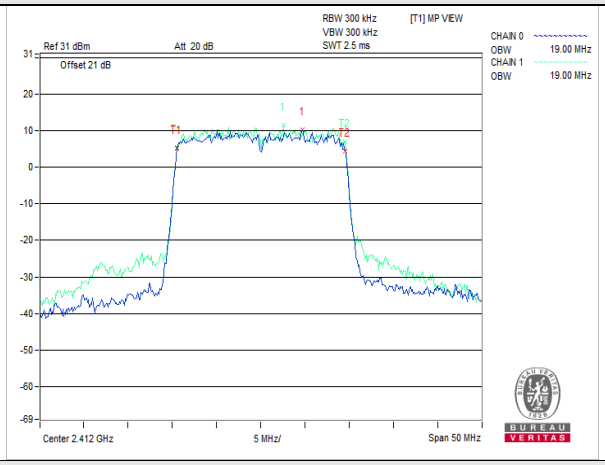
NOTE: For the test plots please refer to the below pages.

Chain 1

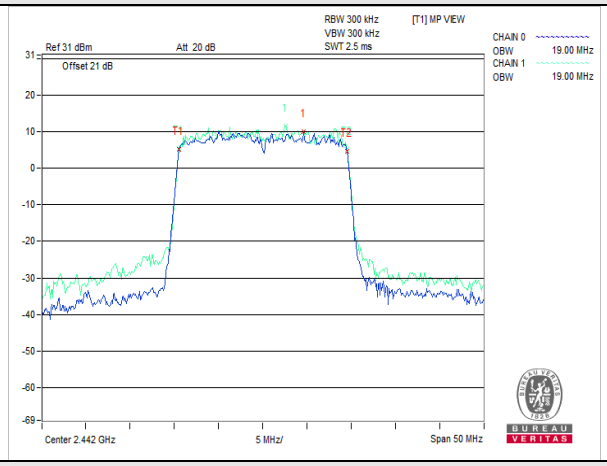
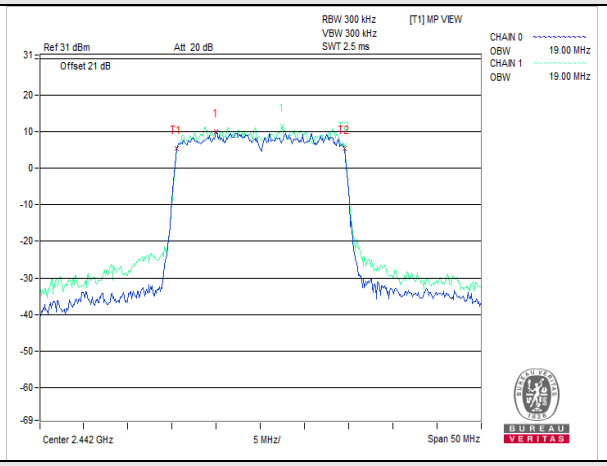
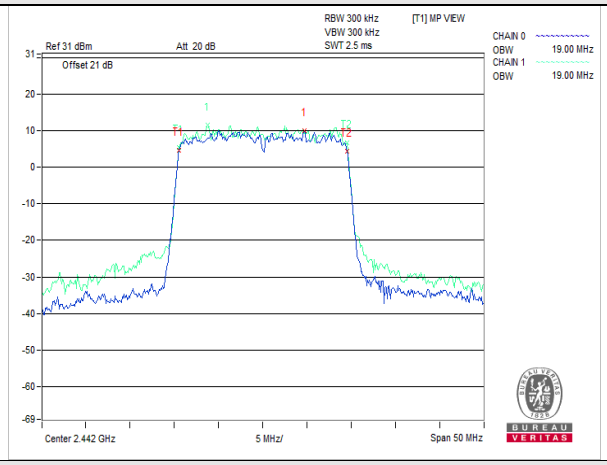
Channel	Frequency (MHz)	V_{normal}	$V_{max.}$	$V_{min.}$
		Occupied bandwidth (MHz)	Occupied bandwidth (MHz)	Occupied bandwidth (MHz)
1	2412	19.00	19.00	19.00
7	2442	19.00	19.00	19.00
13	2472	19.00	19.00	19.00

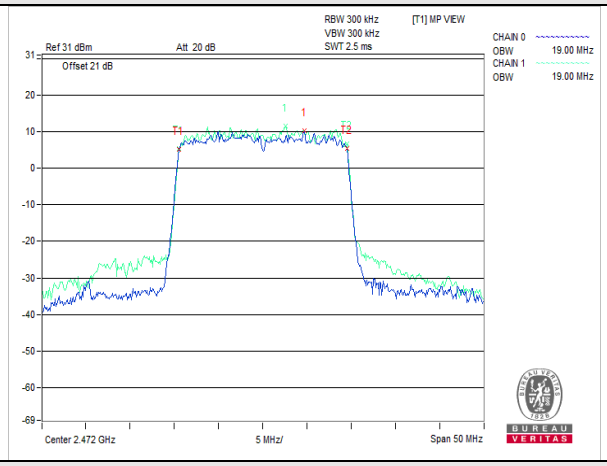
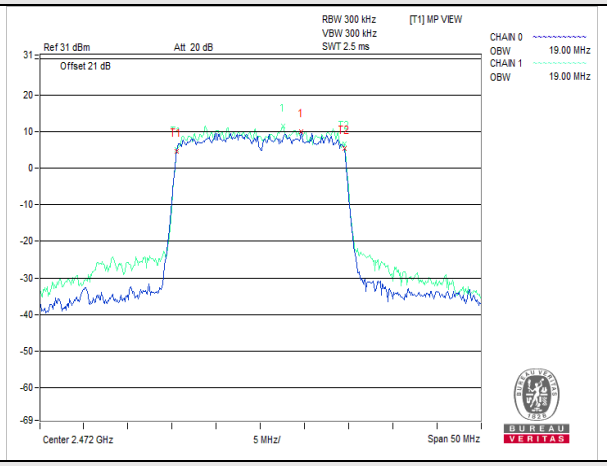
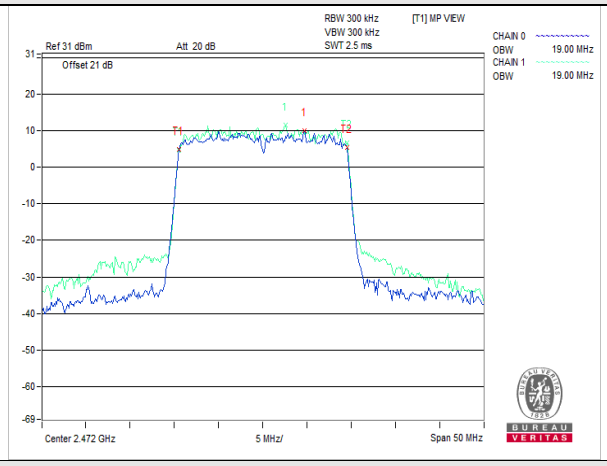
NOTE: For the test plots please refer to the below pages.

Graph

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	

CH 1 (2412MHz)

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 7 (2442MHz)	

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 13 (2472MHz)	

802.11ax (HE40)

Chain 0

Channel	Frequency (MHz)	V_{normal}	$V_{max.}$	$V_{min.}$
		Occupied bandwidth (MHz)	Occupied bandwidth (MHz)	Occupied bandwidth (MHz)
3	2422	37.80	37.90	37.80
7	2442	37.90	37.90	37.90
11	2462	37.80	38.00	37.90

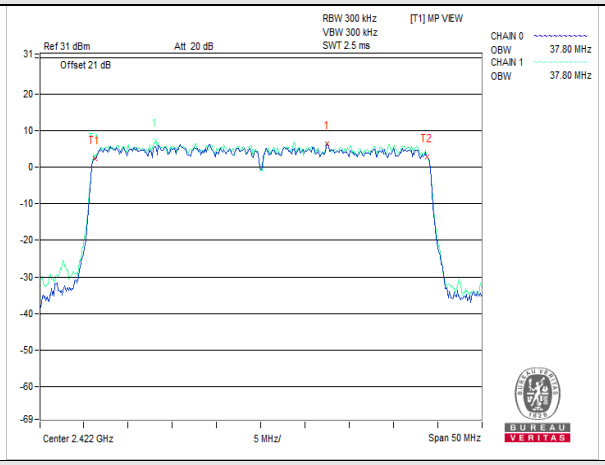
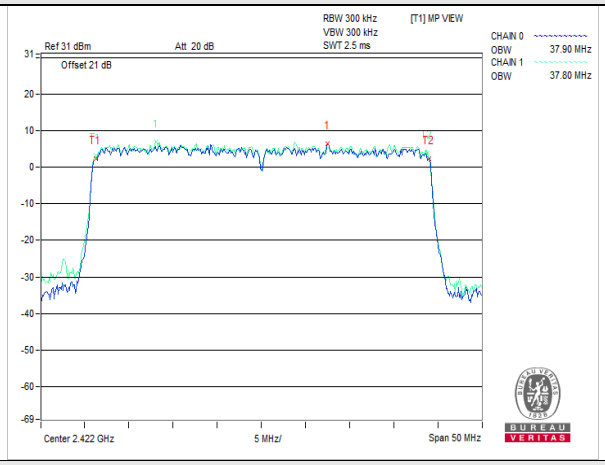
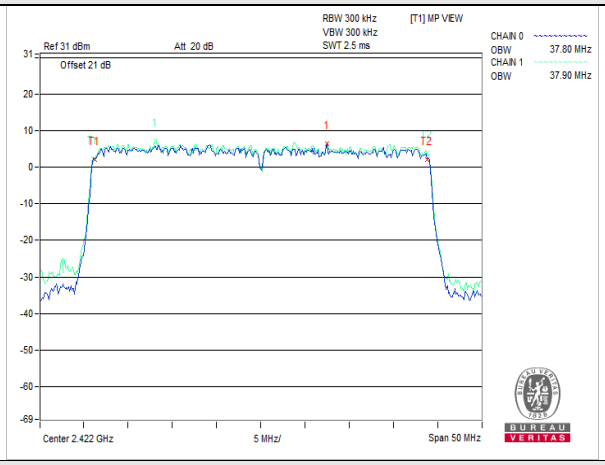
NOTE: For the test plots please refer to the below pages.

Chain 1

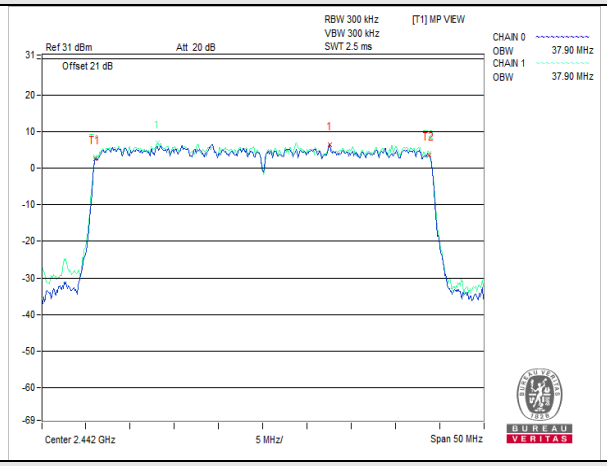
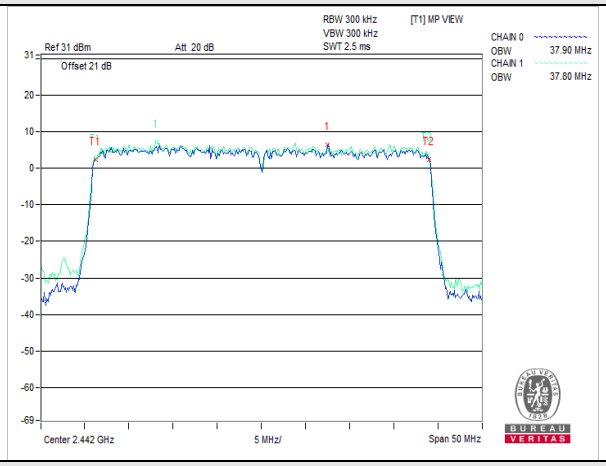
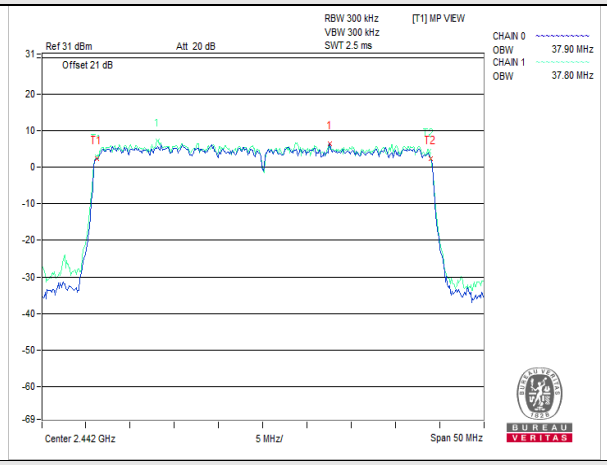
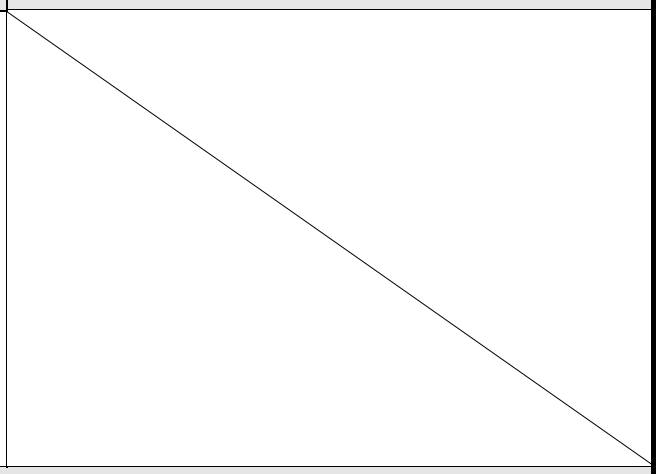
Channel	Frequency (MHz)	V_{normal}	$V_{max.}$	$V_{min.}$
		Occupied bandwidth (MHz)	Occupied bandwidth (MHz)	Occupied bandwidth (MHz)
3	2422	37.80	37.80	37.90
7	2442	37.90	37.80	37.80
11	2462	37.90	37.80	37.80

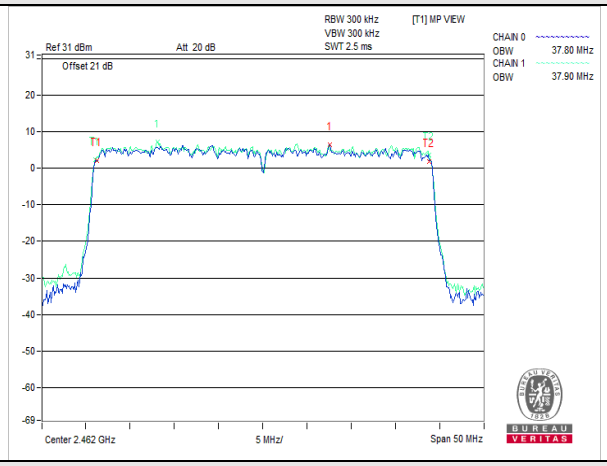
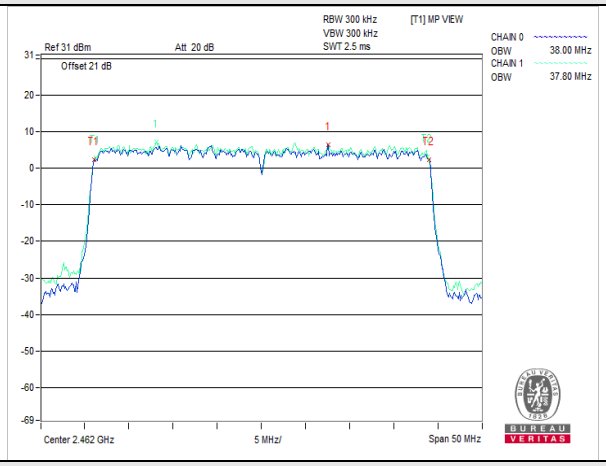
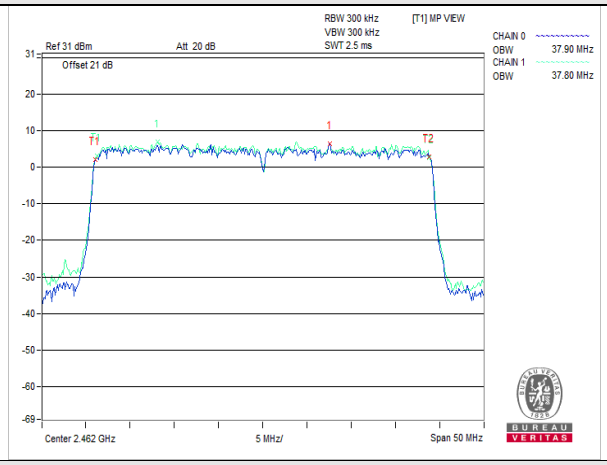
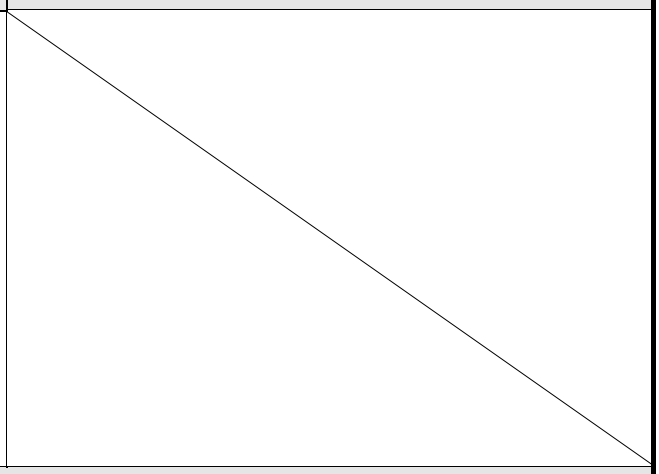
NOTE: For the test plots please refer to the below pages.

Graph

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	

CH 3 (2422MHz)

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 7 (2442MHz)	

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 11 (2462MHz)	

802.11ax (RU26)

Chain 0

Channel	Frequency (MHz)	V_{normal}	$V_{max.}$	$V_{min.}$
		Occupied bandwidth (MHz)	Occupied bandwidth (MHz)	Occupied bandwidth (MHz)
1	2412	18.05	18.00	18.10
7	2442	16.30	16.30	16.20
13	2472	18.10	18.10	18.10

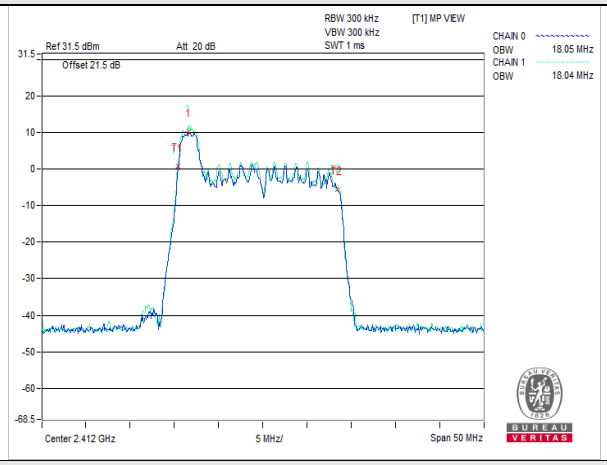
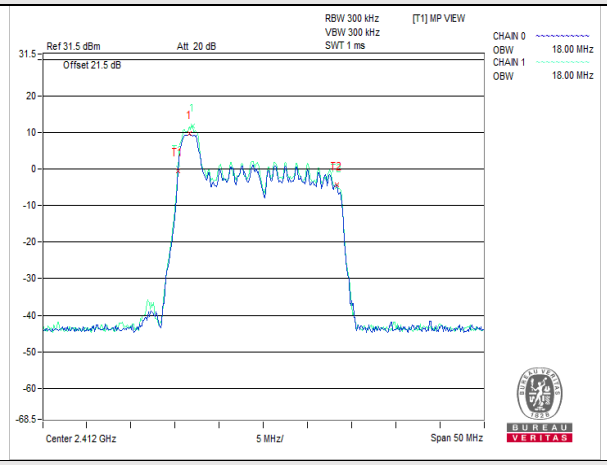
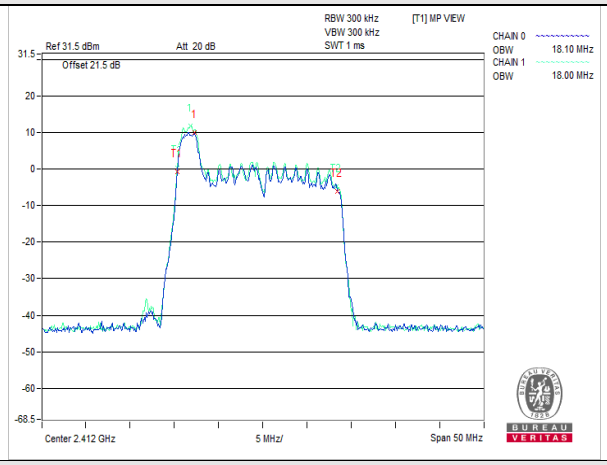
NOTE: For the test plots please refer to the below pages.

Chain 1

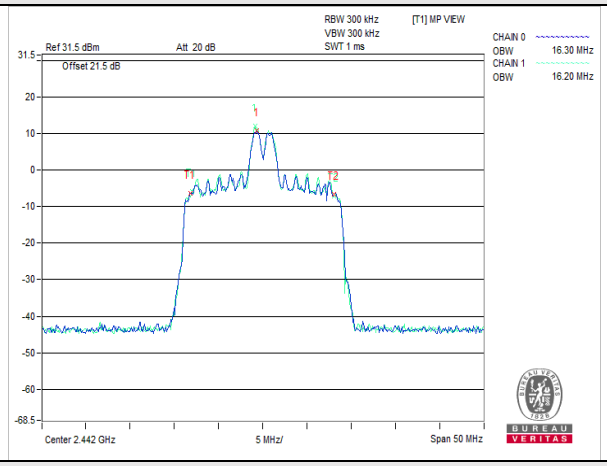
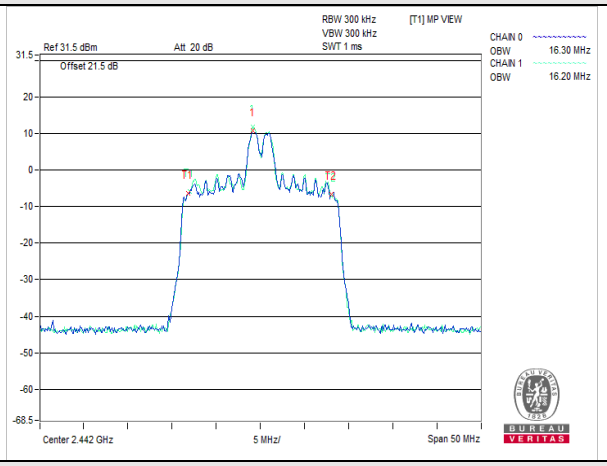
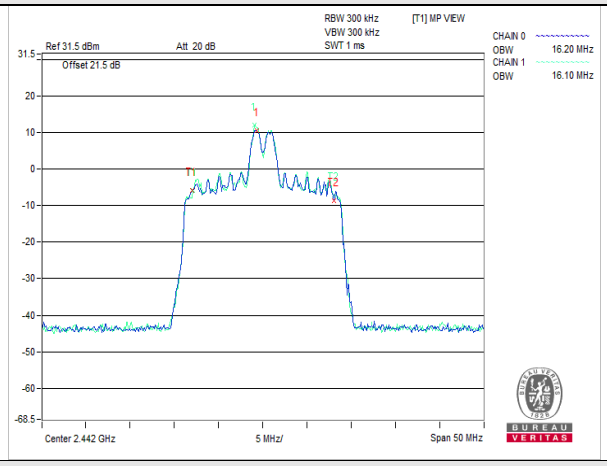
Channel	Frequency (MHz)	V_{normal}	$V_{max.}$	$V_{min.}$
		Occupied bandwidth (MHz)	Occupied bandwidth (MHz)	Occupied bandwidth (MHz)
1	2412	18.04	18.00	18.00
7	2442	16.20	16.20	16.10
13	2472	18.00	18.00	18.00

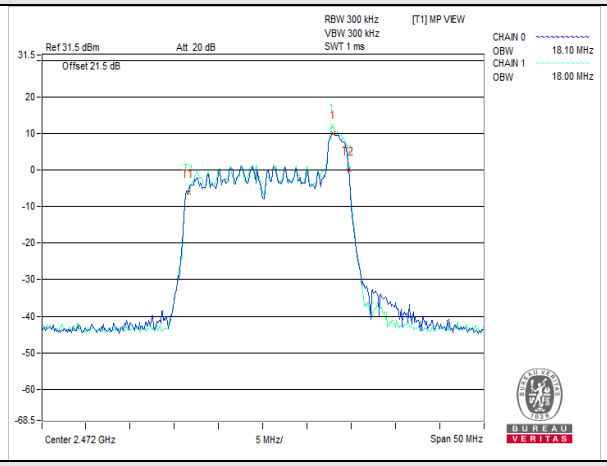
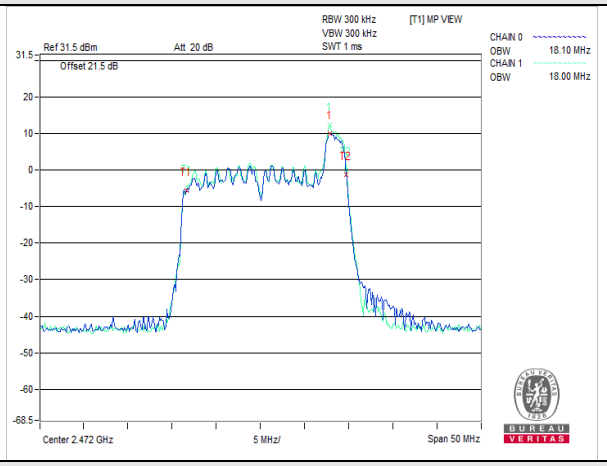
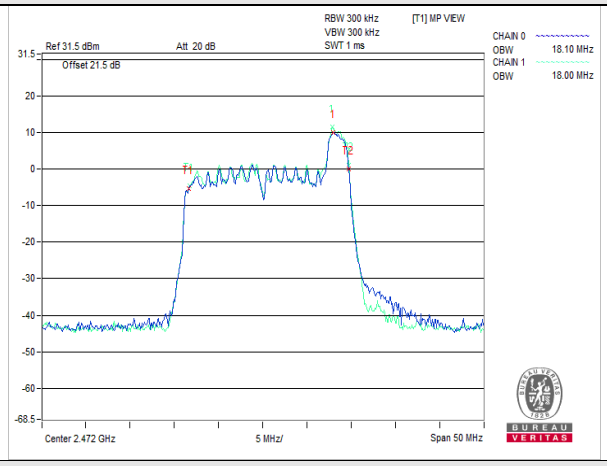
NOTE: For the test plots please refer to the below pages.

Graph

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	

CH 1 (2412MHz)

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 7 (2442MHz)	

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 13 (2472MHz)	

802.11ax (RU52)

Chain 0

Channel	Frequency (MHz)	V_{normal}	$V_{max.}$	$V_{min.}$
		Occupied bandwidth (MHz)	Occupied bandwidth (MHz)	Occupied bandwidth (MHz)
1	2412	17.98	18.10	18.00
7	2442	16.90	16.80	16.90
13	2472	18.10	18.20	18.20

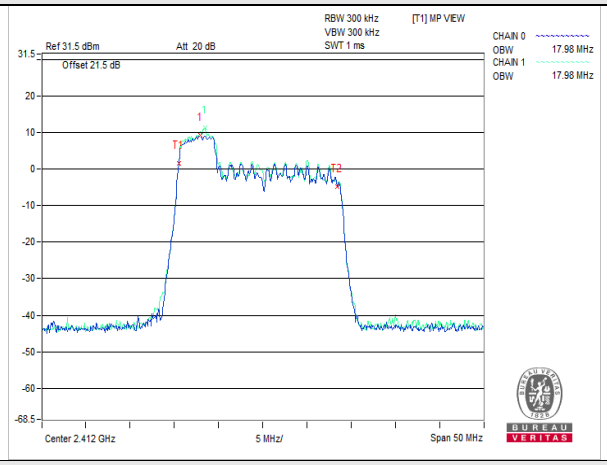
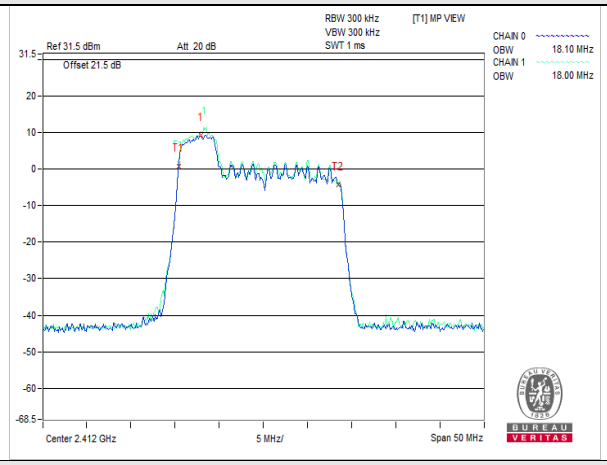
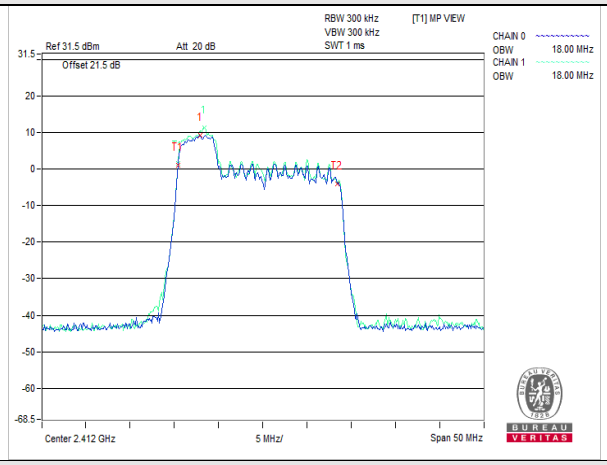
NOTE: For the test plots please refer to the below pages.

Chain 1

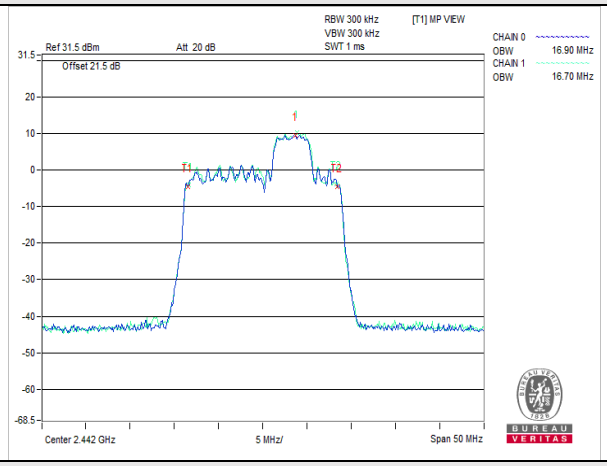
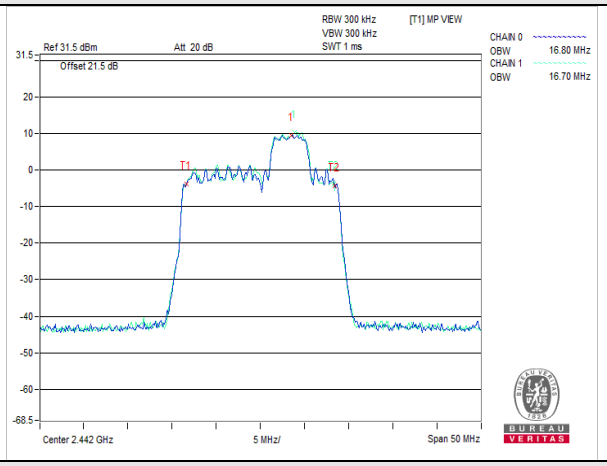
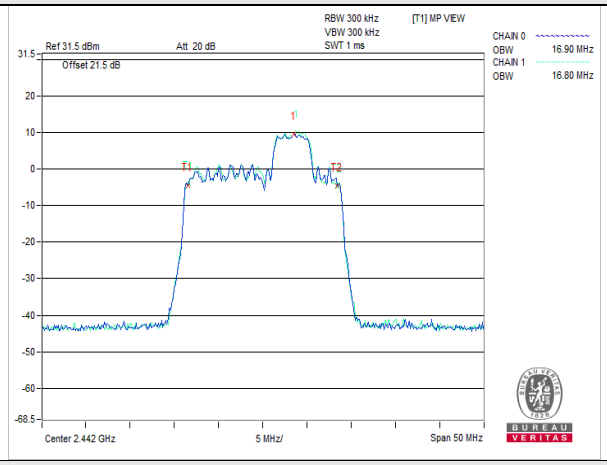
Channel	Frequency (MHz)	V_{normal}	$V_{max.}$	$V_{min.}$
		Occupied bandwidth (MHz)	Occupied bandwidth (MHz)	Occupied bandwidth (MHz)
1	2412	17.98	18.00	18.00
7	2442	16.70	16.70	16.80
13	2472	18.10	18.10	18.10

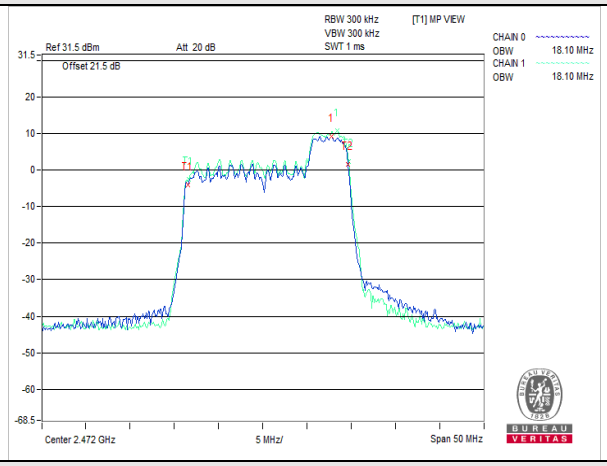
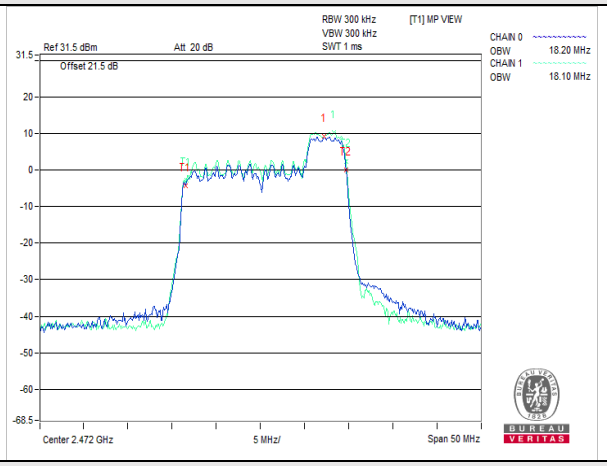
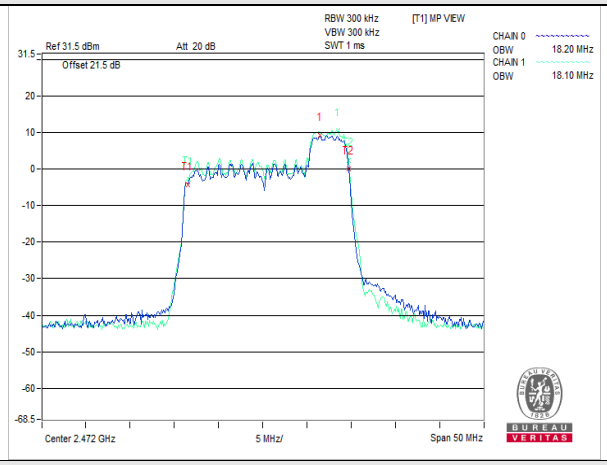
NOTE: For the test plots please refer to the below pages.

Graph

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	

CH 1 (2412MHz)

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 7 (2442MHz)	

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 13 (2472MHz)	

802.11ax (RU106)

Chain 0

Channel	Frequency (MHz)	V_{normal}	$V_{max.}$	$V_{min.}$
		Occupied bandwidth (MHz)	Occupied bandwidth (MHz)	Occupied bandwidth (MHz)
1	2412	18.05	18.10	18.10
7	2442	18.10	18.10	18.10
13	2472	18.12	18.10	18.10

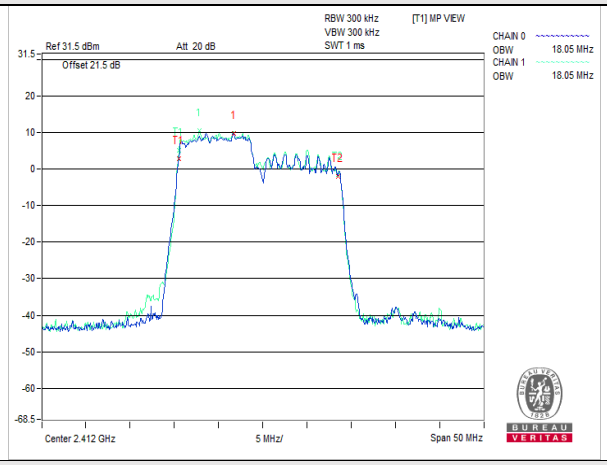
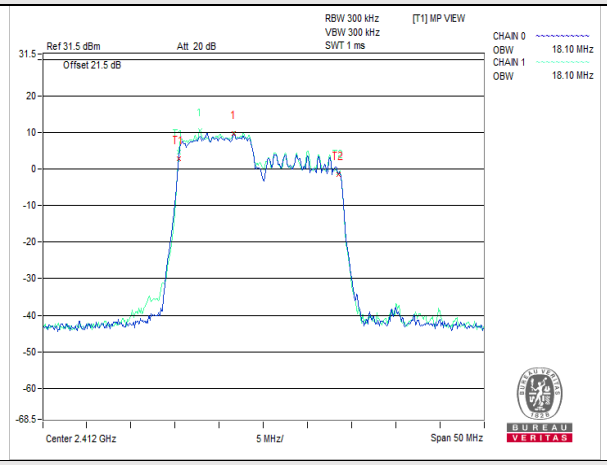
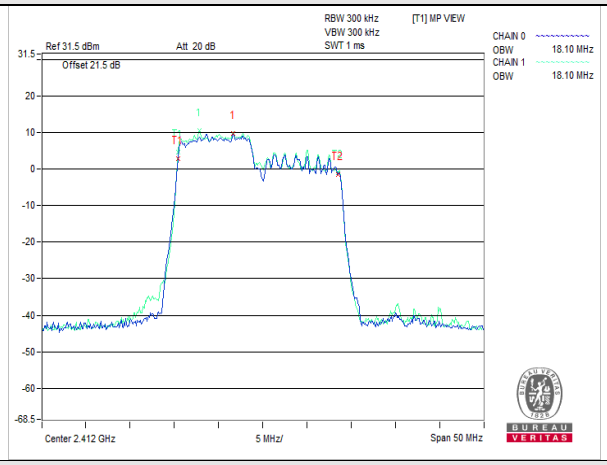
NOTE: For the test plots please refer to the below pages.

Chain 1

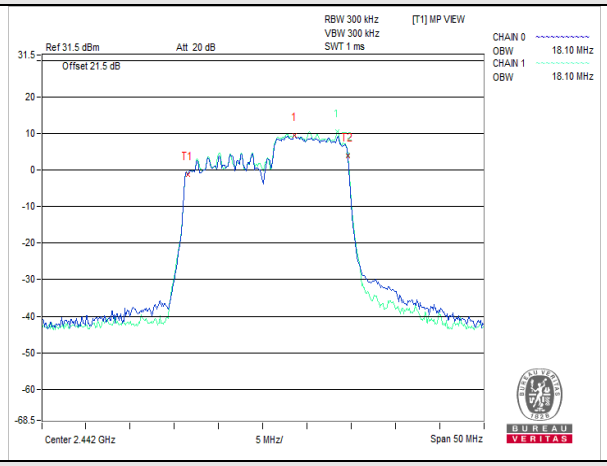
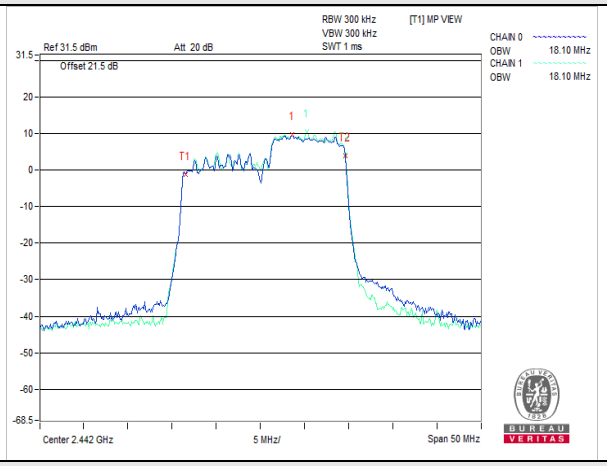
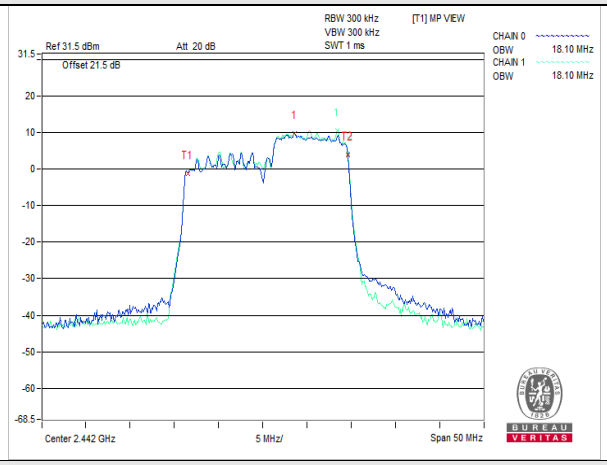
Channel	Frequency (MHz)	V_{normal}	$V_{max.}$	$V_{min.}$
		Occupied bandwidth (MHz)	Occupied bandwidth (MHz)	Occupied bandwidth (MHz)
1	2412	18.05	18.10	18.10
7	2442	18.10	18.10	18.10
13	2472	18.10	18.10	18.10

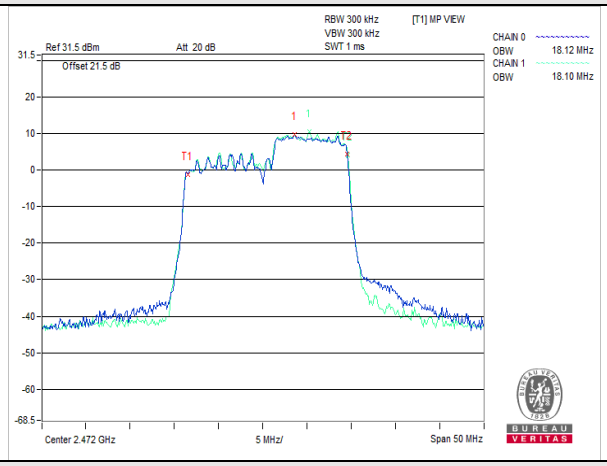
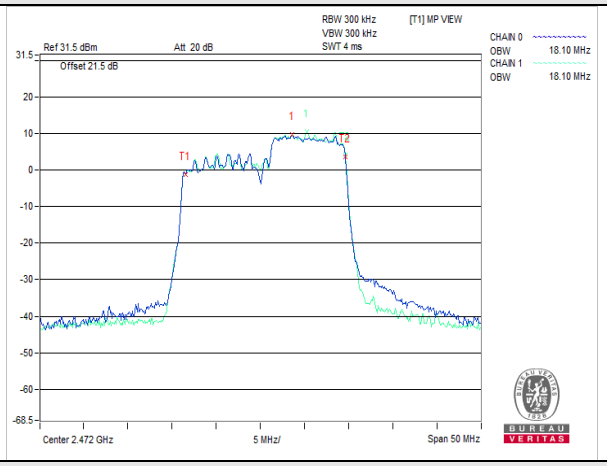
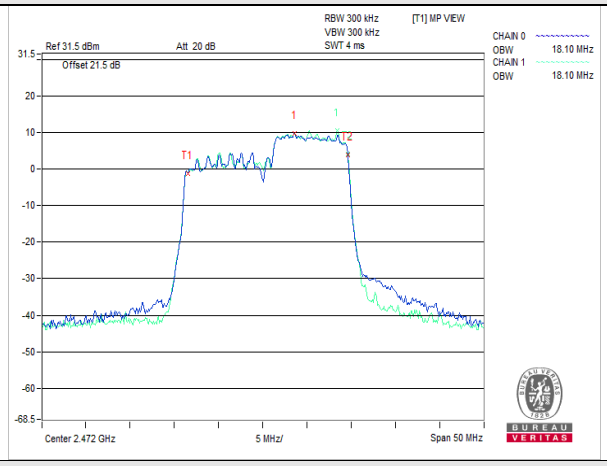
NOTE: For the test plots please refer to the below pages.

Graph

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	

CH 1 (2412MHz)

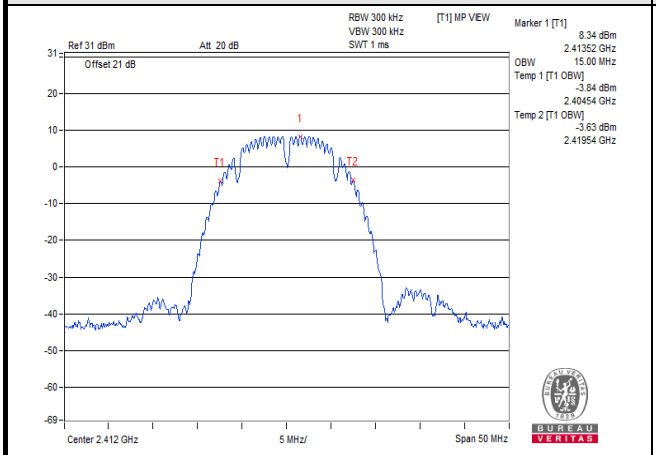
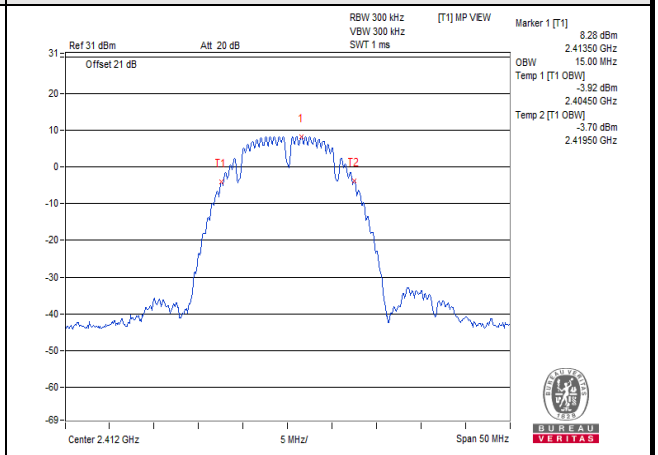
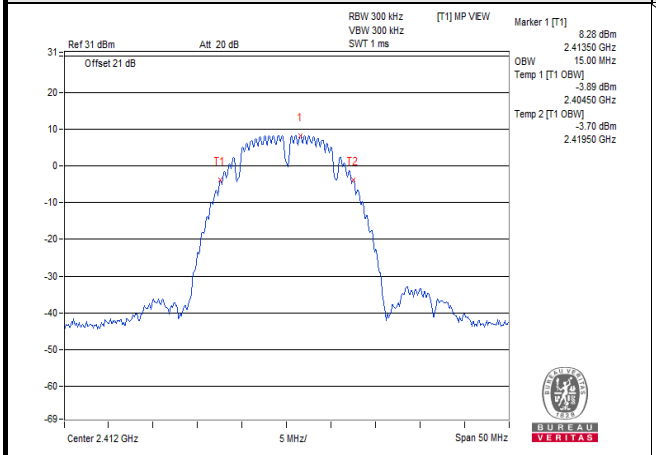
V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 7 (2442MHz)	

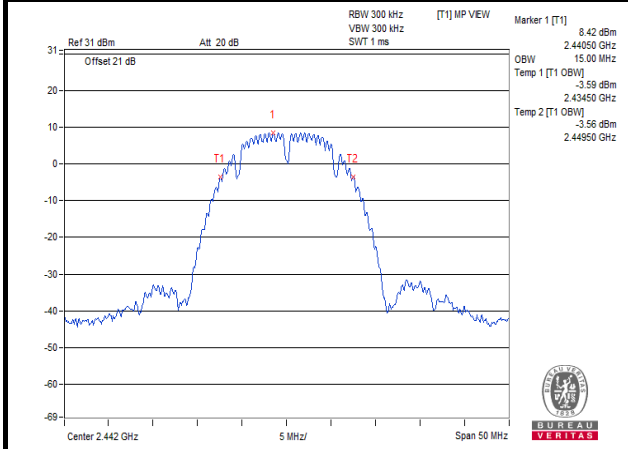
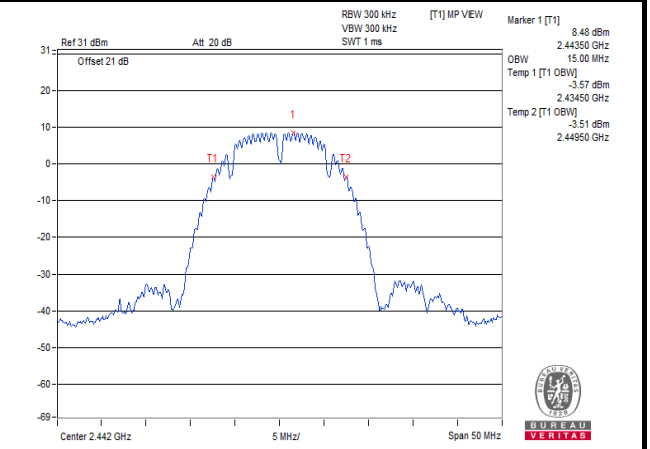
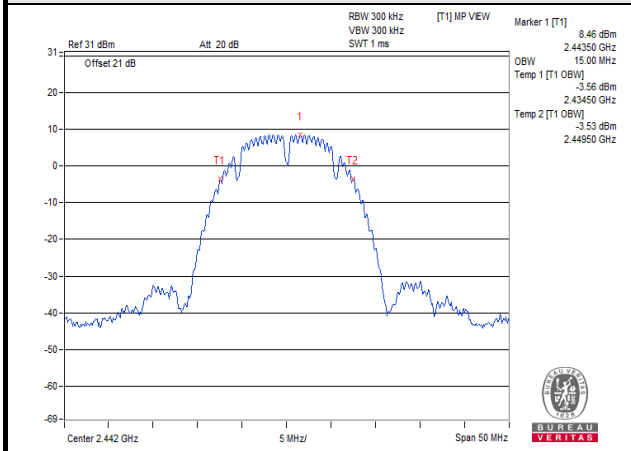
V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 13 (2472MHz)	

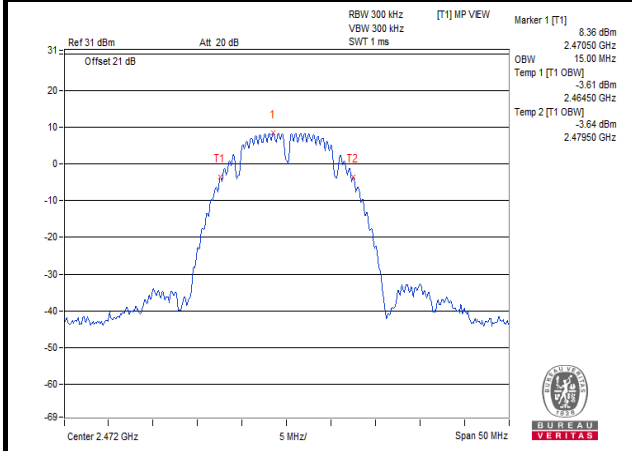
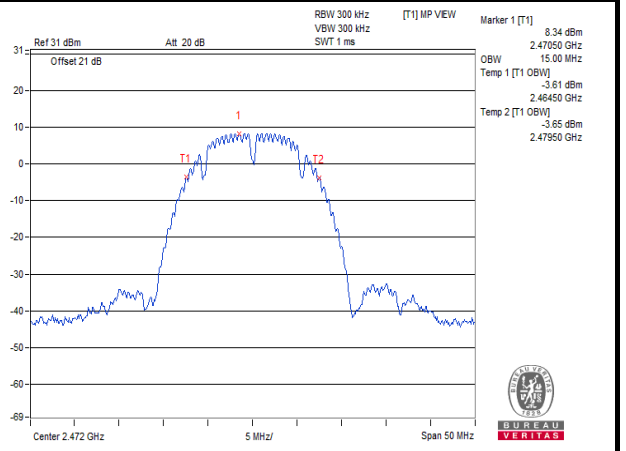
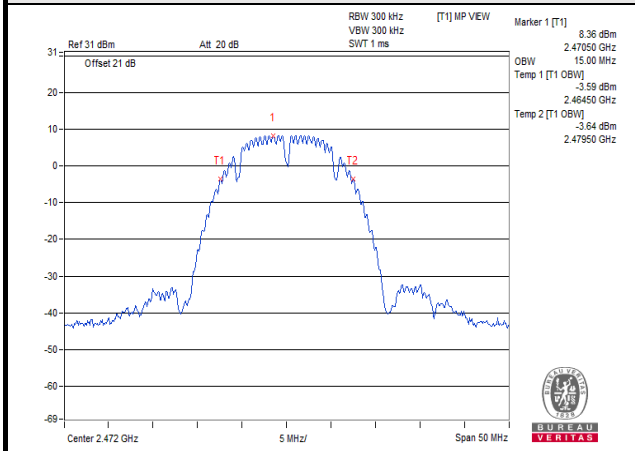
4.2.4 Test Results (Mode 2)

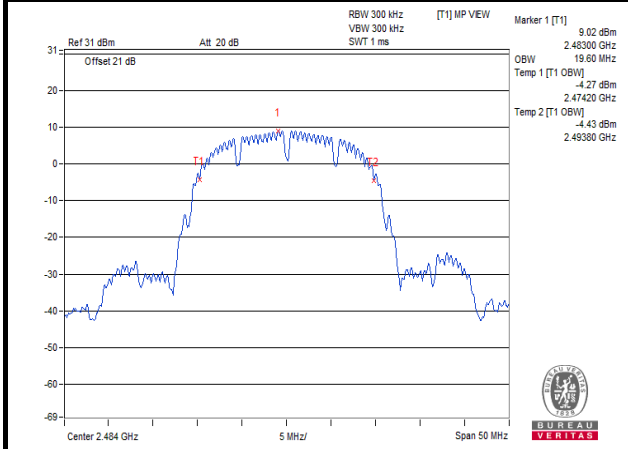
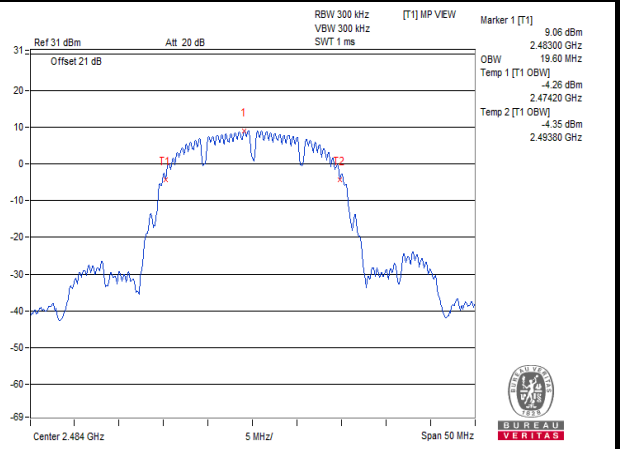
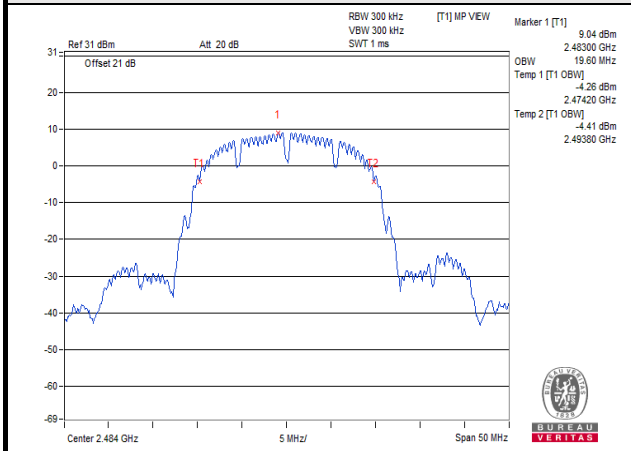
802.11b

Channel	Frequency (MHz)	V_{normal}	$V_{max.}$	$V_{min.}$
		Occupied bandwidth (MHz)	Occupied bandwidth (MHz)	Occupied bandwidth (MHz)
1	2412	15.00	15.00	15.00
7	2442	15.00	15.00	15.00
13	2472	15.00	15.00	15.00
14	2484	19.60	19.60	19.60

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 1 (2412MHz)	

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 7 (2442MHz)	

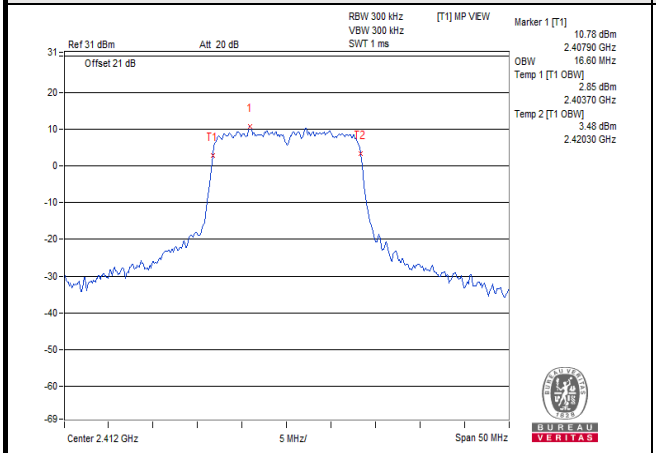
V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 13 (2472MHz)	

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 14 (2484MHz)	

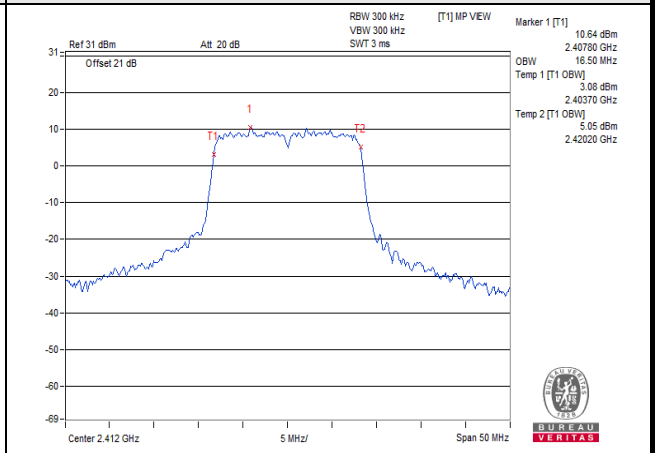
802.11g

Channel	Frequency (MHz)	V_{normal}	$V_{max.}$	$V_{min.}$
		Occupied bandwidth (MHz)	Occupied bandwidth (MHz)	Occupied bandwidth (MHz)
1	2412	16.60	16.50	16.60
7	2442	16.60	16.60	16.60
13	2472	16.60	16.52	16.60

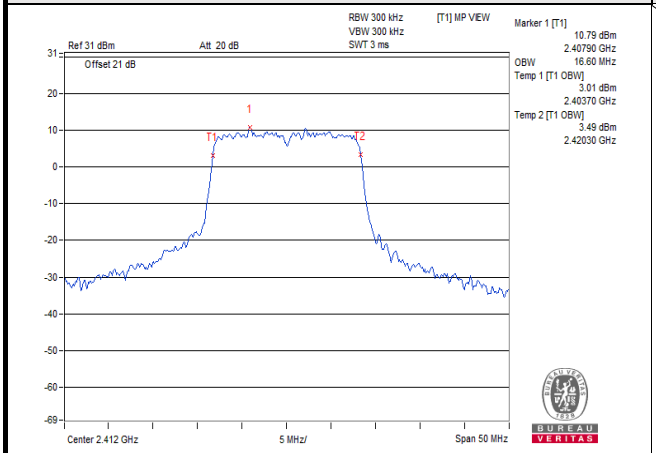
V_{normal}



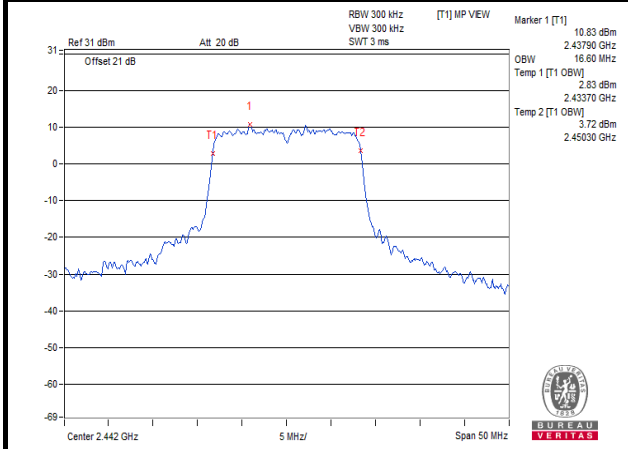
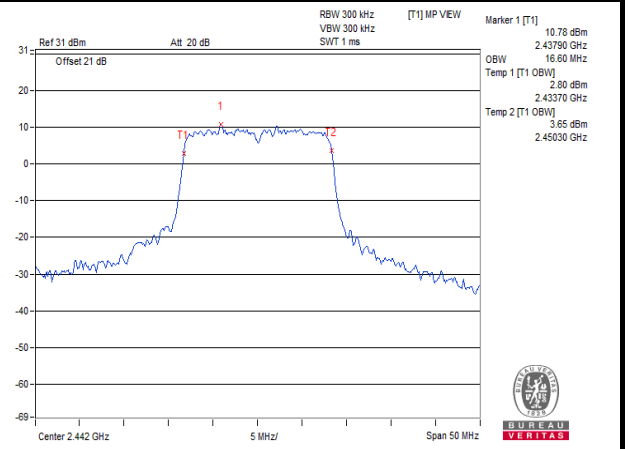
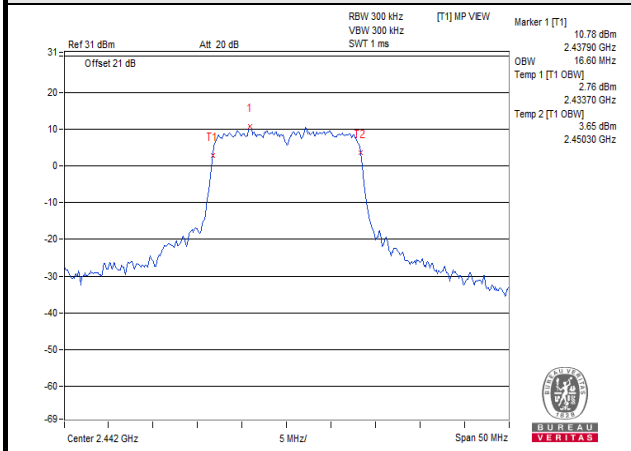
$V_{max.}$

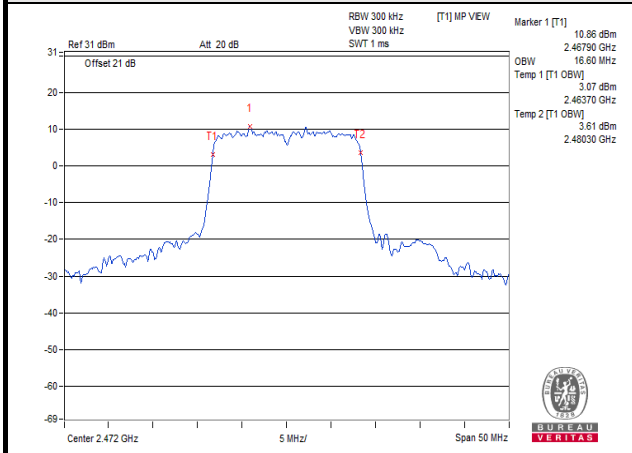
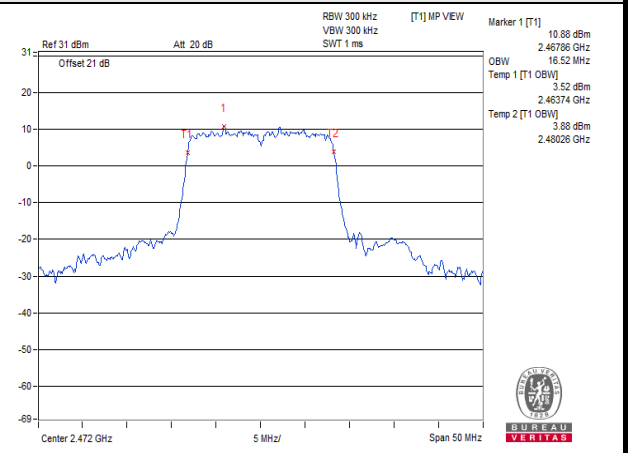
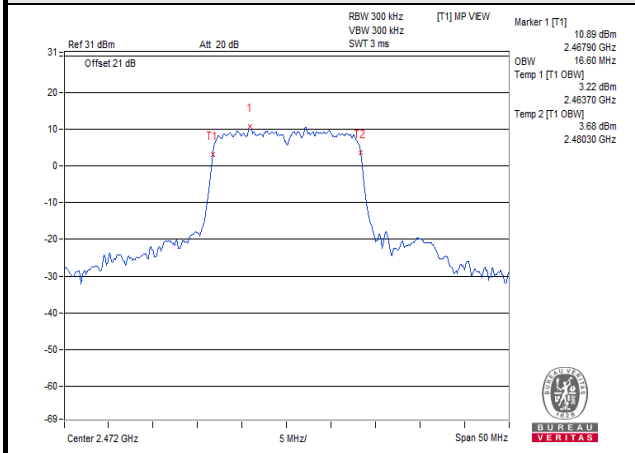


$V_{min.}$



CH 1 (2412MHz)

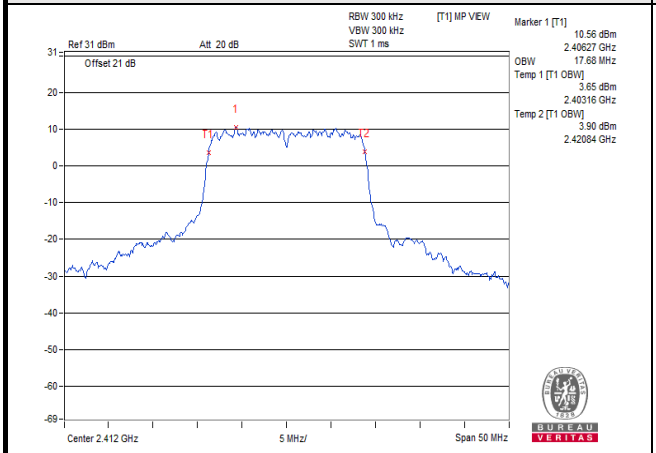
V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 7 (2442MHz)	

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 13 (2472MHz)	

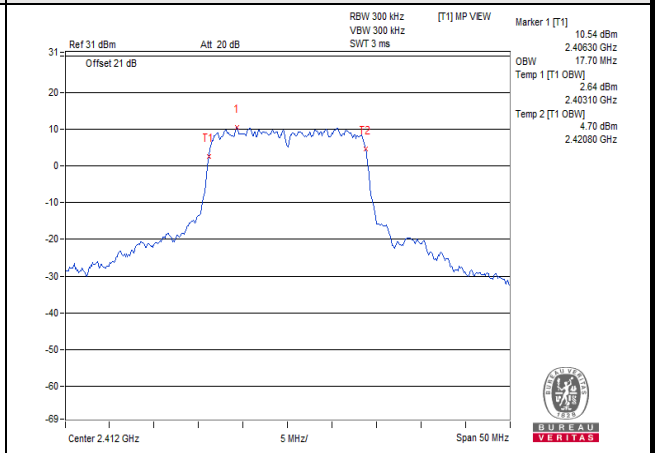
VHT20

Channel	Frequency (MHz)	V_{normal}	$V_{max.}$	$V_{min.}$
		Occupied bandwidth (MHz)	Occupied bandwidth (MHz)	Occupied bandwidth (MHz)
1	2412	17.68	17.70	17.70
7	2442	17.70	17.70	17.80
13	2472	17.80	17.80	17.80

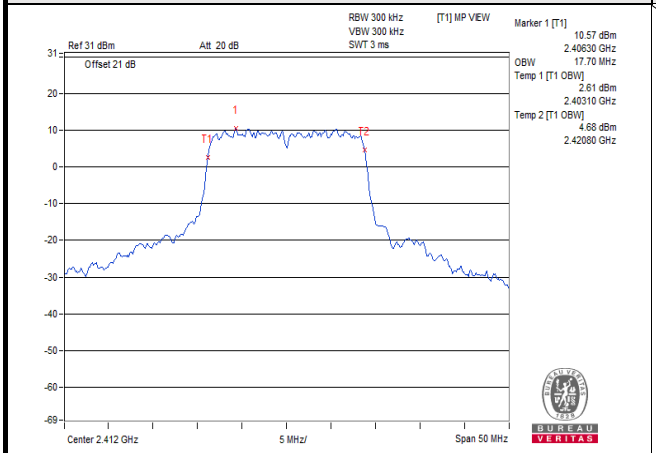
V_{normal}



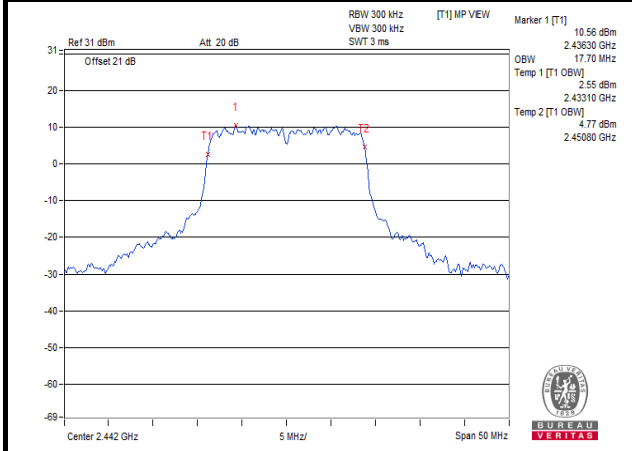
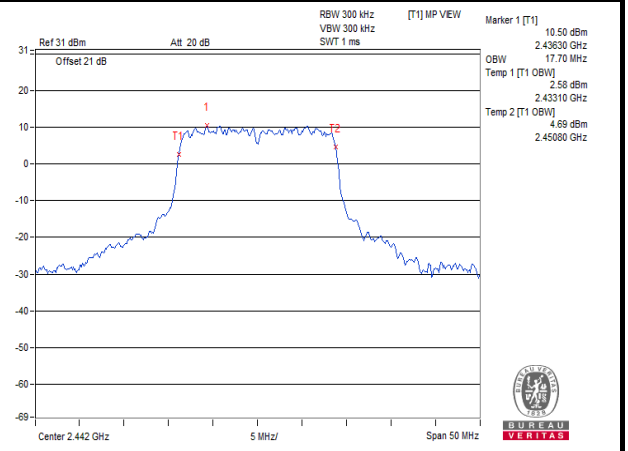
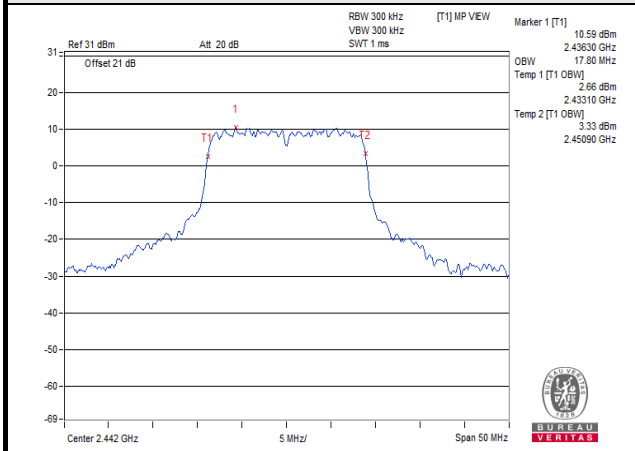
$V_{max.}$

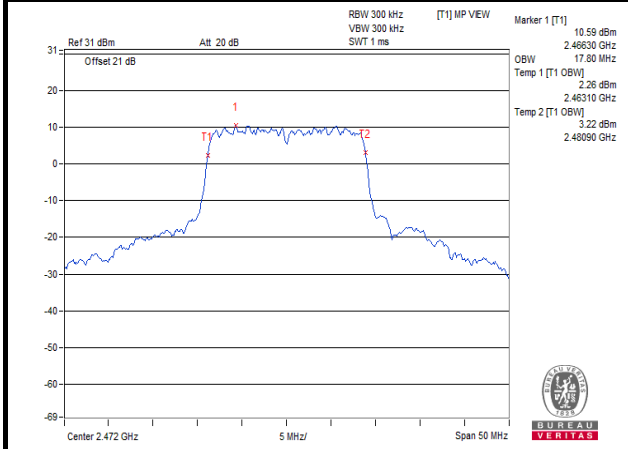
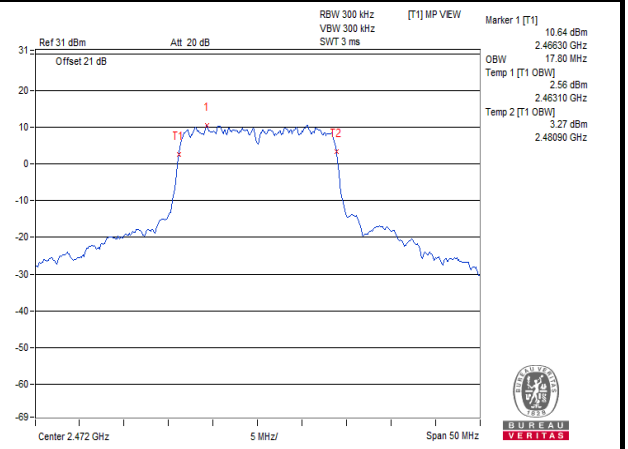
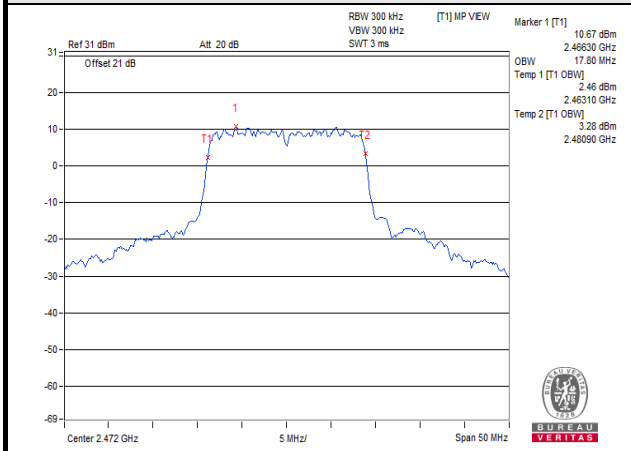


$V_{min.}$



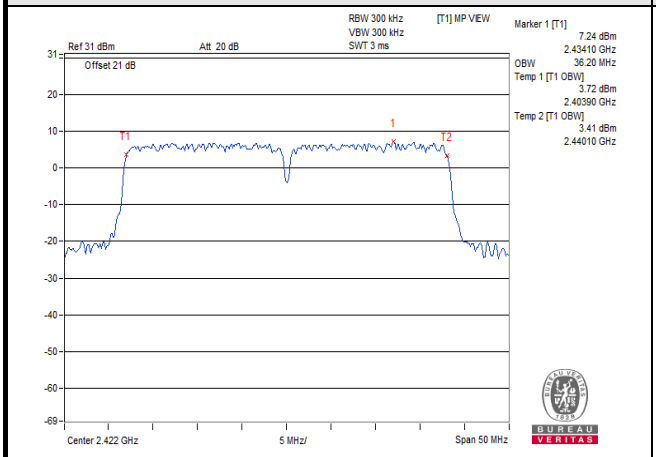
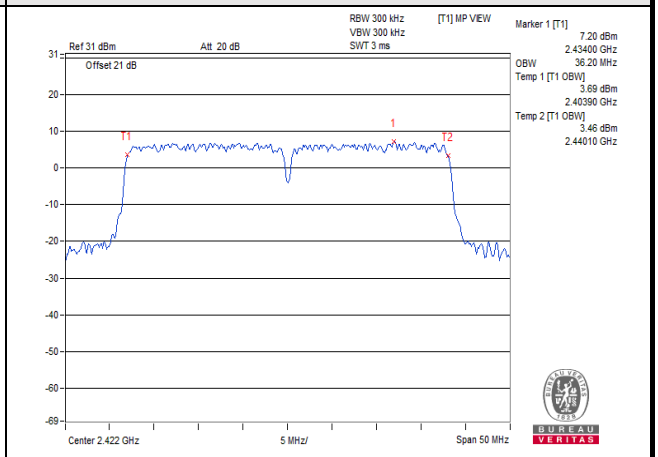
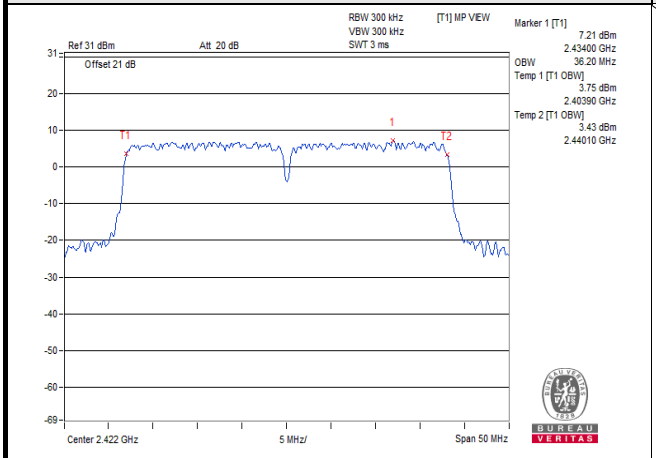
CH 1 (2412MHz)

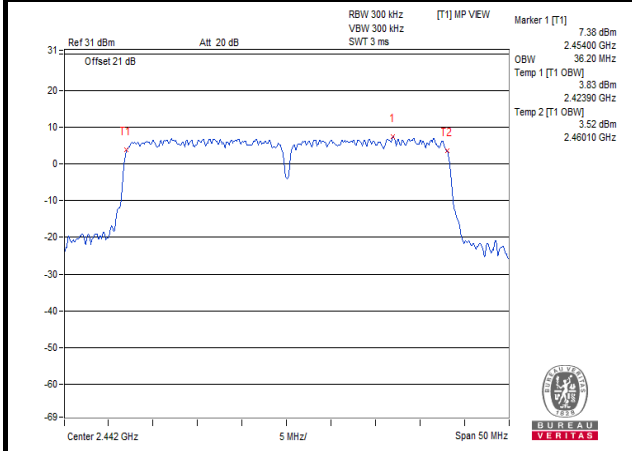
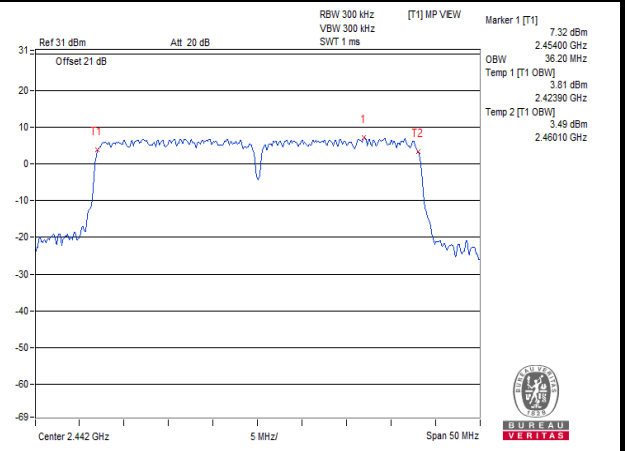
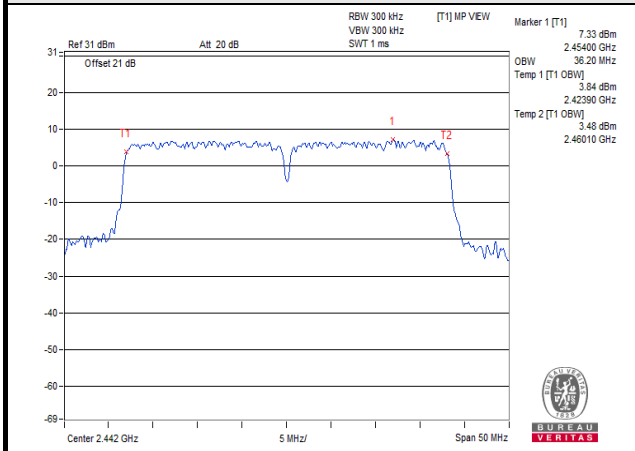
V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 7 (2442MHz)	

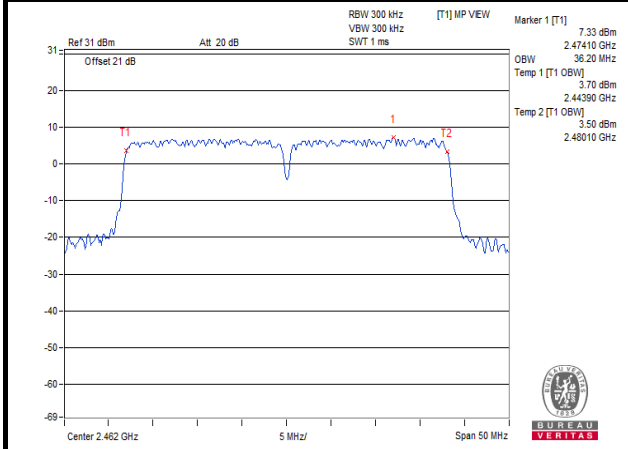
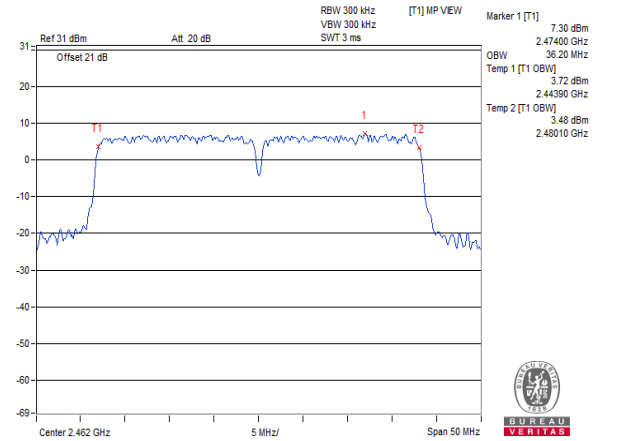
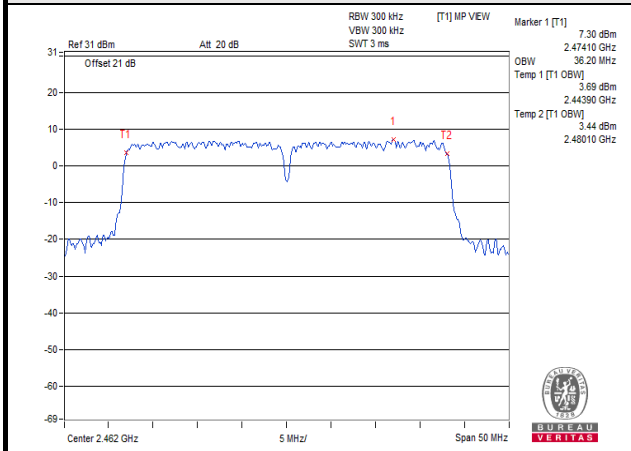
V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 13 (2472MHz)	

VHT40

Channel	Frequency (MHz)	V_{normal}	$V_{max.}$	$V_{min.}$
		Occupied bandwidth (MHz)	Occupied bandwidth (MHz)	Occupied bandwidth (MHz)
3	2422	36.20	36.20	36.20
7	2442	36.20	36.20	36.20
11	2462	36.20	36.20	36.20

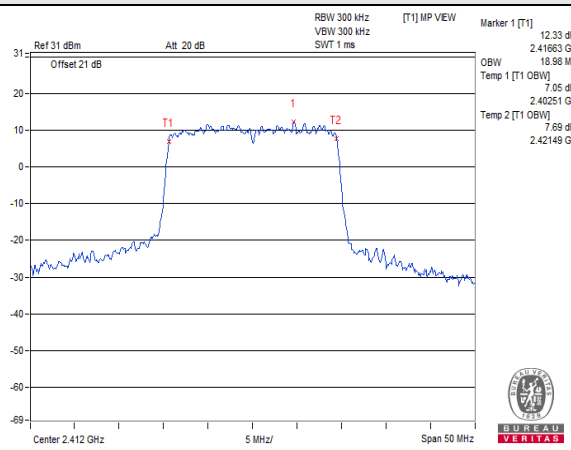
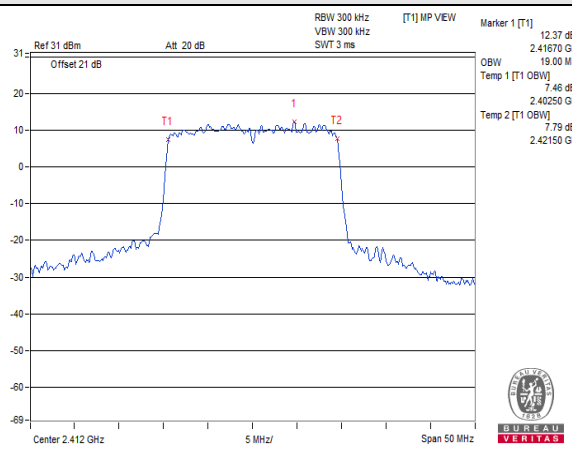
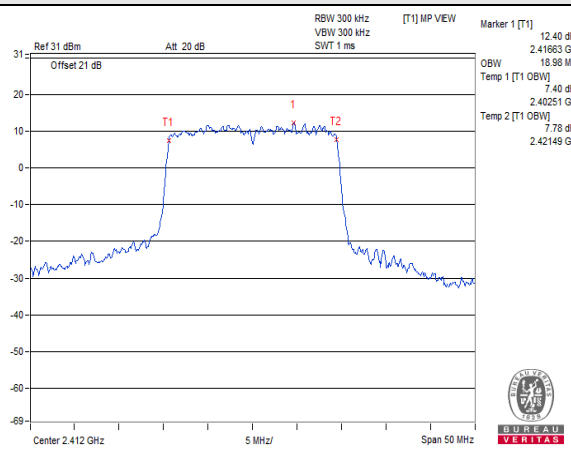
V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 3 (2422MHz)	

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 7 (2442MHz)	

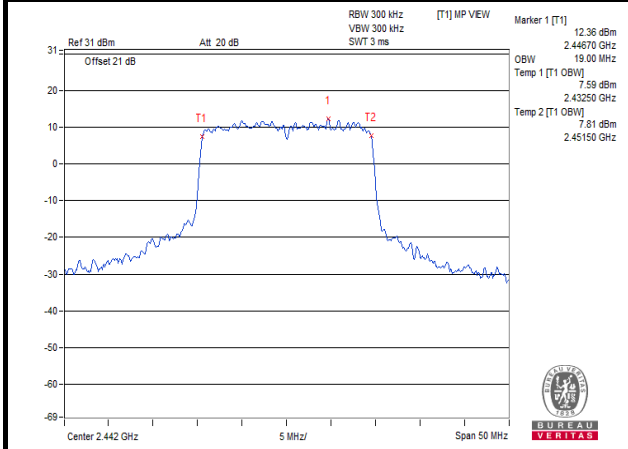
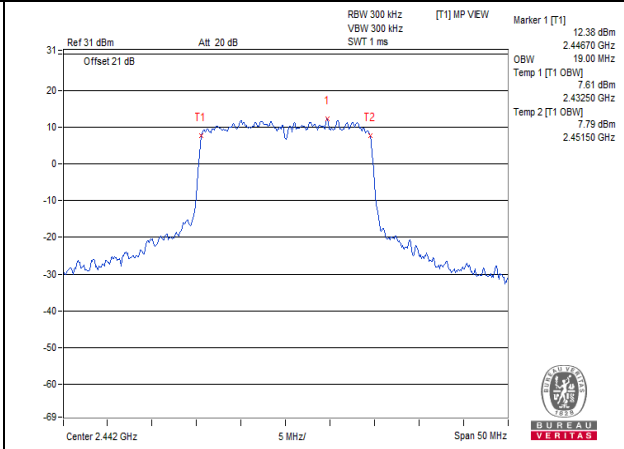
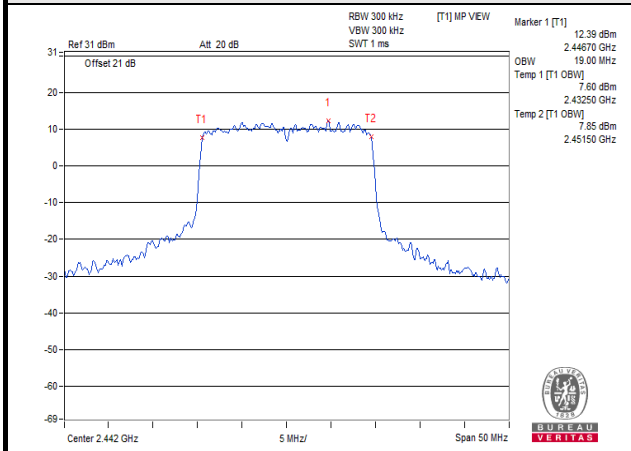
V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 11 (2462MHz)	

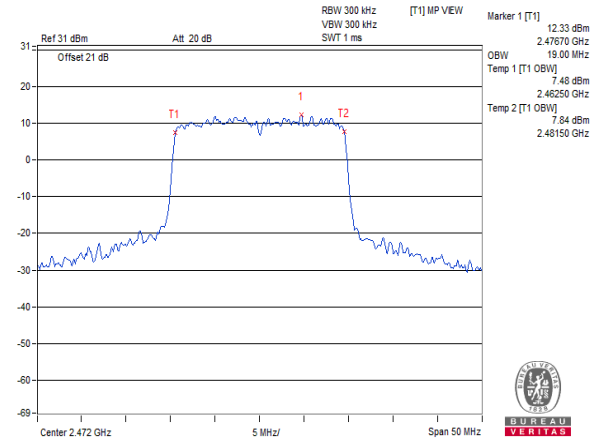
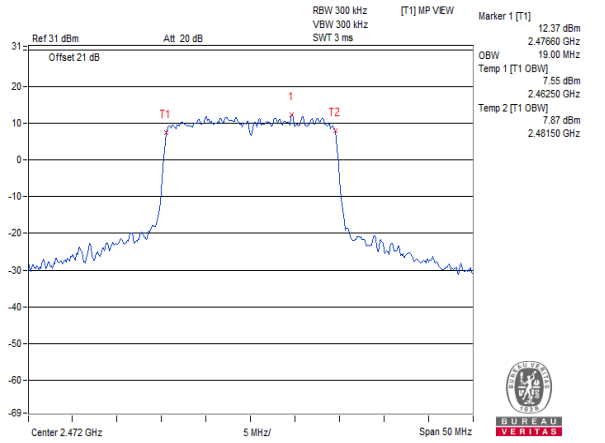
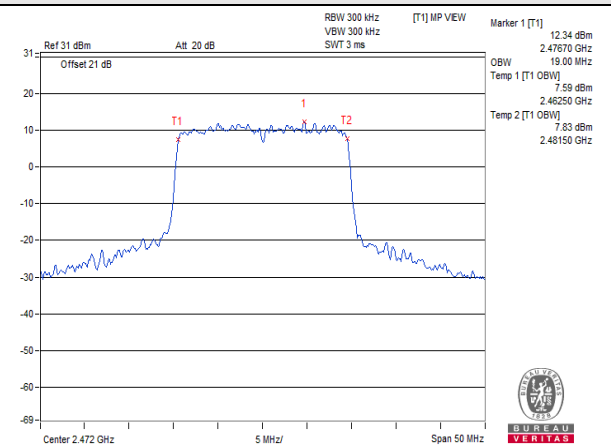
802.11ax (HE20)

Channel	Frequency (MHz)	V_{normal}	$V_{max.}$	$V_{min.}$
		Occupied bandwidth (MHz)	Occupied bandwidth (MHz)	Occupied bandwidth (MHz)
1	2412	18.98	19.00	18.98
7	2442	19.00	19.00	19.00
13	2472	19.00	19.00	19.00

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	

CH 1 (2412MHz)

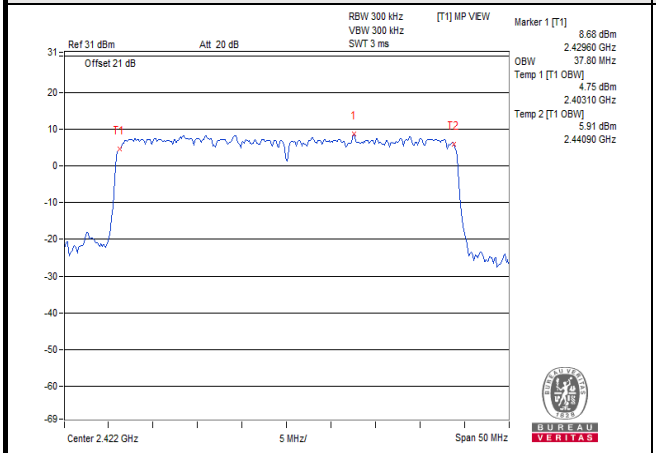
V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 7 (2442MHz)	

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 13 (2472MHz)	

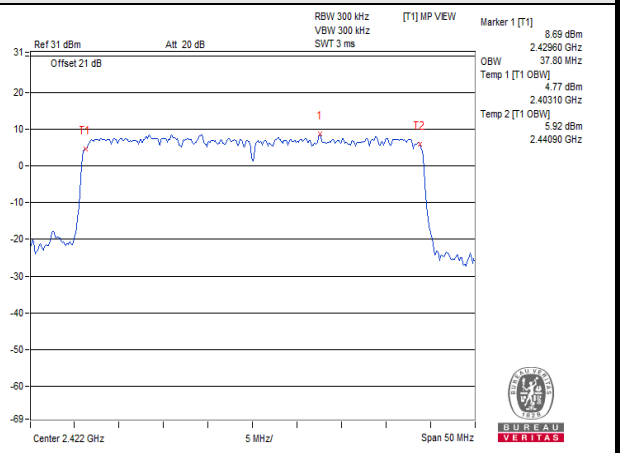
802.11ax (HE40)

Channel	Frequency (MHz)	V_{normal}	$V_{max.}$	$V_{min.}$
		Occupied bandwidth (MHz)	Occupied bandwidth (MHz)	Occupied bandwidth (MHz)
3	2422	37.80	37.80	37.90
7	2442	37.90	38.00	38.00
11	2462	37.90	37.80	37.90

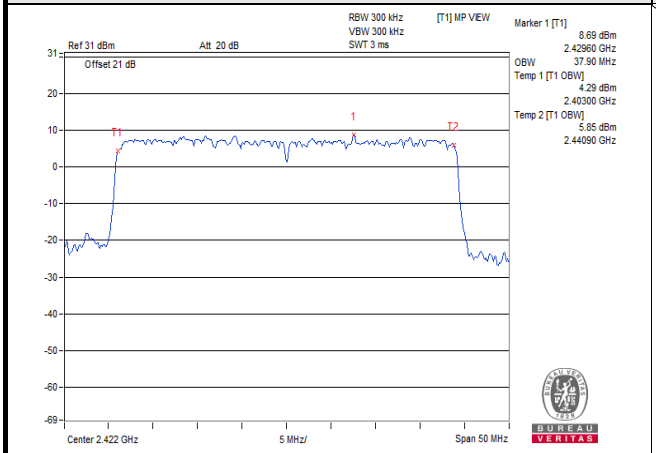
V_{normal}



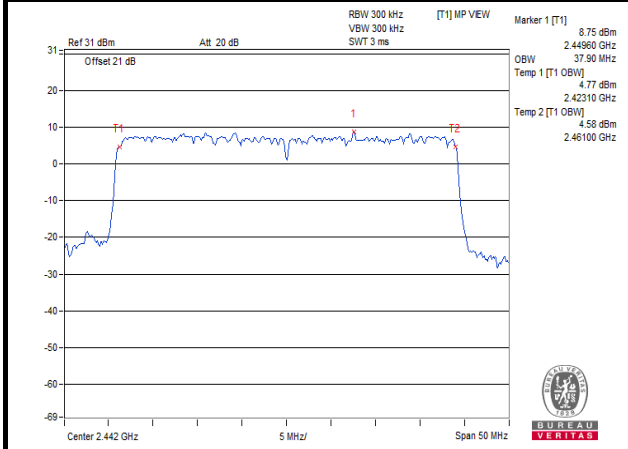
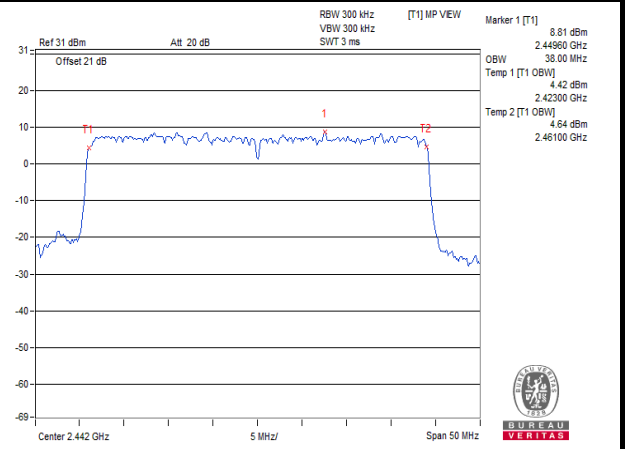
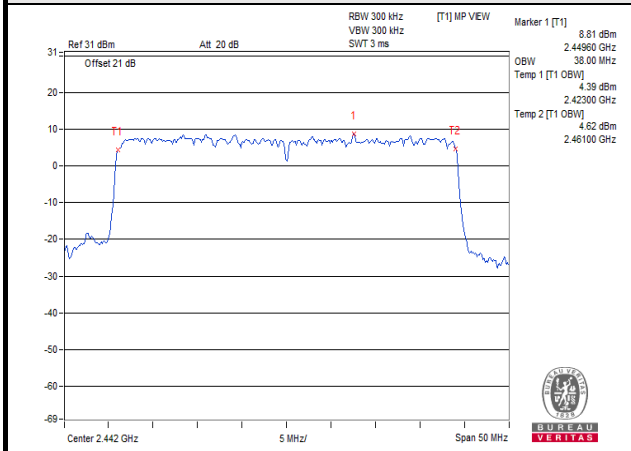
$V_{max.}$

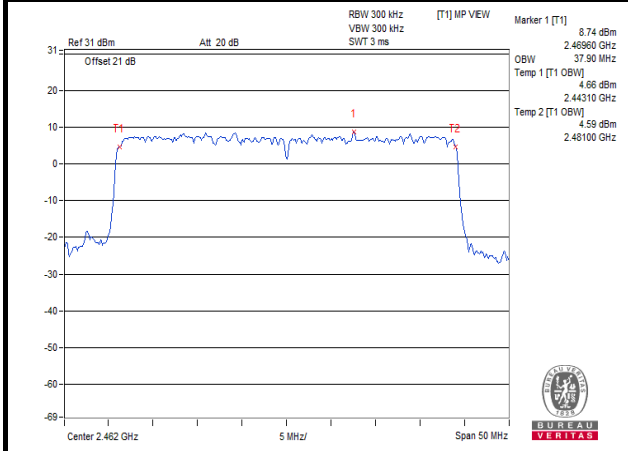
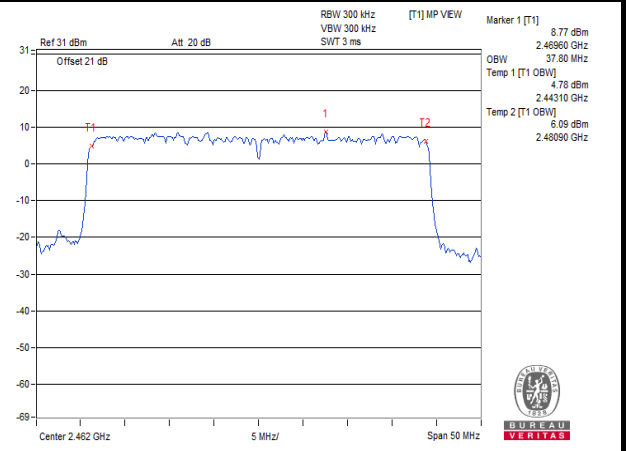
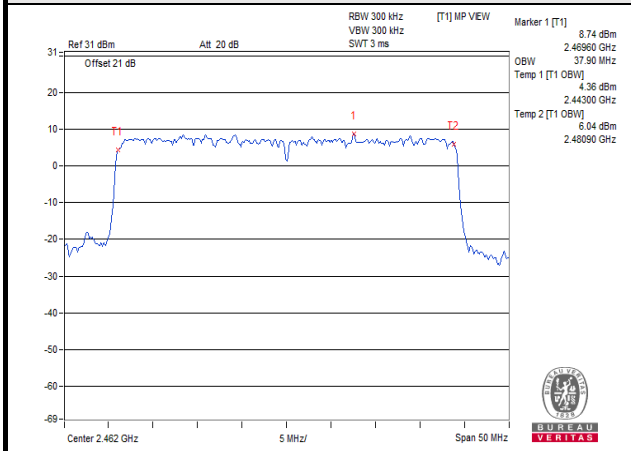


$V_{min.}$



CH 3 (2422MHz)

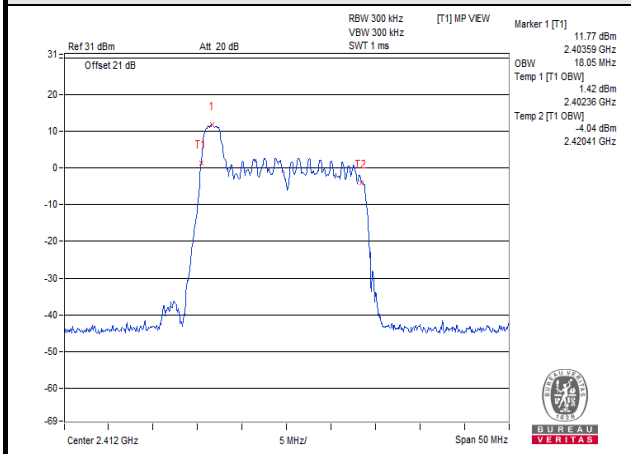
V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 7 (2442MHz)	

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 11 (2462MHz)	

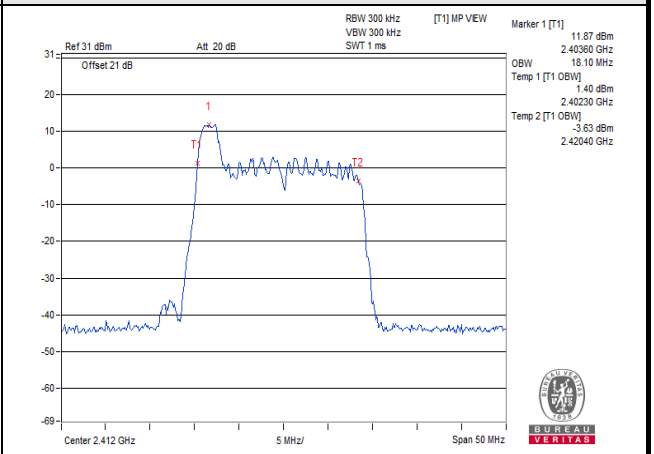
802.11ax (RU26)

Channel	Frequency (MHz)	V_{normal}	$V_{max.}$	$V_{min.}$
		Occupied bandwidth (MHz)	Occupied bandwidth (MHz)	Occupied bandwidth (MHz)
1	2412	18.05	18.10	18.10
7	2442	16.40	16.40	16.40
13	2472	18.10	18.20	18.20

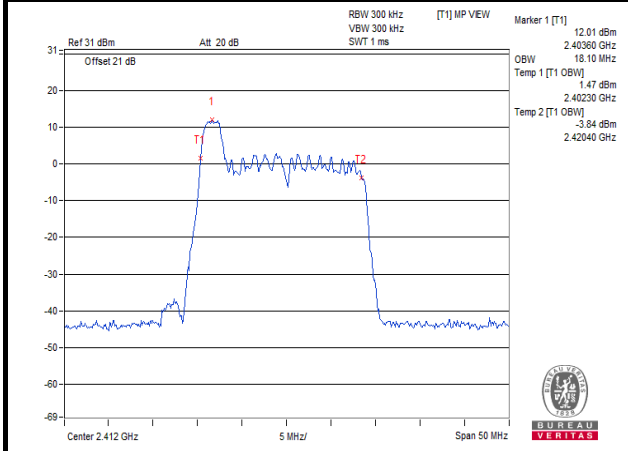
V_{normal}



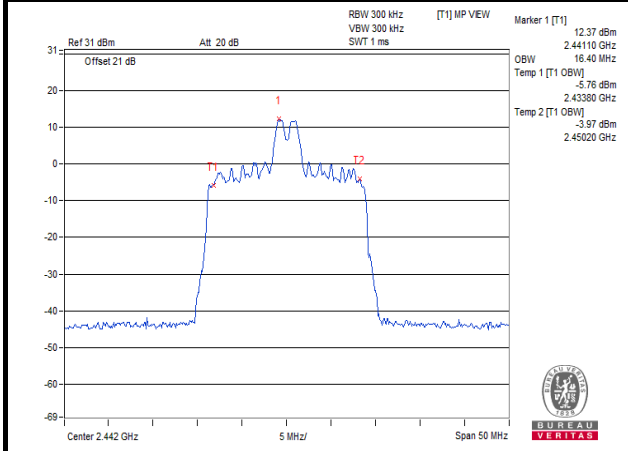
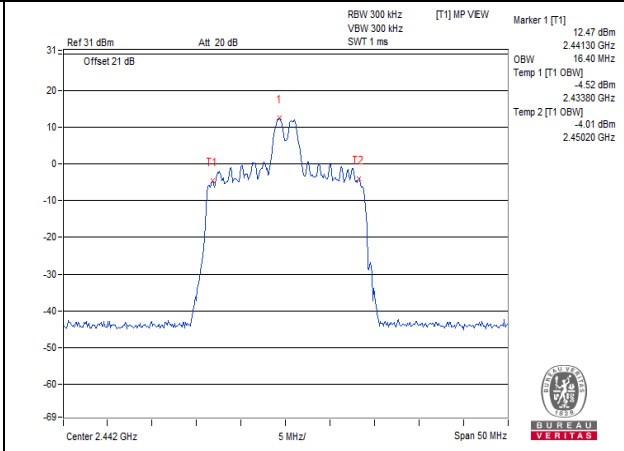
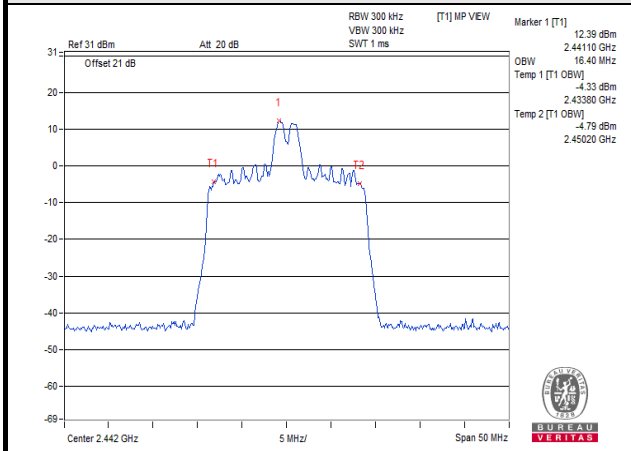
$V_{max.}$

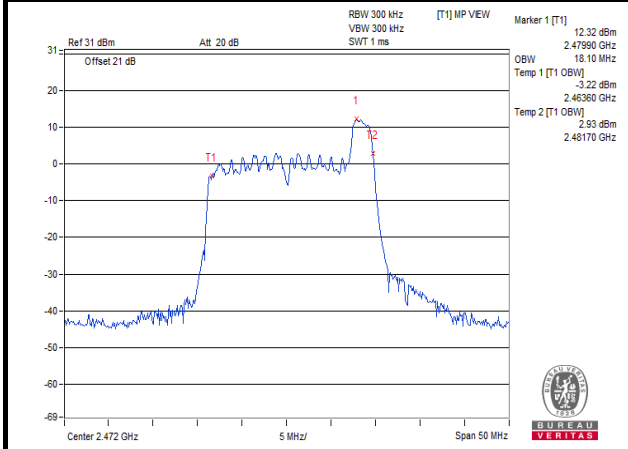
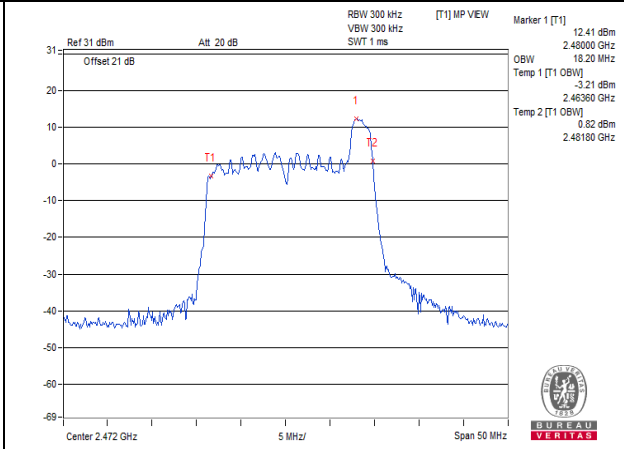
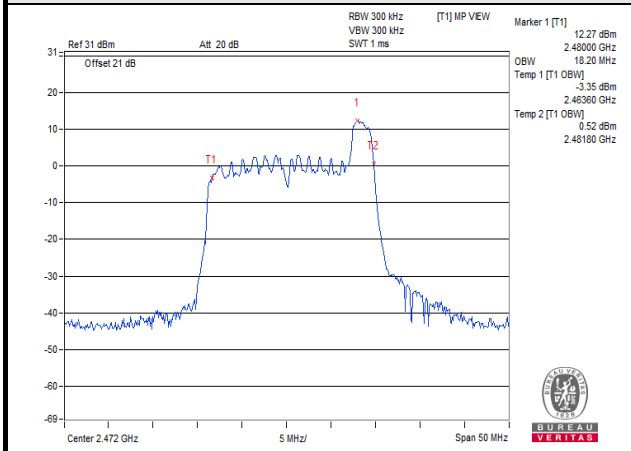


$V_{min.}$



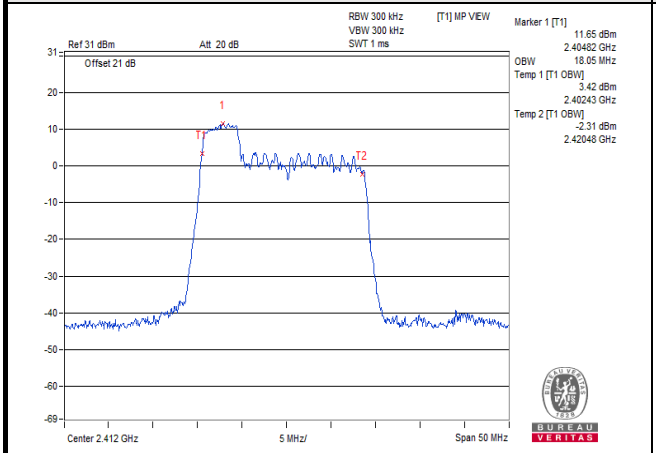
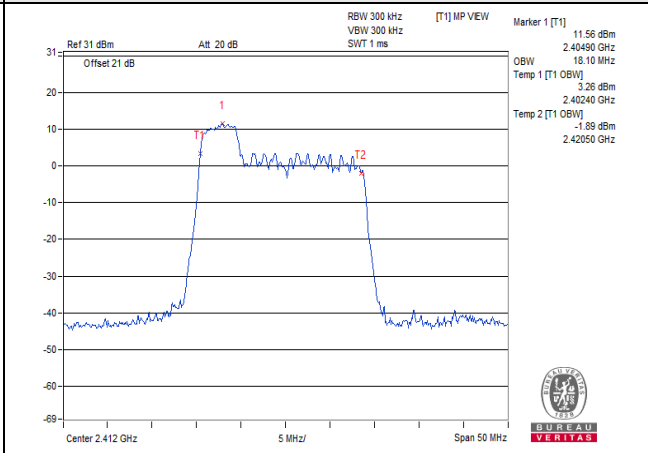
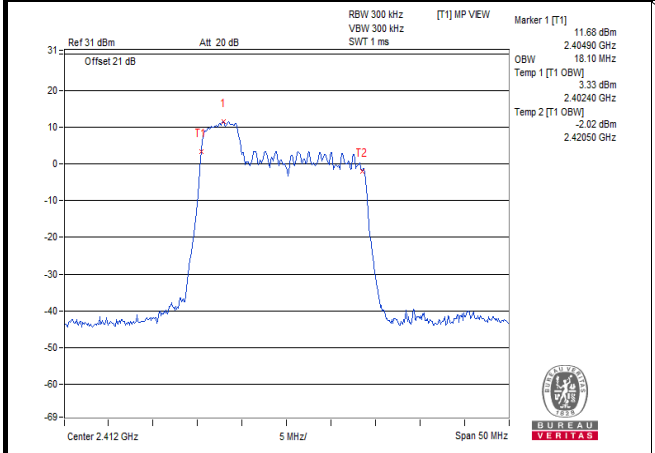
CH 1 (2412MHz)

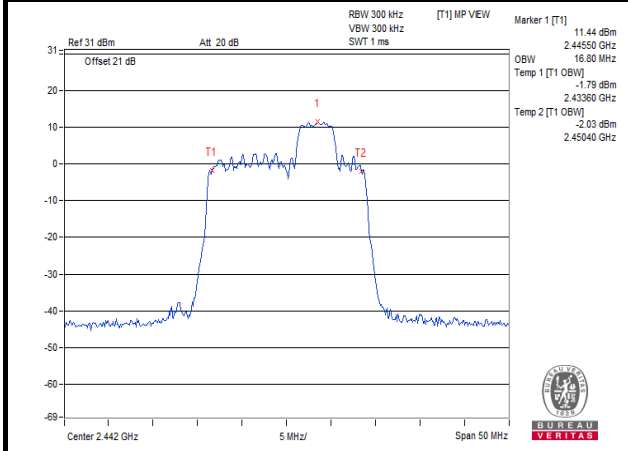
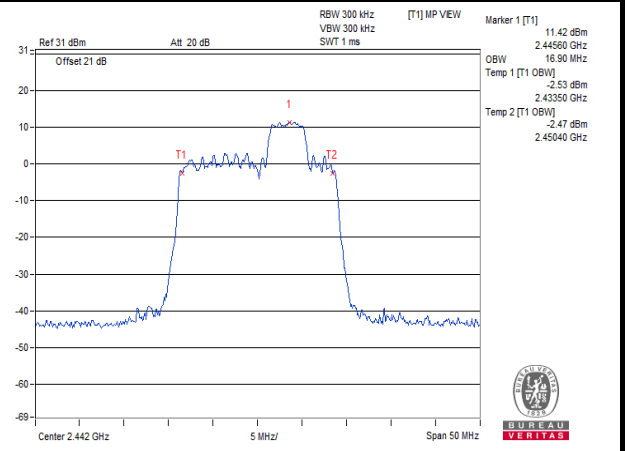
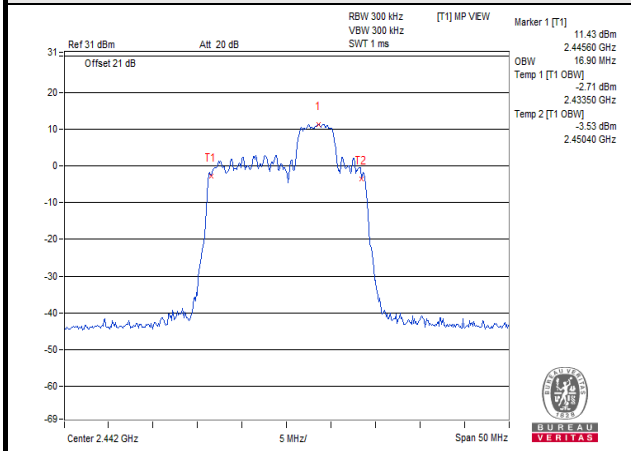
V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 7 (2442MHz)	

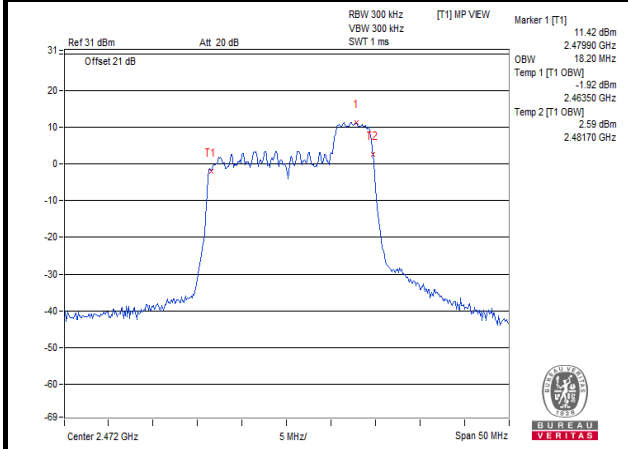
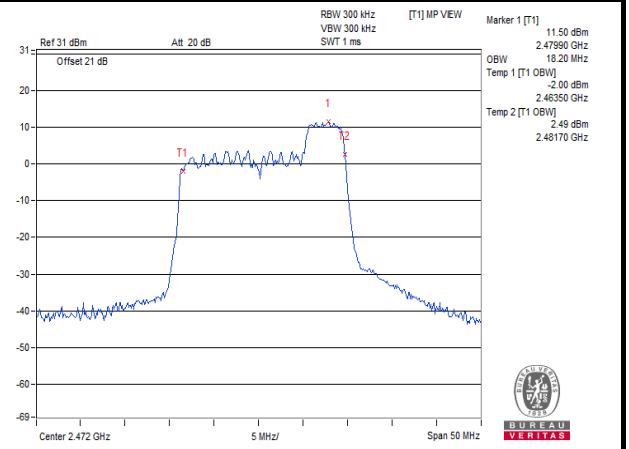
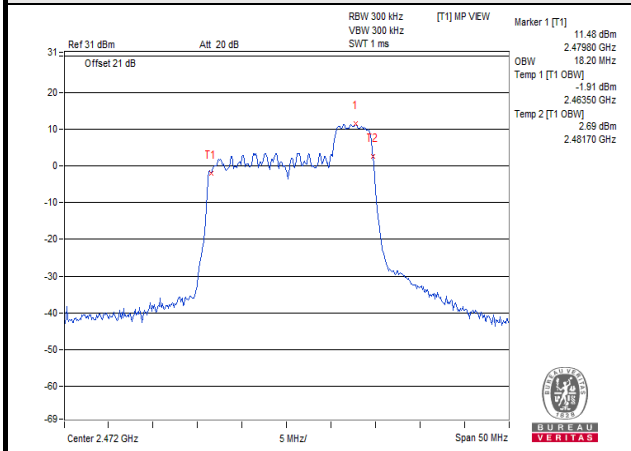
V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 13 (2472MHz)	

802.11ax (RU52)

Channel	Frequency (MHz)	V_{normal}	$V_{max.}$	$V_{min.}$
		Occupied bandwidth (MHz)	Occupied bandwidth (MHz)	Occupied bandwidth (MHz)
1	2412	18.05	18.10	18.10
7	2442	16.80	16.90	16.90
13	2472	18.20	18.20	18.20

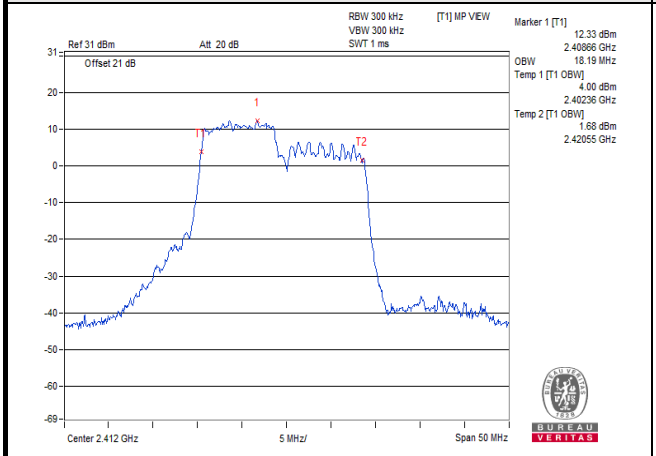
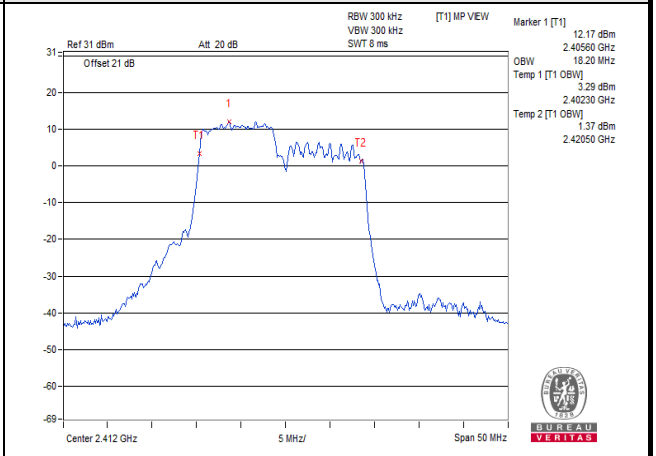
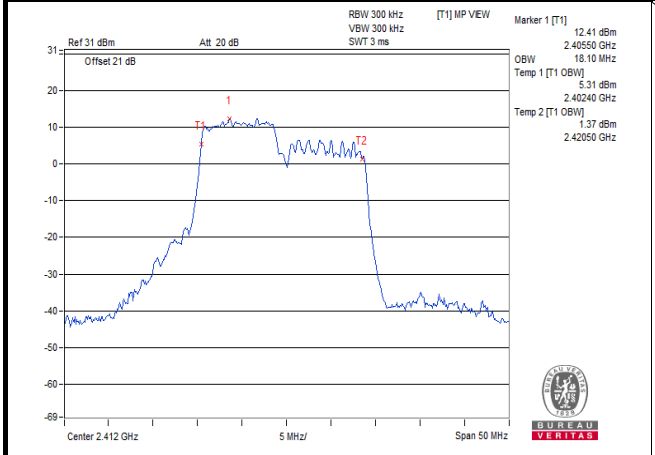
V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 1 (2412MHz)	

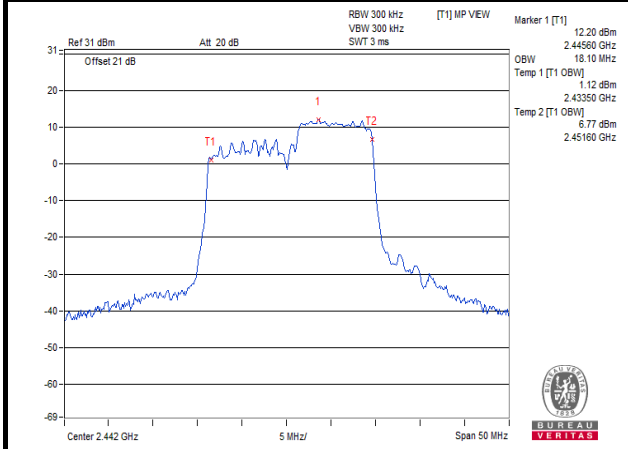
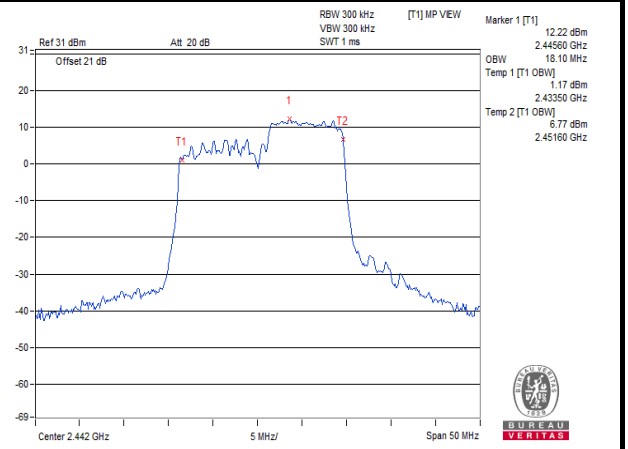
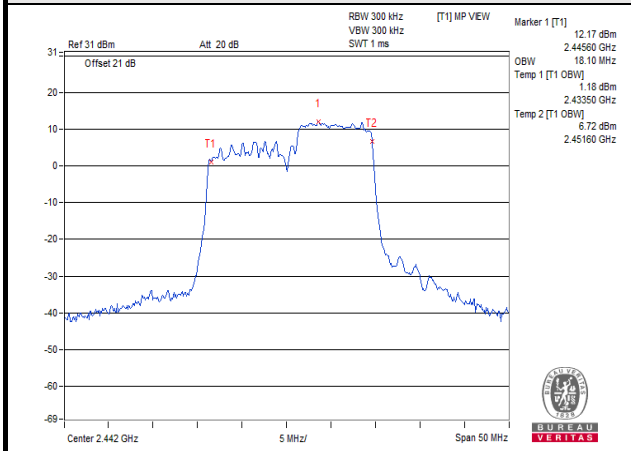
V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 7 (2442MHz)	

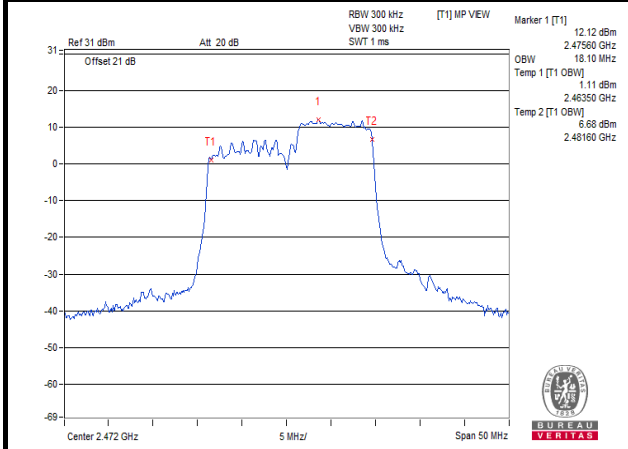
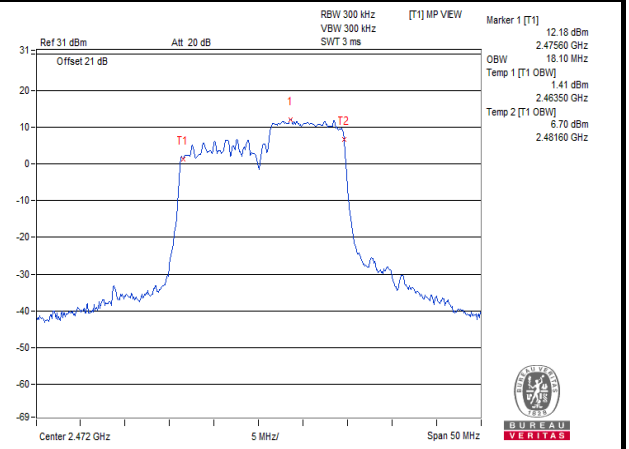
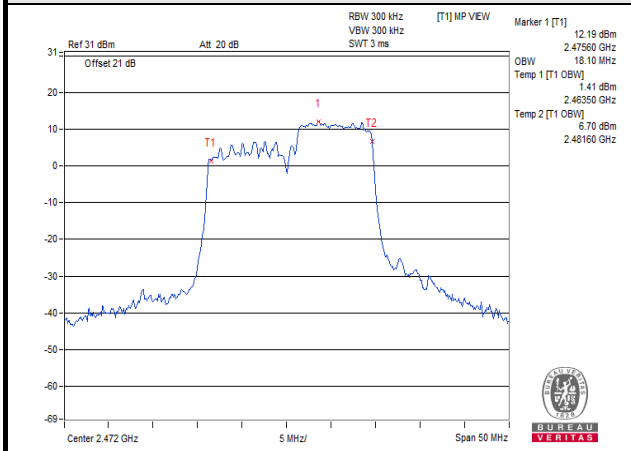
V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 13 (2472MHz)	

802.11ax (RU106)

Channel	Frequency (MHz)	V_{normal}	$V_{max.}$	$V_{min.}$
		Occupied bandwidth (MHz)	Occupied bandwidth (MHz)	Occupied bandwidth (MHz)
1	2412	18.19	18.20	18.10
7	2442	18.10	18.10	18.10
13	2472	18.10	18.10	18.10

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 1 (2412MHz)	

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 7 (2442MHz)	

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	

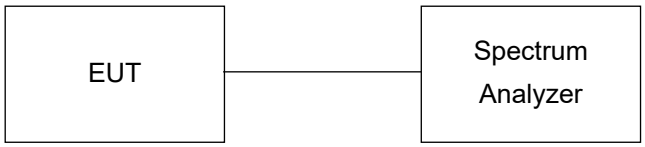
CH 13 (2472MHz)

4.3 Spreading Bandwidth Measurement (90% power bandwidth)

4.3.1 Limits of Spreading Bandwidth and Spreading Factor Measurement

Item	Limit	Remark
Spreading Bandwidth	≧500kHz	(For DSSS, FHSS)
Spreading Factor	≧5	Operating frequency 2400 to 2483.5MHz
	≧10	Operating frequency 2471 to 2497MHz

4.3.2 Test Setup



4.3.3 Test Results (Mode 1)

802.11b_Data Rate: 1Mbps

Chain 0

Channel	Frequency (MHz)	V_{normal}		$V_{max.}$		$V_{min.}$	
		Occupied bandwidth (MHz)	Spreading factor	Occupied bandwidth (MHz)	Spreading factor	Occupied bandwidth (MHz)	Spreading factor
1	2412	10.10	10.10	10.10	10.10	10.10	10.10
7	2442	10.10	10.10	10.10	10.10	10.10	10.10
13	2472	10.10	10.10	10.10	10.10	10.10	10.10
14	2484	15.10	15.10	15.10	15.10	15.10	15.10

NOTE: For the test plots please refer to the below pages.

Spreading Factor: 90% channel power bandwidth / 1

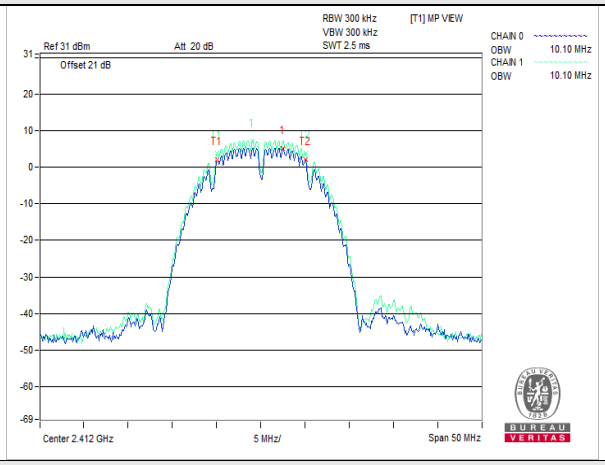
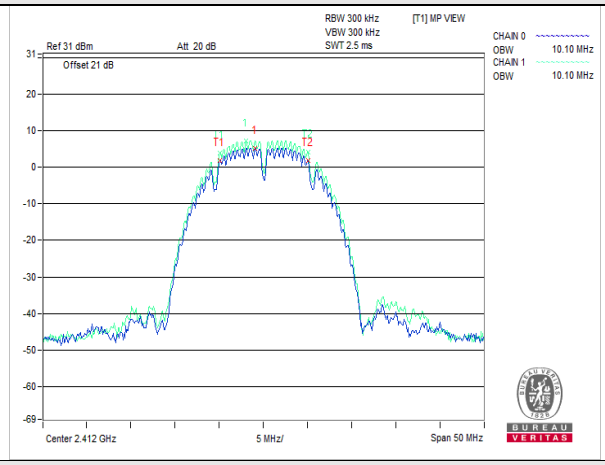
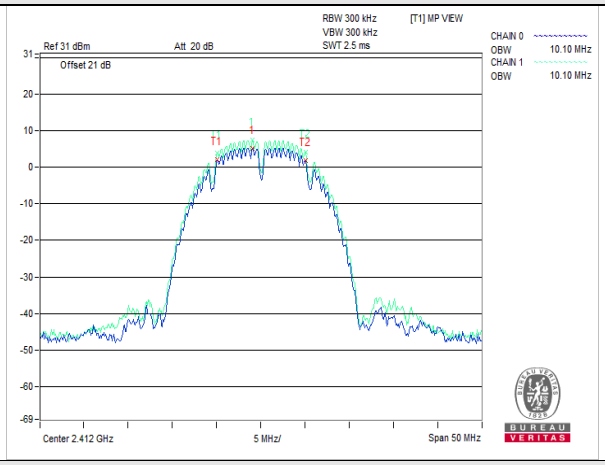
Chain 1

Channel	Frequency (MHz)	V_{normal}		$V_{max.}$		$V_{min.}$	
		Occupied bandwidth (MHz)	Spreading factor	Occupied bandwidth (MHz)	Spreading factor	Occupied bandwidth (MHz)	Spreading factor
1	2412	10.10	10.10	10.10	10.10	10.10	10.10
7	2442	10.10	10.10	10.10	10.10	10.10	10.10
13	2472	10.10	10.10	10.10	10.10	10.10	10.10
14	2484	15.20	15.20	15.20	15.20	15.20	15.20

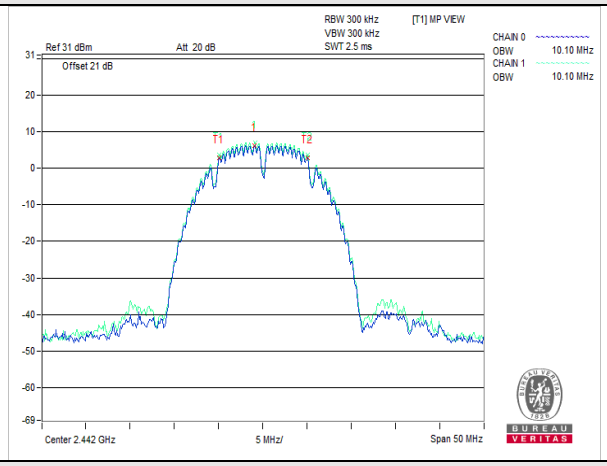
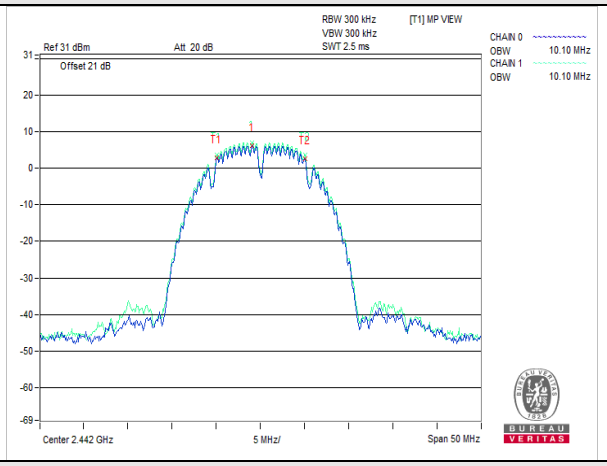
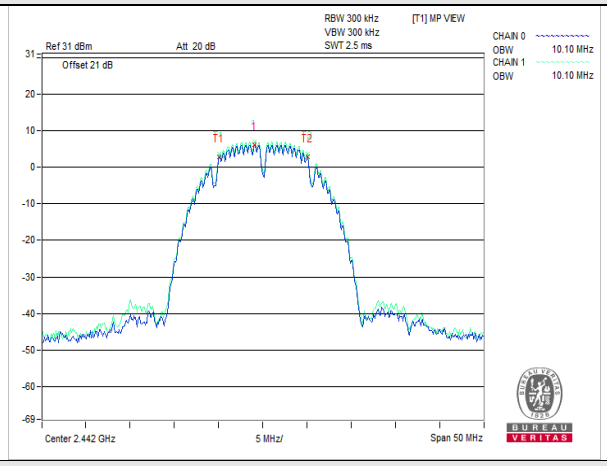
NOTE: For the test plots please refer to the below pages.

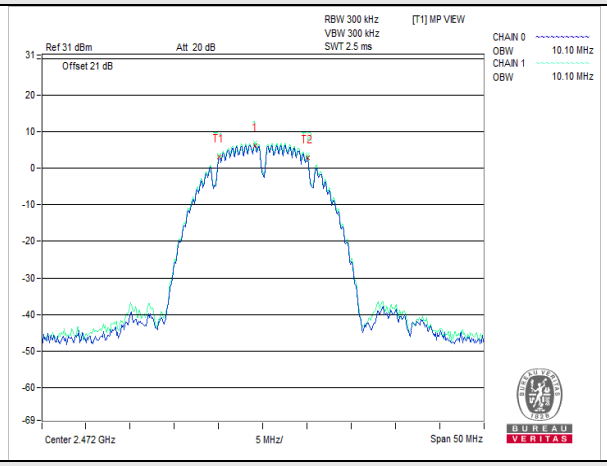
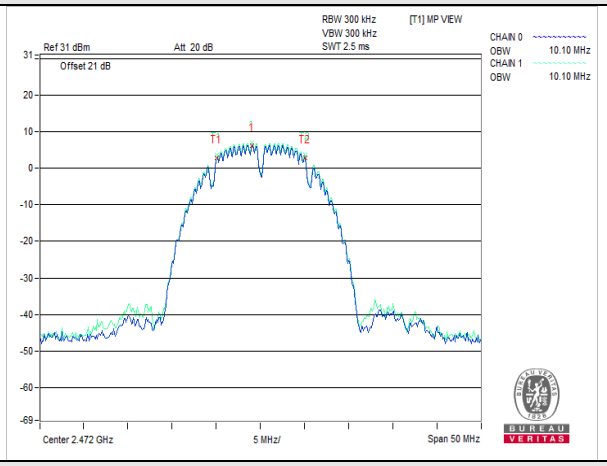
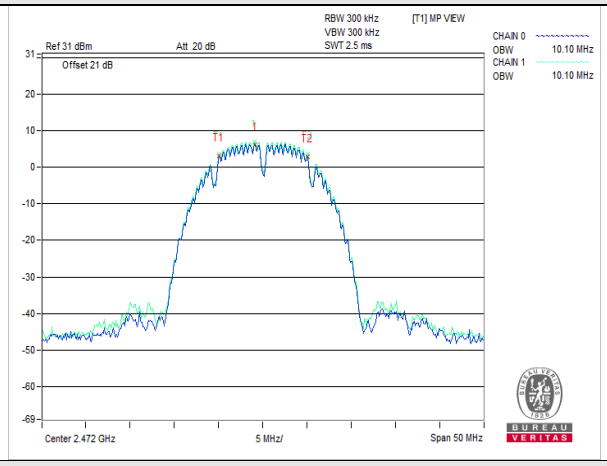
Spreading Factor: 90% channel power bandwidth / 1

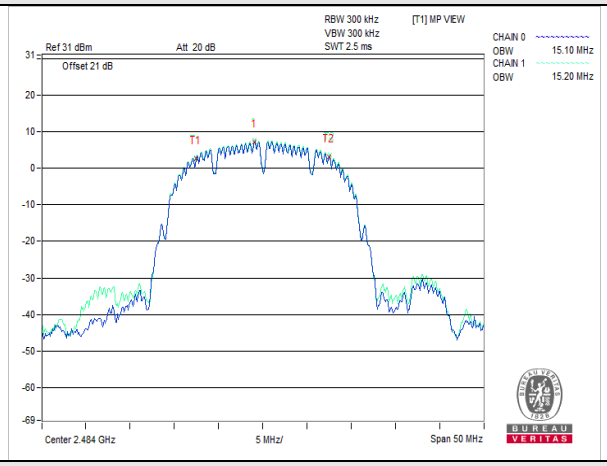
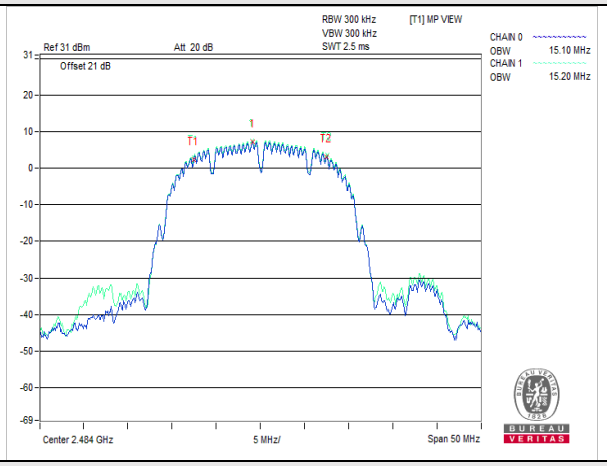
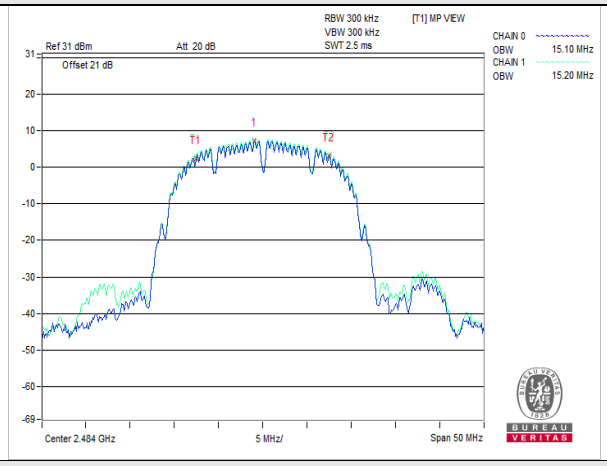
Graph

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	

CH 1 (2412MHz)

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 7 (2442MHz)	

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 13 (2472MHz)	

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 14 (2484MHz)	

802.11b_Data Rate: 2Mbps

Chain 0

Channel	Frequency (MHz)	V_{normal}		$V_{max.}$		$V_{min.}$	
		Occupied bandwidth (MHz)	Spreading factor	Occupied bandwidth (MHz)	Spreading factor	Occupied bandwidth (MHz)	Spreading factor
1	2412	10.10	10.10	10.10	10.10	10.10	10.10
7	2442	10.10	10.10	10.10	10.10	10.10	10.10
13	2472	10.10	10.10	10.00	10.00	10.10	10.10
14	2484	15.10	15.10	15.20	15.20	15.10	15.10

NOTE: For the test plots please refer to the below pages.

Spreading Factor: 90% channel power bandwidth / 1

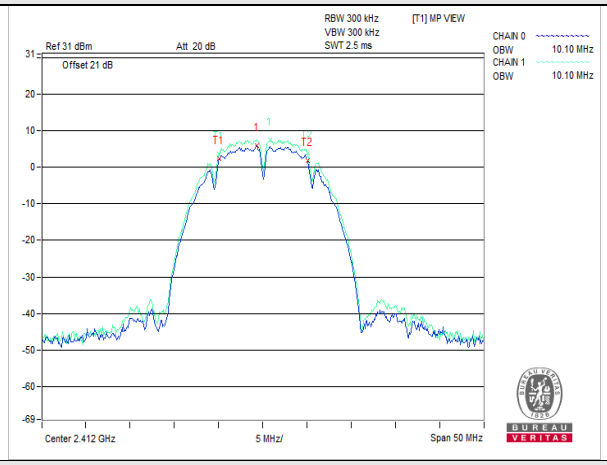
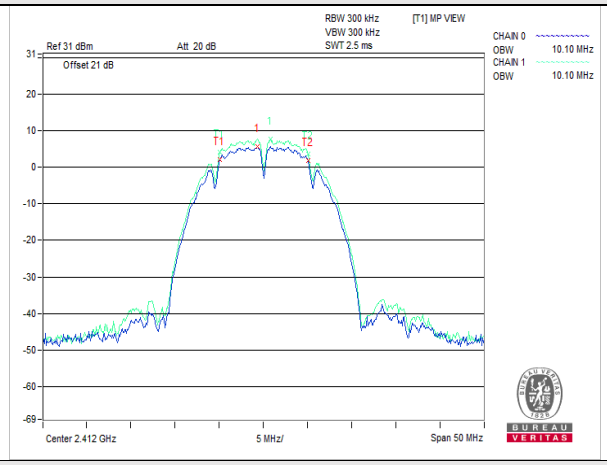
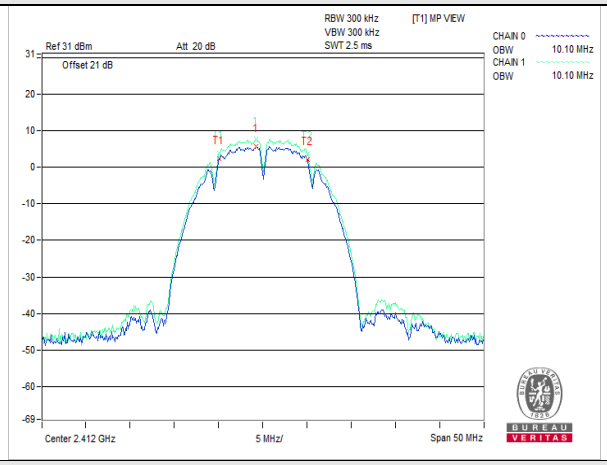
Chain 1

Channel	Frequency (MHz)	V_{normal}		$V_{max.}$		$V_{min.}$	
		Occupied bandwidth (MHz)	Spreading factor	Occupied bandwidth (MHz)	Spreading factor	Occupied bandwidth (MHz)	Spreading factor
1	2412	10.10	10.10	10.10	10.10	10.10	10.10
7	2442	10.10	10.10	10.10	10.10	10.10	10.10
13	2472	10.10	10.10	10.10	10.10	10.10	10.10
14	2484	15.20	15.20	15.20	15.20	15.10	15.10

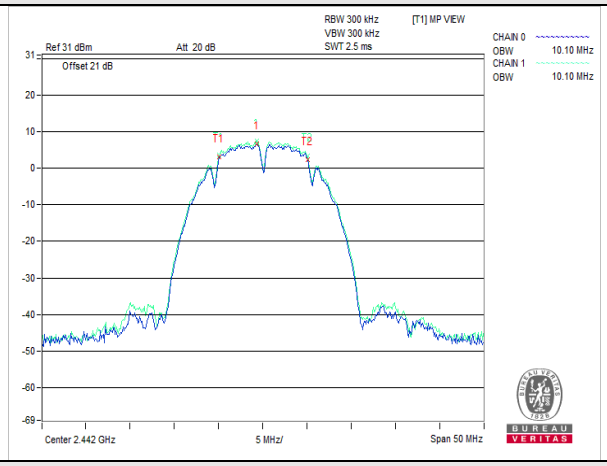
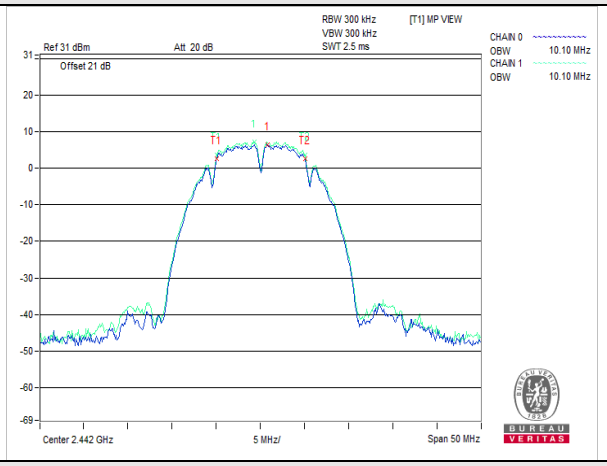
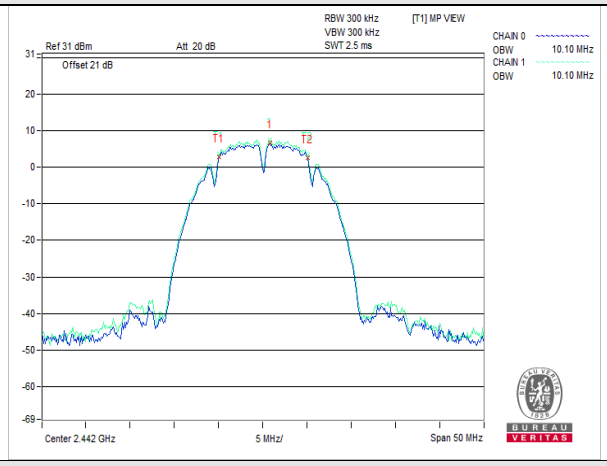
NOTE: For the test plots please refer to the below pages.

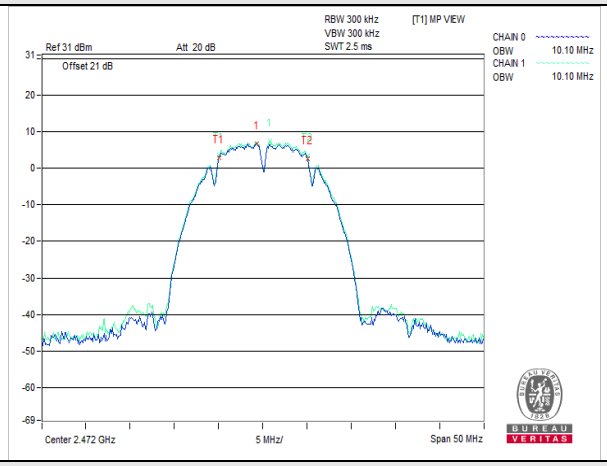
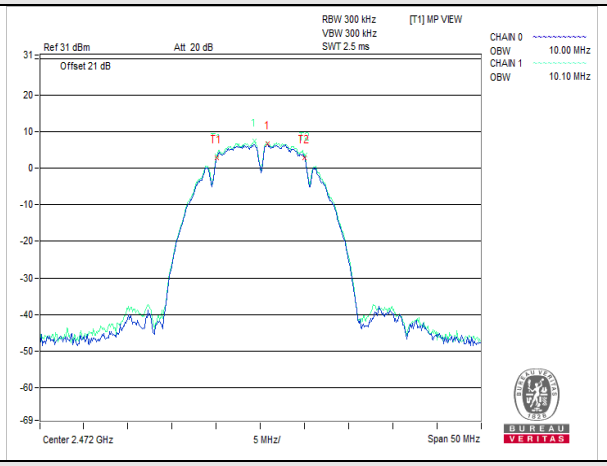
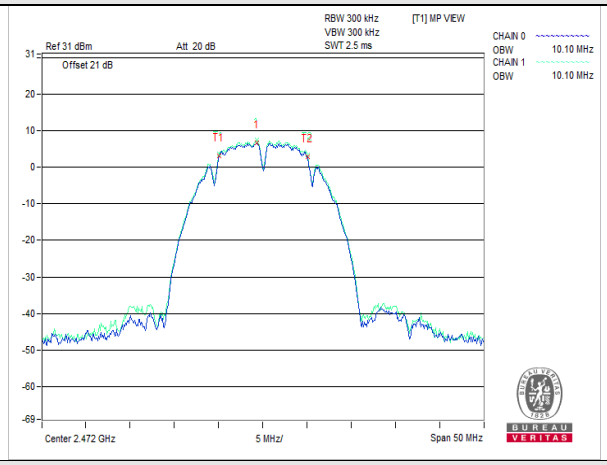
Spreading Factor: 90% channel power bandwidth / 1

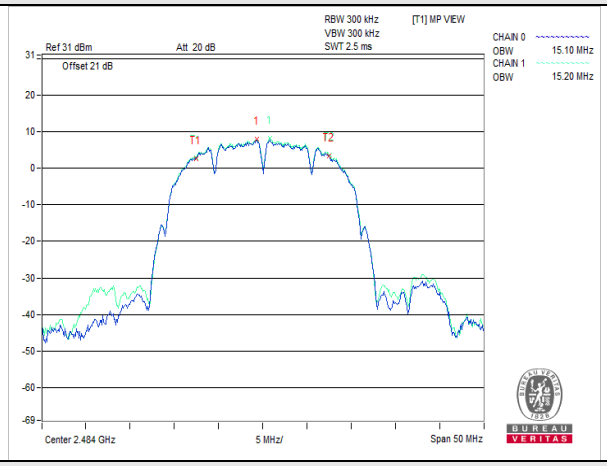
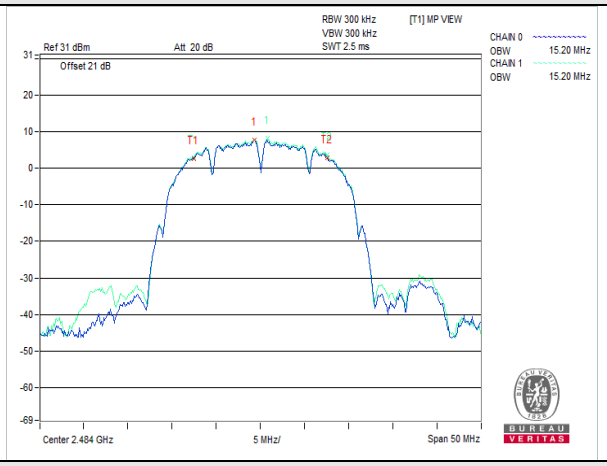
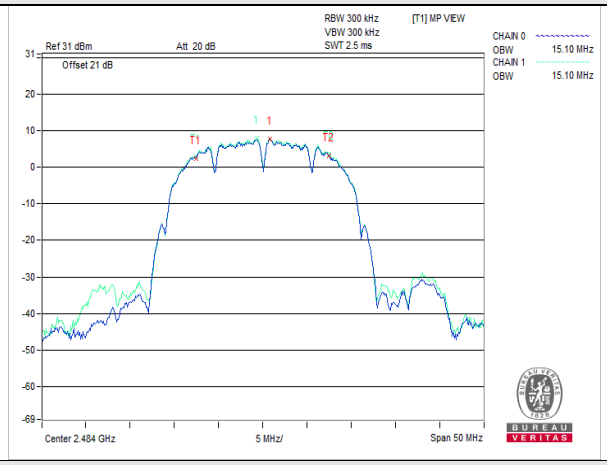
Graph

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	

CH 1 (2412MHz)

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 7 (2442MHz)	

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 13 (2472MHz)	

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 14 (2484MHz)	

802.11b_Data Rate: 5.5Mbps

Chain 0

Channel	Frequency (MHz)	V_{normal}		$V_{max.}$		$V_{min.}$	
		Occupied bandwidth (MHz)	Spreading factor	Occupied bandwidth (MHz)	Spreading factor	Occupied bandwidth (MHz)	Spreading factor
1	2412	10.50	7.63	10.50	7.63	10.50	7.63
7	2442	10.50	7.63	10.50	7.63	10.50	7.63
13	2472	10.40	7.56	10.40	7.56	10.40	7.56
14	2484	15.10	10.98	15.10	10.98	15.10	10.98

NOTE: For the test plots please refer to the below pages.

Spreading Factor: 90% channel power bandwidth / 1.375

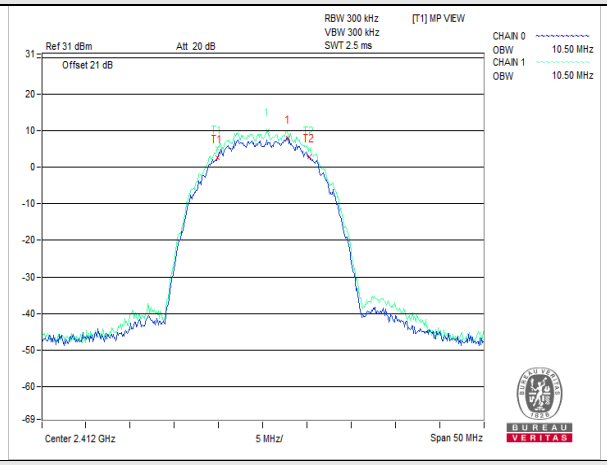
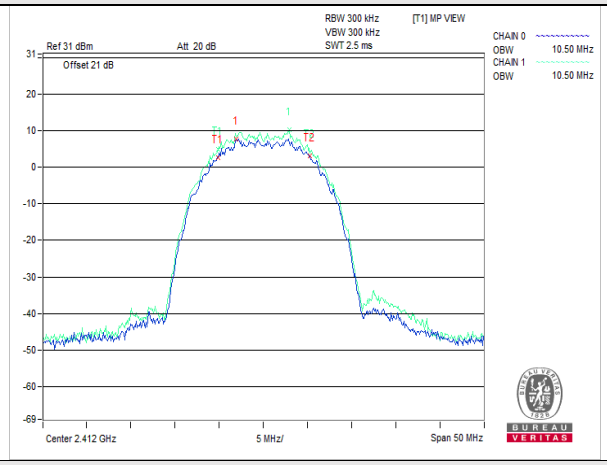
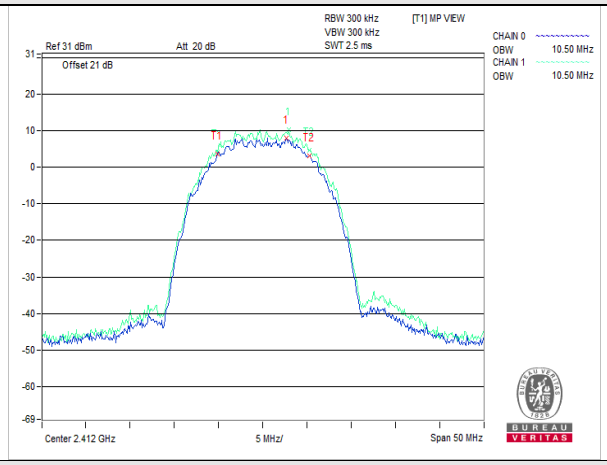
Chain 1

Channel	Frequency (MHz)	V_{normal}		$V_{max.}$		$V_{min.}$	
		Occupied bandwidth (MHz)	Spreading factor	Occupied bandwidth (MHz)	Spreading factor	Occupied bandwidth (MHz)	Spreading factor
1	2412	10.50	7.63	10.50	7.63	10.50	7.63
7	2442	10.50	7.63	10.40	7.56	10.50	7.63
13	2472	10.40	7.56	10.50	7.63	10.50	7.63
14	2484	15.10	10.98	15.20	11.05	15.00	10.90

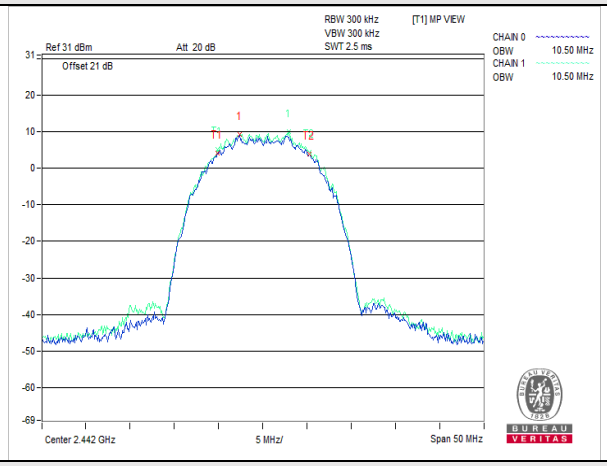
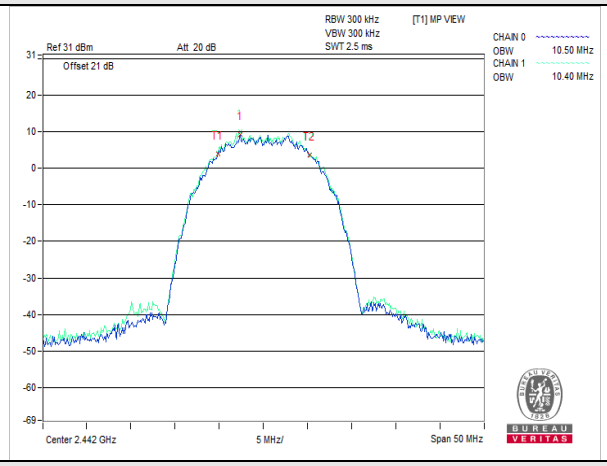
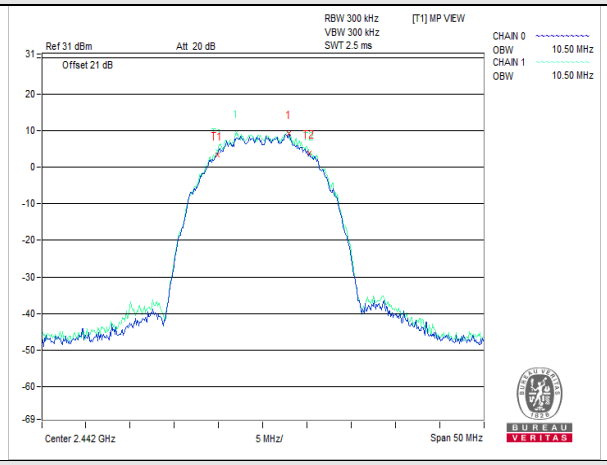
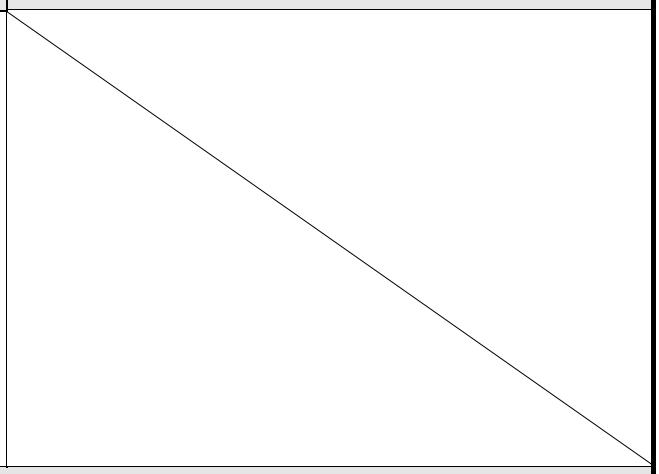
NOTE: For the test plots please refer to the below pages.

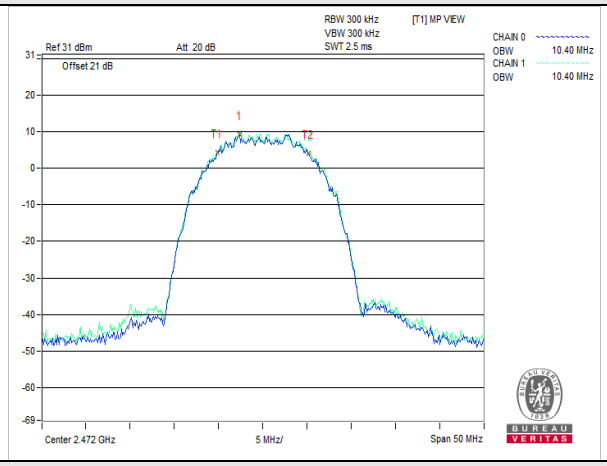
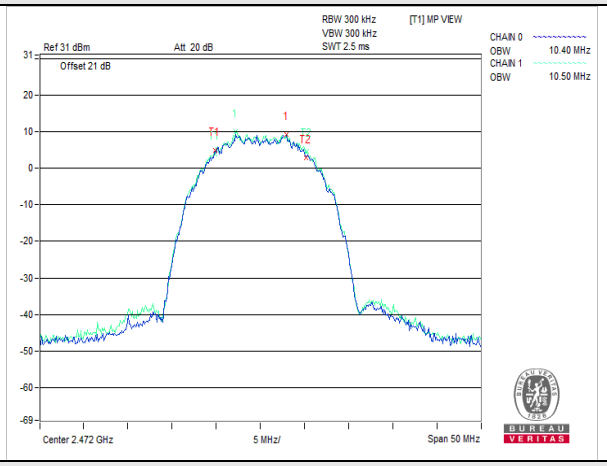
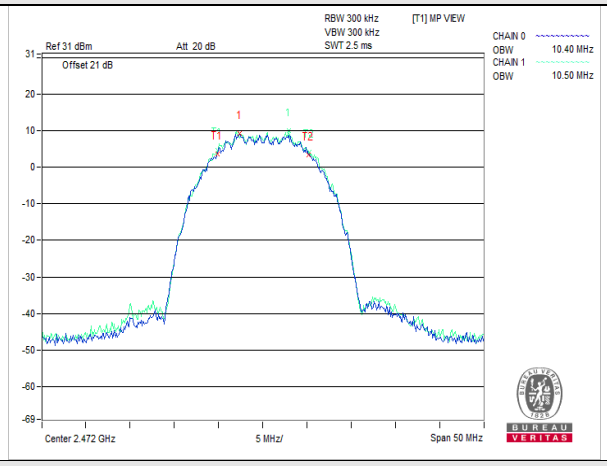
Spreading Factor: 90% channel power bandwidth / 1.375

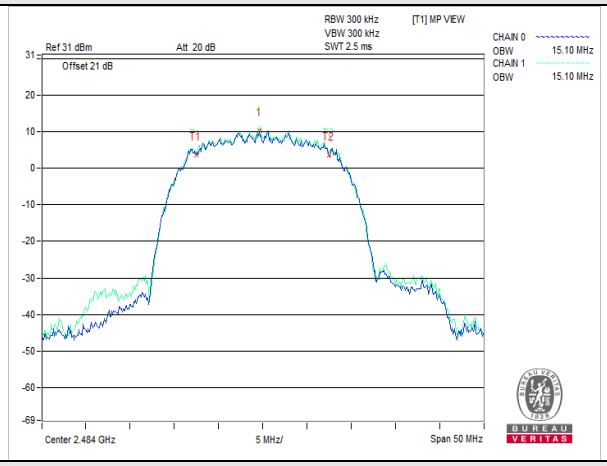
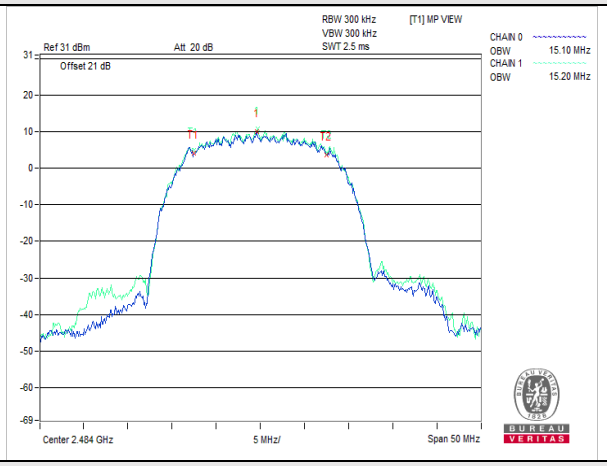
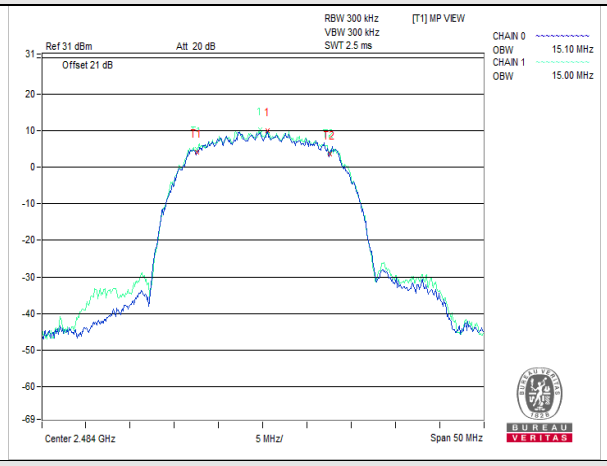
Graph

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	

CH 1 (2412MHz)

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 7 (2442MHz)	

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 13 (2472MHz)	

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 14 (2484MHz)	

802.11b_Data Rate: 11Mbps

Chain 0

Channel	Frequency (MHz)	V_{normal}		$V_{max.}$		$V_{min.}$	
		Occupied bandwidth (MHz)	Spreading factor	Occupied bandwidth (MHz)	Spreading factor	Occupied bandwidth (MHz)	Spreading factor
1	2412	10.60	7.70	10.60	7.70	10.60	7.70
7	2442	10.60	7.70	10.60	7.70	10.60	7.70
13	2472	10.60	7.70	10.60	7.70	10.50	7.63
14	2484	15.00	10.90	14.90	10.83	15.00	10.90

NOTE: For the test plots please refer to the below pages.

Spreading Factor: 90% channel power bandwidth / 1.375

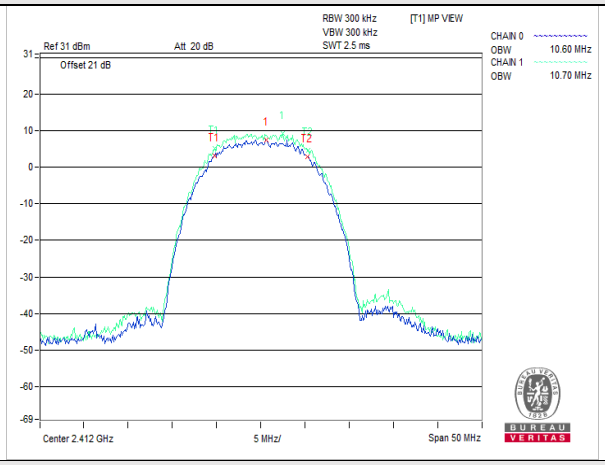
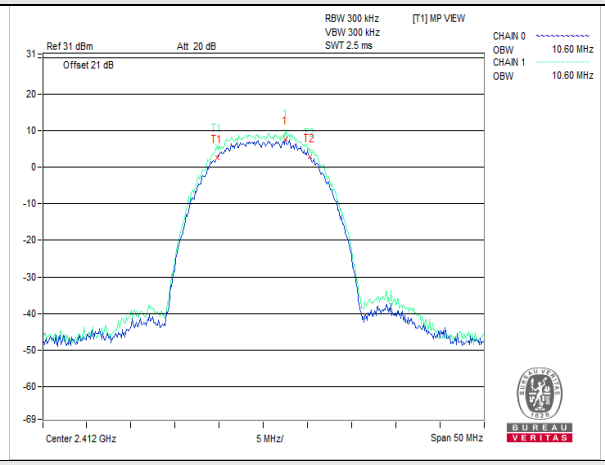
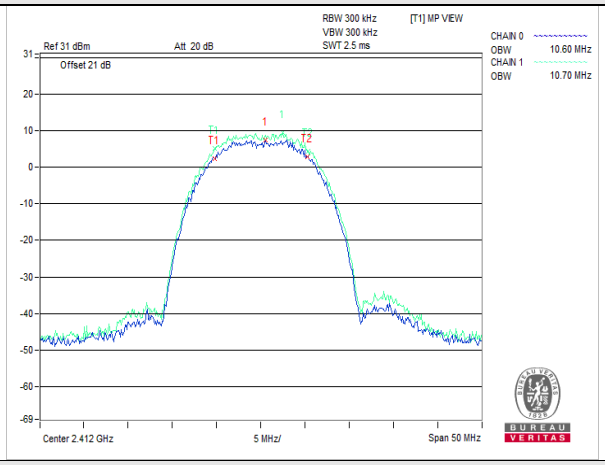
Chain 1

Channel	Frequency (MHz)	V_{normal}		$V_{max.}$		$V_{min.}$	
		Occupied bandwidth (MHz)	Spreading factor	Occupied bandwidth (MHz)	Spreading factor	Occupied bandwidth (MHz)	Spreading factor
1	2412	10.70	7.78	10.60	7.70	10.70	7.78
7	2442	10.60	7.70	10.60	7.70	10.50	7.63
13	2472	10.50	7.63	10.60	7.70	10.60	7.70
14	2484	15.00	10.90	15.10	10.98	15.00	10.90

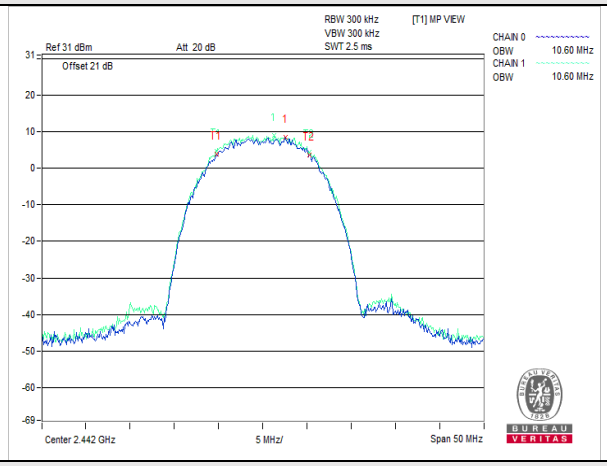
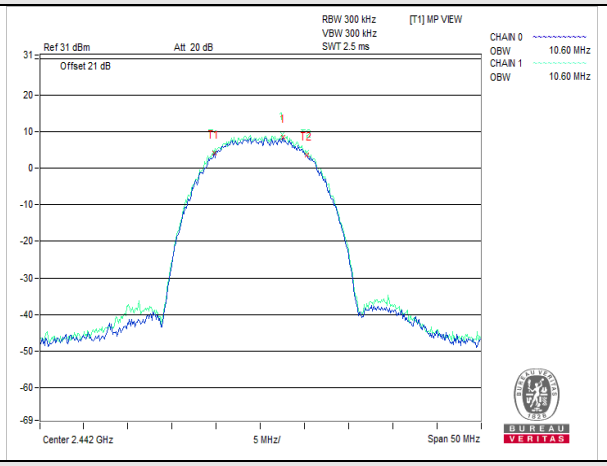
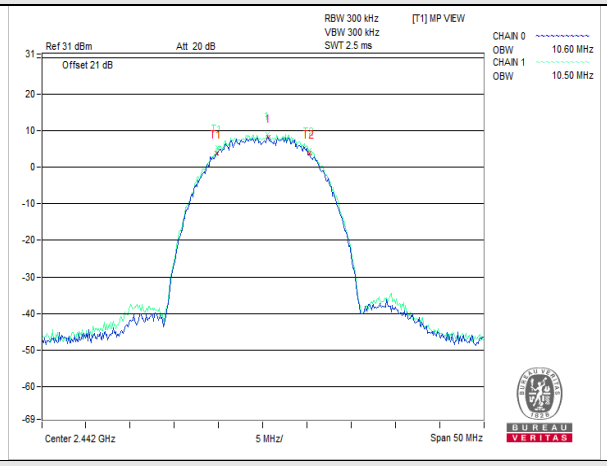
NOTE: For the test plots please refer to the below pages.

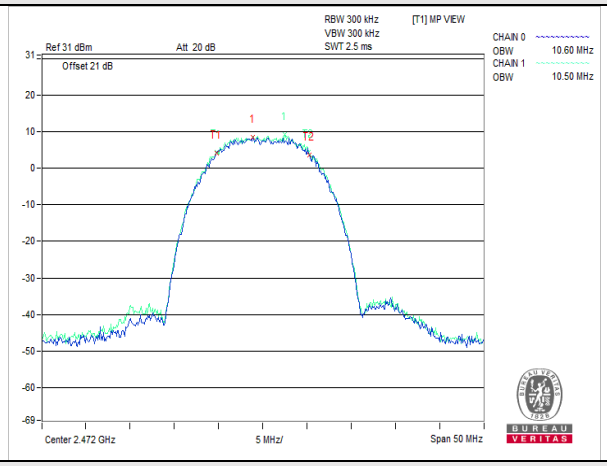
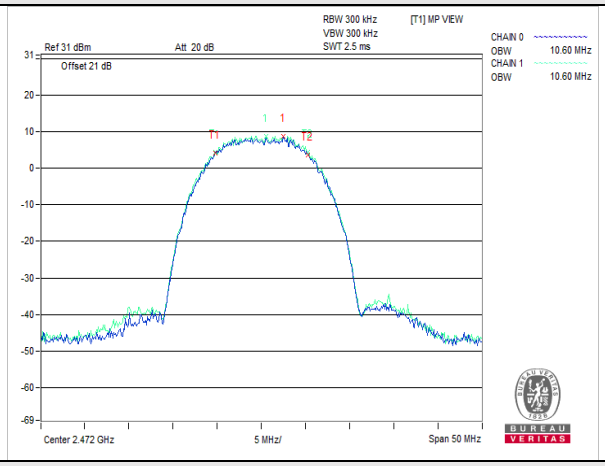
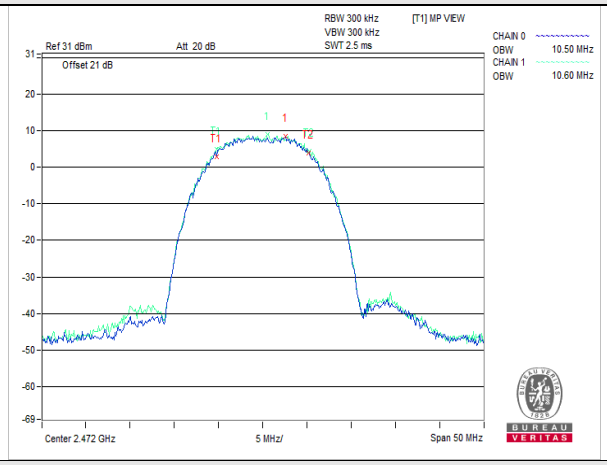
Spreading Factor: 90% channel power bandwidth / 1.375

Graph

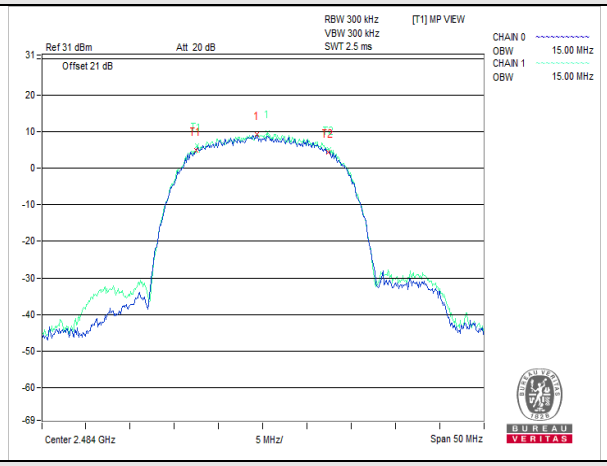
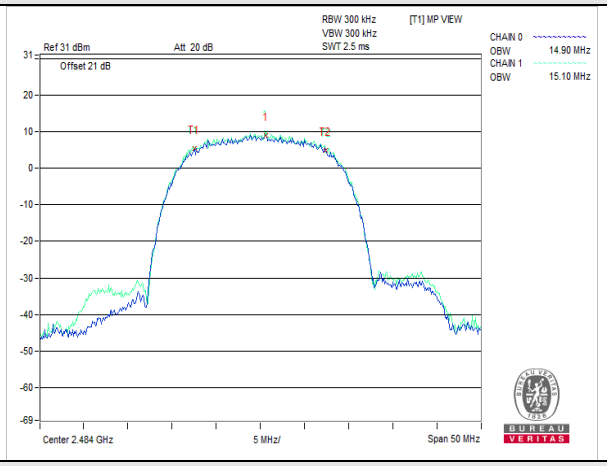
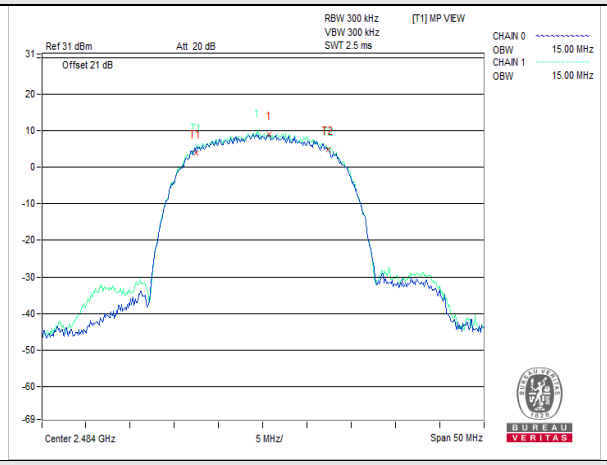
V_{normal}	$V_{max.}$
	
$V_{min.}$	
	

CH 1 (2412MHz)

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 7 (2442MHz)	

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	

CH 13 (2472MHz)

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	

CH 14 (2484MHz)

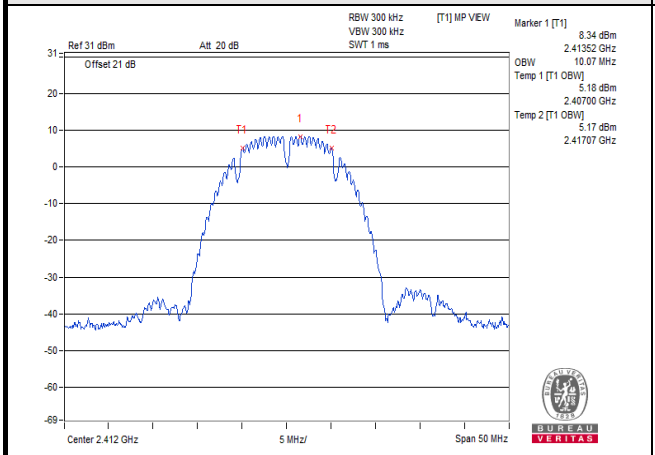
4.3.4 Test Results (Mode 2)

802.11b_Data Rate: 1Mbps

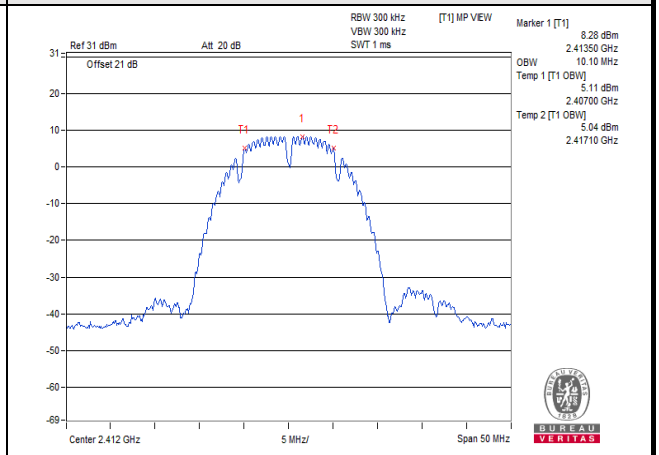
Channel	Frequency (MHz)	V_{normal}		$V_{max.}$		$V_{min.}$	
		Occupied bandwidth (MHz)	Spreading factor	Occupied bandwidth (MHz)	Spreading factor	Occupied bandwidth (MHz)	Spreading factor
1	2412	10.07	10.07	10.10	10.10	10.10	10.10
7	2442	10.10	10.10	10.10	10.10	10.10	10.10
13	2472	10.10	10.10	10.10	10.10	10.10	10.10
14	2484	15.10	15.10	15.10	15.10	15.10	15.10

NOTE: Spreading Factor: 90% channel power bandwidth / 1

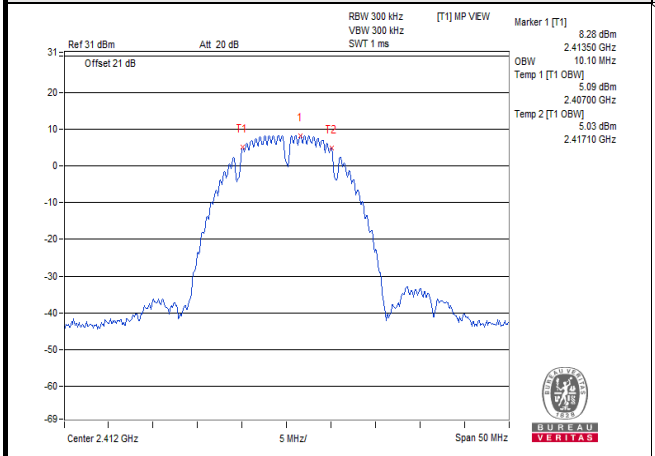
V_{normal}



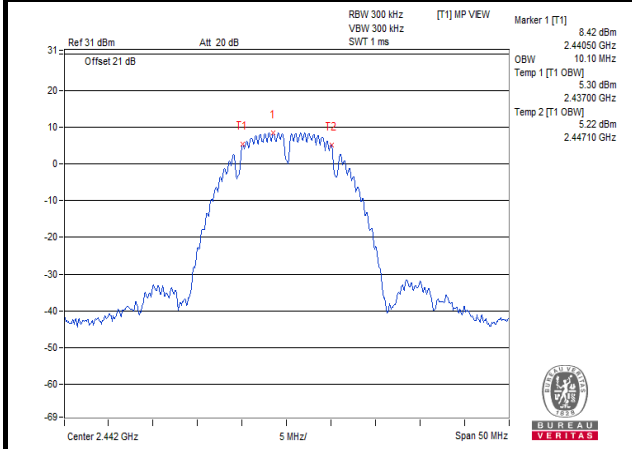
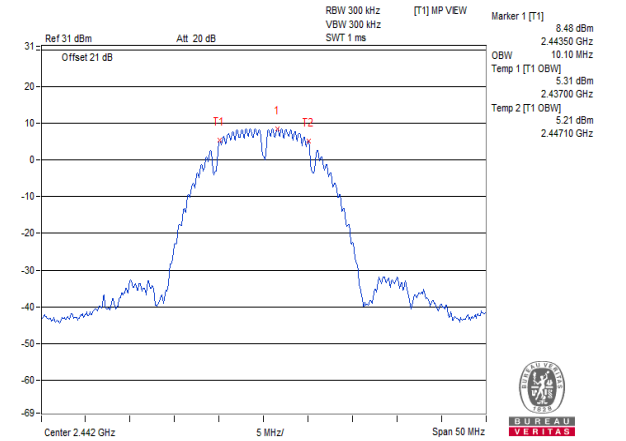
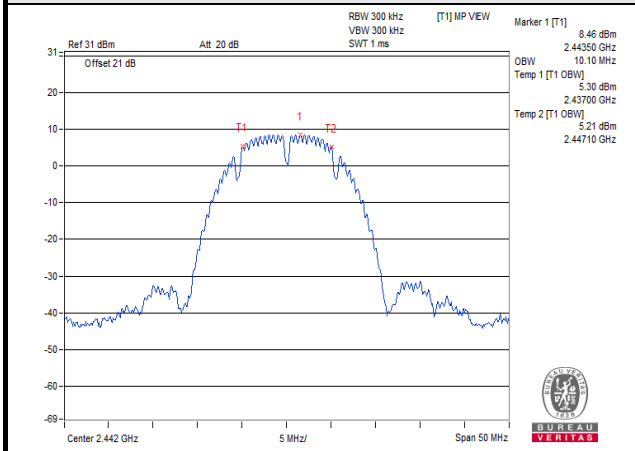
$V_{max.}$

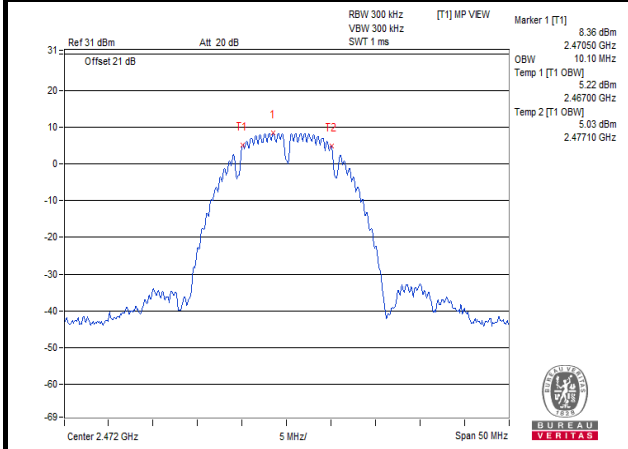
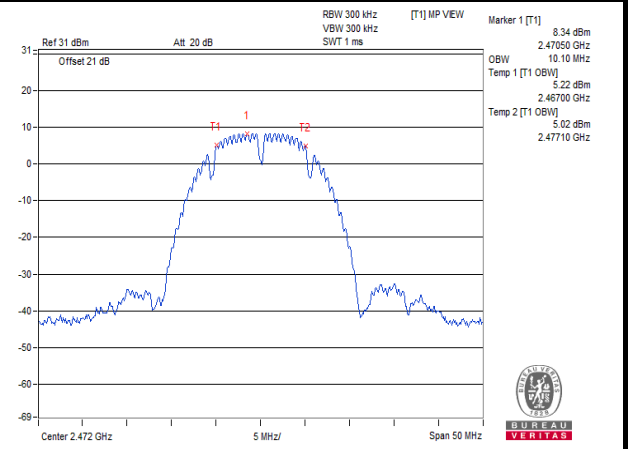
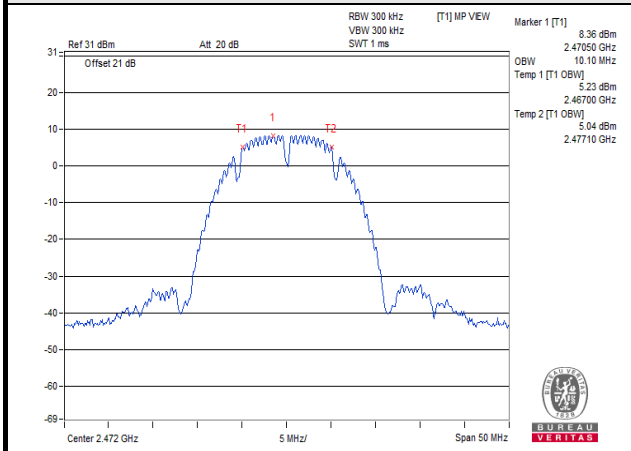


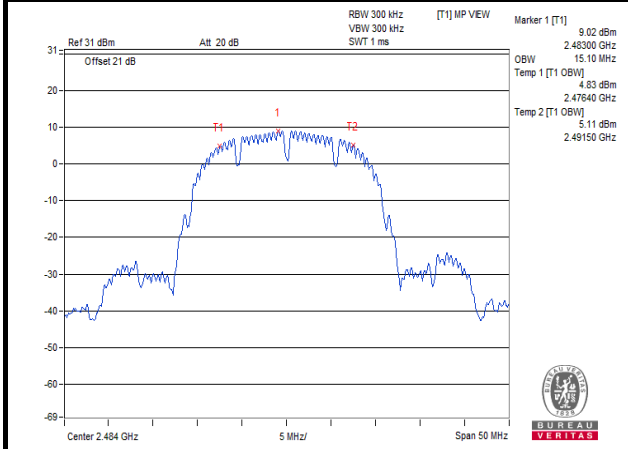
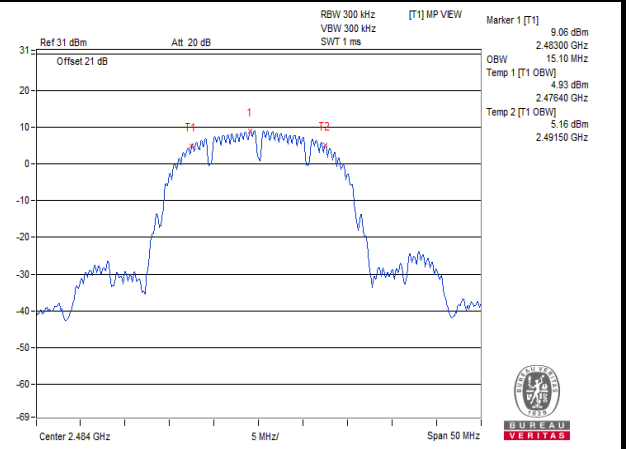
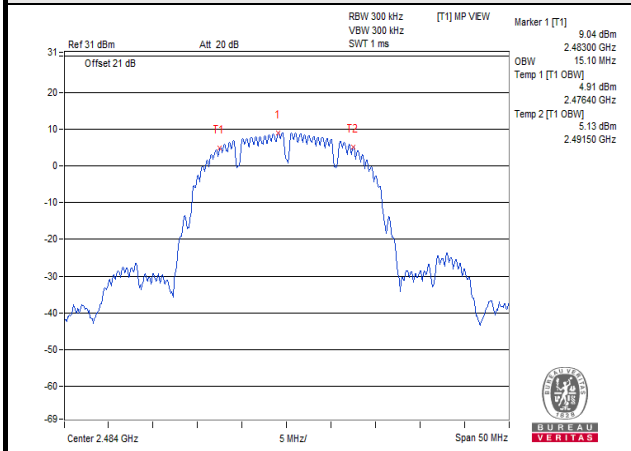
$V_{min.}$



CH 1 (2412MHz)

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 7 (2442MHz)	

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 13 (2472MHz)	

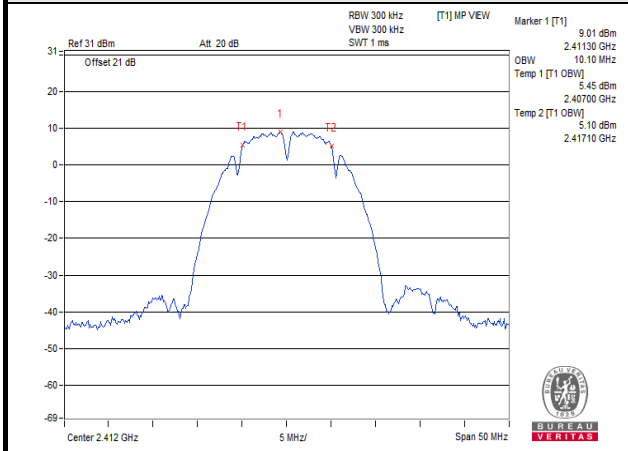
V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 14 (2484MHz)	

802.11b_Data Rate: 2Mbps

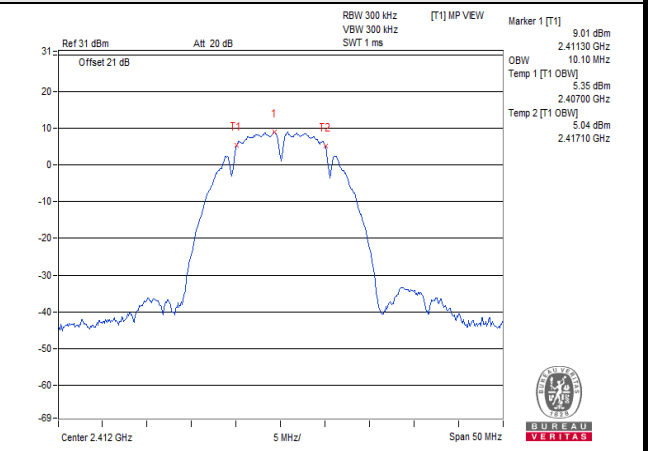
Channel	Frequency (MHz)	V_{normal}		$V_{max.}$		$V_{min.}$	
		Occupied bandwidth (MHz)	Spreading factor	Occupied bandwidth (MHz)	Spreading factor	Occupied bandwidth (MHz)	Spreading factor
1	2412	10.10	10.10	10.10	10.10	10.10	10.10
7	2442	10.10	10.10	10.10	10.10	10.10	10.10
13	2472	10.20	10.20	10.10	10.10	10.10	10.10
14	2484	15.10	15.10	15.10	15.10	15.10	15.10

NOTE: Spreading Factor: 90% channel power bandwidth / 1

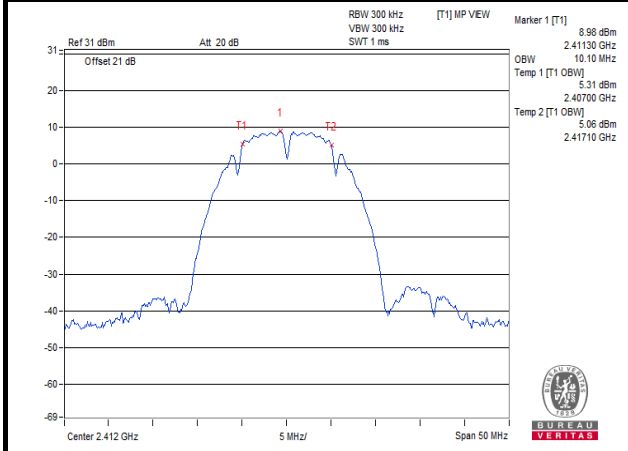
V_{normal}



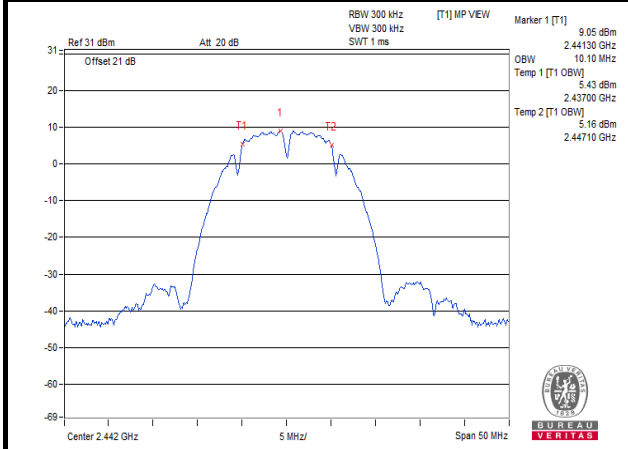
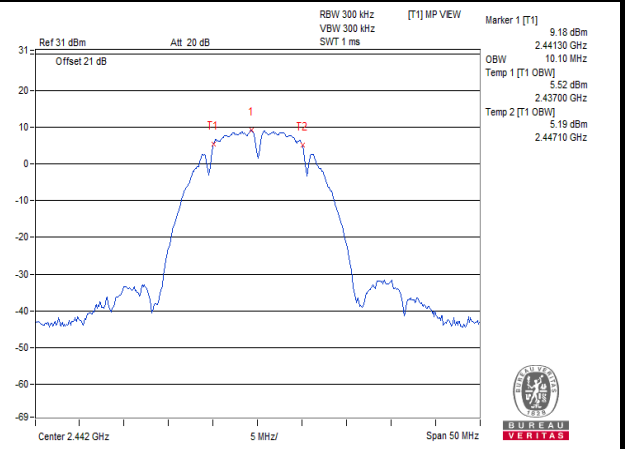
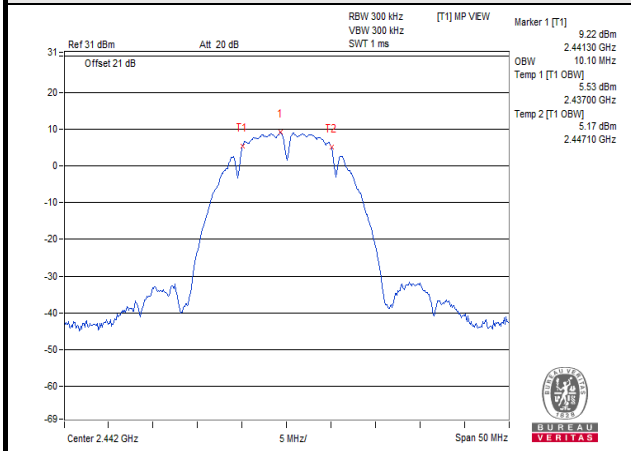
$V_{max.}$

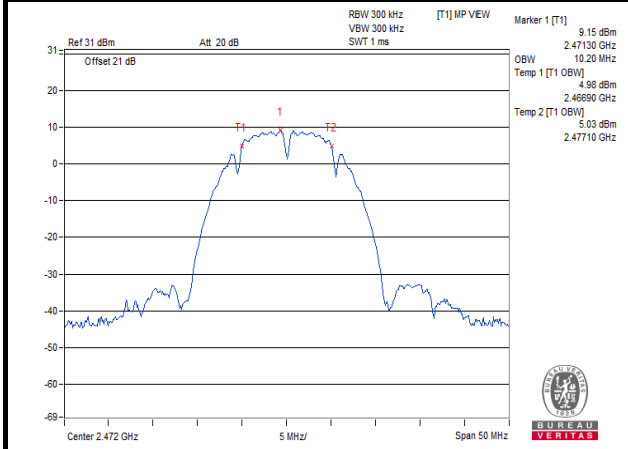
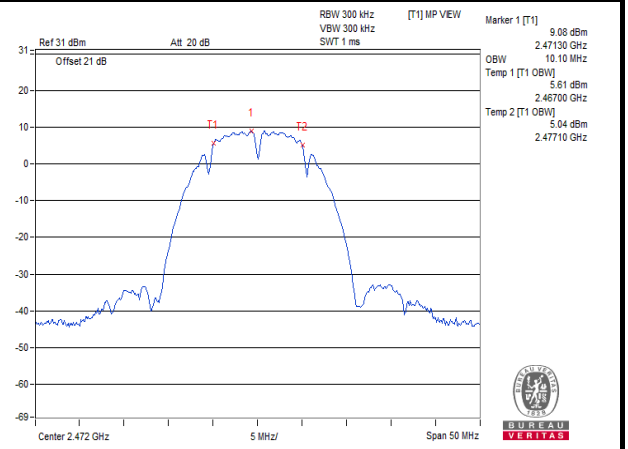
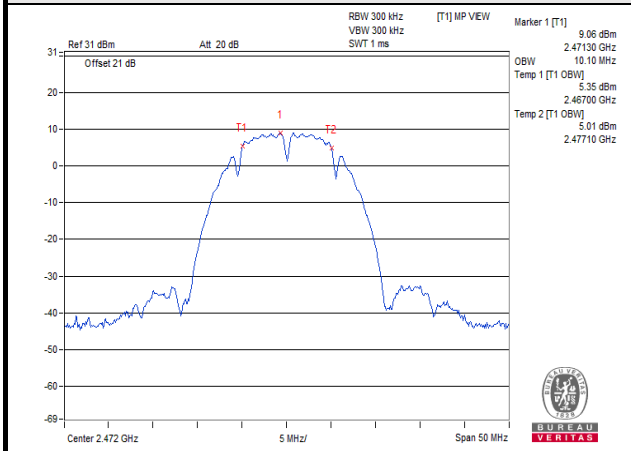


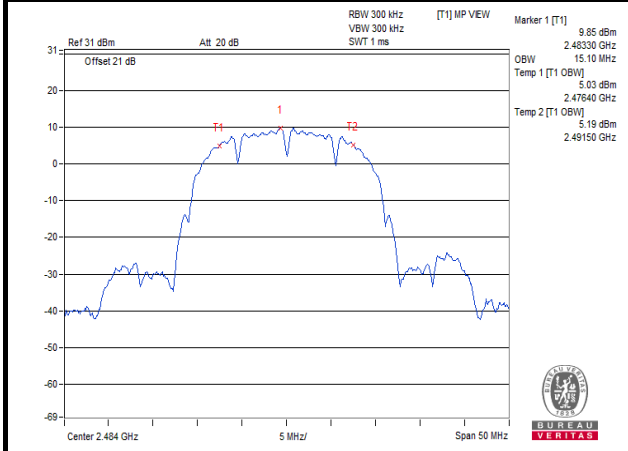
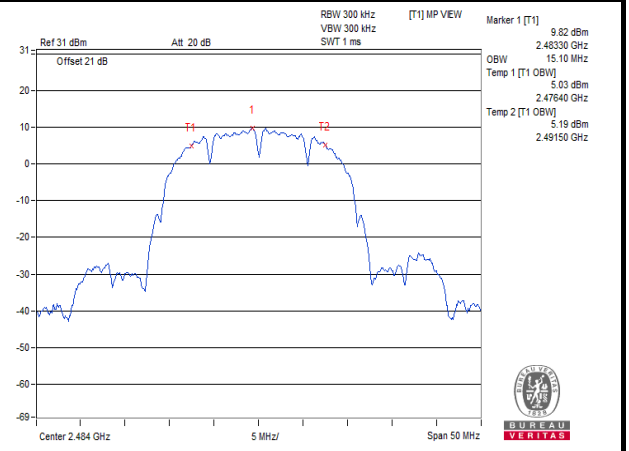
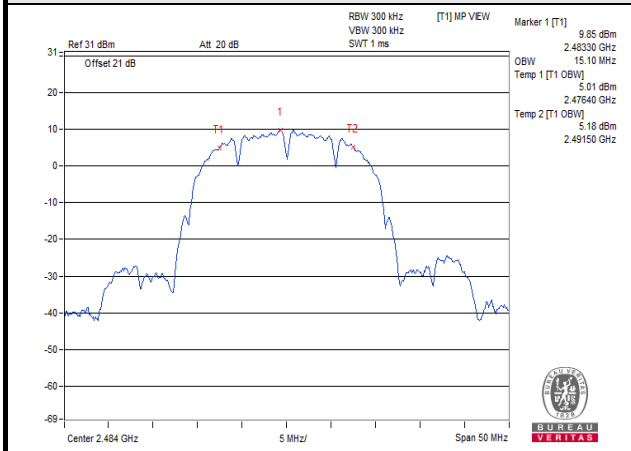
$V_{min.}$



CH 1 (2412MHz)

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 7 (2442MHz)	

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 13 (2472MHz)	

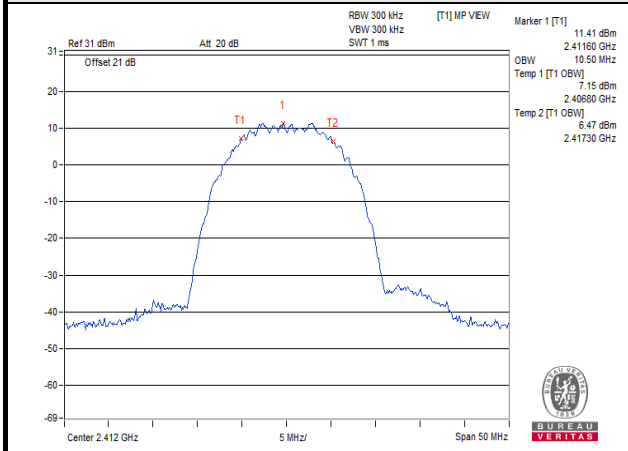
V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 14 (2484MHz)	

802.11b_Data Rate: 5.5Mbps

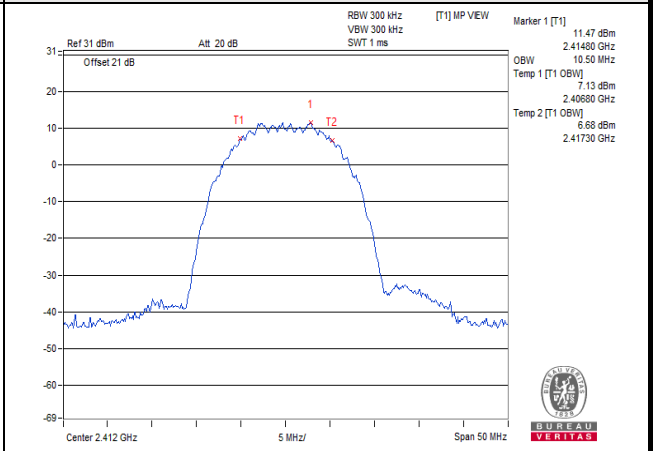
Channel	Frequency (MHz)	V_{normal}		$V_{max.}$		$V_{min.}$	
		Occupied bandwidth (MHz)	Spreading factor	Occupied bandwidth (MHz)	Spreading factor	Occupied bandwidth (MHz)	Spreading factor
1	2412	10.50	7.63	10.50	7.63	10.50	7.63
7	2442	10.50	7.63	10.50	7.63	10.50	7.63
13	2472	10.50	7.63	10.50	7.63	10.50	7.63
14	2484	15.20	11.05	15.20	11.05	15.20	11.05

NOTE: Spreading Factor: 90% channel power bandwidth / 1.375

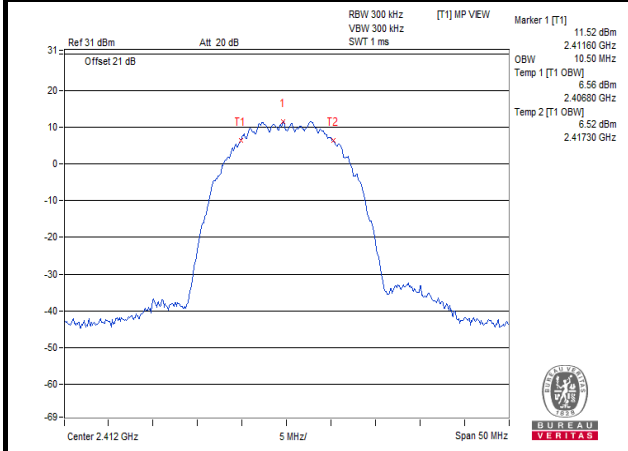
V_{normal}



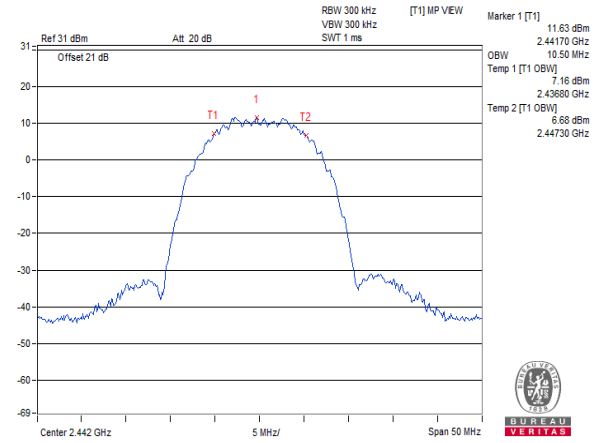
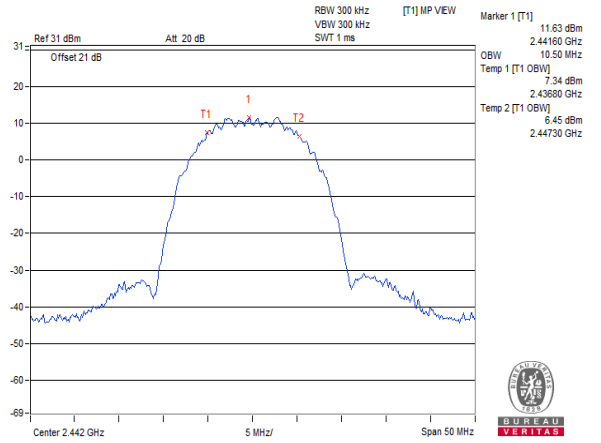
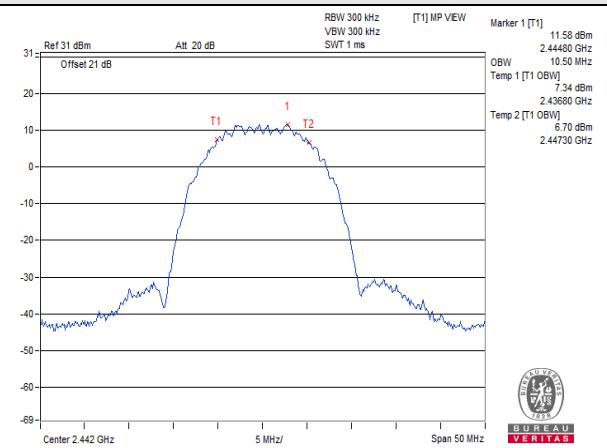
$V_{max.}$

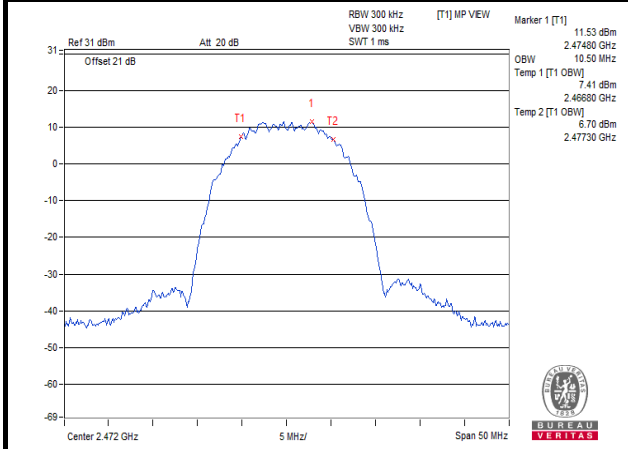
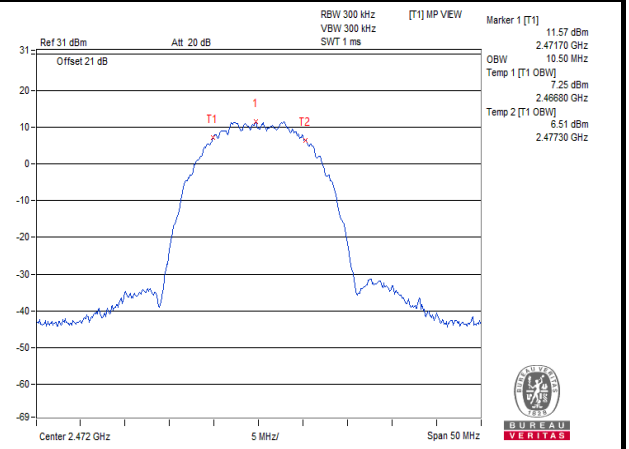
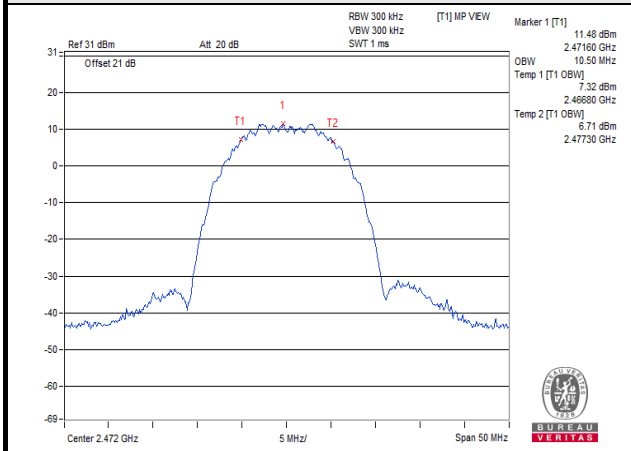


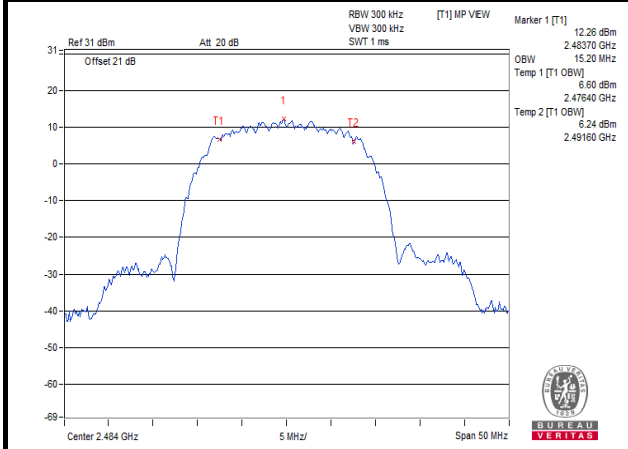
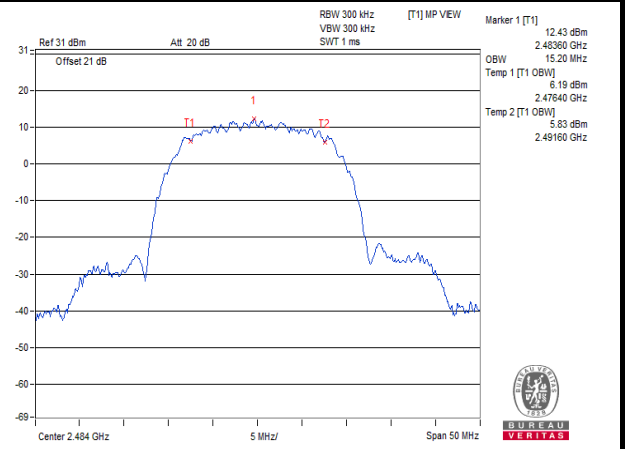
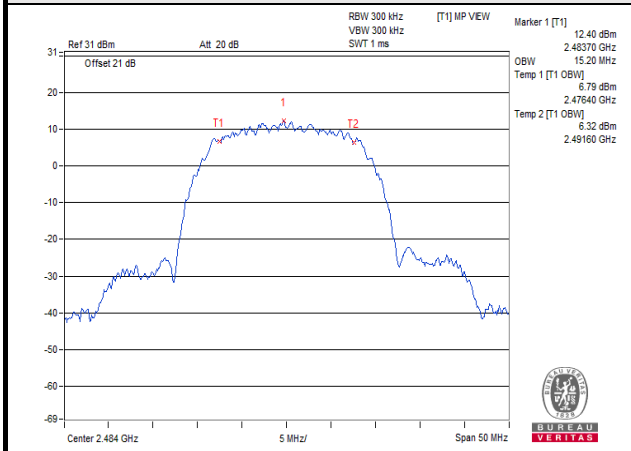
$V_{min.}$



CH 1 (2412MHz)

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 7 (2442MHz)	

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 13 (2472MHz)	

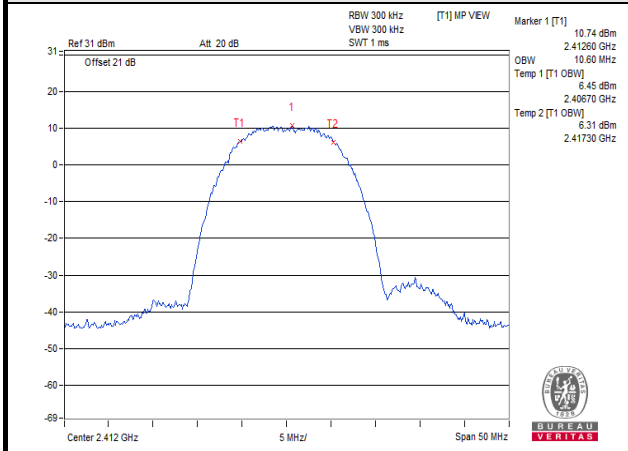
V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 14 (2484MHz)	

802.11b_Data Rate: 11Mbps

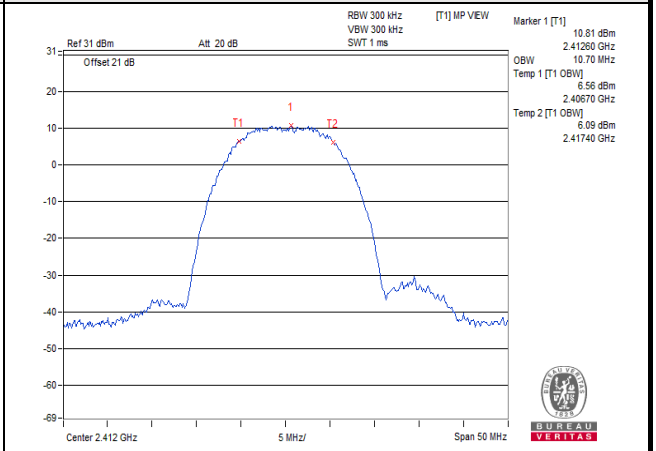
Channel	Frequency (MHz)	V_{normal}		$V_{max.}$		$V_{min.}$	
		Occupied bandwidth (MHz)	Spreading factor	Occupied bandwidth (MHz)	Spreading factor	Occupied bandwidth (MHz)	Spreading factor
1	2412	10.60	7.70	10.70	7.78	10.60	7.70
7	2442	10.70	7.78	10.60	7.70	10.60	7.70
13	2472	10.60	7.70	10.60	7.70	10.60	7.70
14	2484	15.00	10.90	15.00	10.90	15.00	10.90

NOTE: Spreading Factor: 90% channel power bandwidth / 1.375

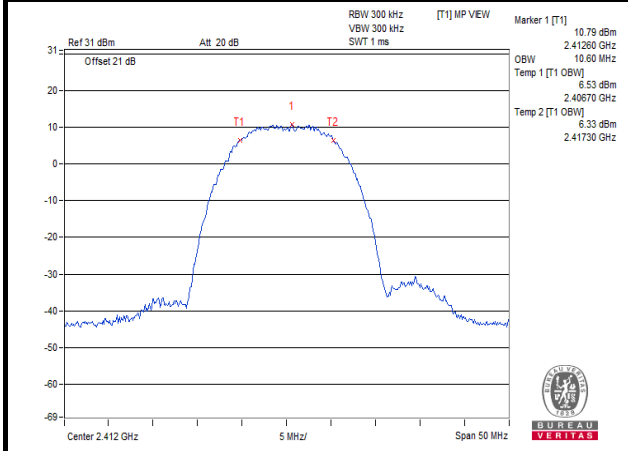
V_{normal}



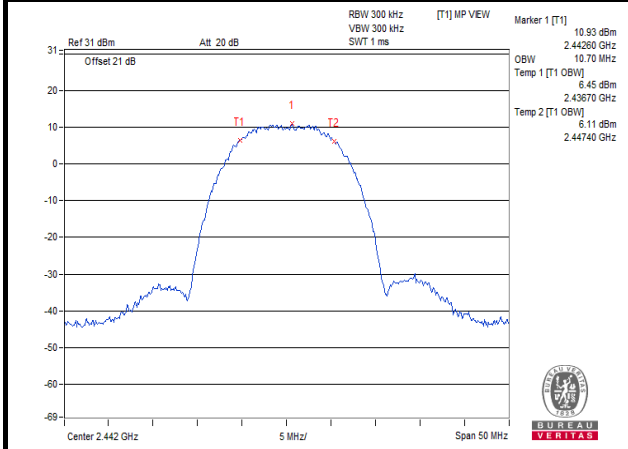
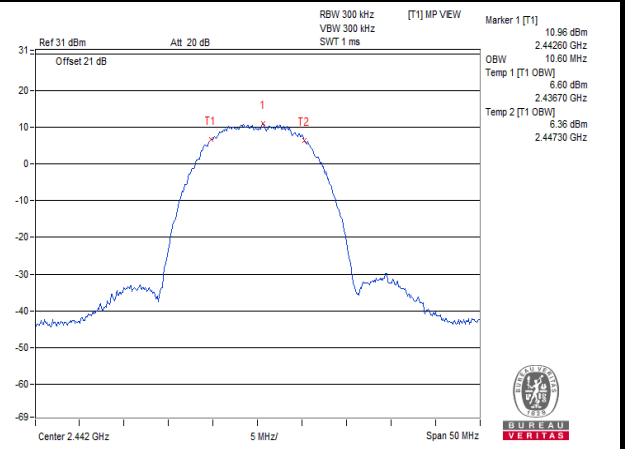
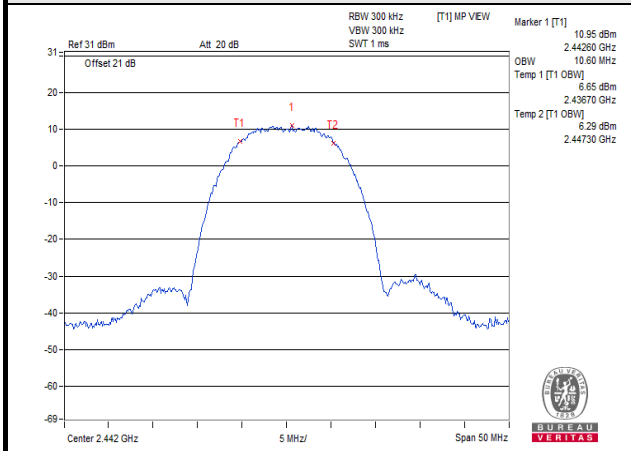
$V_{max.}$

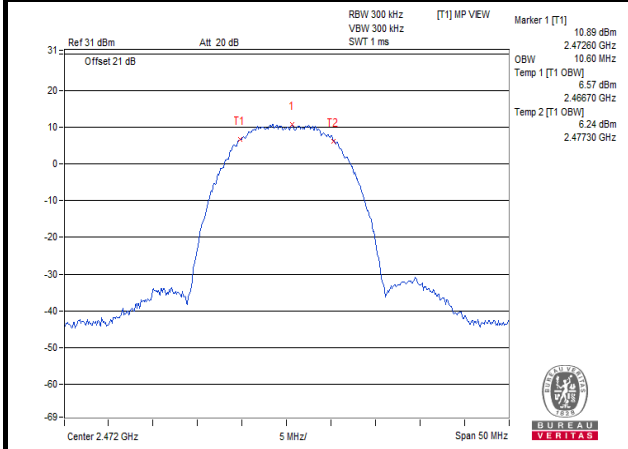
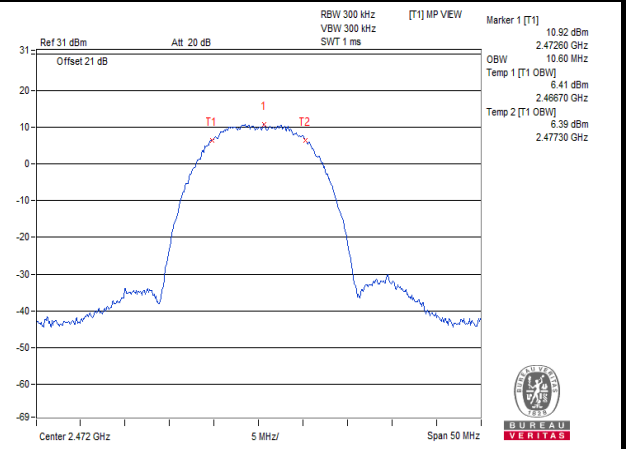
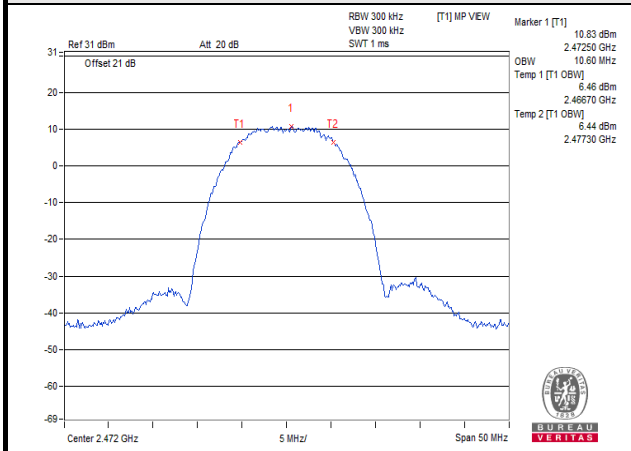


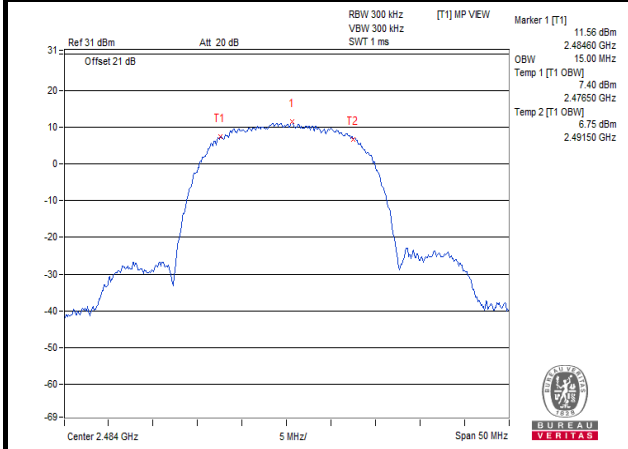
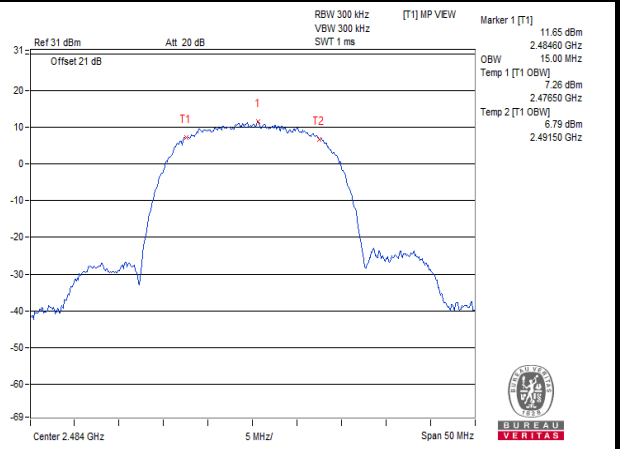
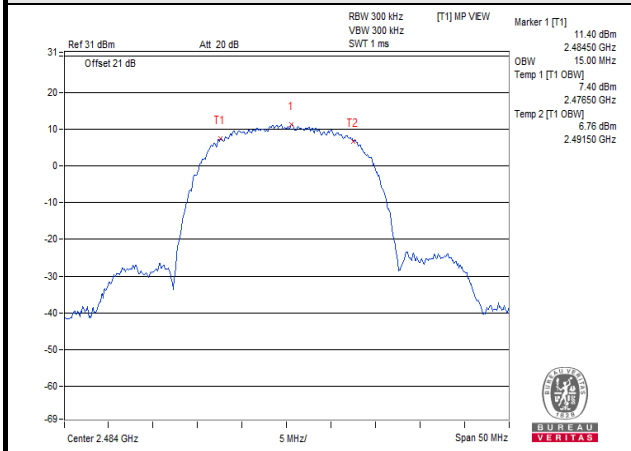
$V_{min.}$



CH 1 (2412MHz)

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 7 (2442MHz)	

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 13 (2472MHz)	

V_{normal}	$V_{max.}$
	
$V_{min.}$	
	
CH 14 (2484MHz)	

4.4 Spurious Emissions for Transmitter Measurement

4.4.1 Limits of Spurious Emissions

Frequencies (MHz)	Limit
Operating frequency 2400 to 2483.5MHz	
30.0MHz to 1000.0MHz	≦ 0.25 uW/100kHz
1000.0MHz to 2387MHz	≦ 2.5 uW/MHz
2387.0MHz to 2400.0MHz	≦ 25 uW/MHz
2483.5MHz to 2496.5MHz	≦ 25 uW/MHz
2496.5MHz to 12500.0MHz	≦ 2.5 uW/MHz
Operating frequency 2471 to 2497MHz	
30.0MHz to 1000.0MHz	≦ 0.25 uW/100kHz
1000.0MHz to 2458.0MHz	≦ 2.5 uW/MHz
2458.0MHz to 2471.0MHz	≦ 25 uW/MHz
2497.0MHz to 2510.0MHz	≦ 25 uW/MHz
2510.0MHz to 12500.0MHz	≦ 2.5 uW/MHz

4.4.2 Test Setup

4.4.3 Test Results (Mode 1)

802.11b

Chain 0

TEST CHANNEL		CH 1 (2412MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	668.502	0.021478	0.125	PASS
	1000.0 to 2387.0	2384.572	0.090365	1.25	PASS
	2387.0 to 2400.0	2398.482	0.311889	12.5	PASS
	2483.5 to 2496.5	2489.546	0.099083	12.5	PASS
	2496.5 to 12500.0	7005.577	0.467735	1.25	PASS
$V_{max.}$	30.0 to 1000.0	673.837	0.019953	0.125	PASS
	1000.0 to 2387.0	1106.972	0.088105	1.25	PASS
	2387.0 to 2400.0	2398.674	0.320627	12.5	PASS
	2483.5 to 2496.5	2487.081	0.097949	12.5	PASS
	2496.5 to 12500.0	3274.272	0.425598	1.25	PASS
$V_{min.}$	30.0 to 1000.0	555.497	0.017458	0.125	PASS
	1000.0 to 2387.0	2245.699	0.087700	1.25	PASS
	2387.0 to 2400.0	2399.033	0.343558	12.5	PASS
	2483.5 to 2496.5	2490.918	0.086497	12.5	PASS
	2496.5 to 12500.0	6769.244	0.396278	1.25	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	703.786	0.018239	0.125	PASS
	1000.0 to 2387.0	2346.950	0.099770	1.25	PASS
	2387.0 to 2400.0	2398.581	0.107647	12.5	PASS
	2483.5 to 2496.5	2487.963	0.111944	12.5	PASS
	2496.5 to 12500.0	9596.484	0.428549	1.25	PASS
$V_{max.}$	30.0 to 1000.0	703.786	0.021979	0.125	PASS
	1000.0 to 2387.0	2067.816	0.083946	1.25	PASS
	2387.0 to 2400.0	2399.761	0.103753	12.5	PASS
	2483.5 to 2496.5	2485.277	0.097275	12.5	PASS
	2496.5 to 12500.0	6900.540	0.422669	1.25	PASS
$V_{min.}$	30.0 to 1000.0	703.786	0.021429	0.125	PASS
	1000.0 to 2387.0	1847.803	0.087498	1.25	PASS
	2387.0 to 2400.0	2396.296	0.096828	12.5	PASS
	2483.5 to 2496.5	2488.856	0.102329	12.5	PASS
	2496.5 to 12500.0	7029.335	0.383707	1.25	PASS

TEST CHANNEL		CH 13 (2472MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	733.856	0.023174	0.125	PASS
	1000.0 to 2387.0	1087.381	0.091833	1.25	PASS
	2387.0 to 2400.0	2391.554	0.090365	12.5	PASS
	2483.5 to 2496.5	2486.413	0.390841	12.5	PASS
	2496.5 to 12500.0	3791.953	0.366438	1.25	PASS
$V_{max.}$	30.0 to 1000.0	733.856	0.029580	0.125	PASS
	1000.0 to 2387.0	2224.894	0.090573	1.25	PASS
	2387.0 to 2400.0	2397.076	0.113240	12.5	PASS
	2483.5 to 2496.5	2486.347	0.434510	12.5	PASS
	2496.5 to 12500.0	7386.961	0.392645	1.25	PASS
$V_{min.}$	30.0 to 1000.0	733.856	0.020606	0.125	PASS
	1000.0 to 2387.0	2213.625	0.095940	1.25	PASS
	2387.0 to 2400.0	2387.451	0.095280	12.5	PASS
	2483.5 to 2496.5	2486.286	0.438531	12.5	PASS
	2496.5 to 12500.0	6949.307	0.374111	1.25	PASS
TEST CHANNEL		CH 14 (2484MHz)			
V_{normal}	30.0 to 1000.0	745.860	0.036224	0.125	PASS
	1000.0 to 2458.0	2452.897	0.097724	1.25	PASS
	2458.0 to 2471.0	2470.991	2.552701	12.5	PASS
	2497.0 to 2510.0	2501.979	2.133045	12.5	PASS
	2510.0 to 12500.0	6981.773	0.397192	1.25	PASS
$V_{max.}$	30.0 to 1000.0	745.860	0.047315	0.125	PASS
	1000.0 to 2458.0	2452.897	0.101158	1.25	PASS
	2458.0 to 2471.0	2471.000	2.630268	12.5	PASS
	2497.0 to 2510.0	2501.868	2.152782	12.5	PASS
	2510.0 to 12500.0	3135.623	0.434510	1.25	PASS
$V_{min.}$	30.0 to 1000.0	745.860	0.043652	0.125	PASS
	1000.0 to 2458.0	2453.626	0.112460	1.25	PASS
	2458.0 to 2471.0	2470.998	2.517677	12.5	PASS
	2497.0 to 2510.0	2497.003	2.041738	12.5	PASS
	2510.0 to 12500.0	6999.256	0.453942	1.25	PASS

NOTE: 1. The spectrum plots are attached on the following pages.

Chain 1

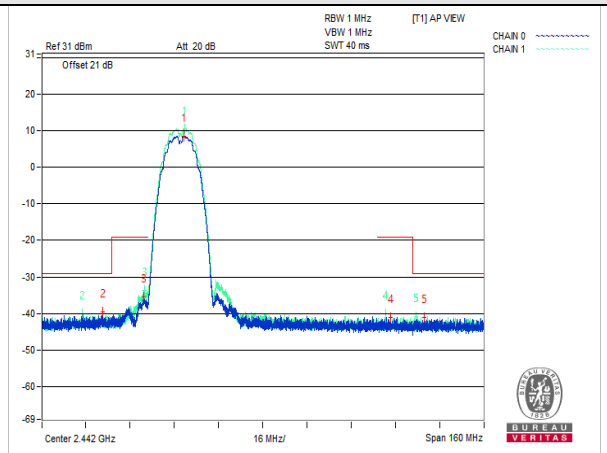
TEST CHANNEL		CH 1 (2412MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	673.837	0.027797	0.125	PASS
	1000.0 to 2387.0	1521.512	0.087096	1.25	PASS
	2387.0 to 2400.0	2398.669	0.519996	12.5	PASS
	2483.5 to 2496.5	2495.978	0.099083	12.5	PASS
	2496.5 to 12500.0	3840.720	0.398107	1.25	PASS
$V_{max.}$	30.0 to 1000.0	673.837	0.028445	0.125	PASS
	1000.0 to 2387.0	2314.182	0.094189	1.25	PASS
	2387.0 to 2400.0	2398.477	0.559758	12.5	PASS
	2483.5 to 2496.5	2491.693	0.105439	12.5	PASS
	2496.5 to 12500.0	7957.160	0.368978	1.25	PASS
$V_{min.}$	30.0 to 1000.0	673.837	0.029580	0.125	PASS
	1000.0 to 2387.0	2278.467	0.093972	1.25	PASS
	2387.0 to 2400.0	2398.678	0.592925	12.5	PASS
	2483.5 to 2496.5	2487.112	0.124165	12.5	PASS
	2496.5 to 12500.0	3239.259	0.374973	1.25	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	703.786	0.023335	0.125	PASS
	1000.0 to 2387.0	2257.315	0.094842	1.25	PASS
	2387.0 to 2400.0	2399.520	0.114288	12.5	PASS
	2483.5 to 2496.5	2486.051	0.122180	12.5	PASS
	2496.5 to 12500.0	3121.718	0.453942	1.25	PASS
$V_{max.}$	30.0 to 1000.0	534.036	0.018923	0.125	PASS
	1000.0 to 2387.0	1863.407	0.102094	1.25	PASS
	2387.0 to 2400.0	2395.737	0.122744	12.5	PASS
	2483.5 to 2496.5	2492.348	0.140281	12.5	PASS
	2496.5 to 12500.0	3963.263	0.384592	1.25	PASS
$V_{min.}$	30.0 to 1000.0	703.786	0.024889	0.125	PASS
	1000.0 to 2387.0	2293.550	0.083753	1.25	PASS
	2387.0 to 2400.0	2396.395	0.120504	12.5	PASS
	2483.5 to 2496.5	2493.381	0.125314	12.5	PASS
	2496.5 to 12500.0	3823.214	0.349140	1.25	PASS

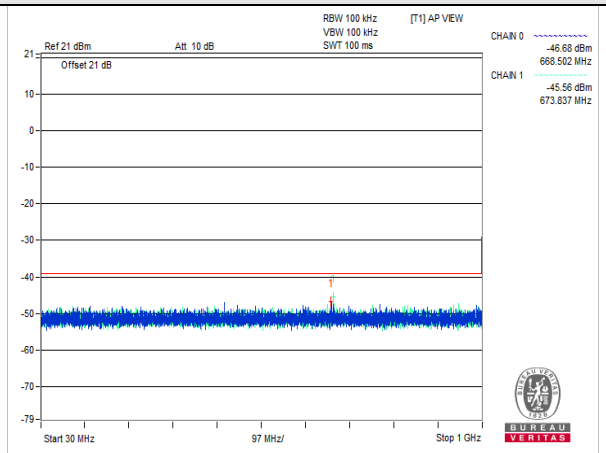
TEST CHANNEL		CH 13 (2472MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	733.856	0.024044	0.125	PASS
	1000.0 to 2387.0	2193.166	0.089950	1.25	PASS
	2387.0 to 2400.0	2399.702	0.106660	12.5	PASS
	2483.5 to 2496.5	2484.478	0.682339	12.5	PASS
	2496.5 to 12500.0	3027.935	0.411150	1.25	PASS
$V_{max.}$	30.0 to 1000.0	733.856	0.027227	0.125	PASS
	1000.0 to 2387.0	1859.940	0.084333	1.25	PASS
	2387.0 to 2400.0	2396.897	0.100000	12.5	PASS
	2483.5 to 2496.5	2485.201	0.613762	12.5	PASS
	2496.5 to 12500.0	3285.526	0.346737	1.25	PASS
$V_{min.}$	30.0 to 1000.0	733.856	0.024717	0.125	PASS
	1000.0 to 2387.0	2286.962	0.085507	1.25	PASS
	2387.0 to 2400.0	2399.831	0.104713	12.5	PASS
	2483.5 to 2496.5	2484.687	0.679204	12.5	PASS
	2496.5 to 12500.0	7021.833	0.484172	1.25	PASS
TEST CHANNEL		CH 14 (2484MHz)			
V_{normal}	30.0 to 1000.0	745.860	0.068707	0.125	PASS
	1000.0 to 2458.0	2435.947	0.149279	1.25	PASS
	2458.0 to 2471.0	2470.996	2.471724	12.5	PASS
	2497.0 to 2510.0	2501.839	3.006076	12.5	PASS
	2510.0 to 12500.0	3131.877	0.512861	1.25	PASS
$V_{max.}$	30.0 to 1000.0	745.860	0.052723	0.125	PASS
	1000.0 to 2458.0	2456.177	0.123310	1.25	PASS
	2458.0 to 2471.0	2470.998	2.506109	12.5	PASS
	2497.0 to 2510.0	2502.096	3.169567	12.5	PASS
	2510.0 to 12500.0	6996.758	0.353183	1.25	PASS
$V_{min.}$	30.0 to 1000.0	745.860	0.058884	0.125	PASS
	1000.0 to 2458.0	2456.724	0.128233	1.25	PASS
	2458.0 to 2471.0	2470.995	2.618183	12.5	PASS
	2497.0 to 2510.0	2501.909	3.133286	12.5	PASS
	2510.0 to 12500.0	6969.286	0.447713	1.25	PASS

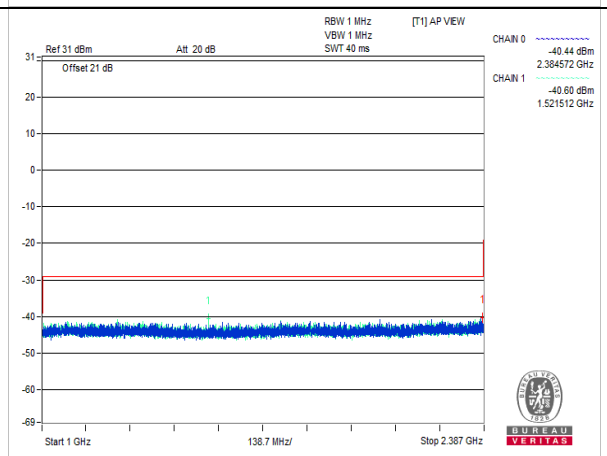
NOTE: 1. The spectrum plots are attached on the following pages.

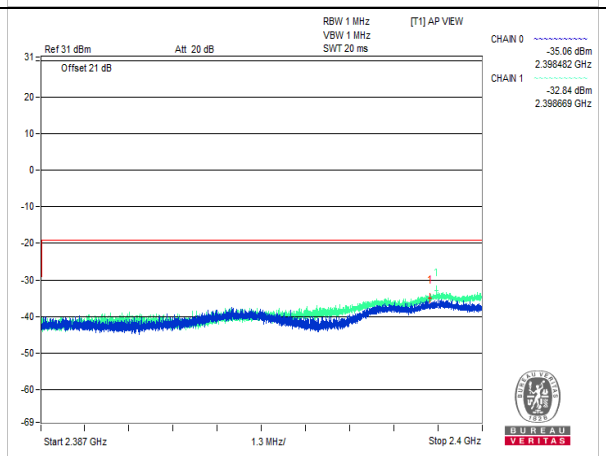
Graph

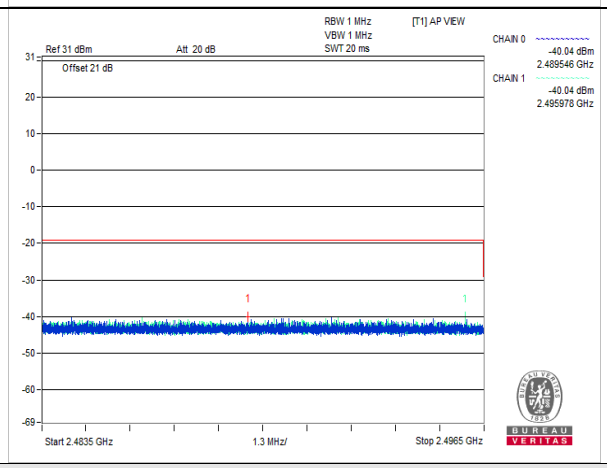
Vnormal

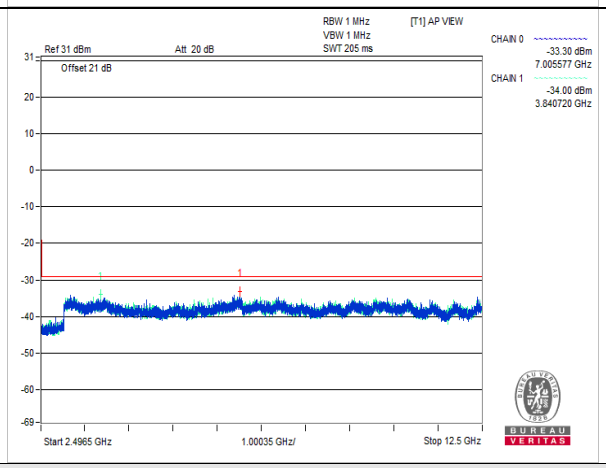






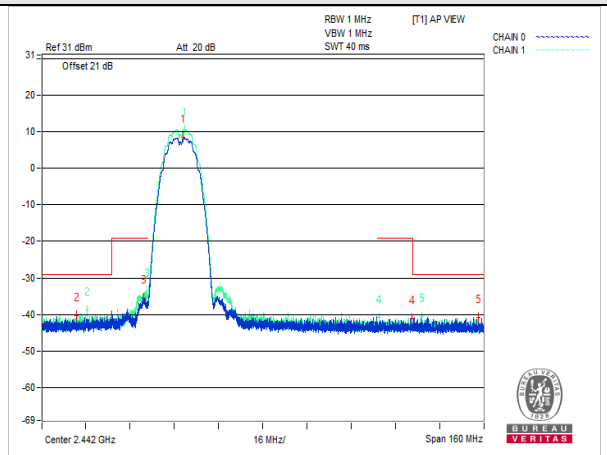


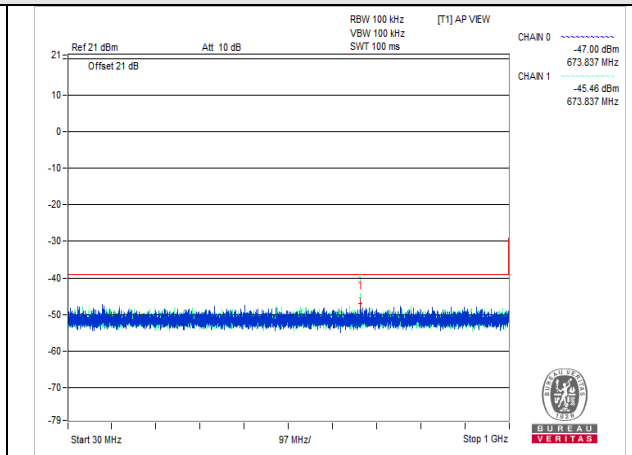


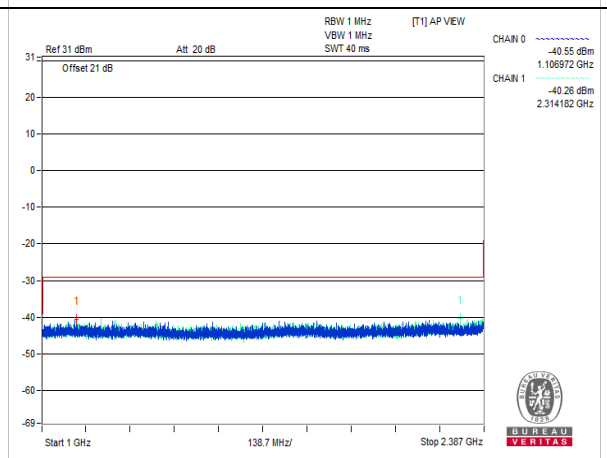


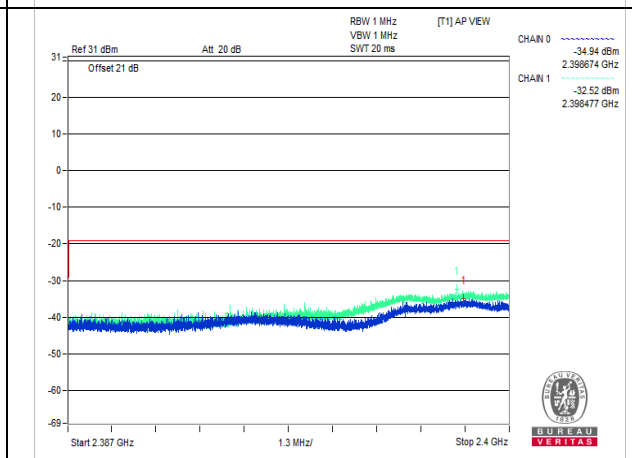
CH 1 (2412MHz)

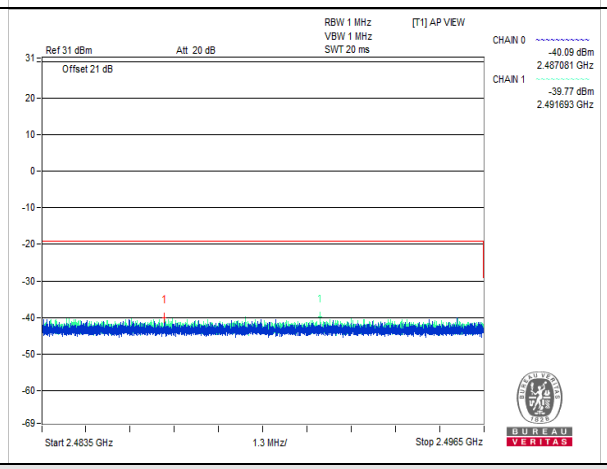
Vmax.

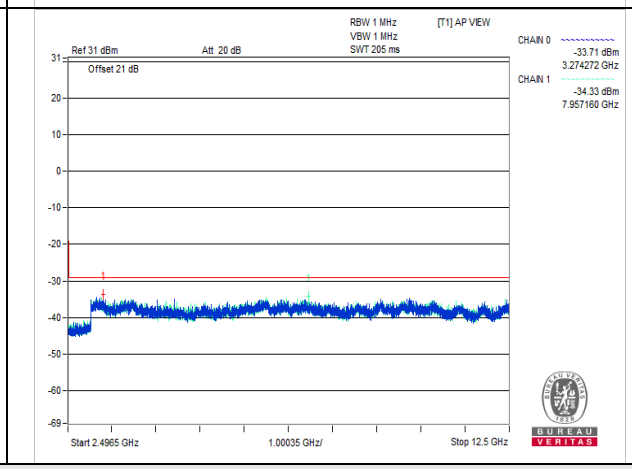






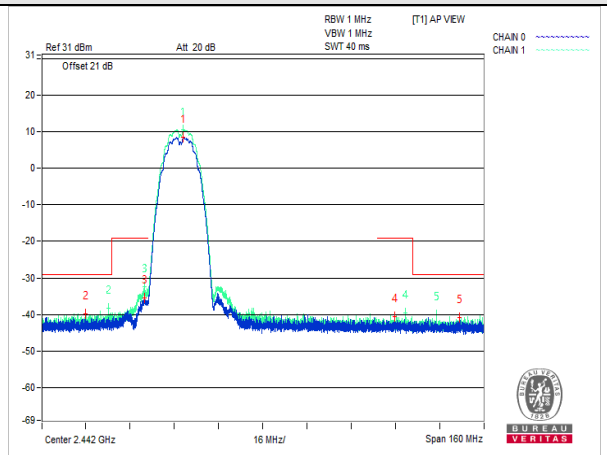


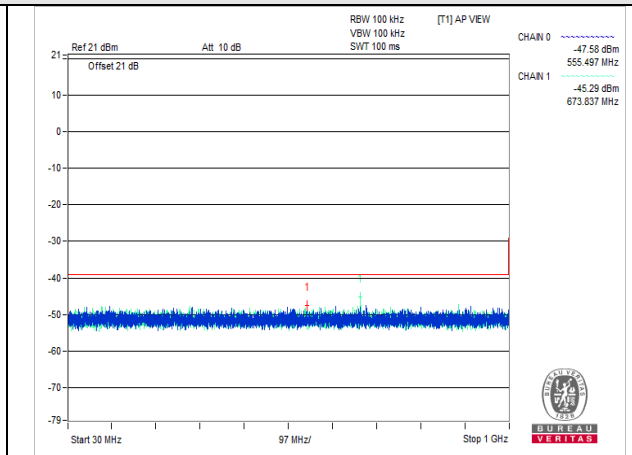


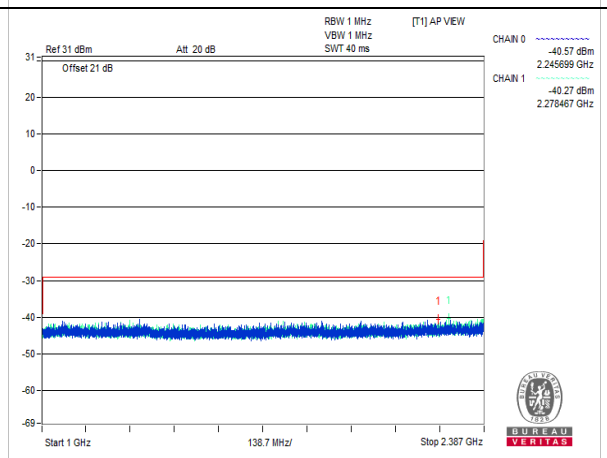


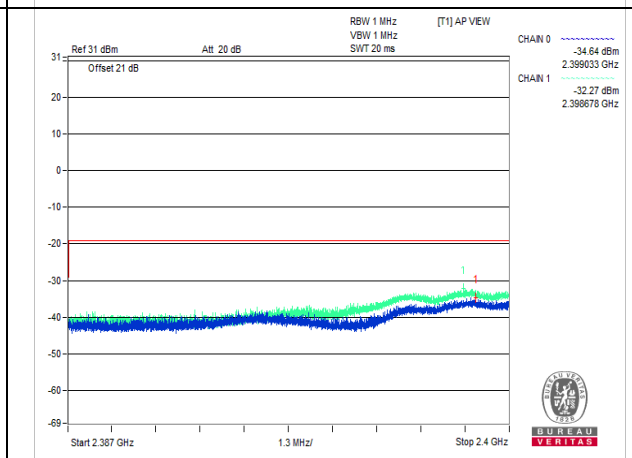
CH 1 (2412MHz)

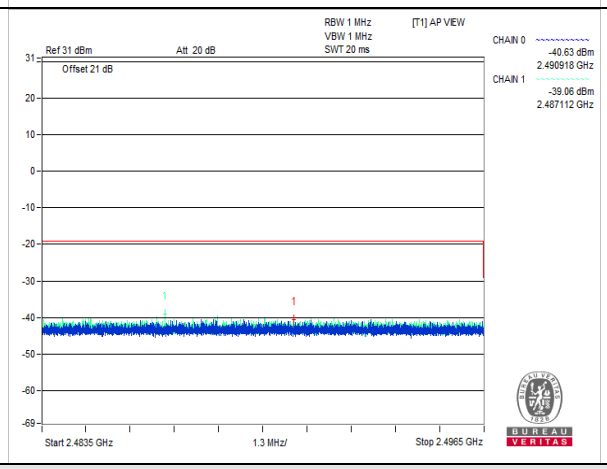
Vmin.

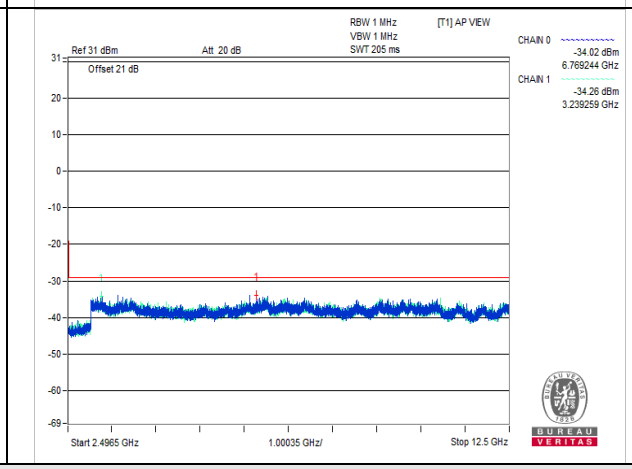






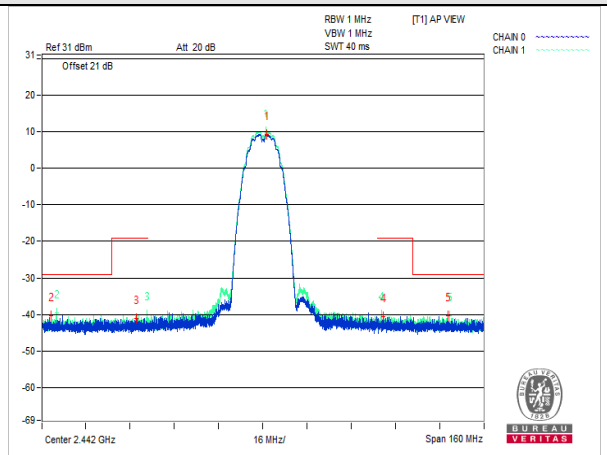


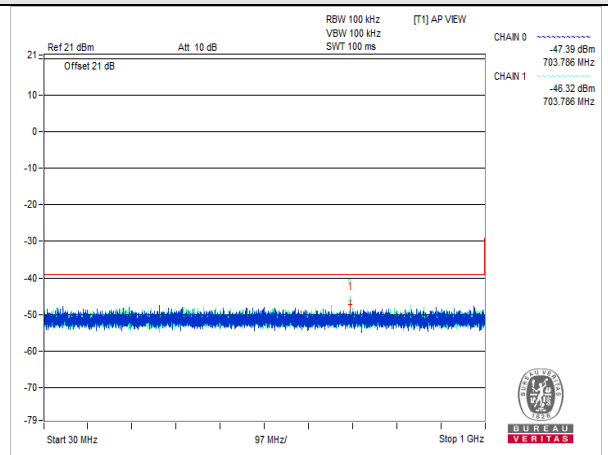


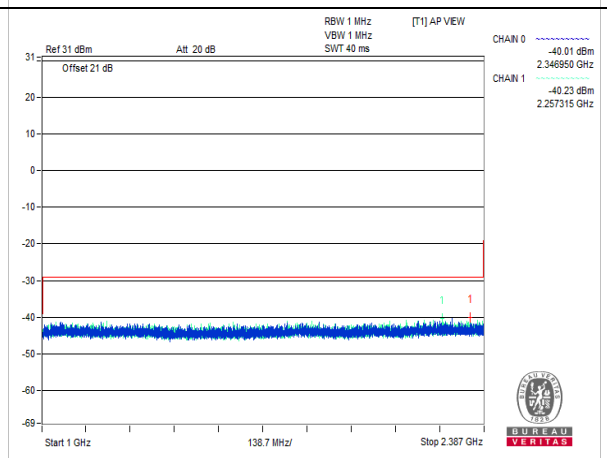


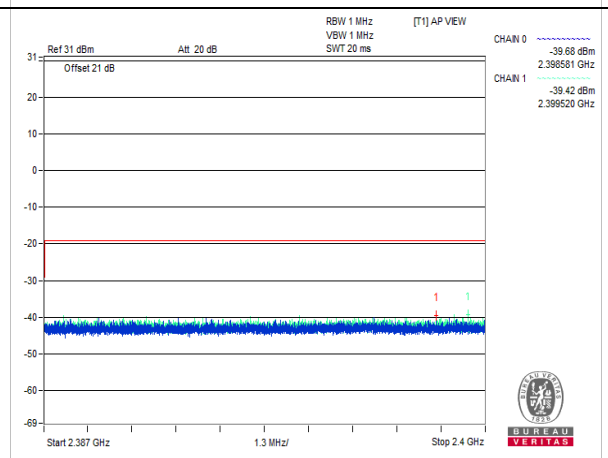
CH 1 (2412MHz)

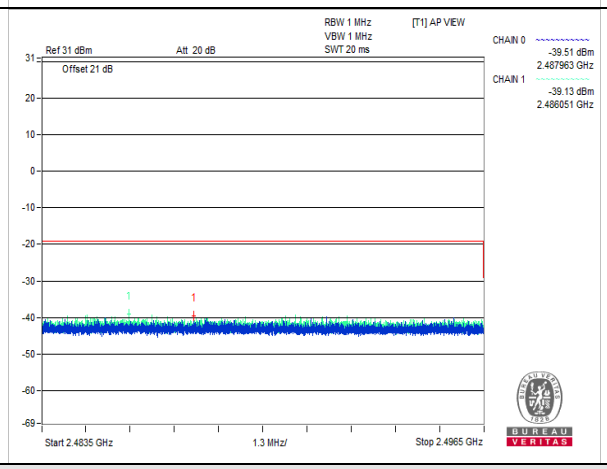
Vnormal

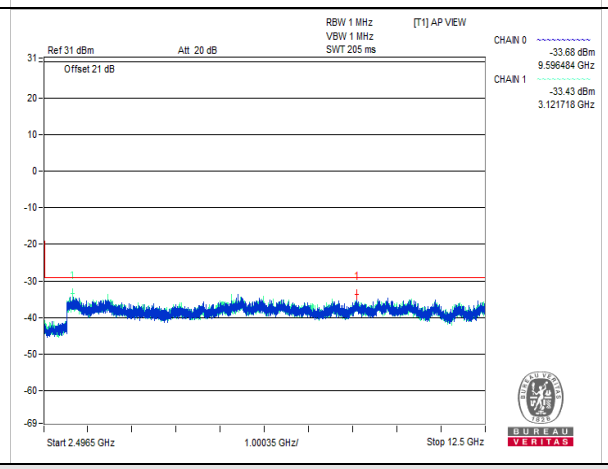






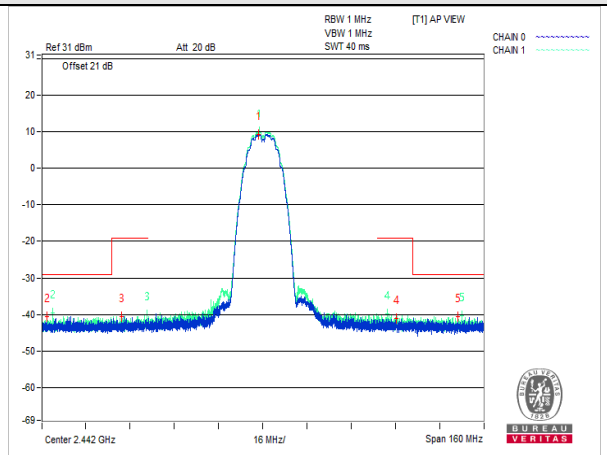


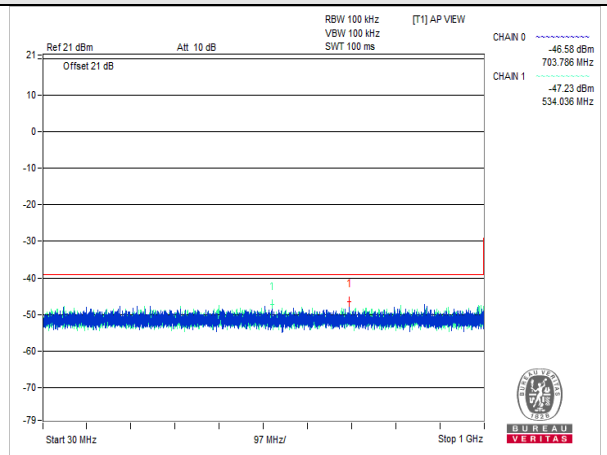


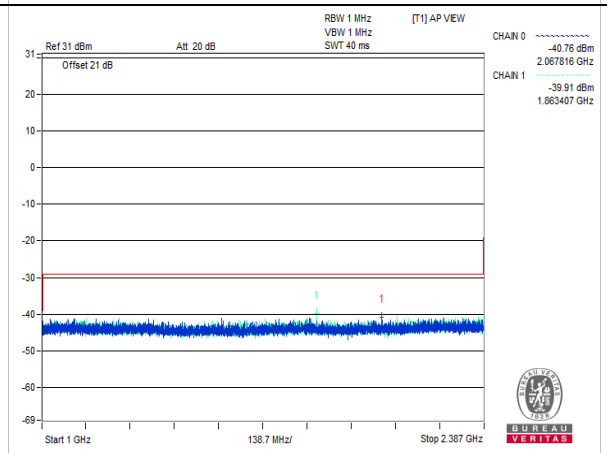


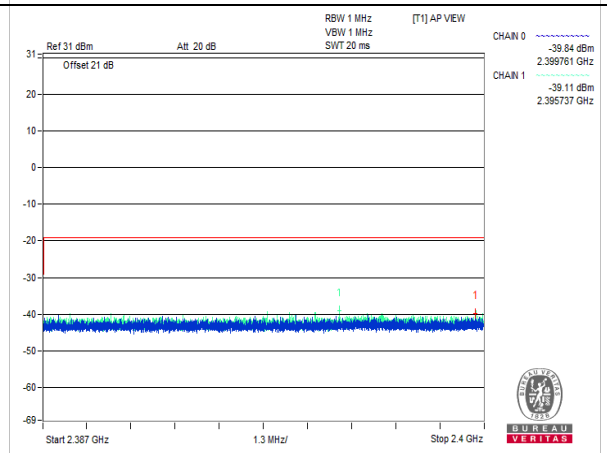
CH 7 (2442MHz)

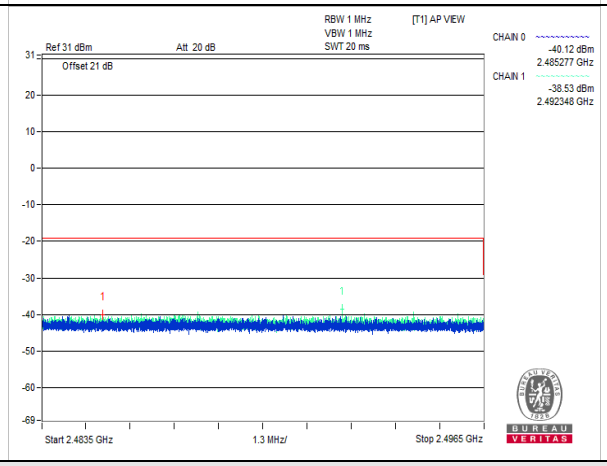
Vmax.

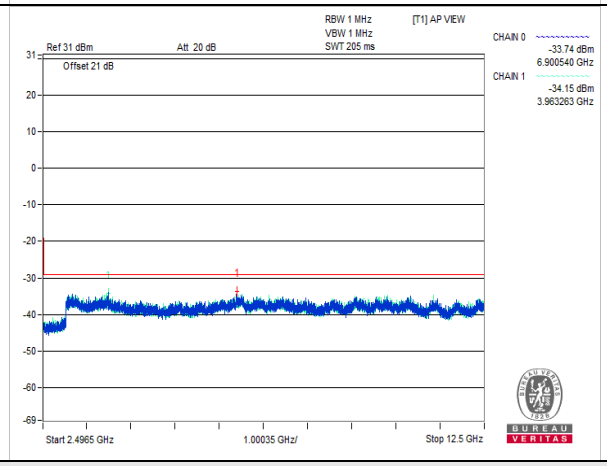






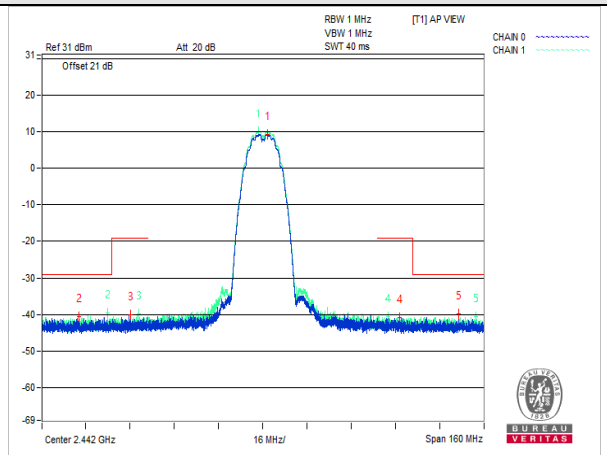


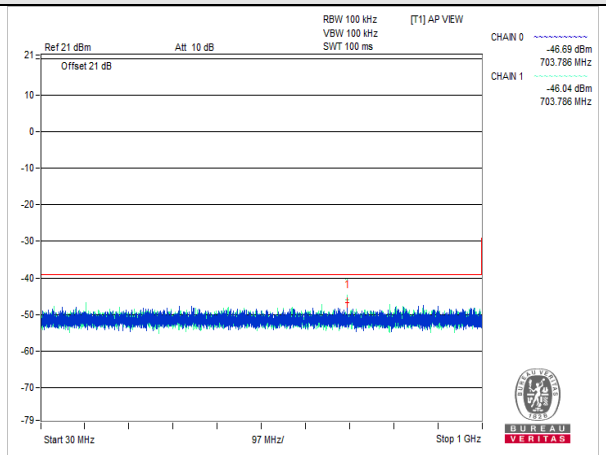


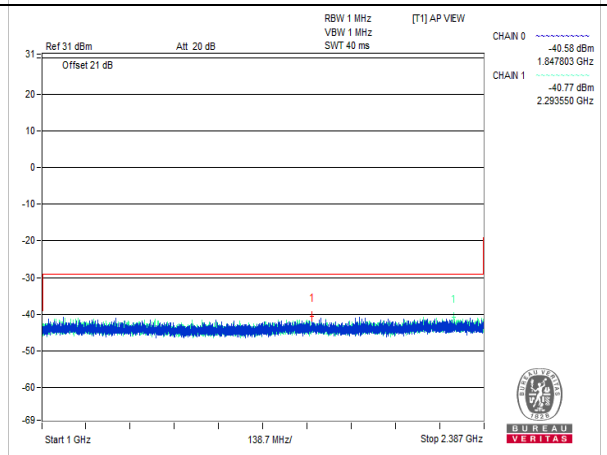


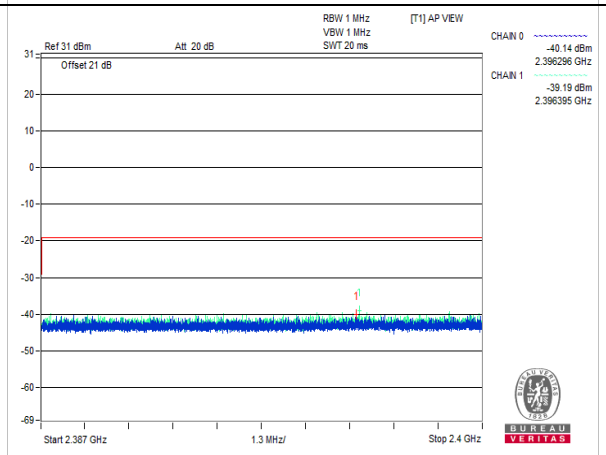
CH 7 (2442MHz)

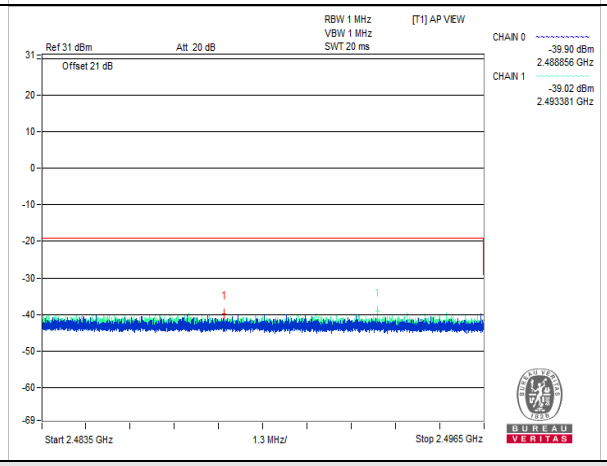
Vmin.

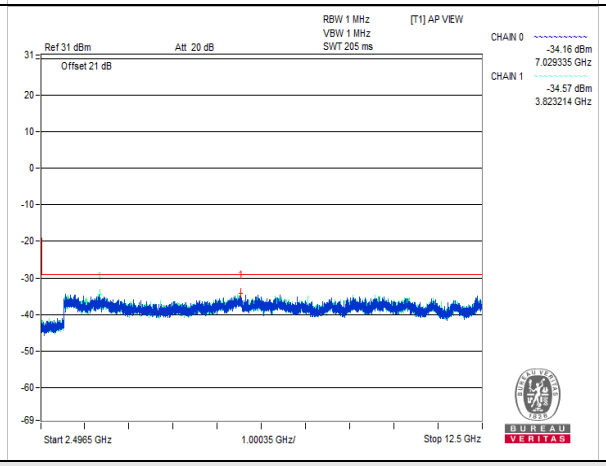






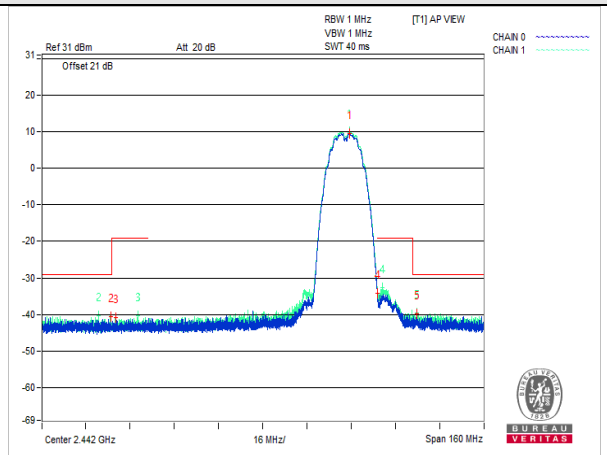


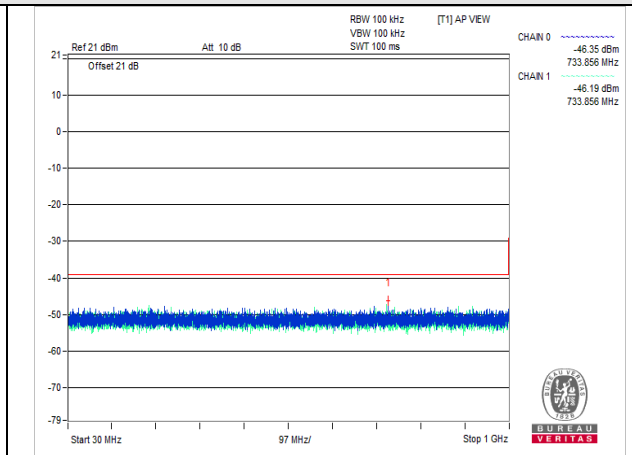


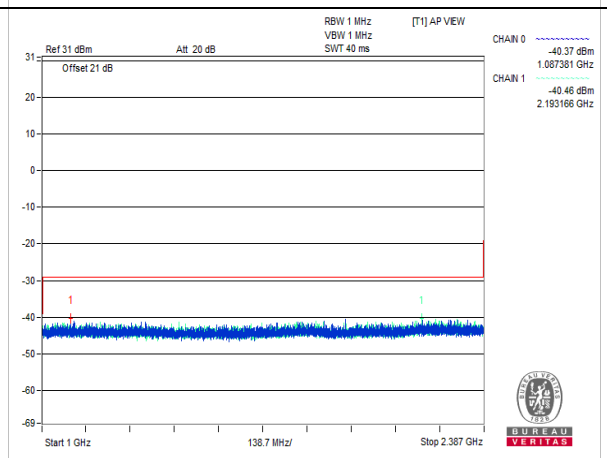


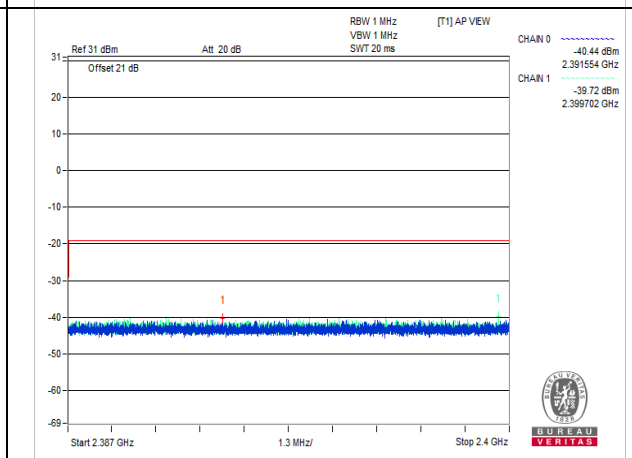
CH 7 (2442MHz)

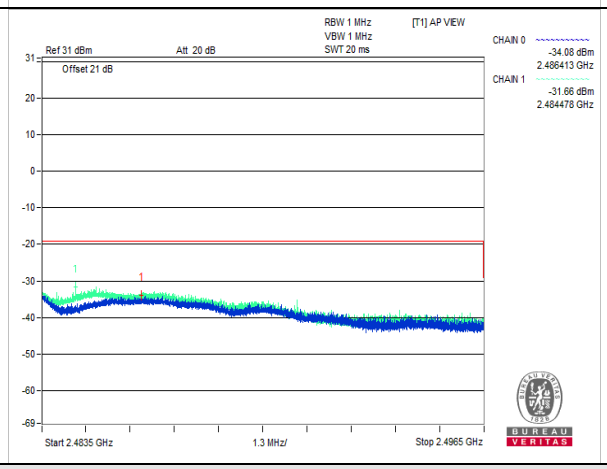
Vnormal

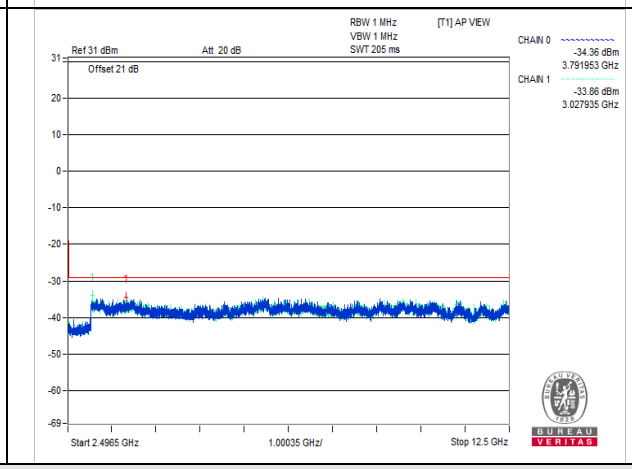






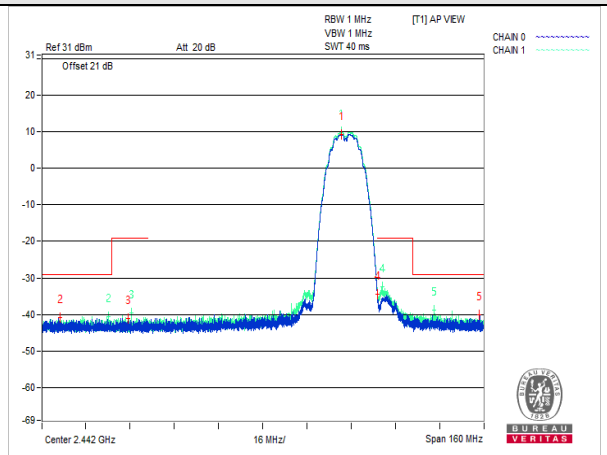


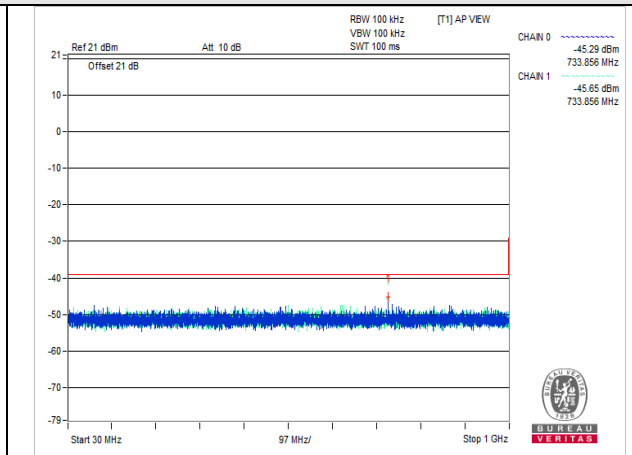


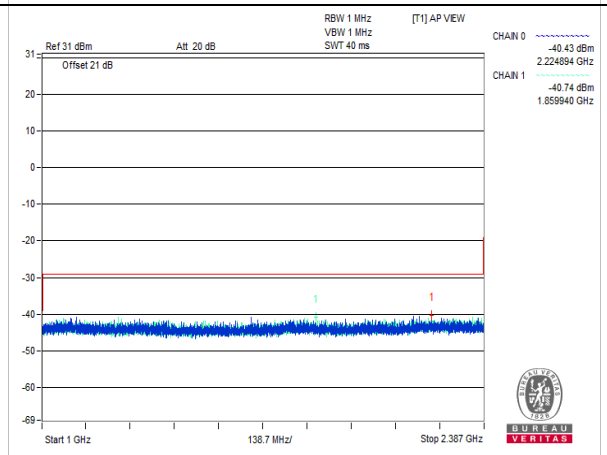


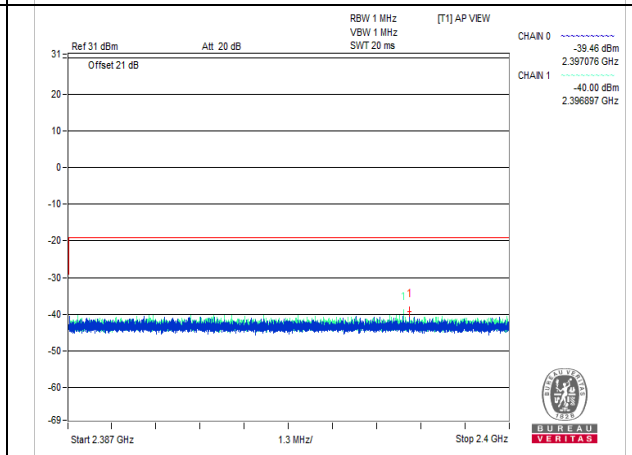
CH 13 (2472MHz)

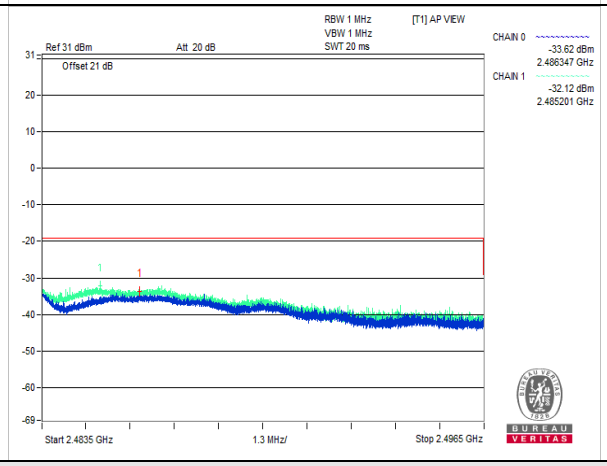
Vmax.

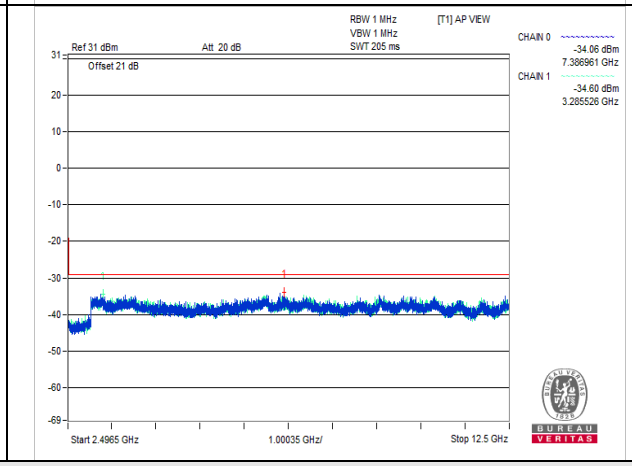






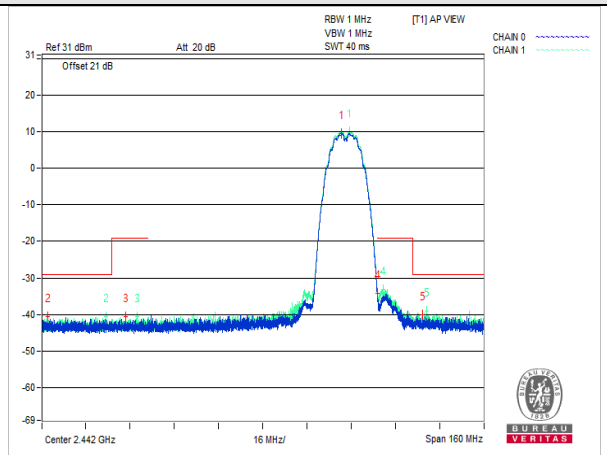


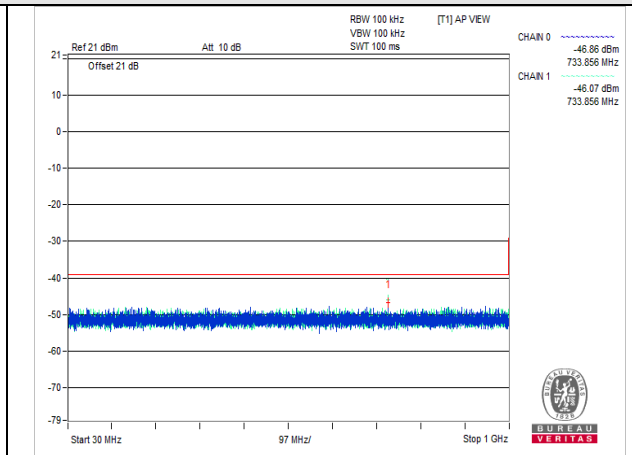


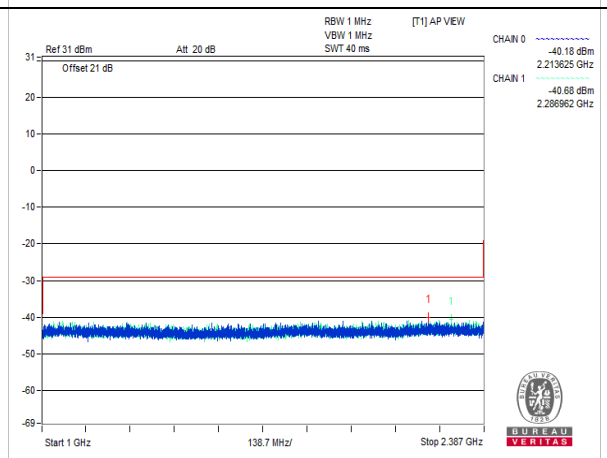


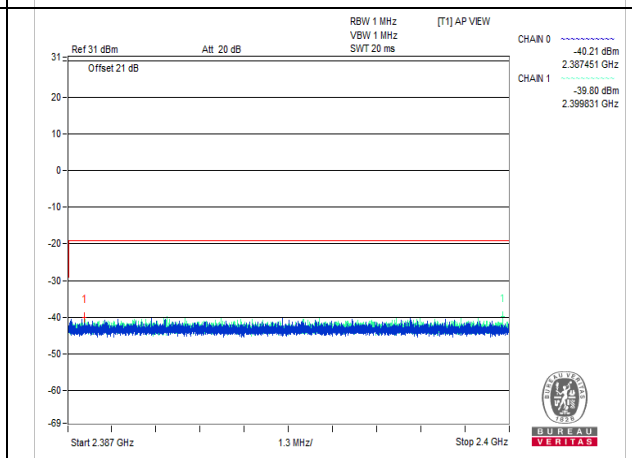
CH 13 (2472MHz)

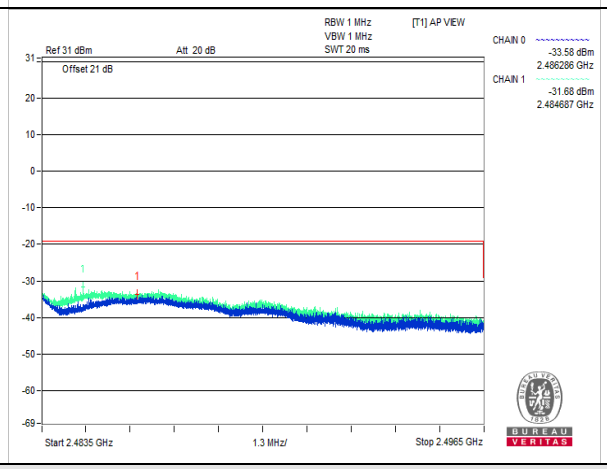
Vmin.

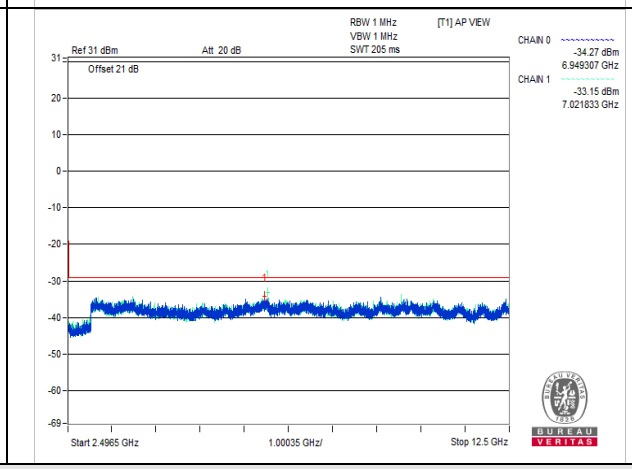






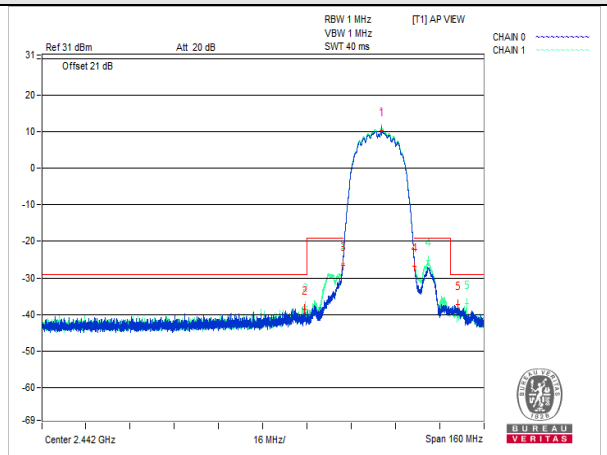


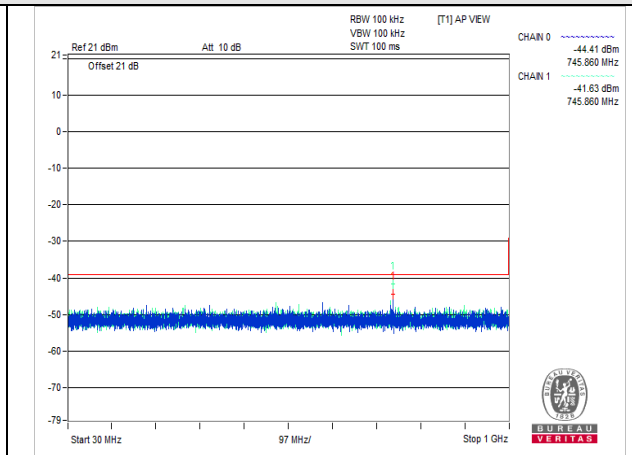


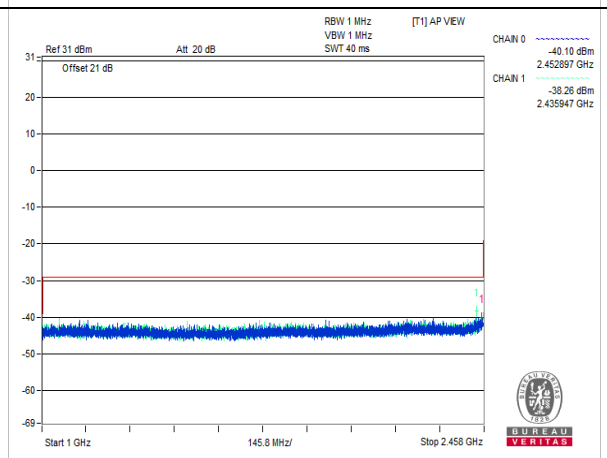


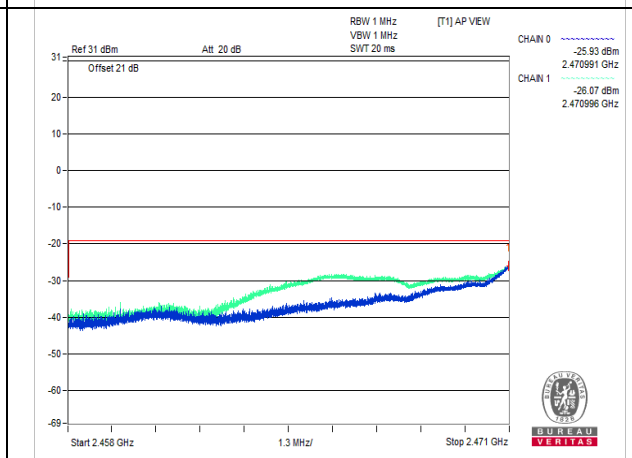
CH 13 (2472MHz)

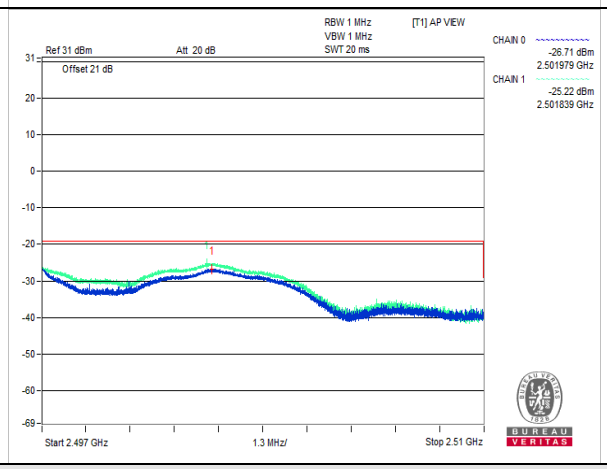
Vnormal

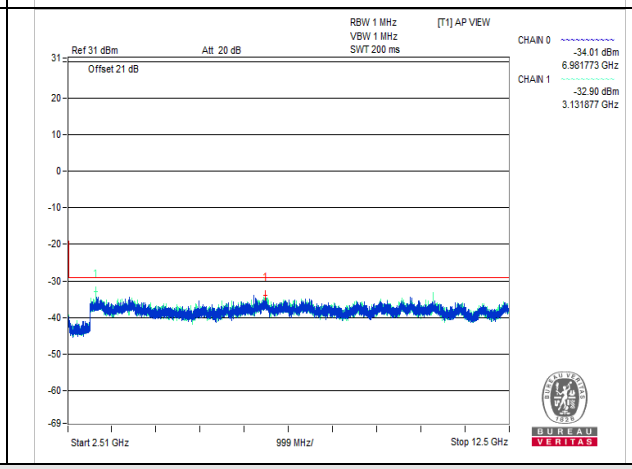






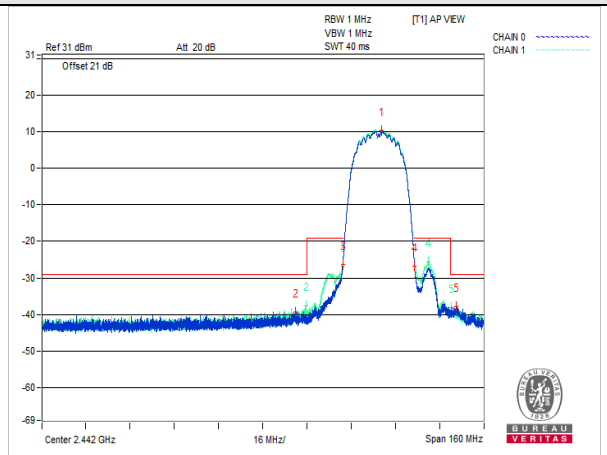


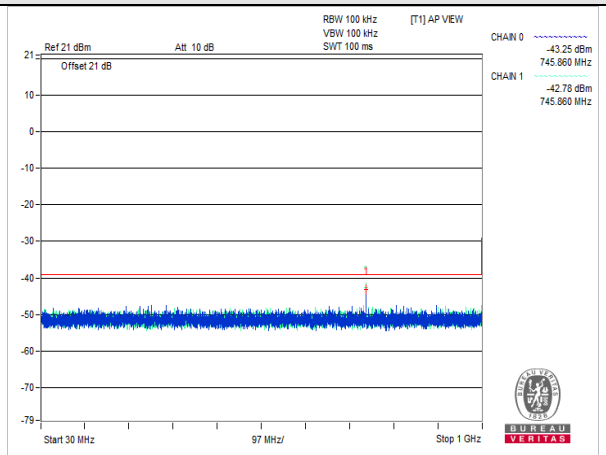


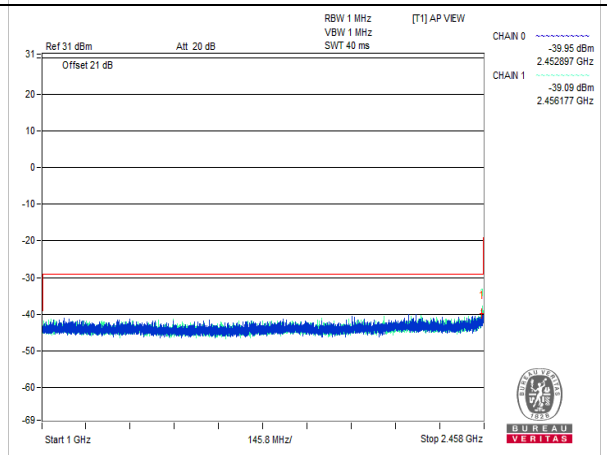


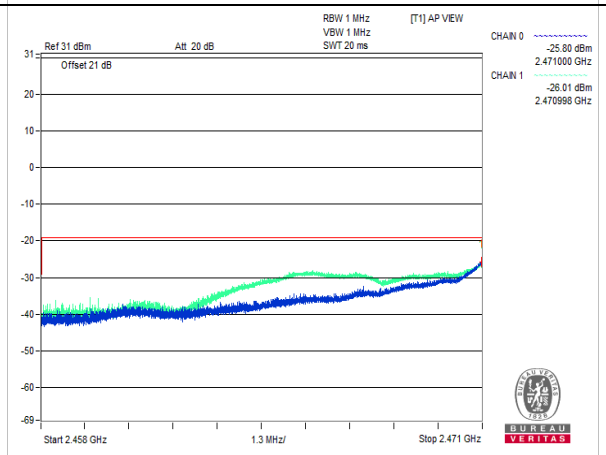
CH 14 (2484MHz)

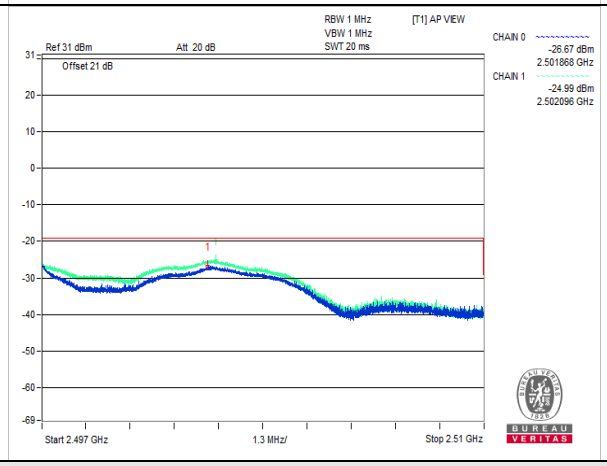
Vmax.

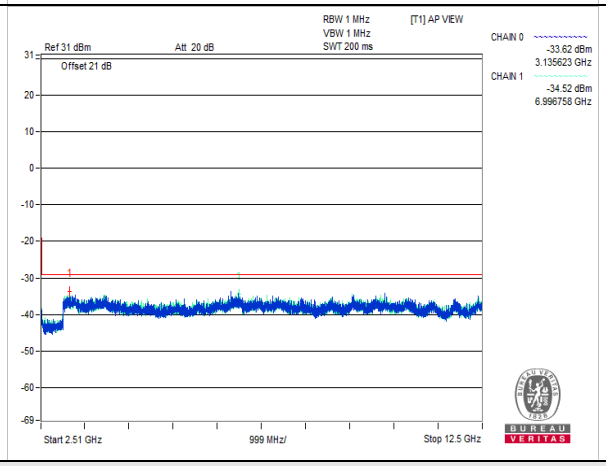






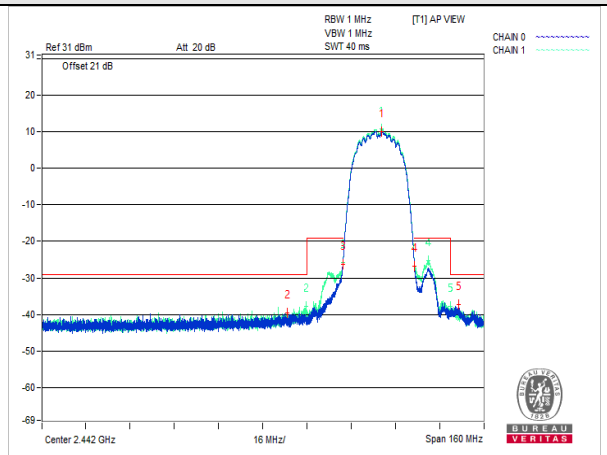


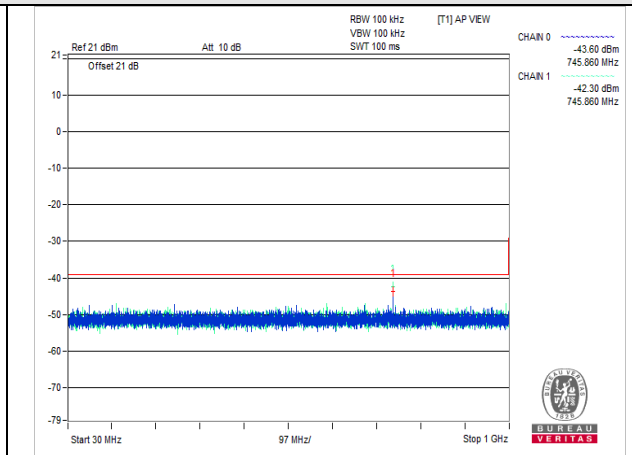


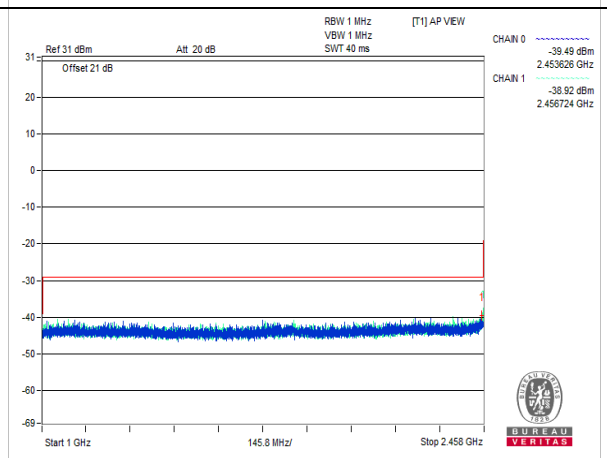


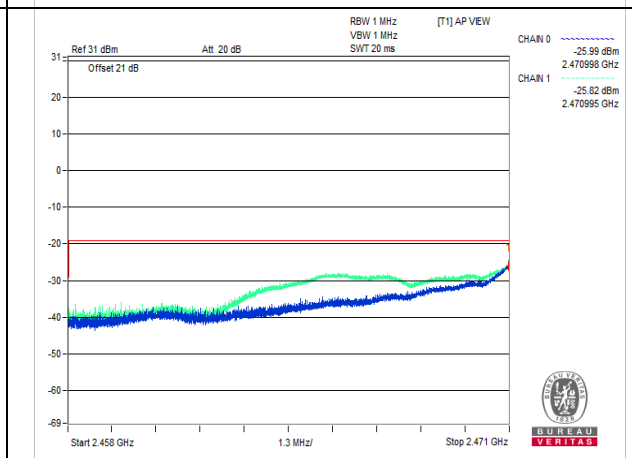
CH 14 (2484MHz)

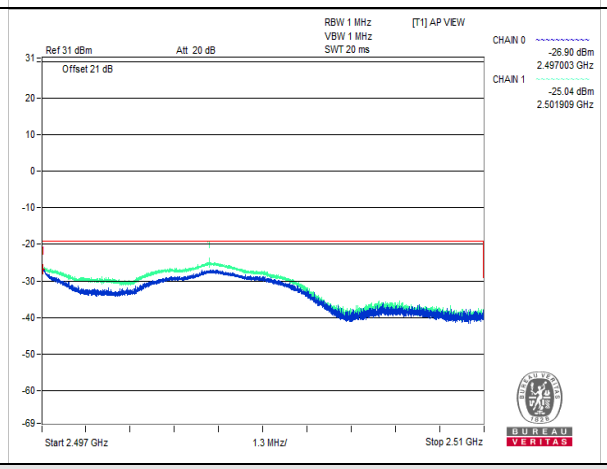
Vmin.

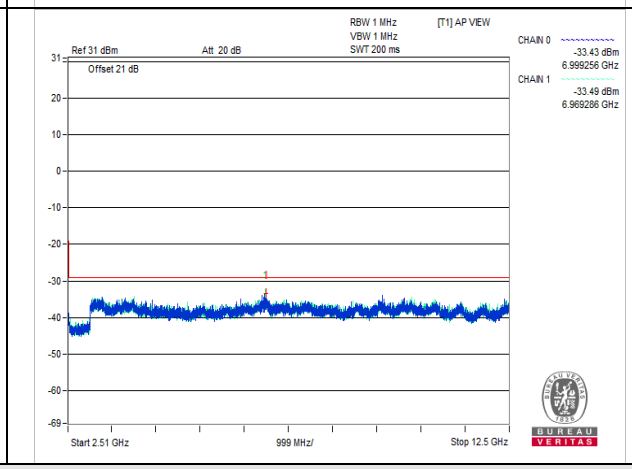












CH 14 (2484MHz)

[Worst result] x [Number of antenna ports]

TEST CHANNEL		CH 1 (2412MHz)		
TEST CONDITION	FREQUENCY RANGE(MHz)	MEASURE. VALUE (uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	0.055594	0.25	PASS
	1000.0 to 2387.0	0.180730	2.5	PASS
	2387.0 to 2400.0	1.039992	25	PASS
	2483.5 to 2496.5	0.198166	25	PASS
	2496.5 to 12500.0	0.935470	2.5	PASS
$V_{max.}$	30.0 to 1000.0	0.056890	0.25	PASS
	1000.0 to 2387.0	0.188378	2.5	PASS
	2387.0 to 2400.0	1.119516	25	PASS
	2483.5 to 2496.5	0.210878	25	PASS
	2496.5 to 12500.0	0.851196	2.5	PASS
$V_{min.}$	30.0 to 1000.0	0.059160	0.25	PASS
	1000.0 to 2387.0	0.187944	2.5	PASS
	2387.0 to 2400.0	1.185850	25	PASS
	2483.5 to 2496.5	0.248330	25	PASS
	2496.5 to 12500.0	0.792556	2.5	PASS
TEST CHANNEL		CH 7 (2442MHz)		
V_{normal}	30.0 to 1000.0	0.046670	0.25	PASS
	1000.0 to 2387.0	0.199540	2.5	PASS
	2387.0 to 2400.0	0.228576	25	PASS
	2483.5 to 2496.5	0.244360	25	PASS
	2496.5 to 12500.0	0.907884	2.5	PASS
$V_{max.}$	30.0 to 1000.0	0.043958	0.25	PASS
	1000.0 to 2387.0	0.204188	2.5	PASS
	2387.0 to 2400.0	0.245488	25	PASS
	2483.5 to 2496.5	0.280562	25	PASS
	2496.5 to 12500.0	0.845338	2.5	PASS
$V_{min.}$	30.0 to 1000.0	0.049778	0.25	PASS
	1000.0 to 2387.0	0.174996	2.5	PASS
	2387.0 to 2400.0	0.241008	25	PASS
	2483.5 to 2496.5	0.250628	25	PASS
	2496.5 to 12500.0	0.767414	2.5	PASS

TEST CHANNEL		CH 13 (2472MHz)		
TEST CONDITION	FREQUENCY RANGE(MHz)	MEASURE. VALUE (uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	0.048088	0.25	PASS
	1000.0 to 2387.0	0.183666	2.5	PASS
	2387.0 to 2400.0	0.213320	25	PASS
	2483.5 to 2496.5	1.364678	25	PASS
	2496.5 to 12500.0	0.822300	2.5	PASS
$V_{max.}$	30.0 to 1000.0	0.059160	0.25	PASS
	1000.0 to 2387.0	0.181146	2.5	PASS
	2387.0 to 2400.0	0.226480	25	PASS
	2483.5 to 2496.5	1.227524	25	PASS
	2496.5 to 12500.0	0.785290	2.5	PASS
$V_{min.}$	30.0 to 1000.0	0.049434	0.25	PASS
	1000.0 to 2387.0	0.191880	2.5	PASS
	2387.0 to 2400.0	0.209426	25	PASS
	2483.5 to 2496.5	1.358408	25	PASS
	2496.5 to 12500.0	0.968344	2.5	PASS
TEST CHANNEL		CH 14 (2484MHz)		
V_{normal}	30.0 to 1000.0	0.137414	0.25	PASS
	1000.0 to 2458.0	0.298558	2.5	PASS
	2458.0 to 2471.0	5.105402	25	PASS
	2497.0 to 2510.0	6.012152	25	PASS
	2510.0 to 12500.0	1.025722	2.5	PASS
$V_{max.}$	30.0 to 1000.0	0.105446	0.25	PASS
	1000.0 to 2458.0	0.246620	2.5	PASS
	2458.0 to 2471.0	5.260536	25	PASS
	2497.0 to 2510.0	6.339134	25	PASS
	2510.0 to 12500.0	0.869020	2.5	PASS
$V_{min.}$	30.0 to 1000.0	0.117768	0.25	PASS
	1000.0 to 2458.0	0.256466	2.5	PASS
	2458.0 to 2471.0	5.236366	25	PASS
	2497.0 to 2510.0	6.266572	25	PASS
	2510.0 to 12500.0	0.907884	2.5	PASS

802.11g

Chain 0

TEST CHANNEL		CH 1 (2412MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	939.617	0.018750	0.125	PASS
	1000.0 to 2387.0	2387.000	0.612350	1.25	PASS
	2387.0 to 2400.0	2399.964	2.197860	12.5	PASS
	2483.5 to 2496.5	2489.265	0.111944	12.5	PASS
	2496.5 to 12500.0	3935.753	0.400867	1.25	PASS
$V_{max.}$	30.0 to 1000.0	673.837	0.018967	0.125	PASS
	1000.0 to 2387.0	2384.052	0.334965	1.25	PASS
	2387.0 to 2400.0	2399.987	2.167704	12.5	PASS
	2483.5 to 2496.5	2487.465	0.119124	12.5	PASS
	2496.5 to 12500.0	6975.567	0.421697	1.25	PASS
$V_{min.}$	30.0 to 1000.0	859.350	0.018707	0.125	PASS
	1000.0 to 2387.0	2387.000	0.758578	1.25	PASS
	2387.0 to 2400.0	2399.795	2.506109	12.5	PASS
	2483.5 to 2496.5	2486.876	0.105682	12.5	PASS
	2496.5 to 12500.0	3140.475	0.375837	1.25	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	204.721	0.019999	0.125	PASS
	1000.0 to 2387.0	2256.448	0.095280	1.25	PASS
	2387.0 to 2400.0	2393.045	0.116145	12.5	PASS
	2483.5 to 2496.5	2484.634	0.103039	12.5	PASS
	2496.5 to 12500.0	3027.935	0.369828	1.25	PASS
$V_{max.}$	30.0 to 1000.0	122.513	0.017179	0.125	PASS
	1000.0 to 2387.0	2219.693	0.089125	1.25	PASS
	2387.0 to 2400.0	2399.507	0.116145	12.5	PASS
	2483.5 to 2496.5	2483.613	0.108393	12.5	PASS
	2496.5 to 12500.0	3220.503	0.386367	1.25	PASS
$V_{min.}$	30.0 to 1000.0	850.862	0.019953	0.125	PASS
	1000.0 to 2387.0	2227.668	0.088512	1.25	PASS
	2387.0 to 2400.0	2399.195	0.106905	12.5	PASS
	2483.5 to 2496.5	2484.125	0.123310	12.5	PASS
	2496.5 to 12500.0	9580.227	0.358922	1.25	PASS

TEST CHANNEL		CH 13 (2472MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	271.045	0.020184	0.125	PASS
	1000.0 to 2387.0	1300.112	0.100462	1.25	PASS
	2387.0 to 2400.0	2395.945	0.097275	12.5	PASS
	2483.5 to 2496.5	2486.904	6.180164	12.5	PASS
	2496.5 to 12500.0	2496.500	0.494311	1.25	PASS
$V_{max.}$	30.0 to 1000.0	680.021	0.022803	0.125	PASS
	1000.0 to 2387.0	2164.906	0.097499	1.25	PASS
	2387.0 to 2400.0	2397.801	0.096828	12.5	PASS
	2483.5 to 2496.5	2486.753	6.095369	12.5	PASS
	2496.5 to 12500.0	3244.261	0.418794	1.25	PASS
$V_{min.}$	30.0 to 1000.0	546.646	0.021429	0.125	PASS
	1000.0 to 2387.0	2233.563	0.086099	1.25	PASS
	2387.0 to 2400.0	2389.905	0.105439	12.5	PASS
	2483.5 to 2496.5	2486.813	6.516284	12.5	PASS
	2496.5 to 12500.0	7015.581	0.437522	1.25	PASS

NOTE: 1. The spectrum plots are attached on the following pages.

Chain 1

TEST CHANNEL		CH 1 (2412MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	192.838	0.019187	0.125	PASS
	1000.0 to 2387.0	2386.653	1.216186	1.25	PASS
	2387.0 to 2400.0	2398.571	0.253924	12.5	PASS(1)
	2483.5 to 2496.5	2484.907	0.116413	12.5	PASS
	2496.5 to 12500.0	3948.257	0.413048	1.25	PASS
$V_{max.}$	30.0 to 1000.0	850.741	0.019543	0.125	PASS
	1000.0 to 2387.0	2386.479	1.106624	1.25	PASS
	2387.0 to 2400.0	2398.878	0.246750	12.5	PASS(2)
	2483.5 to 2496.5	2488.940	0.114551	12.5	PASS
	2496.5 to 12500.0	10850.672	0.382825	1.25	PASS
$V_{min.}$	30.0 to 1000.0	680.142	0.021928	0.125	PASS
	1000.0 to 2387.0	2384.919	0.974990	1.25	PASS
	2387.0 to 2400.0	2398.825	0.244930	12.5	PASS(3)
	2483.5 to 2496.5	2484.182	0.135519	12.5	PASS
	2496.5 to 12500.0	3085.456	0.456037	1.25	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	111.358	0.021727	0.125	PASS
	1000.0 to 2387.0	2364.287	0.104713	1.25	PASS
	2387.0 to 2400.0	2398.427	0.147571	12.5	PASS
	2483.5 to 2496.5	2487.505	0.234963	12.5	PASS
	2496.5 to 12500.0	12438.727	0.408319	1.25	PASS
$V_{max.}$	30.0 to 1000.0	793.875	0.019861	0.125	PASS
	1000.0 to 2387.0	2157.278	0.084333	1.25	PASS
	2387.0 to 2400.0	2395.230	0.156315	12.5	PASS
	2483.5 to 2496.5	2486.758	0.197242	12.5	PASS
	2496.5 to 12500.0	3211.750	0.376704	1.25	PASS
$V_{min.}$	30.0 to 1000.0	754.105	0.017660	0.125	PASS
	1000.0 to 2387.0	1303.059	0.092045	1.25	PASS
	2387.0 to 2400.0	2399.124	0.143219	12.5	PASS
	2483.5 to 2496.5	2484.460	0.202768	12.5	PASS
	2496.5 to 12500.0	3785.701	0.422669	1.25	PASS

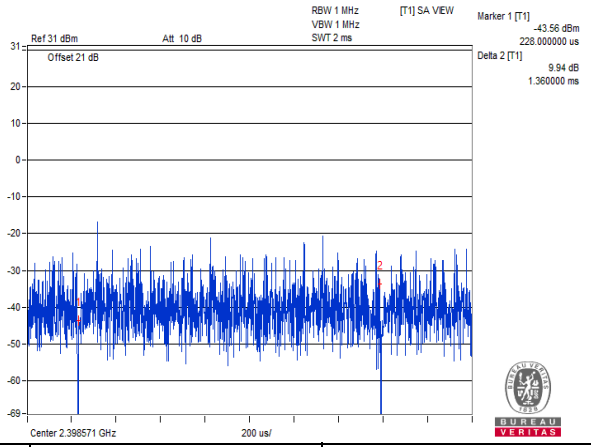
TEST CHANNEL		CH 13 (2472MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	985.935	0.018493	0.125	PASS
	1000.0 to 2387.0	2366.715	0.091201	1.25	PASS
	2387.0 to 2400.0	2394.618	0.110408	12.5	PASS
	2483.5 to 2496.5	2487.083	10.665961	12.5	PASS
	2496.5 to 12500.0	2496.500	1.122018	1.25	PASS
$V_{max.}$	30.0 to 1000.0	257.828	0.021478	0.125	PASS
	1000.0 to 2387.0	1755.221	0.107895	1.25	PASS
	2387.0 to 2400.0	2395.032	0.097724	12.5	PASS
	2483.5 to 2496.5	2487.018	9.527962	12.5	PASS
	2496.5 to 12500.0	2496.500	0.709578	1.25	PASS
$V_{min.}$	30.0 to 1000.0	52.916	0.019999	0.125	PASS
	1000.0 to 2387.0	2269.798	0.089536	1.25	PASS
	2387.0 to 2400.0	2387.502	0.103753	12.5	PASS
	2483.5 to 2496.5	2487.130	9.571941	12.5	PASS
	2496.5 to 12500.0	2496.500	0.526017	1.25	PASS

NOTE: 1. The spectrum plots are attached on the following pages.

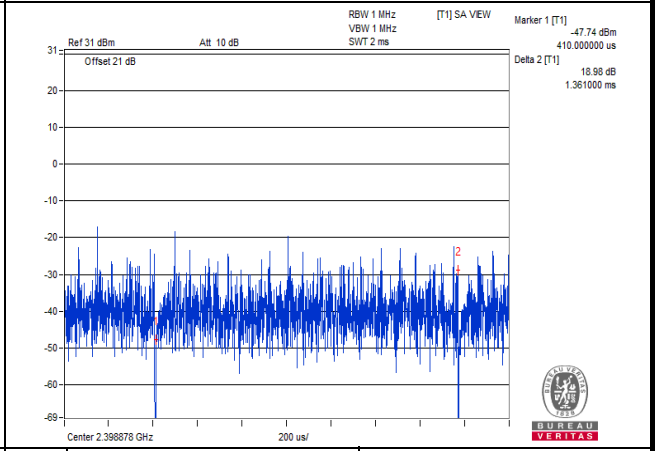
2. (No.): The value was tested under Measuring Mode *Zero Span.

Measuring Mode *Zero Span

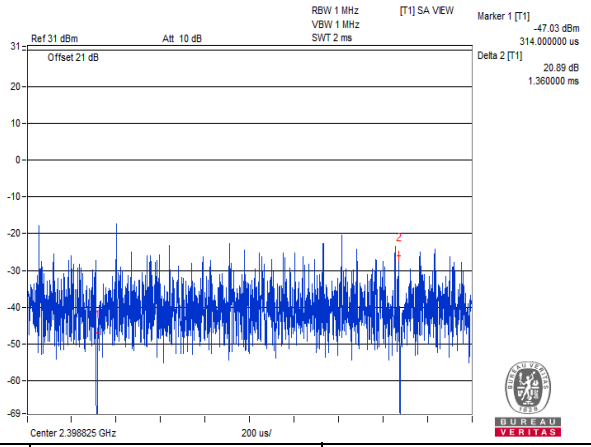
1. Set the spectrum analyzer as below and it takes in a value of all data point.
2. Regarding the all data value, it transforms the “dBm” value into “uW” value.
3. It adds the all values and calculates a grand total. Define a grand total as “P”.
4. It divides “P” by sample data point (ex.501) and calculates the mean value.
5. It reports the mean value.



1	2398.571MHz	P = 0.253924uW



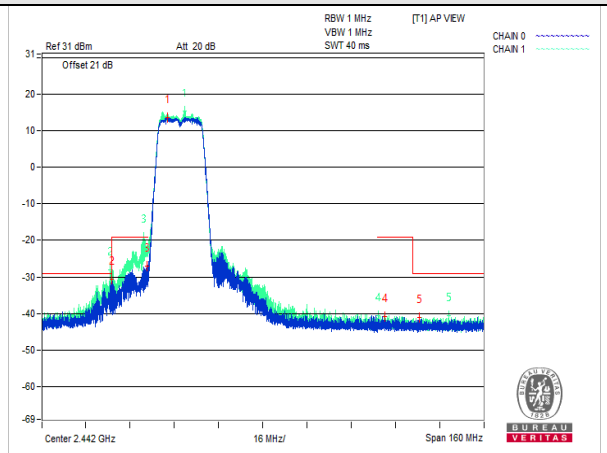
2	2398.878MHz	P = 0.24675uW

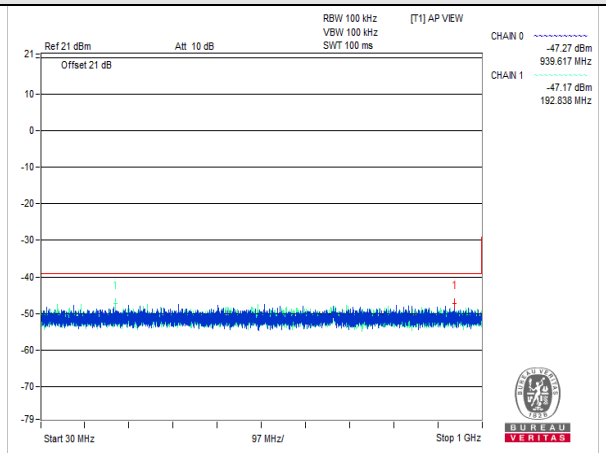


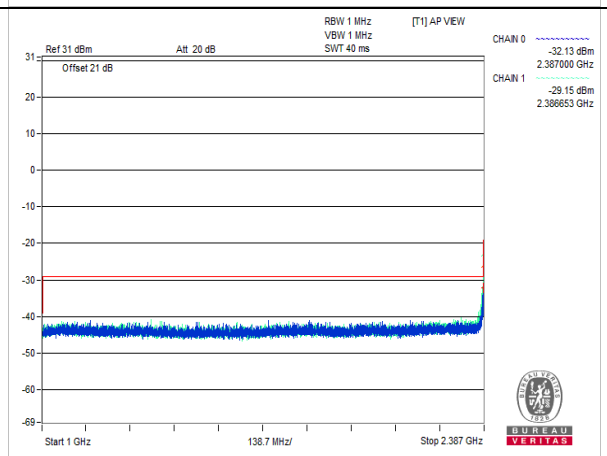
3	2398.825MHz	P = 0.24493uW

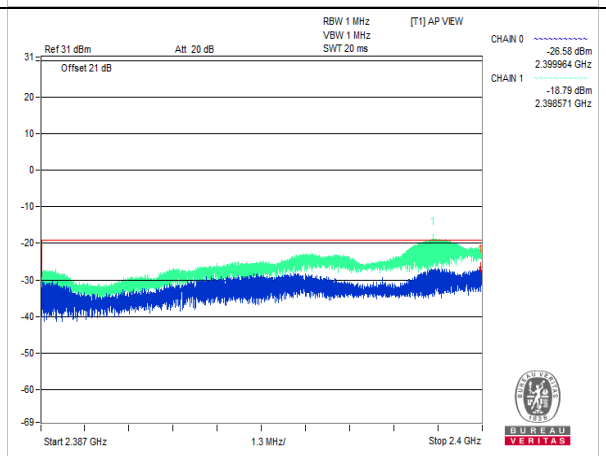
Graph

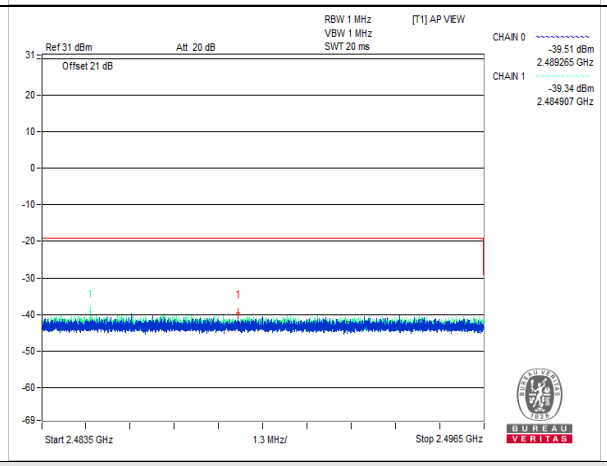
Vnormal

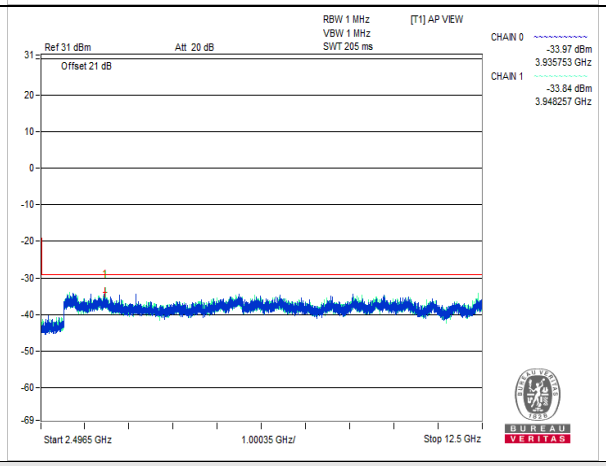






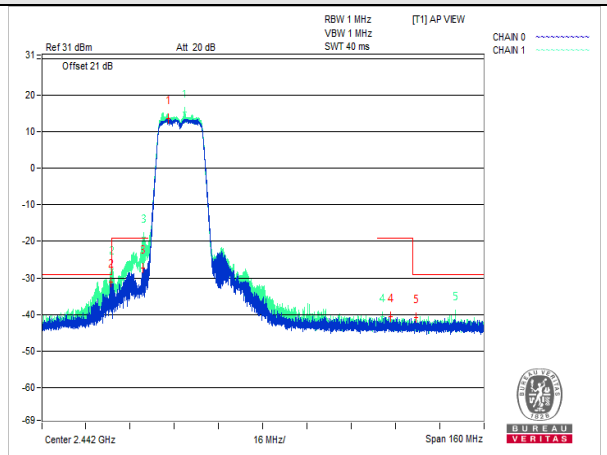


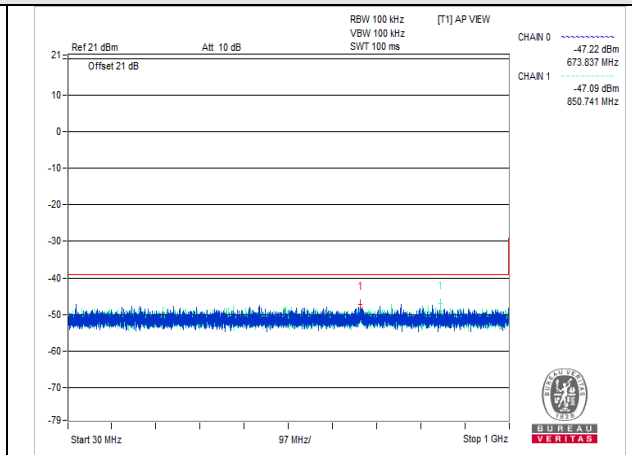


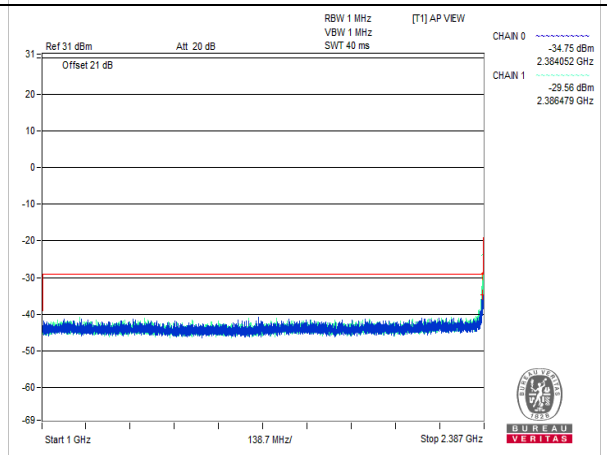


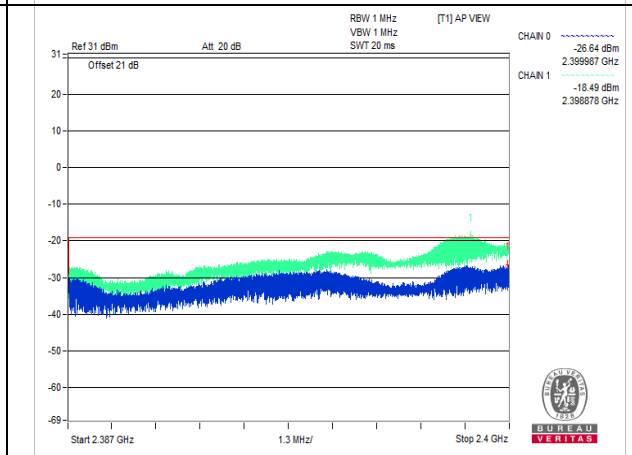
CH 1 (2412MHz)

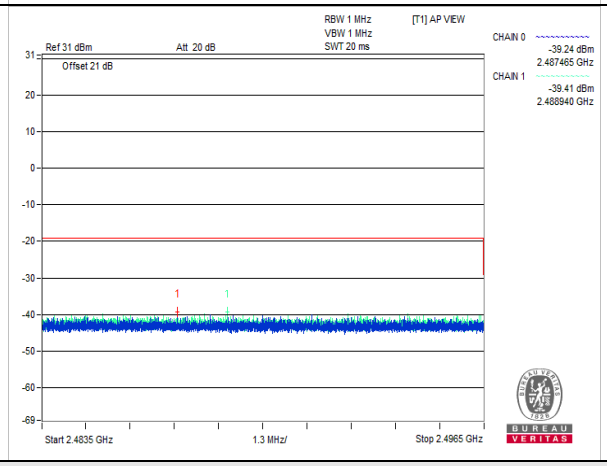
Vmax.

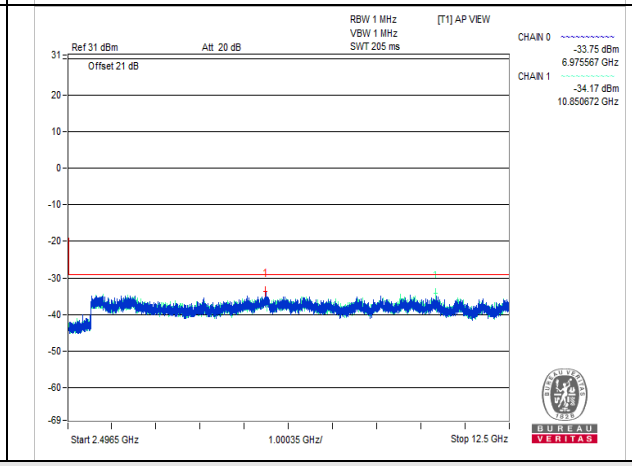






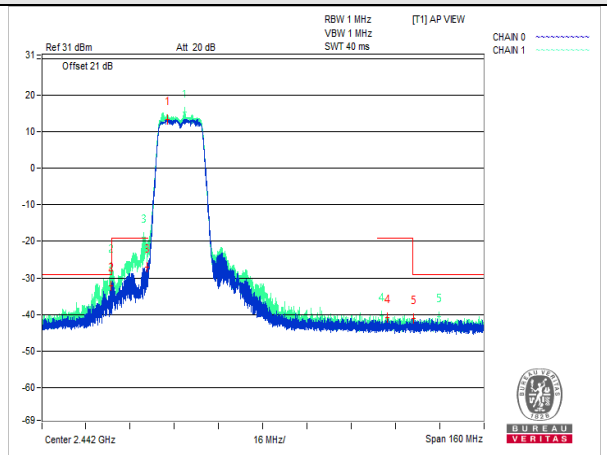


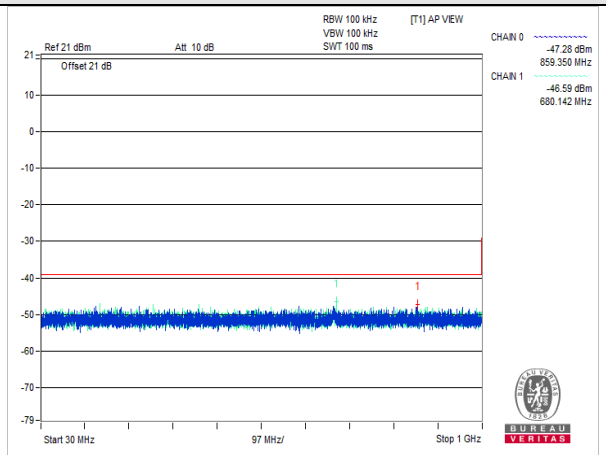


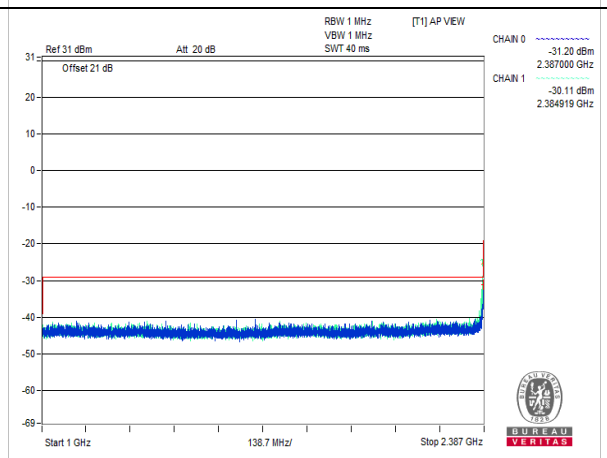


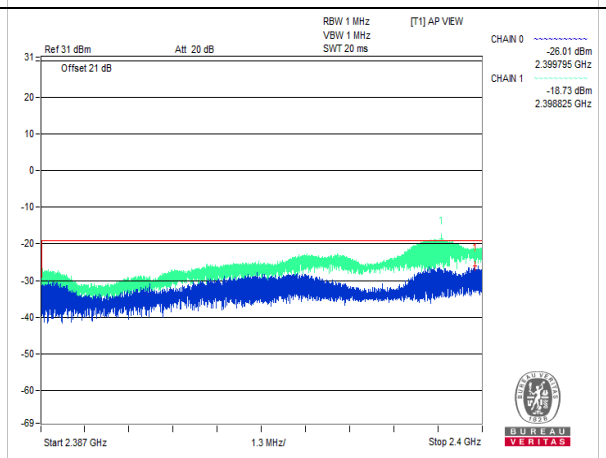
CH 1 (2412MHz)

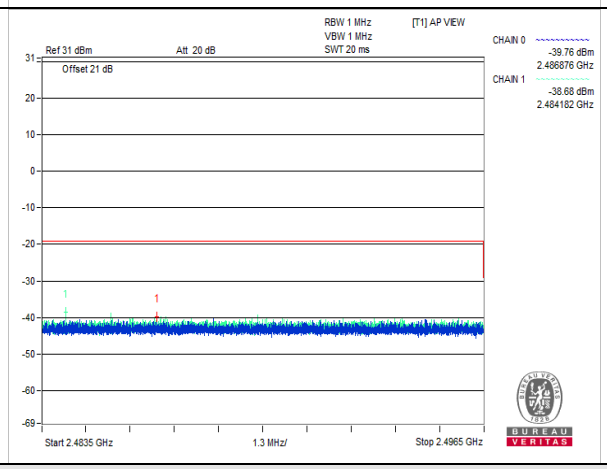
Vmin.

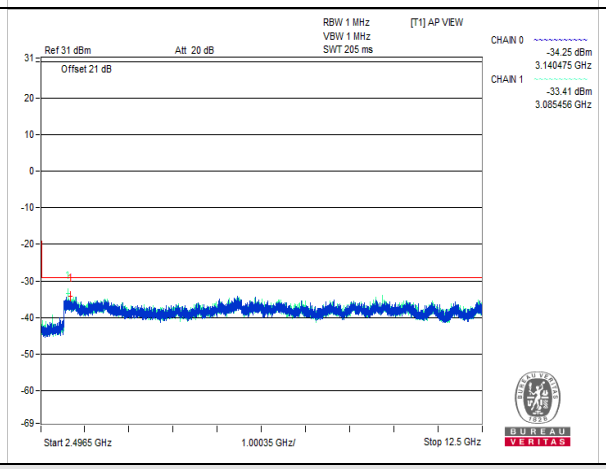






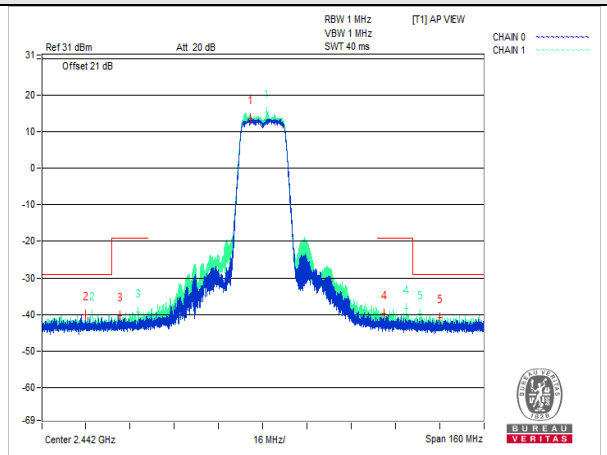


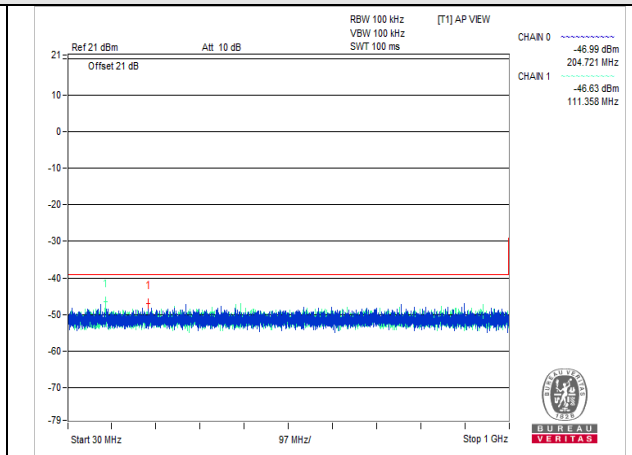


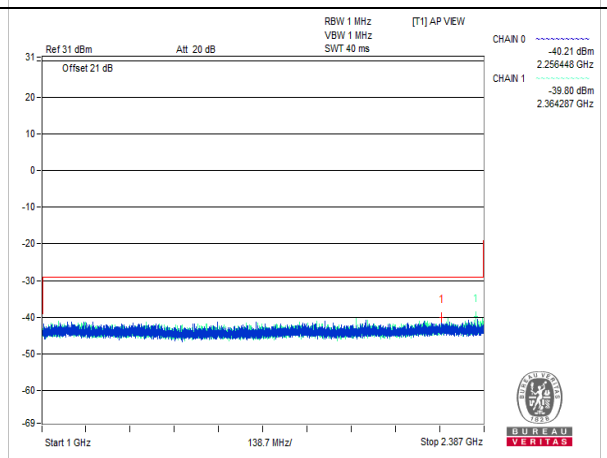


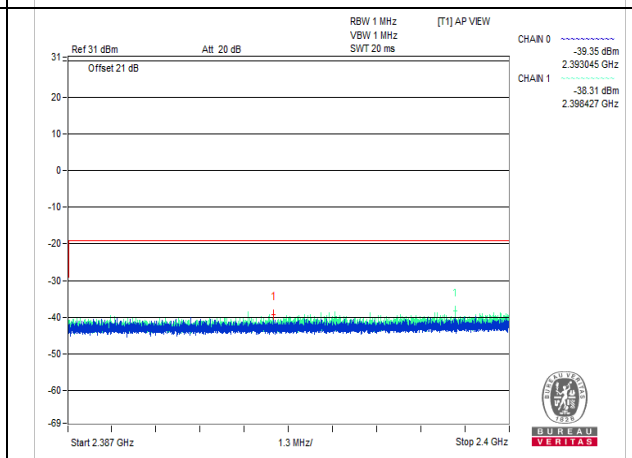
CH 1 (2412MHz)

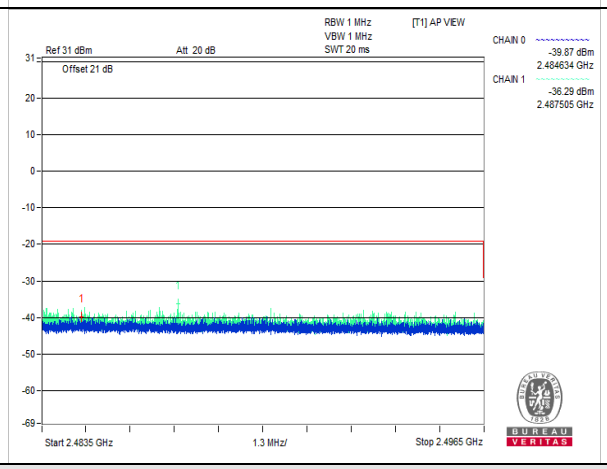
Vnormal

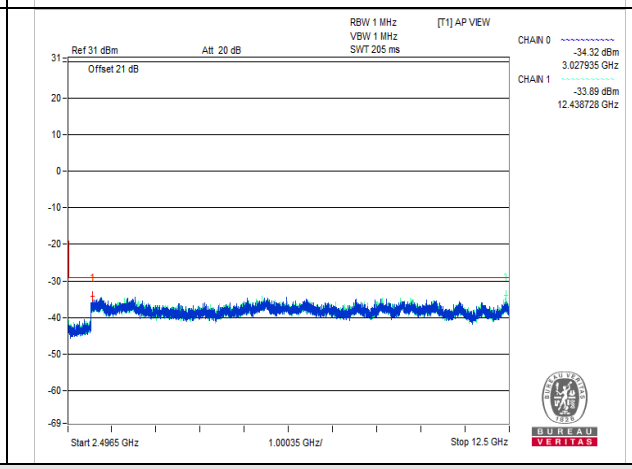






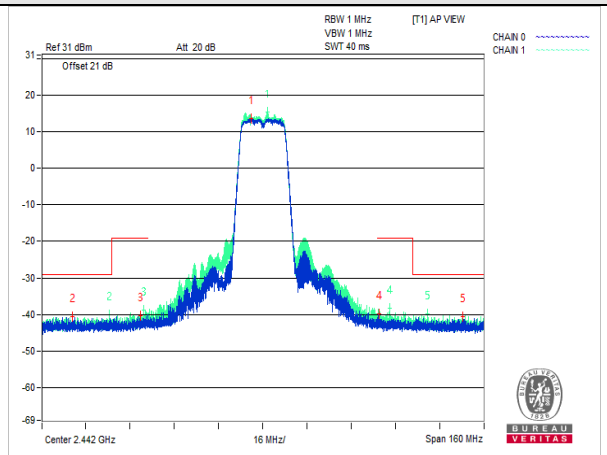


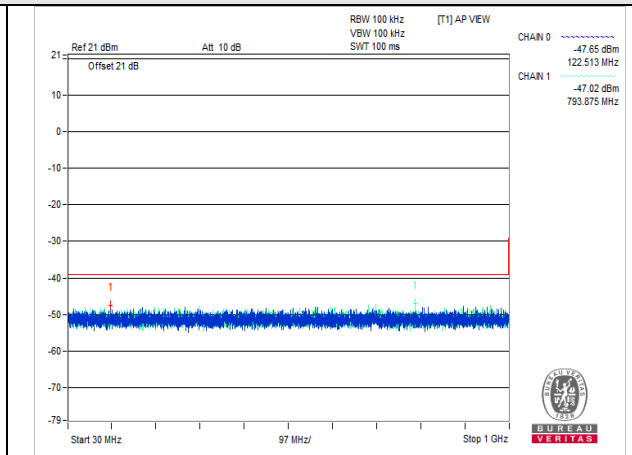


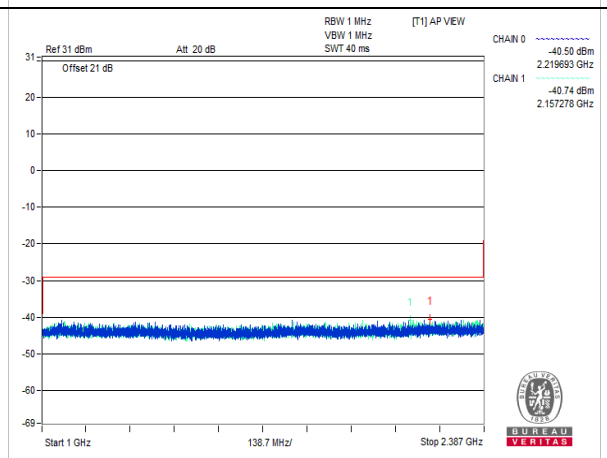


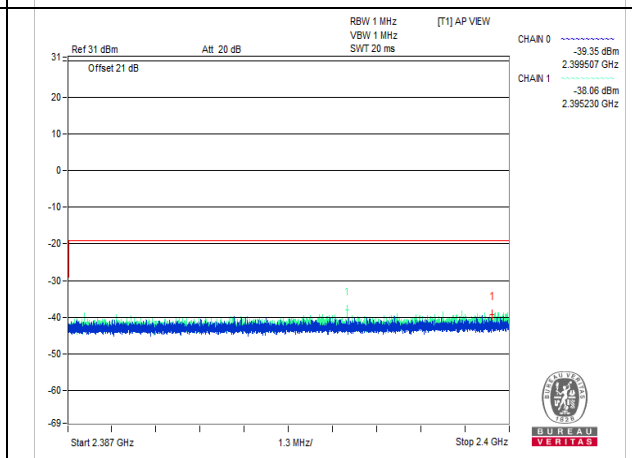
CH 7 (2442MHz)

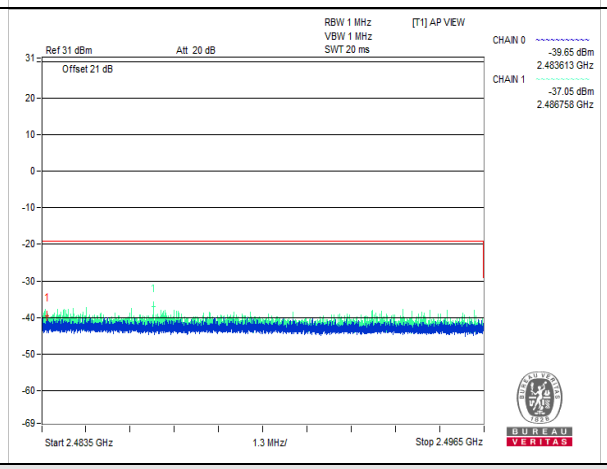
Vmax.

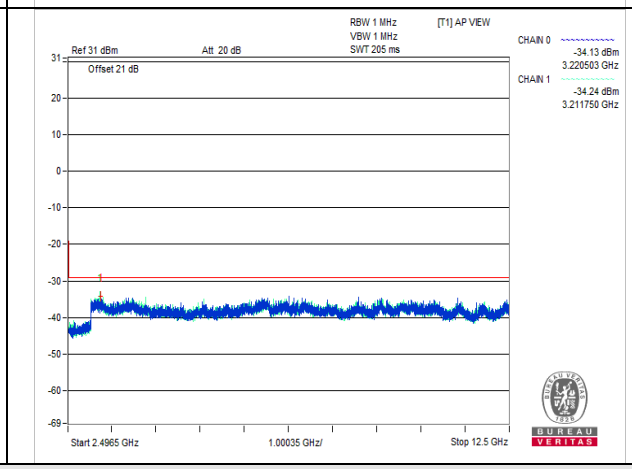






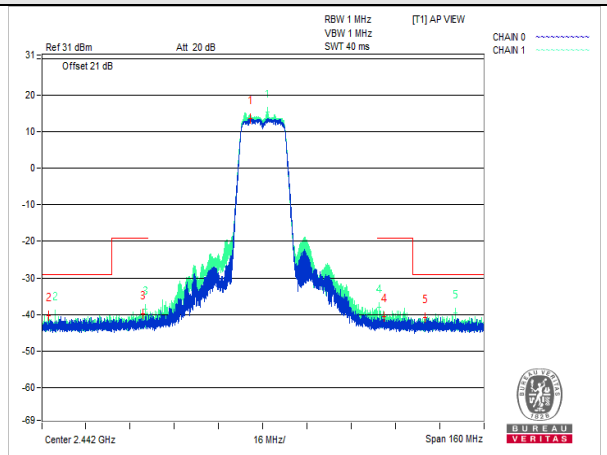


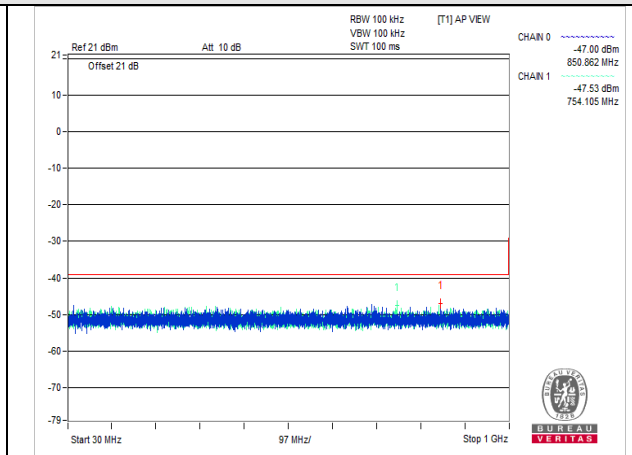


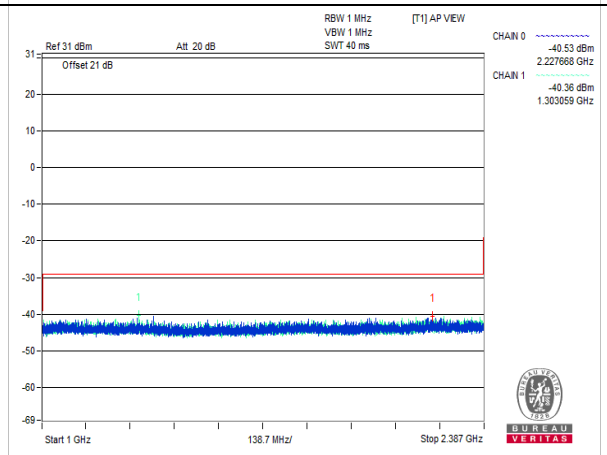


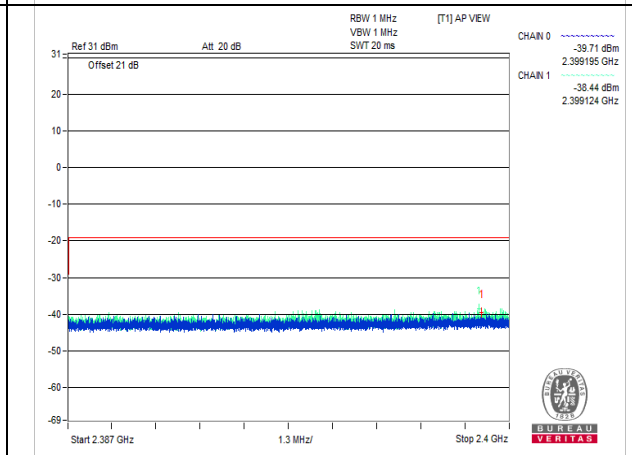
CH 7 (2442MHz)

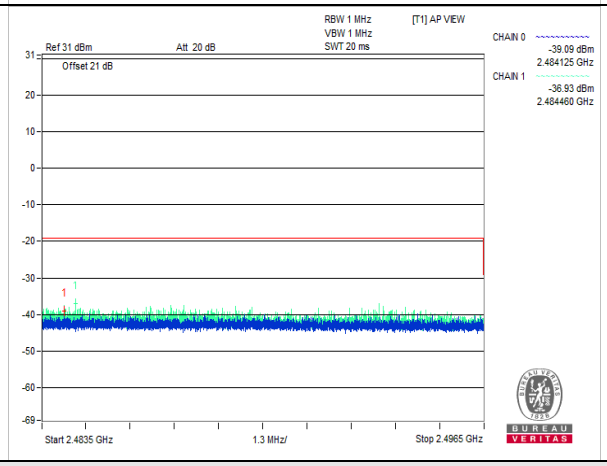
Vmin.

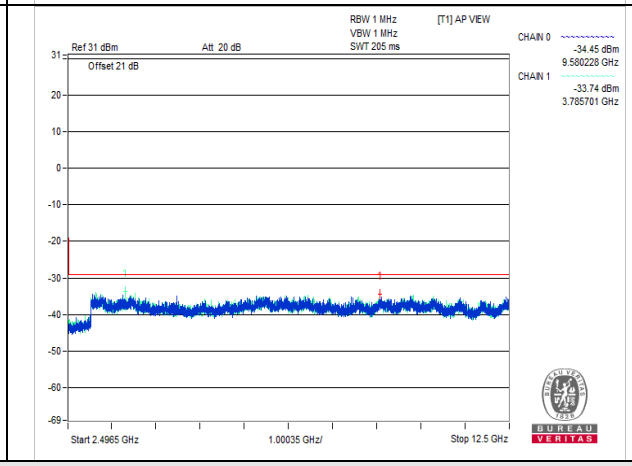






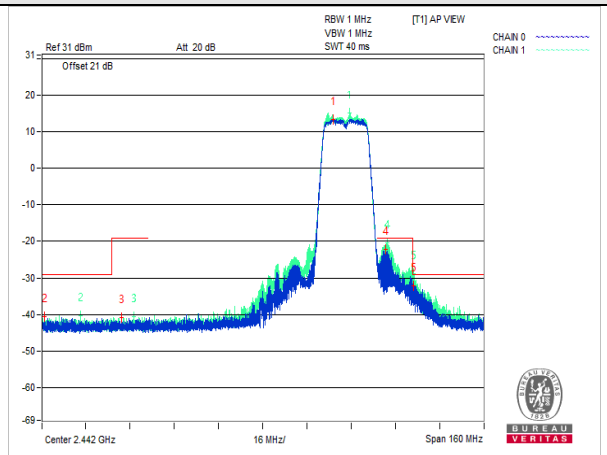


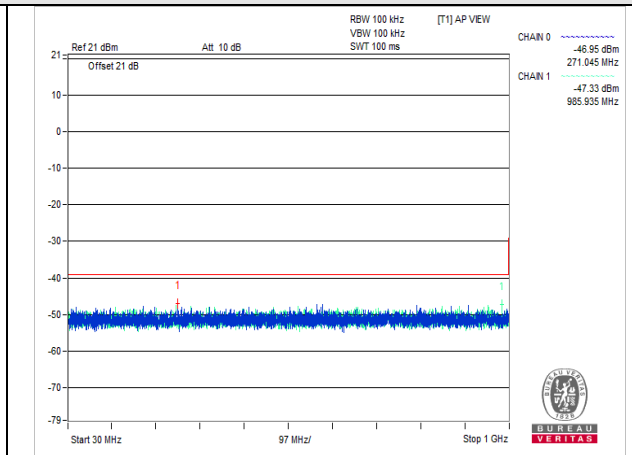


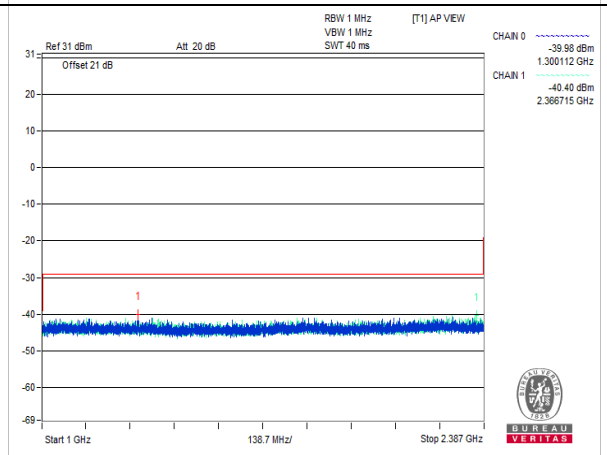


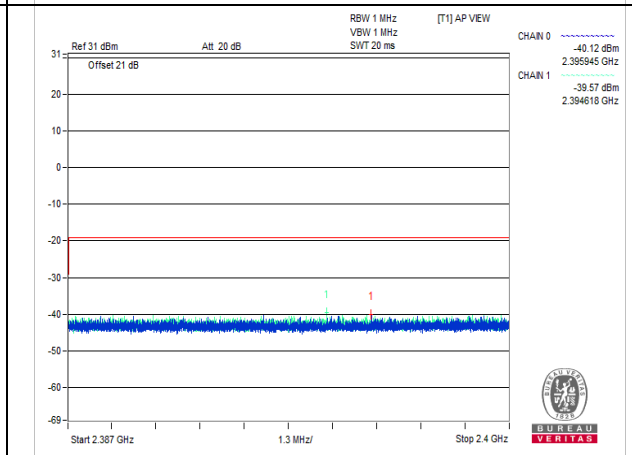
CH 7 (2442MHz)

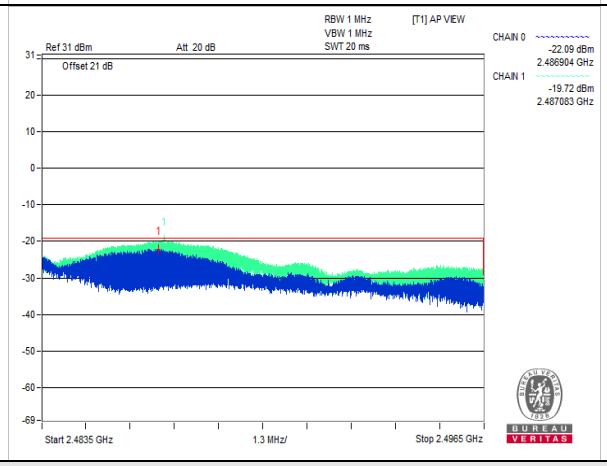
Vnormal

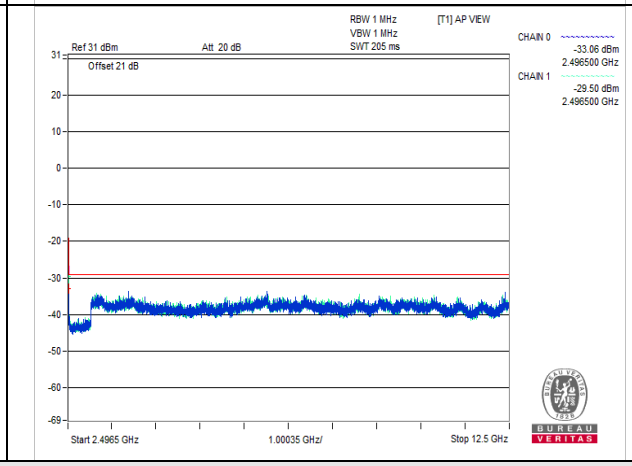






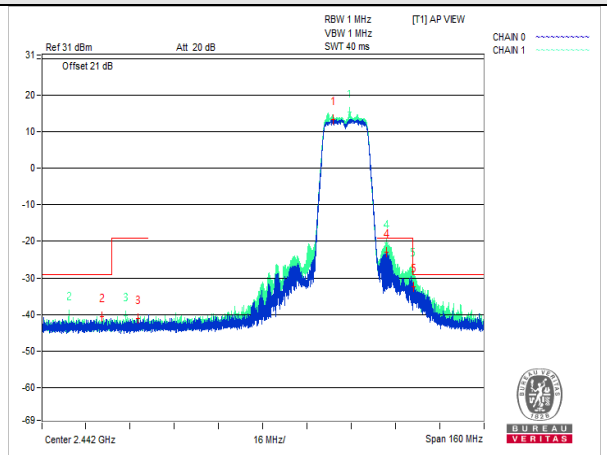


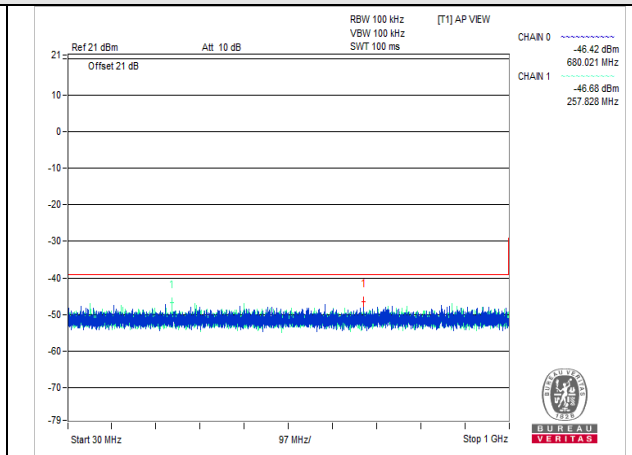


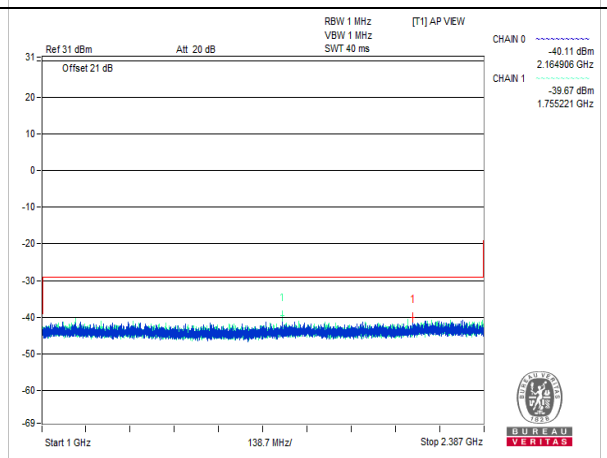


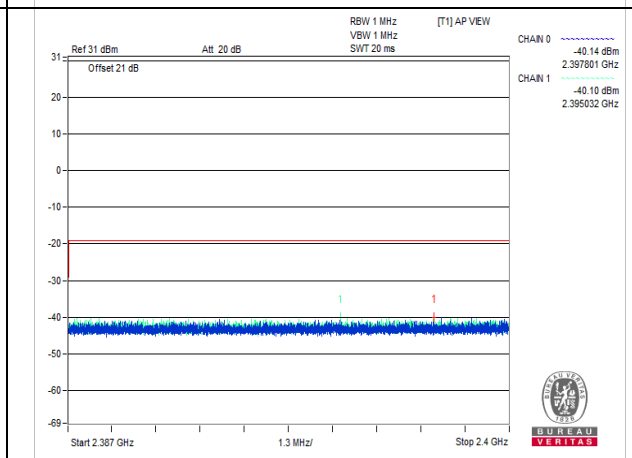
CH 13 (2472MHz)

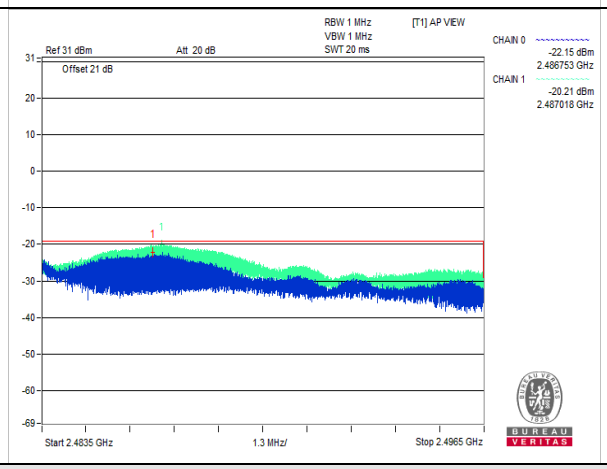
Vmax.

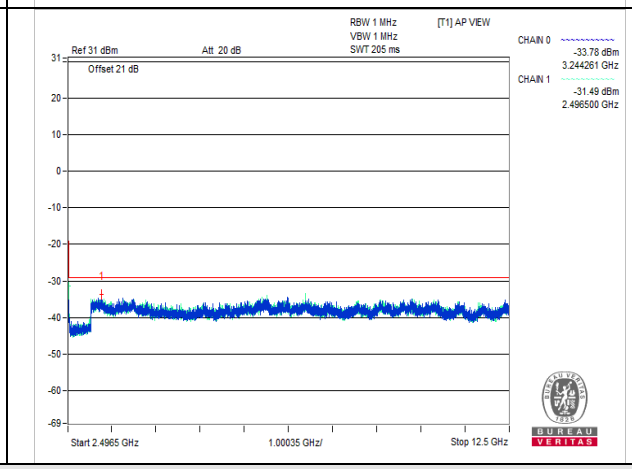






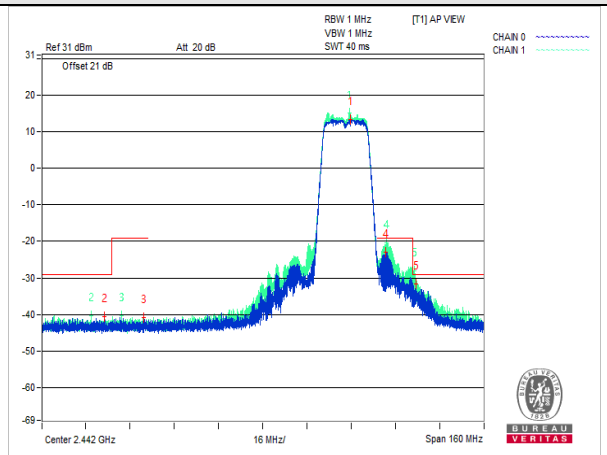


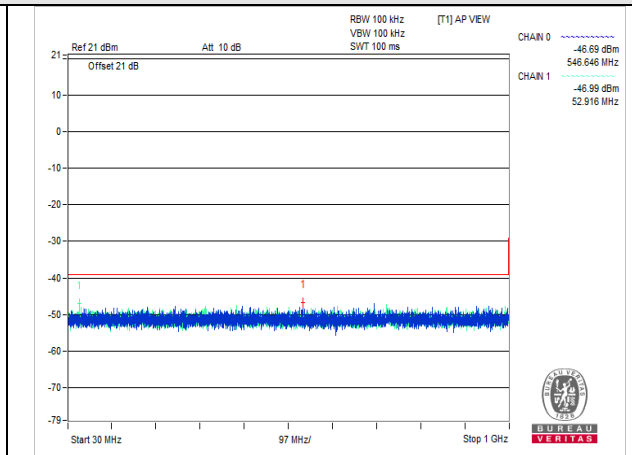


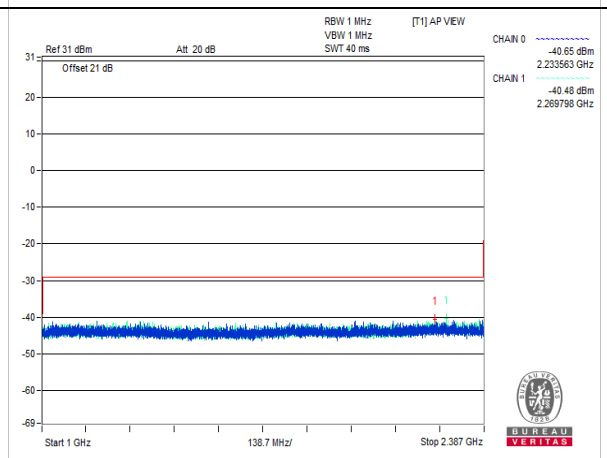


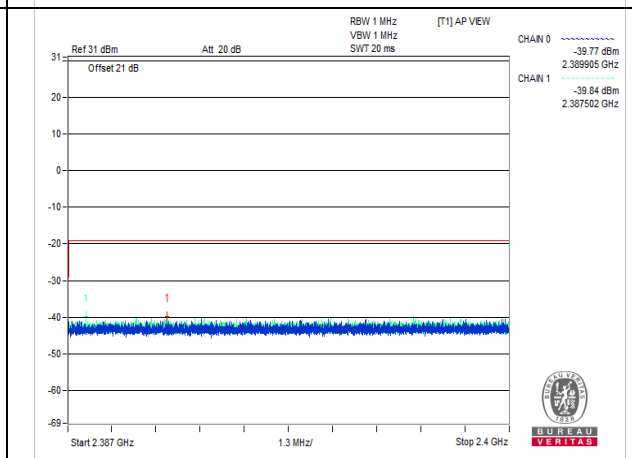
CH 13 (2472MHz)

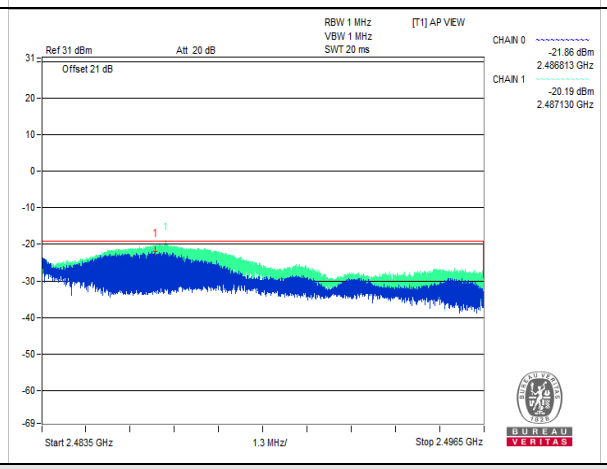
Vmin.

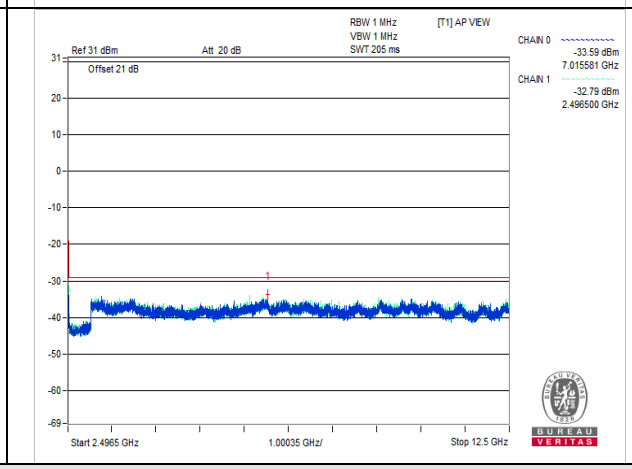












CH 13 (2472MHz)

[Worst result] x [Number of antenna ports]

TEST CHANNEL		CH 1 (2412MHz)		
TEST CONDITION	FREQUENCY RANGE(MHz)	MEASURE. VALUE (uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	0.038374	0.25	PASS
	1000.0 to 2387.0	2.432372	2.5	PASS
	2387.0 to 2400.0	4.395720	25	PASS
	2483.5 to 2496.5	0.232826	25	PASS
	2496.5 to 12500.0	0.826096	2.5	PASS
$V_{max.}$	30.0 to 1000.0	0.039086	0.25	PASS
	1000.0 to 2387.0	2.213248	2.5	PASS
	2387.0 to 2400.0	4.335408	25	PASS
	2483.5 to 2496.5	0.238248	25	PASS
	2496.5 to 12500.0	0.843394	2.5	PASS
$V_{min.}$	30.0 to 1000.0	0.043856	0.25	PASS
	1000.0 to 2387.0	1.949980	2.5	PASS
	2387.0 to 2400.0	5.012218	25	PASS
	2483.5 to 2496.5	0.271038	25	PASS
	2496.5 to 12500.0	0.912074	2.5	PASS
TEST CHANNEL		CH 7 (2442MHz)		
V_{normal}	30.0 to 1000.0	0.043454	0.25	PASS
	1000.0 to 2387.0	0.209426	2.5	PASS
	2387.0 to 2400.0	0.295142	25	PASS
	2483.5 to 2496.5	0.469926	25	PASS
	2496.5 to 12500.0	0.816638	2.5	PASS
$V_{max.}$	30.0 to 1000.0	0.039722	0.25	PASS
	1000.0 to 2387.0	0.178250	2.5	PASS
	2387.0 to 2400.0	0.312630	25	PASS
	2483.5 to 2496.5	0.394484	25	PASS
	2496.5 to 12500.0	0.772734	2.5	PASS
$V_{min.}$	30.0 to 1000.0	0.039906	0.25	PASS
	1000.0 to 2387.0	0.184090	2.5	PASS
	2387.0 to 2400.0	0.286438	25	PASS
	2483.5 to 2496.5	0.405536	25	PASS
	2496.5 to 12500.0	0.845338	2.5	PASS

TEST CHANNEL		CH 13 (2472MHz)		
TEST CONDITION	FREQUENCY RANGE(MHz)	MEASURE. VALUE (uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	0.040368	0.25	PASS
	1000.0 to 2387.0	0.200924	2.5	PASS
	2387.0 to 2400.0	0.220816	25	PASS
	2483.5 to 2496.5	21.331922	25	PASS
	2496.5 to 12500.0	2.244036	2.5	PASS
$V_{max.}$	30.0 to 1000.0	0.045606	0.25	PASS
	1000.0 to 2387.0	0.215790	2.5	PASS
	2387.0 to 2400.0	0.195448	25	PASS
	2483.5 to 2496.5	19.055924	25	PASS
	2496.5 to 12500.0	1.419156	2.5	PASS
$V_{min.}$	30.0 to 1000.0	0.042858	0.25	PASS
	1000.0 to 2387.0	0.179072	2.5	PASS
	2387.0 to 2400.0	0.210878	25	PASS
	2483.5 to 2496.5	19.143882	25	PASS
	2496.5 to 12500.0	1.052034	2.5	PASS

VHT20

Chain 0

TEST CHANNEL		CH 1 (2412MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	983.631	0.019011	0.125	PASS
	1000.0 to 2387.0	2384.919	0.016234	1.25	PASS(1)
	2387.0 to 2400.0	2399.691	0.334112	12.5	PASS(2)
	2483.5 to 2496.5	2488.583	0.097949	12.5	PASS
	2496.5 to 12500.0	3129.221	0.381944	1.25	PASS
$V_{max.}$	30.0 to 1000.0	709.848	0.021038	0.125	PASS
	1000.0 to 2387.0	2386.653	0.019259	1.25	PASS(3)
	2387.0 to 2400.0	2399.686	0.339502	12.5	PASS(4)
	2483.5 to 2496.5	2487.388	0.094624	12.5	PASS
	2496.5 to 12500.0	6995.574	0.397192	1.25	PASS
$V_{min.}$	30.0 to 1000.0	435.096	0.018113	0.125	PASS
	1000.0 to 2387.0	2385.266	0.013321	1.25	PASS(5)
	2387.0 to 2400.0	2399.458	0.256198	12.5	PASS(6)
	2483.5 to 2496.5	2489.655	0.105682	12.5	PASS
	2496.5 to 12500.0	6941.805	0.395367	1.25	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	382.837	0.019861	0.125	PASS
	1000.0 to 2387.0	1102.464	0.086896	1.25	PASS
	2387.0 to 2400.0	2398.116	0.136144	12.5	PASS
	2483.5 to 2496.5	2483.651	0.138357	12.5	PASS
	2496.5 to 12500.0	3967.014	0.395367	1.25	PASS
$V_{max.}$	30.0 to 1000.0	685.356	0.023174	0.125	PASS
	1000.0 to 2387.0	1863.754	0.091201	1.25	PASS
	2387.0 to 2400.0	2399.913	0.153109	12.5	PASS
	2483.5 to 2496.5	2484.554	0.131522	12.5	PASS
	2496.5 to 12500.0	10766.893	0.405509	1.25	PASS
$V_{min.}$	30.0 to 1000.0	507.118	0.018323	0.125	PASS
	1000.0 to 2387.0	1295.604	0.092470	1.25	PASS
	2387.0 to 2400.0	2399.315	0.119399	12.5	PASS
	2483.5 to 2496.5	2486.980	0.136773	12.5	PASS
	2496.5 to 12500.0	3171.736	0.365595	1.25	PASS

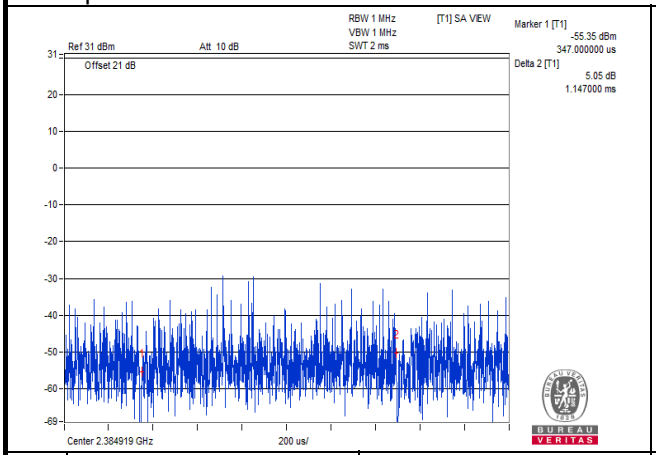
TEST CHANNEL		CH 13 (2472MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	224.000	0.019770	0.125	PASS
	1000.0 to 2387.0	2298.925	0.115611	1.25	PASS
	2387.0 to 2400.0	2394.047	0.100925	12.5	PASS
	2483.5 to 2496.5	2483.509	0.804884	12.5	PASS(7)
	2496.5 to 12500.0	2497.750	0.907821	1.25	PASS
$V_{max.}$	30.0 to 1000.0	418.121	0.019143	0.125	PASS
	1000.0 to 2387.0	2382.318	0.098628	1.25	PASS
	2387.0 to 2400.0	2393.012	0.106660	12.5	PASS
	2483.5 to 2496.5	2483.501	0.812005	12.5	PASS(8)
	2496.5 to 12500.0	2496.500	0.824138	1.25	PASS
$V_{min.}$	30.0 to 1000.0	729.248	0.019588	0.125	PASS
	1000.0 to 2387.0	2204.262	0.086099	1.25	PASS
	2387.0 to 2400.0	2393.295	0.114025	12.5	PASS
	2483.5 to 2496.5	2483.501	0.875093	12.5	PASS(9)
	2496.5 to 12500.0	2496.500	0.492040	1.25	PASS

NOTE: 1. The spectrum plots are attached on the following pages.

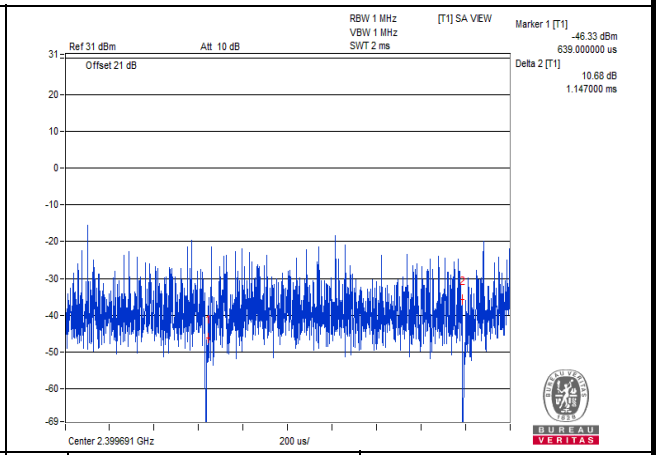
2. (No.): The value was tested under Measuring Mode *Zero Span.

Measuring Mode *Zero Span

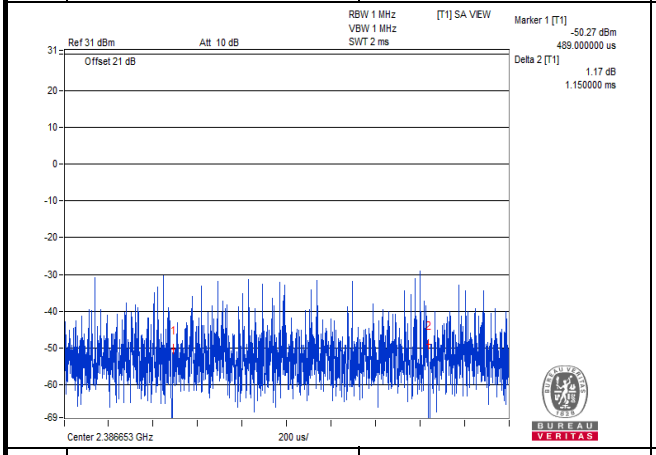
1. Set the spectrum analyzer as below and it takes in a value of all data point.
2. Regarding the all data value, it transforms the “dBm” value into “uW” value.
3. It adds the all values and calculates a grand total. Define a grand total as “P”.
4. It divides “P” by sample data point (ex.501) and calculates the mean value.
5. It reports the mean value.



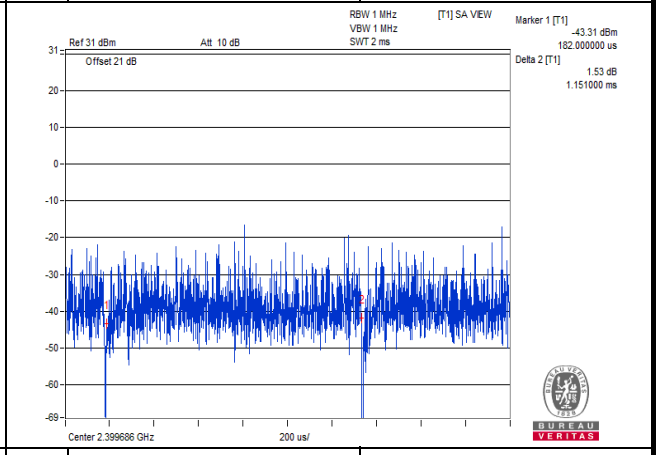
1	2384.919MHz	P = 0.016234uW



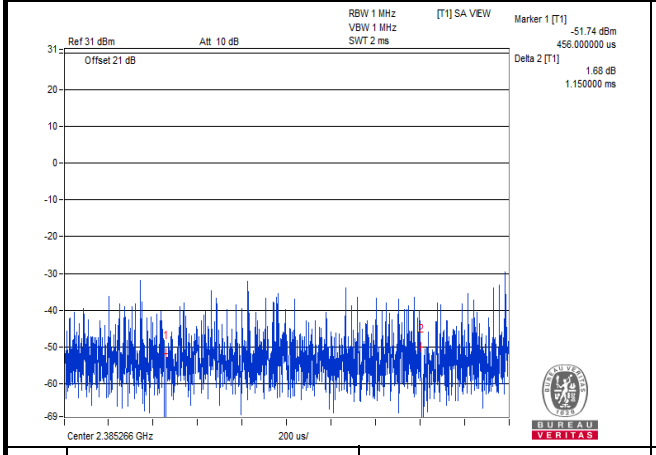
2	2399.691MHz	P = 0.334112uW



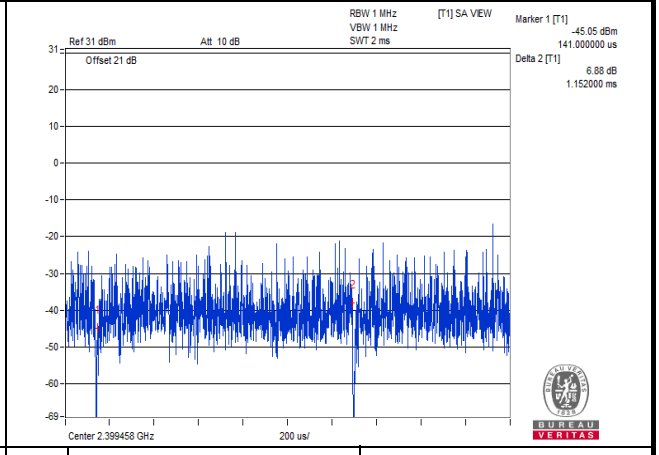
3	2386.653MHz	P = 0.019259uW



4	2399.686MHz	P = 0.339502uW



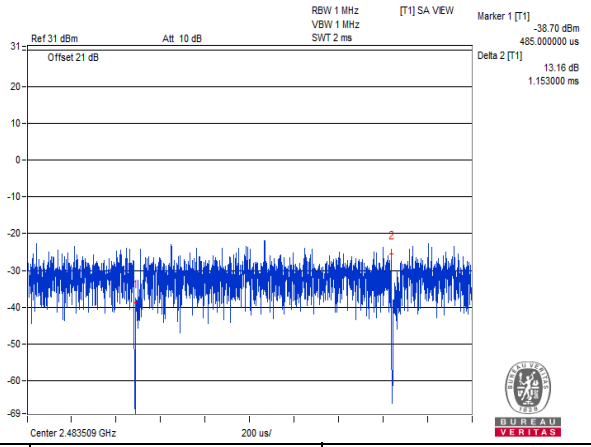
5	2385.266MHz	P = 0.013321uW



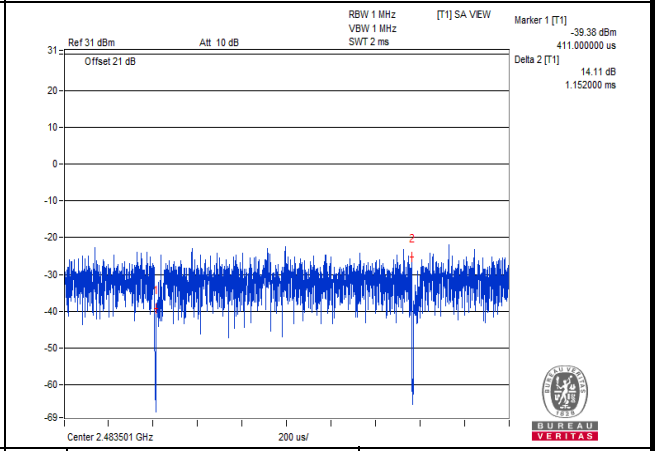
6	2399.458MHz	P = 0.256198uW

Measuring Mode *Zero Span

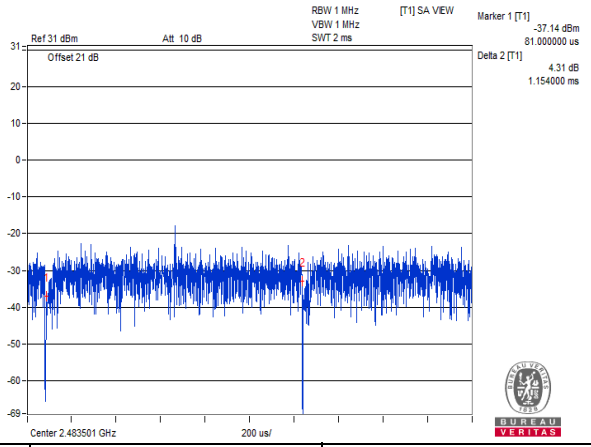
1. Set the spectrum analyzer as below and it takes in a value of all data point.
2. Regarding the all data value, it transforms the “dBm” value into “uW” value.
3. It adds the all values and calculates a grand total. Define a grand total as “P”.
4. It divides “P” by sample data point (ex.501) and calculates the mean value.
5. It reports the mean value.



7	2483.509MHz	P = 0.804884uW



8	2483.501MHz	P = 0.812005uW



9	2483.501MHz	P = 0.875093uW

Chain 1

TEST CHANNEL		CH 1 (2412MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	157.070	0.019679	0.125	PASS
	1000.0 to 2387.0	2384.572	0.024456	1.25	PASS(1)
	2387.0 to 2400.0	2399.978	0.712679	12.5	PASS(2)
	2483.5 to 2496.5	2493.237	0.112202	12.5	PASS
	2496.5 to 12500.0	6936.803	0.423643	1.25	PASS
$V_{max.}$	30.0 to 1000.0	668.745	0.022594	0.125	PASS
	1000.0 to 2387.0	2387.000	0.034389	1.25	PASS(3)
	2387.0 to 2400.0	2399.967	0.707804	12.5	PASS(4)
	2483.5 to 2496.5	2491.902	0.139316	12.5	PASS
	2496.5 to 12500.0	7014.330	0.384592	1.25	PASS
$V_{min.}$	30.0 to 1000.0	669.957	0.019679	0.125	PASS
	1000.0 to 2387.0	2385.266	0.027464	1.25	PASS(5)
	2387.0 to 2400.0	2399.571	0.620635	12.5	PASS(6)
	2483.5 to 2496.5	2491.199	0.146555	12.5	PASS
	2496.5 to 12500.0	3226.755	0.381066	1.25	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	437.278	0.019861	0.125	PASS
	1000.0 to 2387.0	2293.550	0.096383	1.25	PASS
	2387.0 to 2400.0	2399.480	0.203704	12.5	PASS
	2483.5 to 2496.5	2488.795	0.174582	12.5	PASS
	2496.5 to 12500.0	6964.313	0.496592	1.25	PASS
$V_{max.}$	30.0 to 1000.0	274.197	0.020091	0.125	PASS
	1000.0 to 2387.0	2291.123	0.095280	1.25	PASS
	2387.0 to 2400.0	2399.314	0.196336	12.5	PASS
	2483.5 to 2496.5	2483.829	0.189234	12.5	PASS
	2496.5 to 12500.0	3923.249	0.395367	1.25	PASS
$V_{min.}$	30.0 to 1000.0	660.015	0.019454	0.125	PASS
	1000.0 to 2387.0	1172.854	0.097051	1.25	PASS
	2387.0 to 2400.0	2399.042	0.175792	12.5	PASS
	2483.5 to 2496.5	2484.200	0.156675	12.5	PASS
	2496.5 to 12500.0	6747.987	0.369828	1.25	PASS

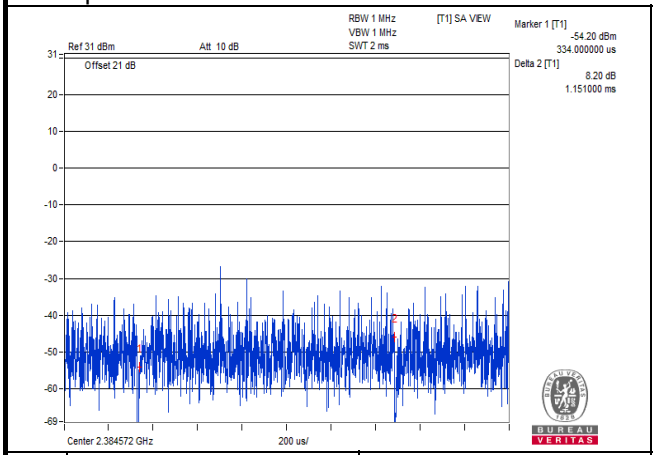
TEST CHANNEL		CH 13 (2472MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	483.111	0.016866	0.125	PASS
	1000.0 to 2387.0	1062.588	0.097275	1.25	PASS
	2387.0 to 2400.0	2387.079	0.100462	12.5	PASS
	2483.5 to 2496.5	2483.503	1.039367	12.5	PASS(7)
	2496.5 to 12500.0	2501.501	0.017781	1.25	PASS(8)
$V_{max.}$	30.0 to 1000.0	310.208	0.018967	0.125	PASS
	1000.0 to 2387.0	2138.900	0.090782	1.25	PASS
	2387.0 to 2400.0	2398.277	0.120226	12.5	PASS
	2483.5 to 2496.5	2485.874	0.257464	12.5	PASS(9)
	2496.5 to 12500.0	2496.500	0.039450	1.25	PASS(10)
$V_{min.}$	30.0 to 1000.0	334.337	0.018450	0.125	PASS
	1000.0 to 2387.0	2326.665	0.091411	1.25	PASS
	2387.0 to 2400.0	2387.862	0.105925	12.5	PASS
	2483.5 to 2496.5	2483.503	1.037752	12.5	PASS(11)
	2496.5 to 12500.0	2497.750	0.031441	1.25	PASS(12)

NOTE: 1. The spectrum plots are attached on the following pages.

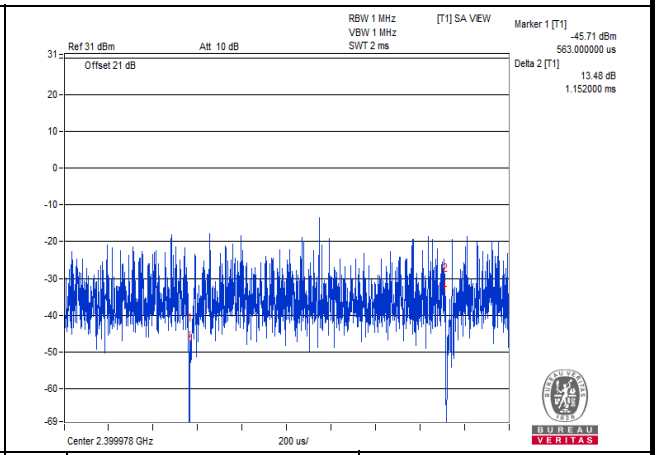
2. (No.): The value was tested under Measuring Mode *Zero Span.

Measuring Mode *Zero Span

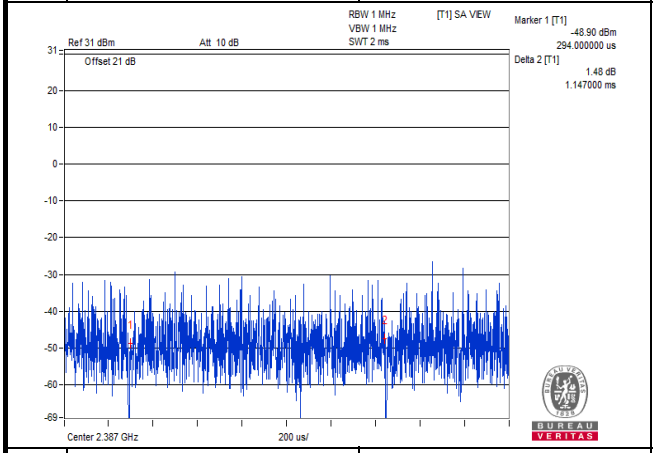
1. Set the spectrum analyzer as below and it takes in a value of all data point.
2. Regarding the all data value, it transforms the “dBm” value into “uW” value.
3. It adds the all values and calculates a grand total. Define a grand total as “P”.
4. It divides “P” by sample data point (ex.501) and calculates the mean value.
5. It reports the mean value.



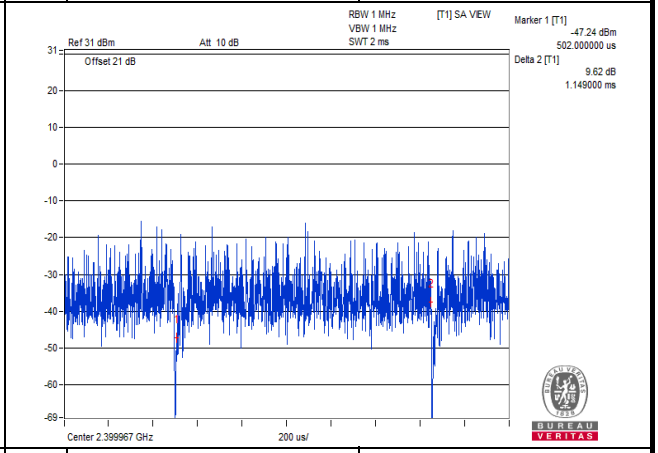
1	2384.572MHz	P = 0.024456uW



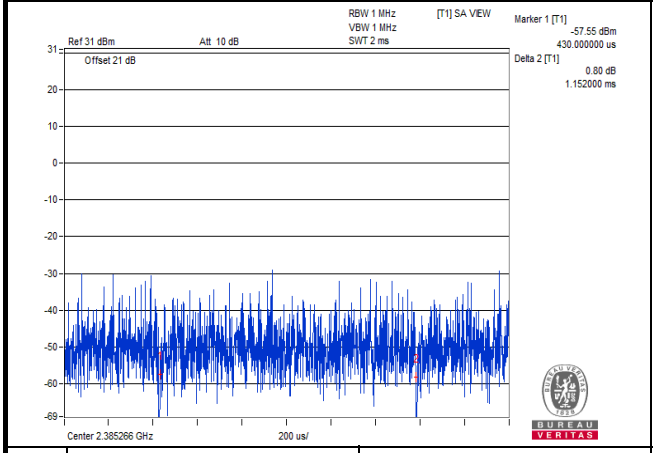
2	2399.978MHz	P = 0.712679uW



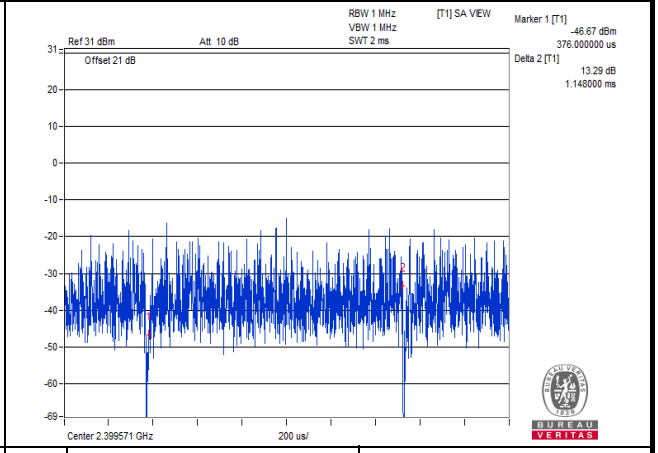
3	2387.000MHz	P = 0.034389uW



4	2399.967MHz	P = 0.707804uW



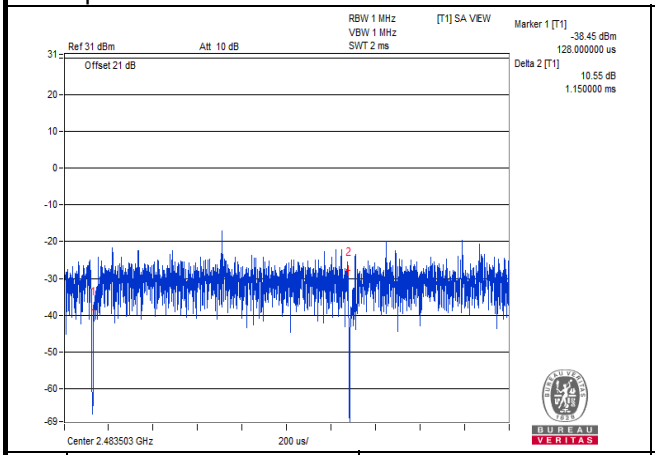
5	2385.266MHz	P = 0.027464uW



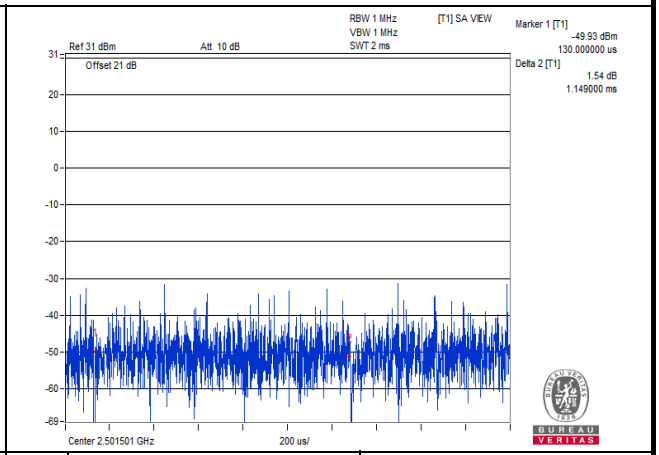
6	2399.571MHz	P = 0.620635uW

Measuring Mode *Zero Span

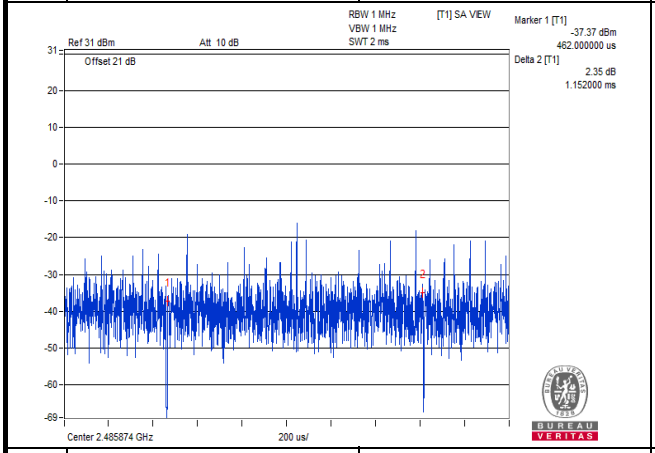
1. Set the spectrum analyzer as below and it takes in a value of all data point.
2. Regarding the all data value, it transforms the “dBm” value into “uW” value.
3. It adds the all values and calculates a grand total. Define a grand total as “P”.
4. It divides “P” by sample data point (ex.501) and calculates the mean value.
5. It reports the mean value.



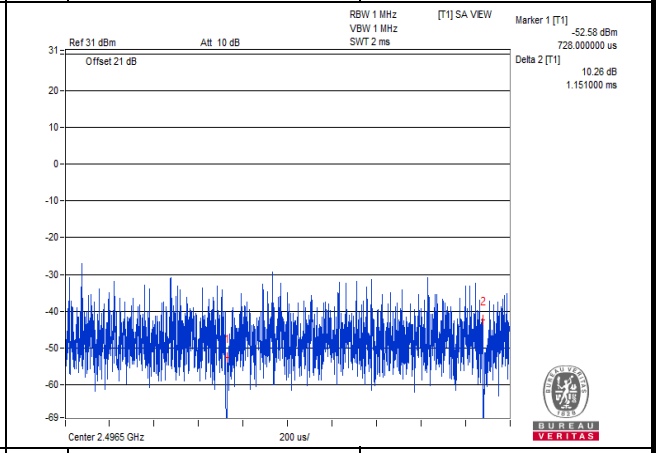
7	2483.503MHz	P = 1.039367uW



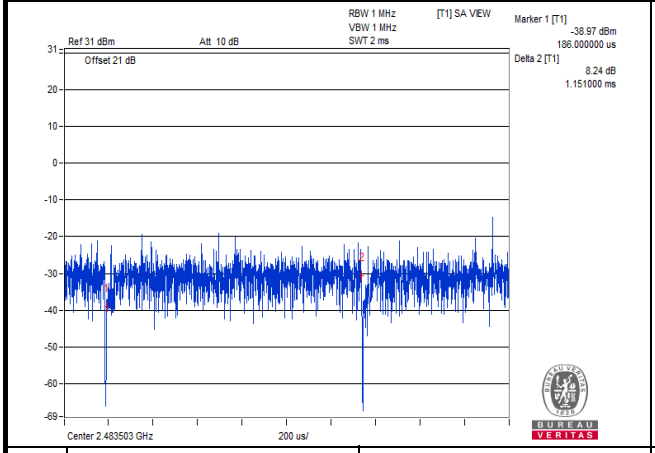
8	2501.501MHz	P = 0.017781uW



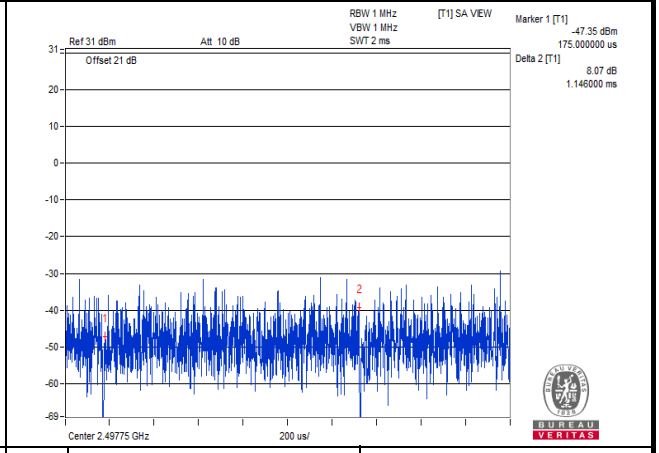
9	2485.874MHz	P = 0.257464uW



10	2496.500MHz	P = 0.03945uW



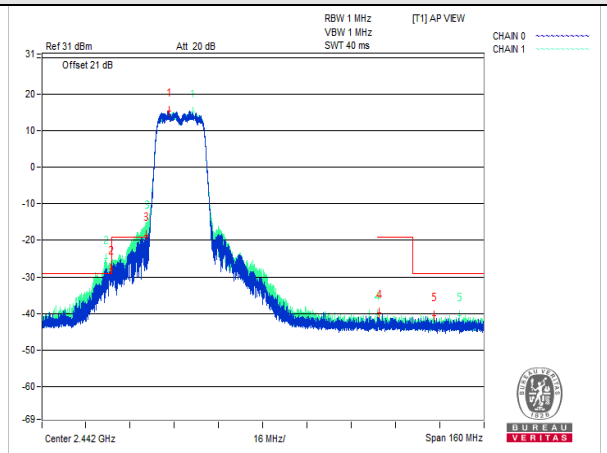
11	2483.503MHz	P = 1.037752uW

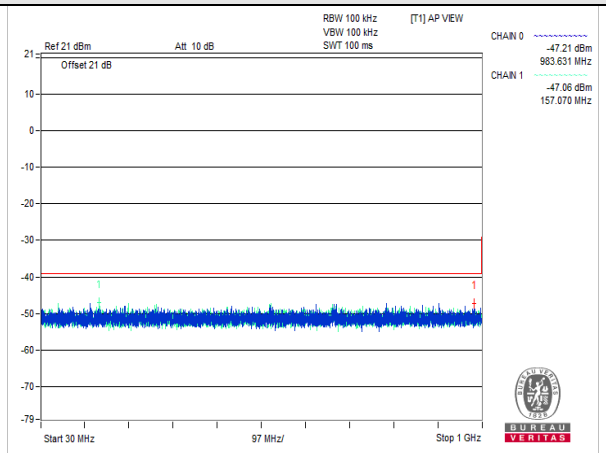


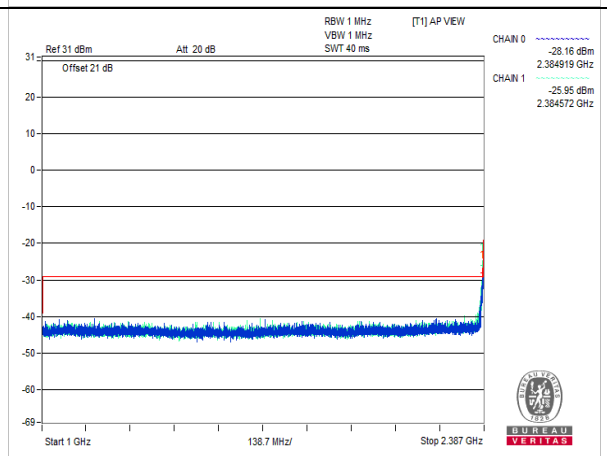
12	2497.750MHz	P = 0.031441uW

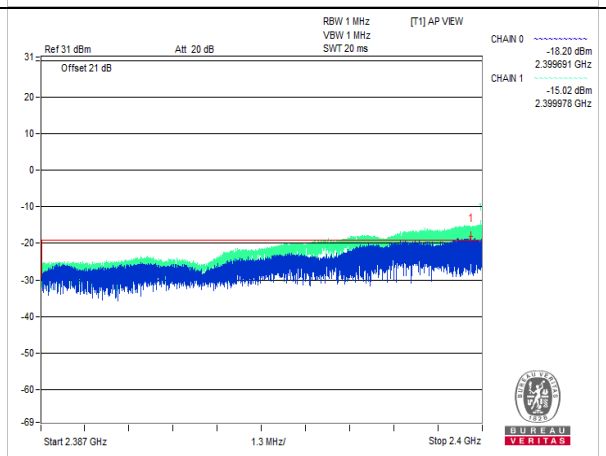
Graph

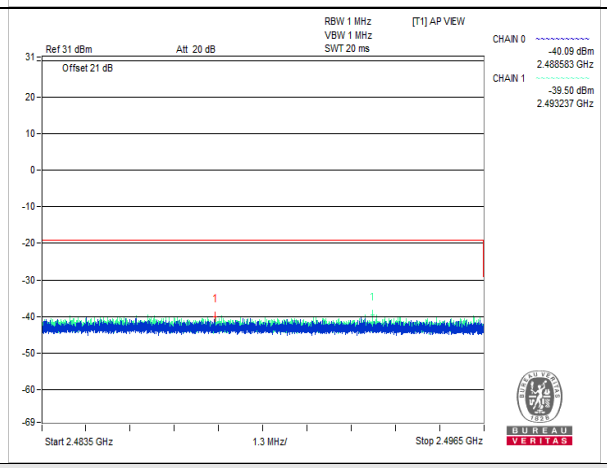
Vnormal

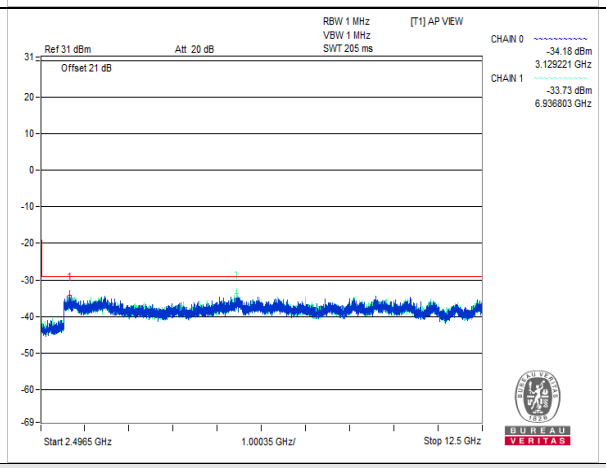






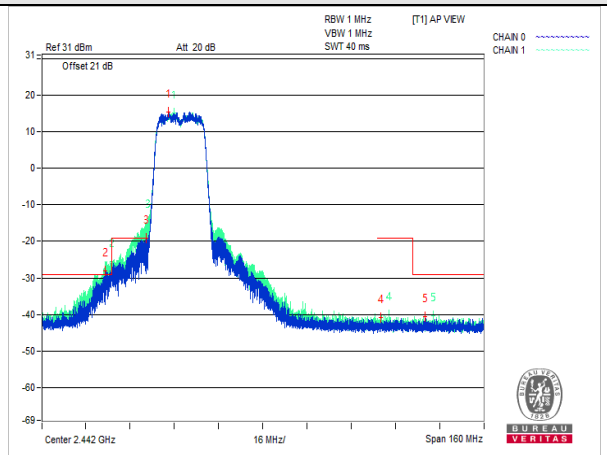


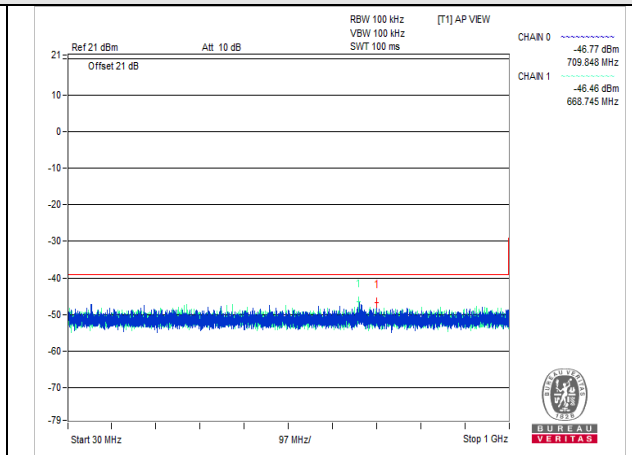


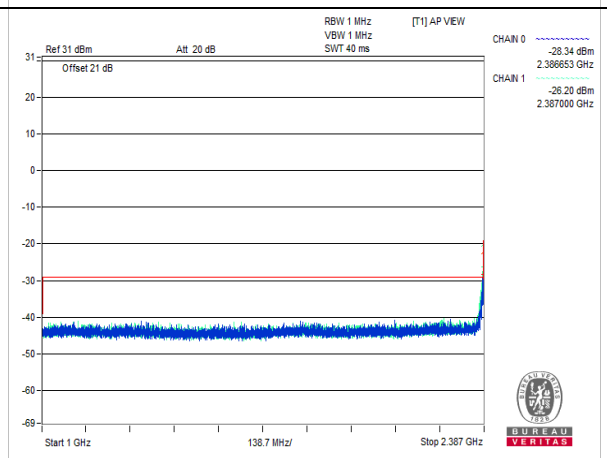


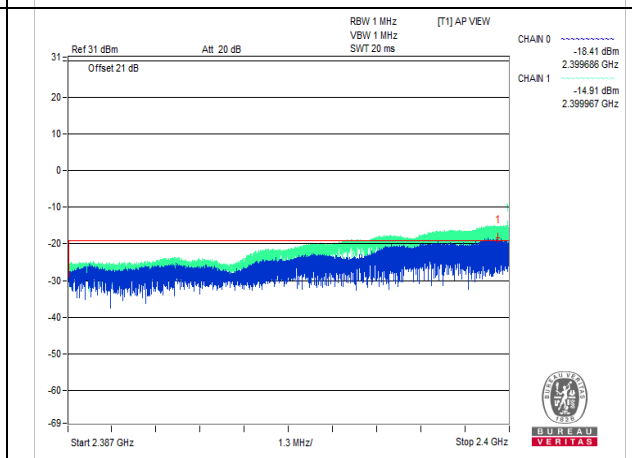
CH 1 (2412MHz)

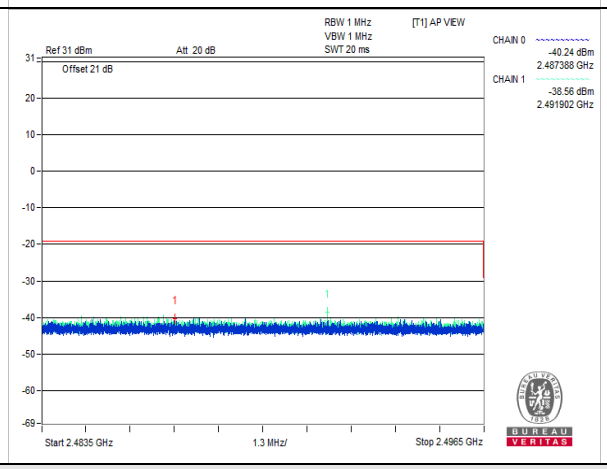
Vmax.

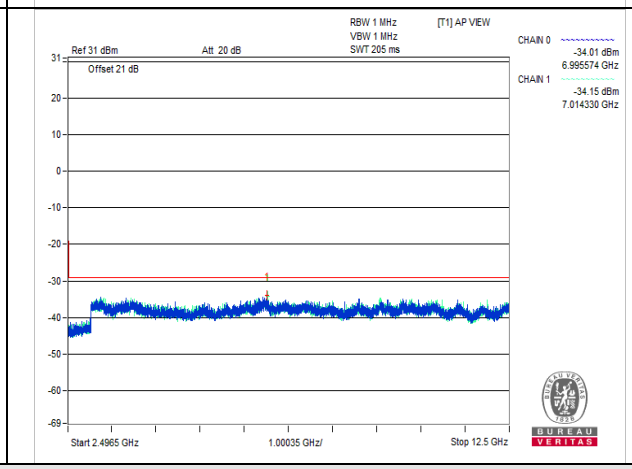






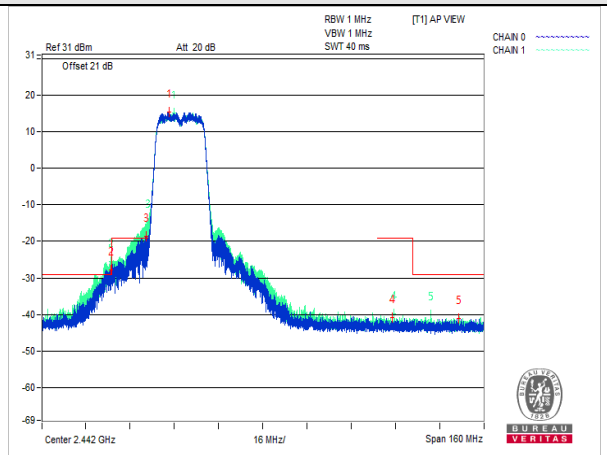


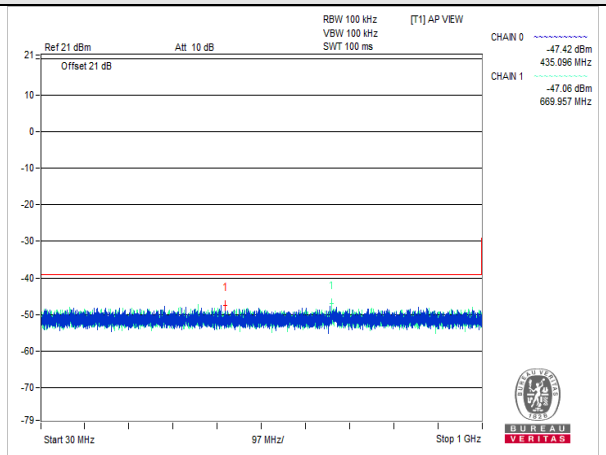


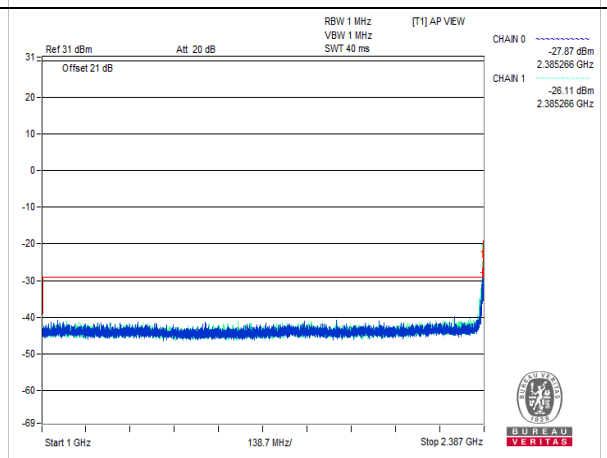


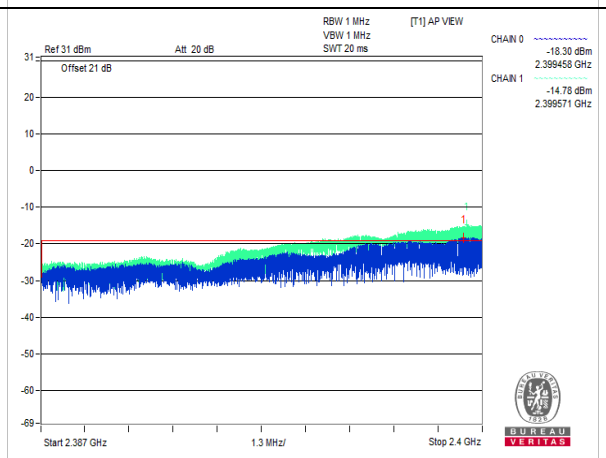
CH 1 (2412MHz)

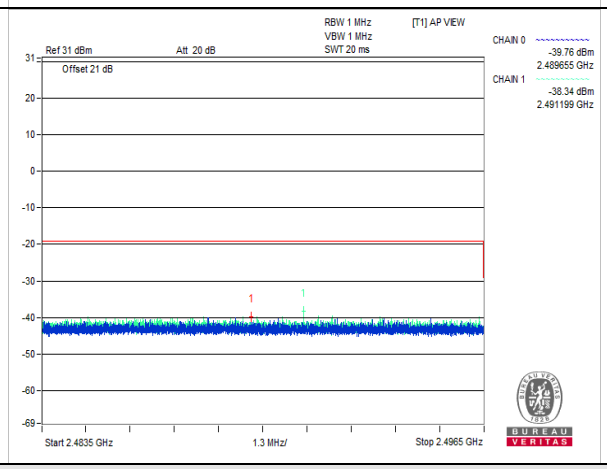
Vmin.

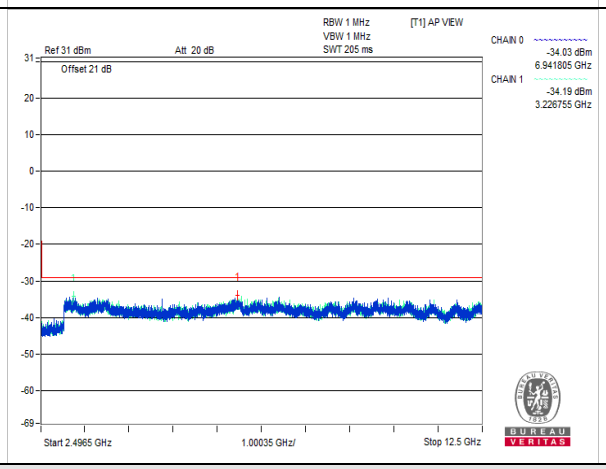






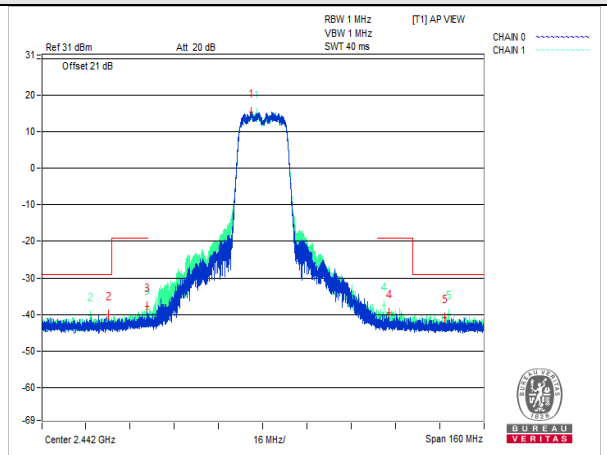


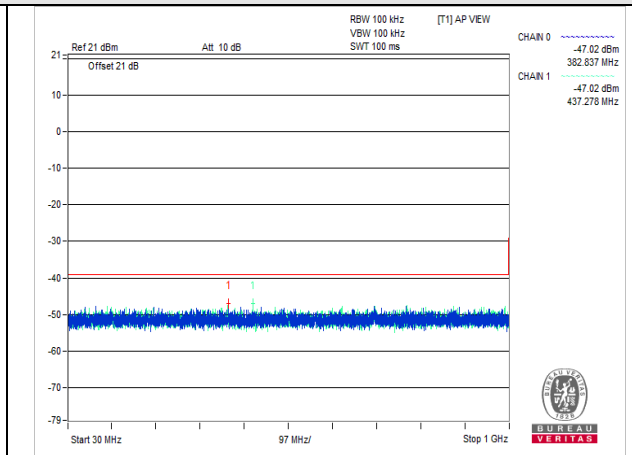


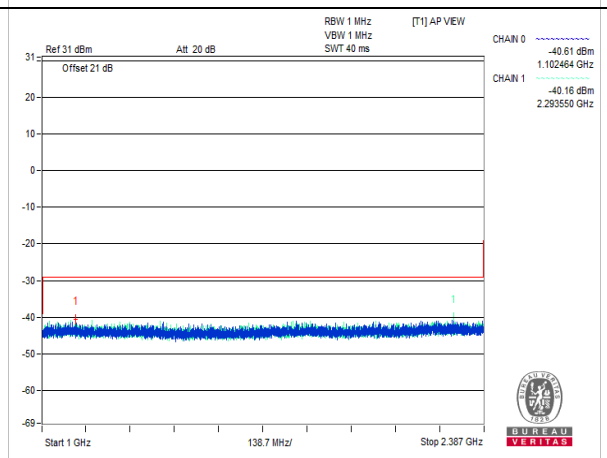


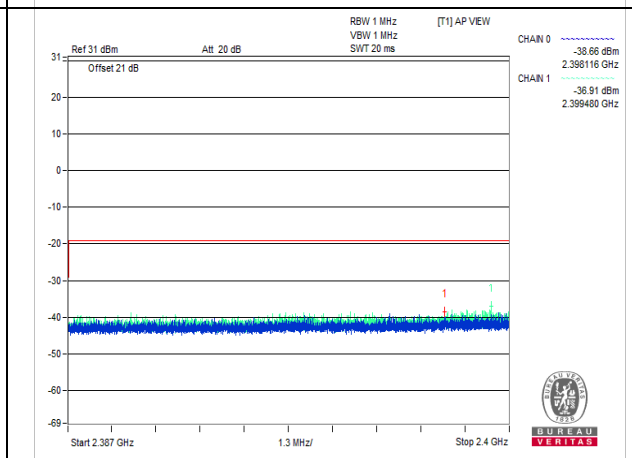
CH 1 (2412MHz)

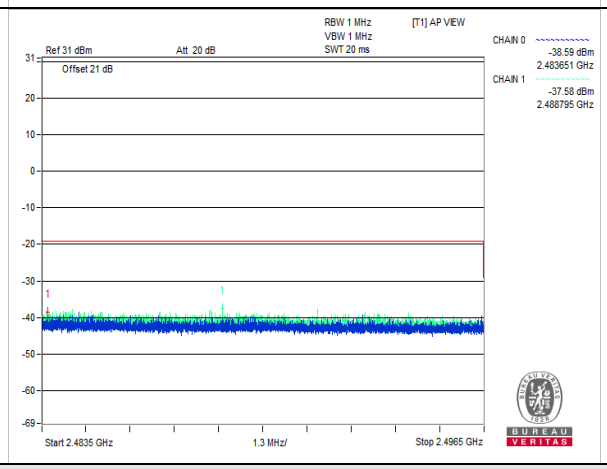
Vnormal

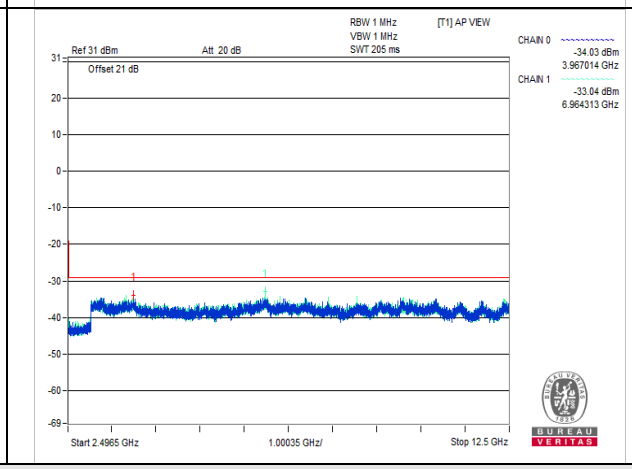






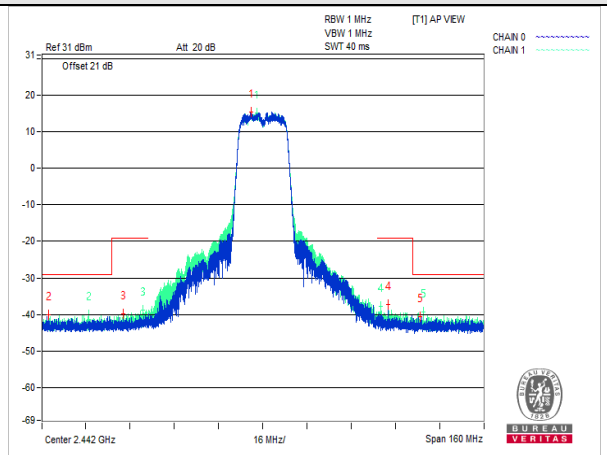


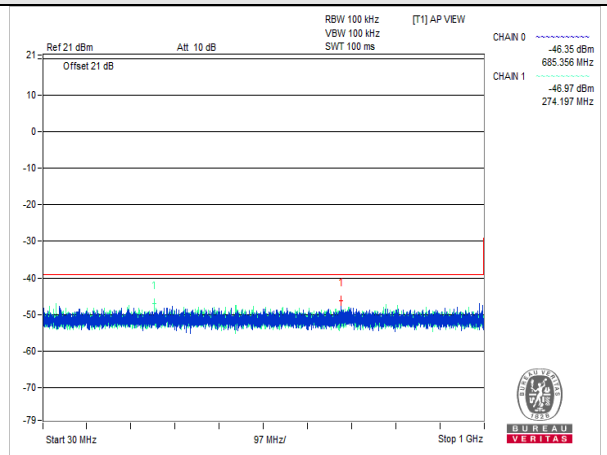


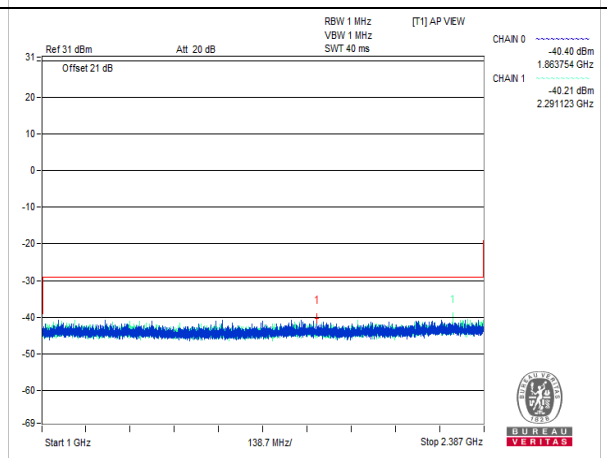


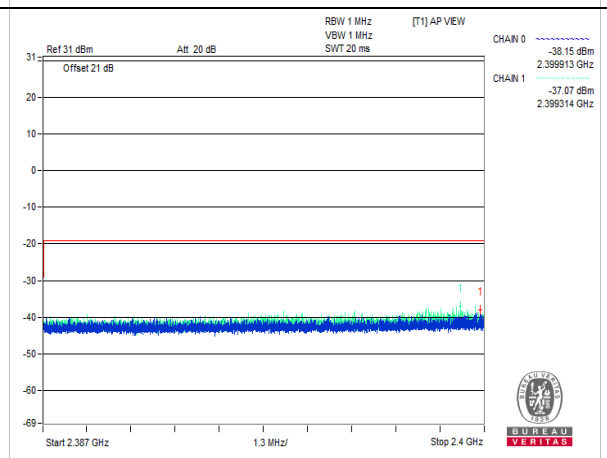
CH 7 (2442MHz)

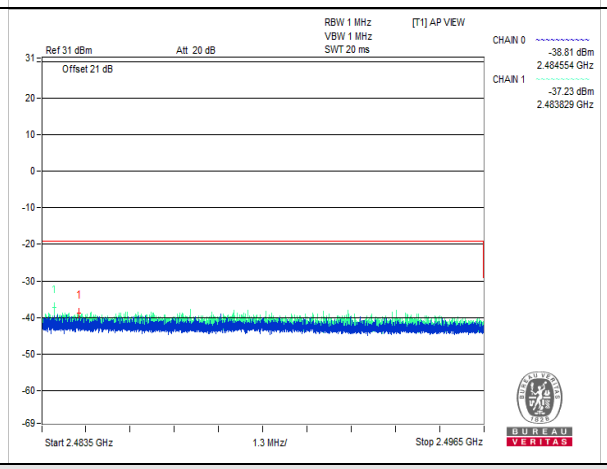
Vmax.

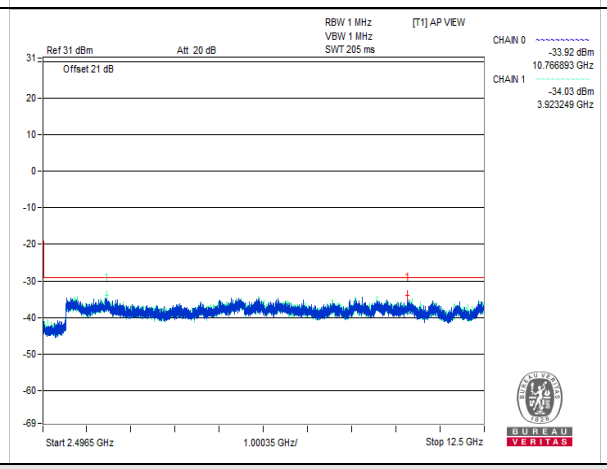






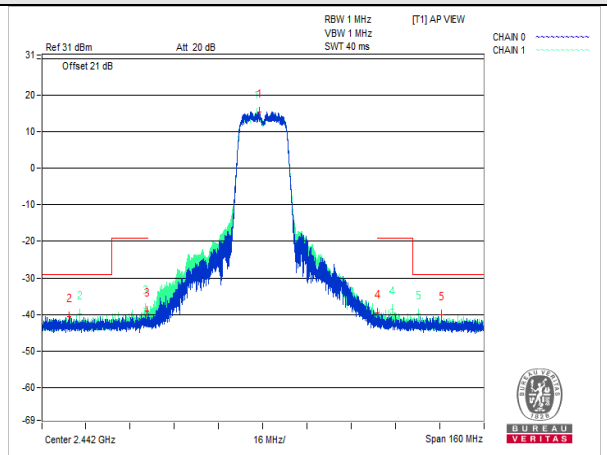


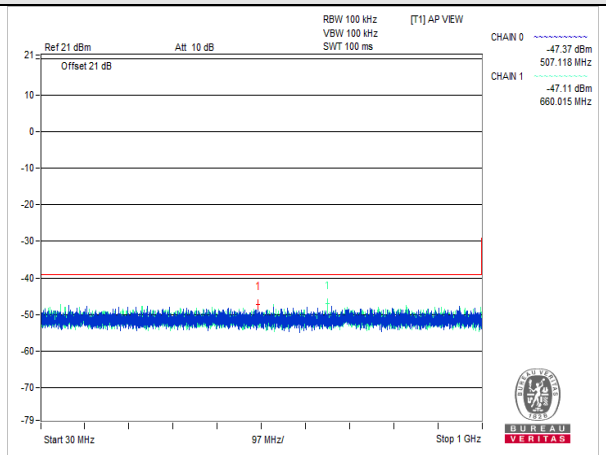


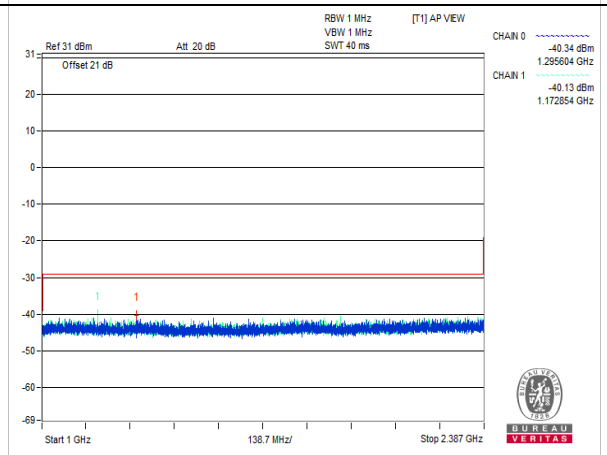


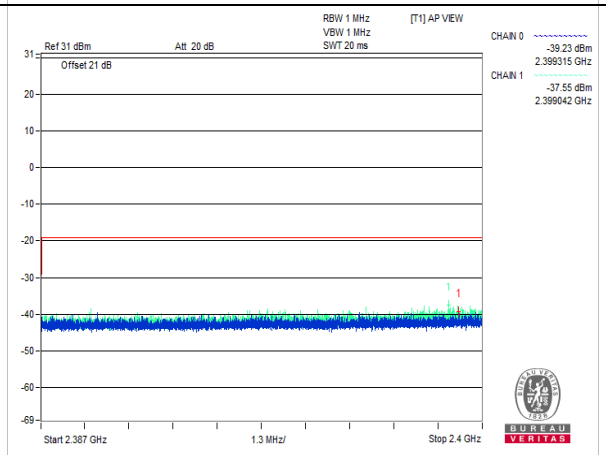
CH 7 (2442MHz)

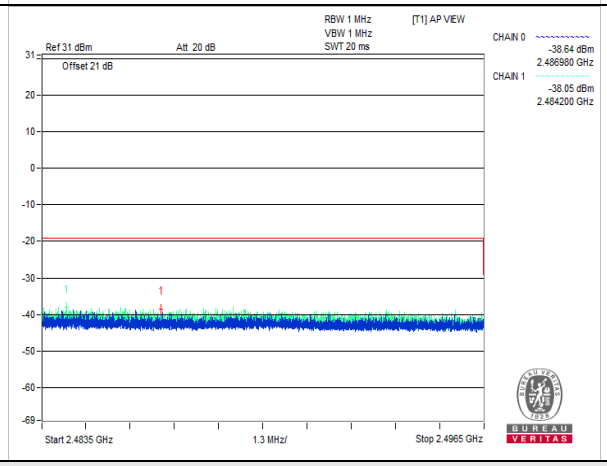
Vmin.

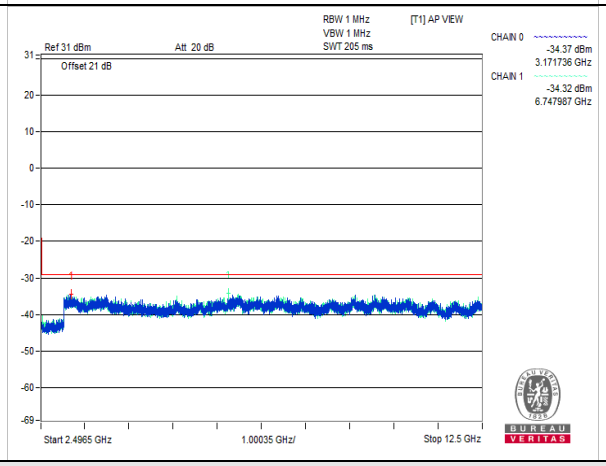






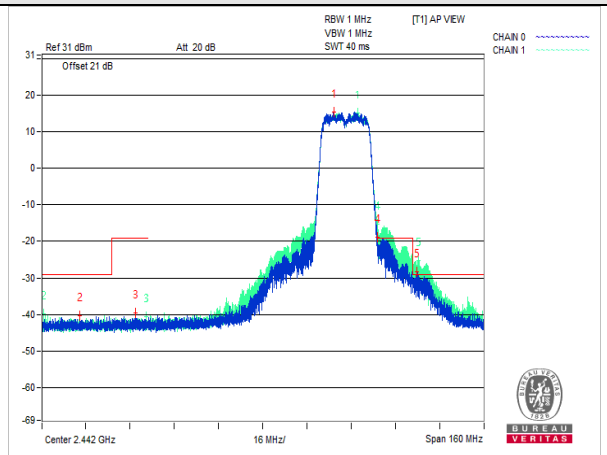


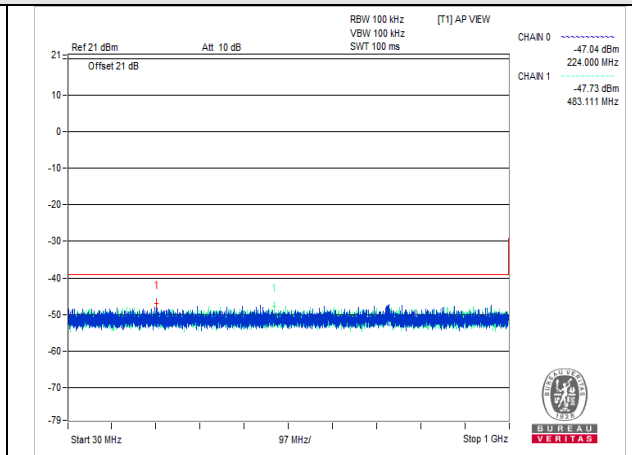


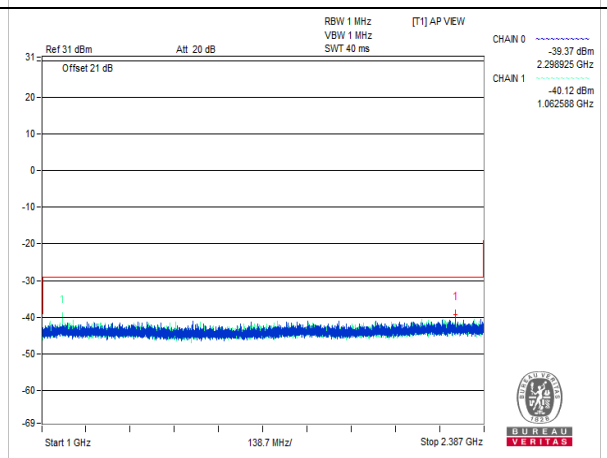


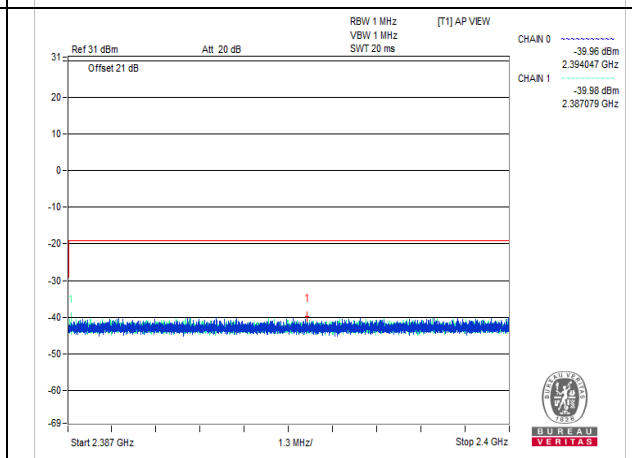
CH 7 (2442MHz)

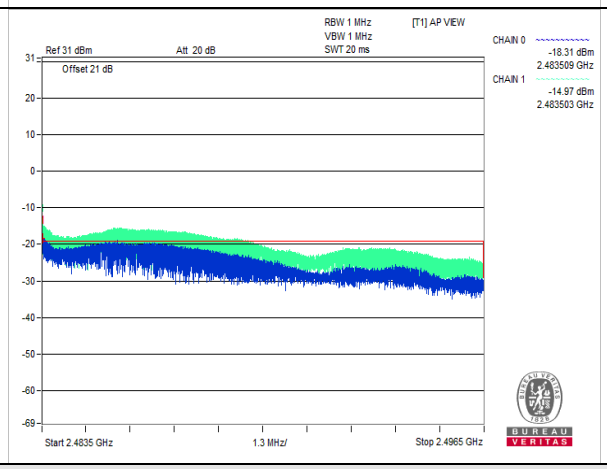
Vnormal

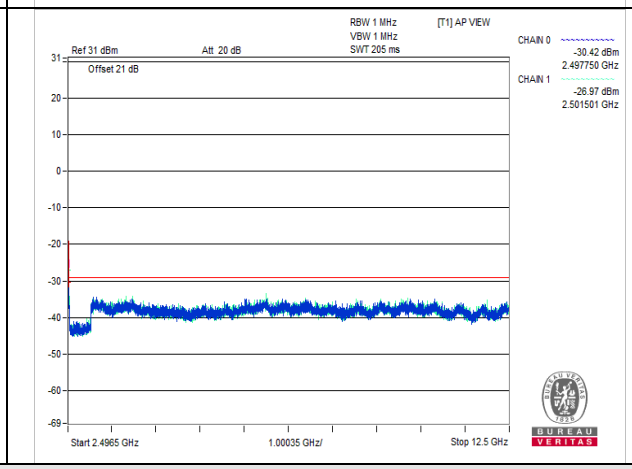






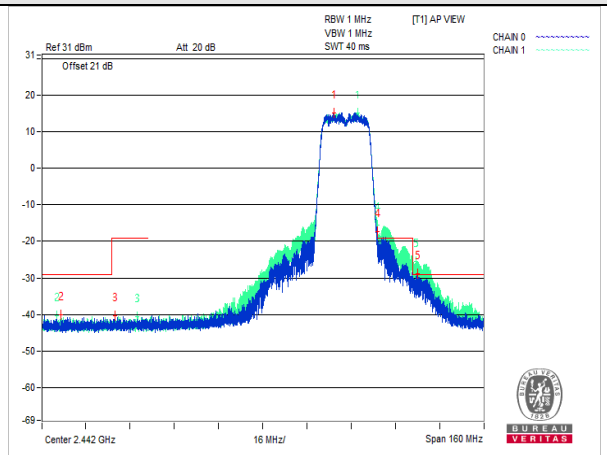


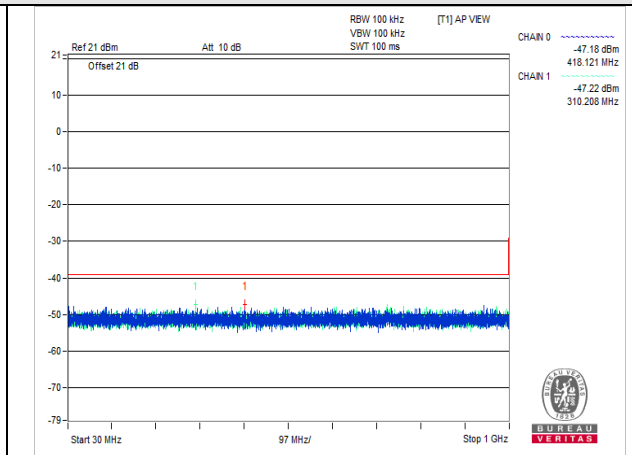


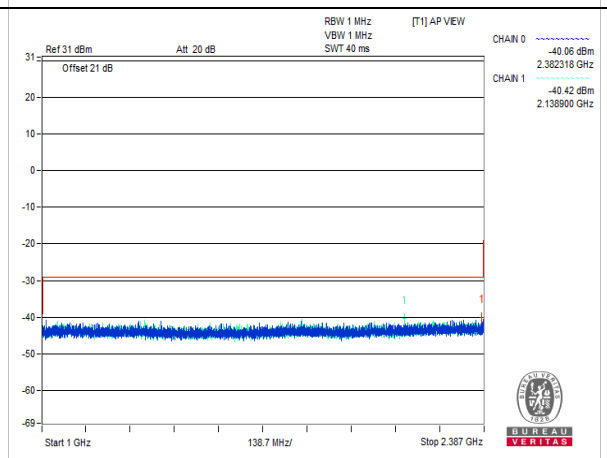


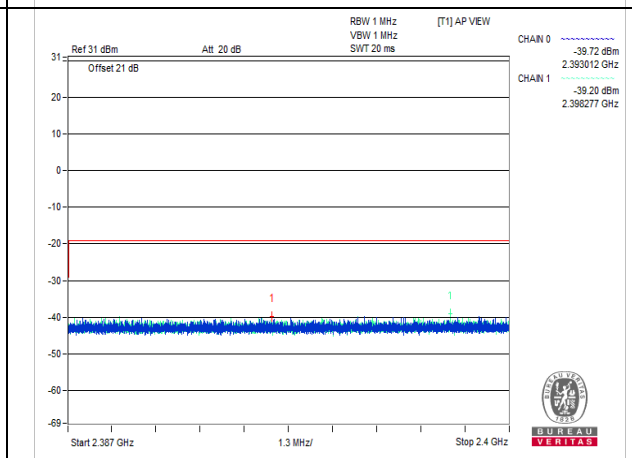
CH 13 (2472MHz)

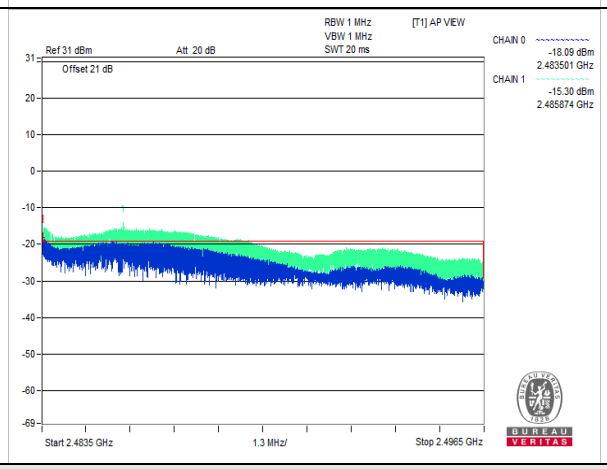
Vmax.

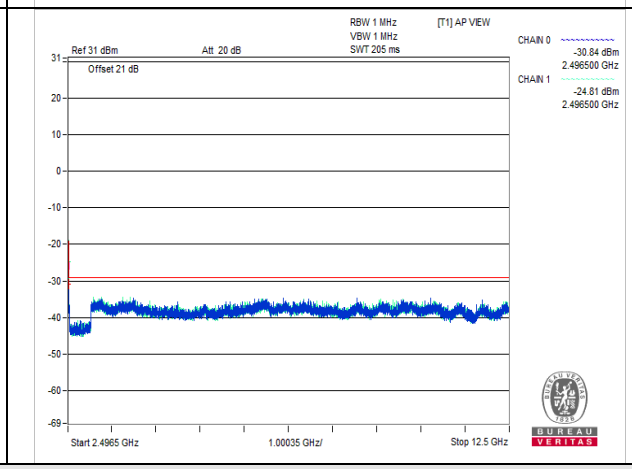






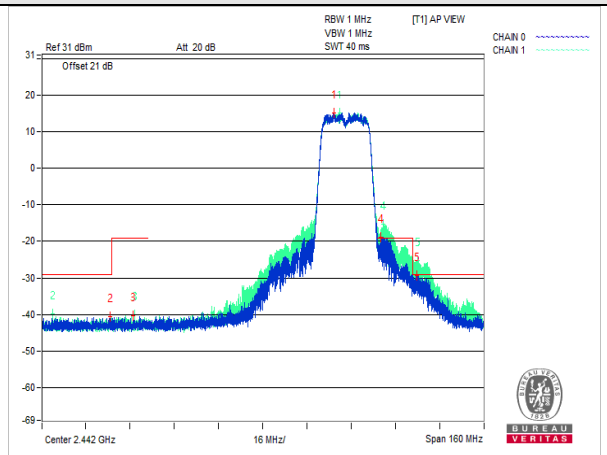


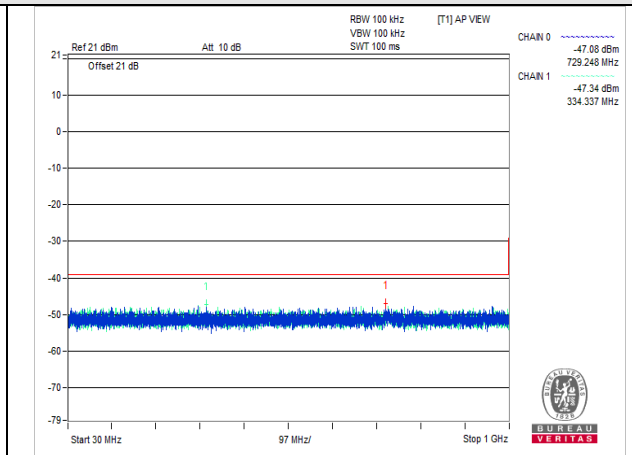


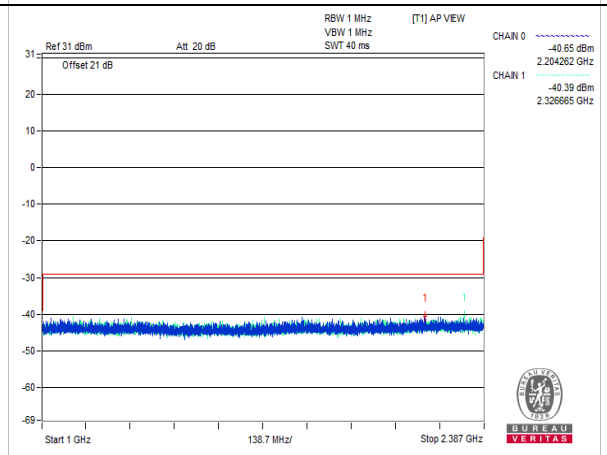


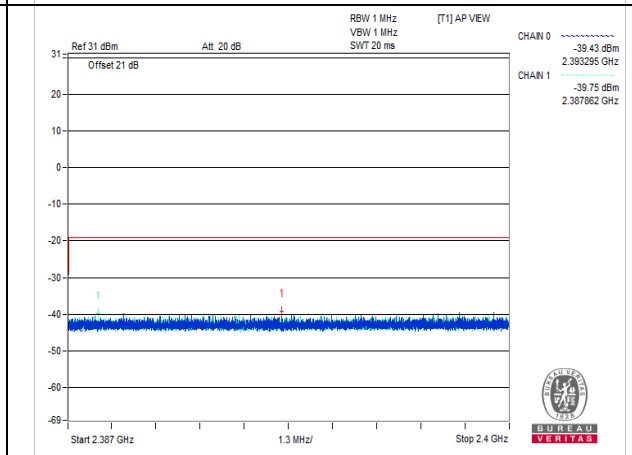
CH 13 (2472MHz)

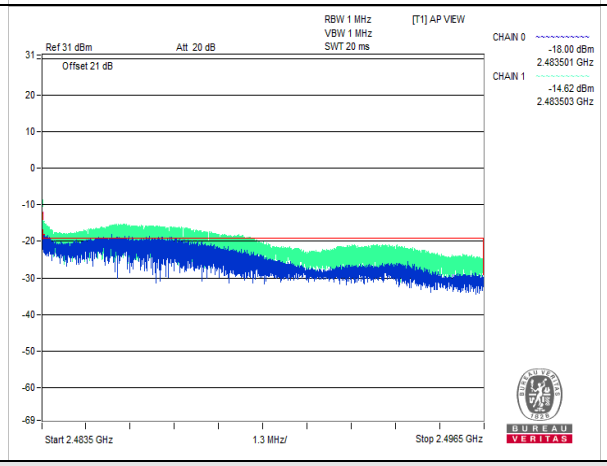
Vmin.

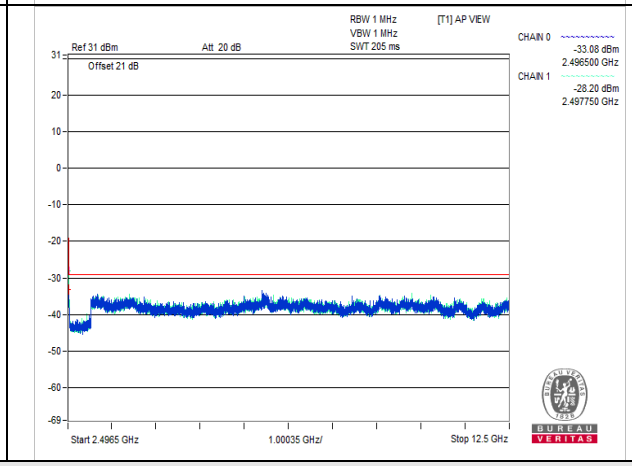












CH 13 (2472MHz)

[Worst result] x [Number of antenna ports]

TEST CHANNEL		CH 1 (2412MHz)		
TEST CONDITION	FREQUENCY RANGE(MHz)	MEASURE. VALUE (uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	0.039358	0.25	PASS
	1000.0 to 2387.0	0.048912	2.5	PASS
	2387.0 to 2400.0	1.425358	25	PASS
	2483.5 to 2496.5	0.224404	25	PASS
	2496.5 to 12500.0	0.847286	2.5	PASS
$V_{max.}$	30.0 to 1000.0	0.045188	0.25	PASS
	1000.0 to 2387.0	0.068778	2.5	PASS
	2387.0 to 2400.0	1.415608	25	PASS
	2483.5 to 2496.5	0.278632	25	PASS
	2496.5 to 12500.0	0.794384	2.5	PASS
$V_{min.}$	30.0 to 1000.0	0.039358	0.25	PASS
	1000.0 to 2387.0	0.054928	2.5	PASS
	2387.0 to 2400.0	1.241270	25	PASS
	2483.5 to 2496.5	0.293110	25	PASS
	2496.5 to 12500.0	0.790734	2.5	PASS
TEST CHANNEL		CH 7 (2442MHz)		
V_{normal}	30.0 to 1000.0	0.039722	0.25	PASS
	1000.0 to 2387.0	0.192766	2.5	PASS
	2387.0 to 2400.0	0.407408	25	PASS
	2483.5 to 2496.5	0.349164	25	PASS
	2496.5 to 12500.0	0.993184	2.5	PASS
$V_{max.}$	30.0 to 1000.0	0.046348	0.25	PASS
	1000.0 to 2387.0	0.190560	2.5	PASS
	2387.0 to 2400.0	0.392672	25	PASS
	2483.5 to 2496.5	0.378468	25	PASS
	2496.5 to 12500.0	0.811018	2.5	PASS
$V_{min.}$	30.0 to 1000.0	0.038908	0.25	PASS
	1000.0 to 2387.0	0.194102	2.5	PASS
	2387.0 to 2400.0	0.351584	25	PASS
	2483.5 to 2496.5	0.313350	25	PASS
	2496.5 to 12500.0	0.739656	2.5	PASS

TEST CHANNEL		CH 13 (2472MHz)		
TEST CONDITION	FREQUENCY RANGE(MHz)	MEASURE. VALUE (uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	0.039540	0.25	PASS
	1000.0 to 2387.0	0.231222	2.5	PASS
	2387.0 to 2400.0	0.201850	25	PASS
	2483.5 to 2496.5	2.078734	25	PASS
	2496.5 to 12500.0	1.815642	2.5	PASS
$V_{max.}$	30.0 to 1000.0	0.038286	0.25	PASS
	1000.0 to 2387.0	0.197256	2.5	PASS
	2387.0 to 2400.0	0.240452	25	PASS
	2483.5 to 2496.5	1.624010	25	PASS
	2496.5 to 12500.0	1.648276	2.5	PASS
$V_{min.}$	30.0 to 1000.0	0.039176	0.25	PASS
	1000.0 to 2387.0	0.182822	2.5	PASS
	2387.0 to 2400.0	0.228050	25	PASS
	2483.5 to 2496.5	2.075504	25	PASS
	2496.5 to 12500.0	0.984080	2.5	PASS

VHT40

Chain 0

TEST CHANNEL		CH 3 (2422MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	228.850	0.019588	0.125	PASS
	1000.0 to 2387.0	2386.133	0.115325	1.25	PASS(1)
	2387.0 to 2400.0	2399.809	6.622165	12.5	PASS
	2483.5 to 2496.5	2487.169	0.776247	12.5	PASS
	2496.5 to 12500.0	3189.242	0.431519	1.25	PASS
$V_{max.}$	30.0 to 1000.0	934.646	0.017498	0.125	PASS
	1000.0 to 2387.0	2386.826	0.143969	1.25	PASS(2)
	2387.0 to 2400.0	2399.887	6.237348	12.5	PASS
	2483.5 to 2496.5	2487.229	0.749894	12.5	PASS
	2496.5 to 12500.0	3226.755	0.338844	1.25	PASS
$V_{min.}$	30.0 to 1000.0	391.567	0.016866	0.125	PASS
	1000.0 to 2387.0	2385.786	0.119117	1.25	PASS(3)
	2387.0 to 2400.0	2399.670	6.792036	12.5	PASS
	2483.5 to 2496.5	2486.949	0.636796	12.5	PASS
	2496.5 to 12500.0	6995.574	0.356451	1.25	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	903.606	0.019953	0.125	PASS
	1000.0 to 2387.0	2385.439	0.275423	1.25	PASS
	2387.0 to 2400.0	2399.613	2.421029	12.5	PASS
	2483.5 to 2496.5	2487.733	4.436086	12.5	PASS
	2496.5 to 12500.0	6944.306	0.392645	1.25	PASS
$V_{max.}$	30.0 to 1000.0	587.265	0.020701	0.125	PASS
	1000.0 to 2387.0	2385.959	0.159221	1.25	PASS
	2387.0 to 2400.0	2399.835	2.393316	12.5	PASS
	2483.5 to 2496.5	2487.703	4.395416	12.5	PASS
	2496.5 to 12500.0	6939.304	0.485289	1.25	PASS
$V_{min.}$	30.0 to 1000.0	948.105	0.018578	0.125	PASS
	1000.0 to 2387.0	2384.052	0.212814	1.25	PASS
	2387.0 to 2400.0	2399.761	2.355049	12.5	PASS
	2483.5 to 2496.5	2487.569	4.355119	12.5	PASS
	2496.5 to 12500.0	6981.819	0.381944	1.25	PASS

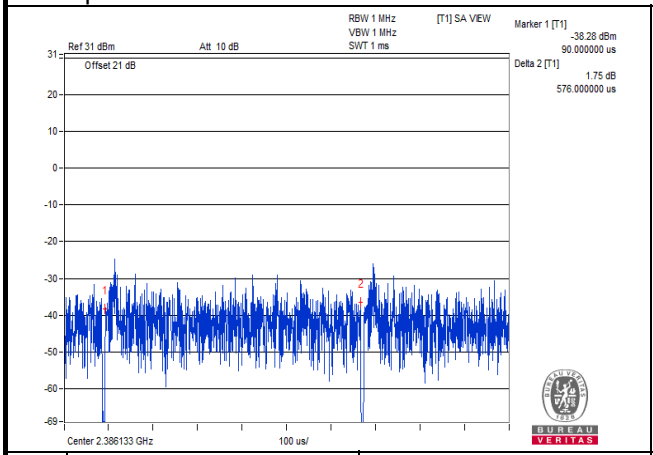
TEST CHANNEL		CH 11 (2462MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	724.883	0.017620	0.125	PASS
	1000.0 to 2387.0	2154.330	0.088308	1.25	PASS
	2387.0 to 2400.0	2399.236	0.301301	12.5	PASS
	2483.5 to 2496.5	2483.633	5.970353	12.5	PASS
	2496.5 to 12500.0	2496.500	0.178872	1.25	PASS(4)
$V_{max.}$	30.0 to 1000.0	446.493	0.019861	0.125	PASS
	1000.0 to 2387.0	2383.705	0.090782	1.25	PASS
	2387.0 to 2400.0	2398.761	0.267301	12.5	PASS
	2483.5 to 2496.5	2489.806	6.053409	12.5	PASS
	2496.5 to 12500.0	2496.500	0.170181	1.25	PASS(5)
$V_{min.}$	30.0 to 1000.0	929.796	0.018072	0.125	PASS
	1000.0 to 2387.0	1046.984	0.082035	1.25	PASS
	2387.0 to 2400.0	2399.653	0.328852	12.5	PASS
	2483.5 to 2496.5	2489.645	6.324119	12.5	PASS
	2496.5 to 12500.0	2499.000	0.170130	1.25	PASS(6)

NOTE: 1. The spectrum plots are attached on the following pages.

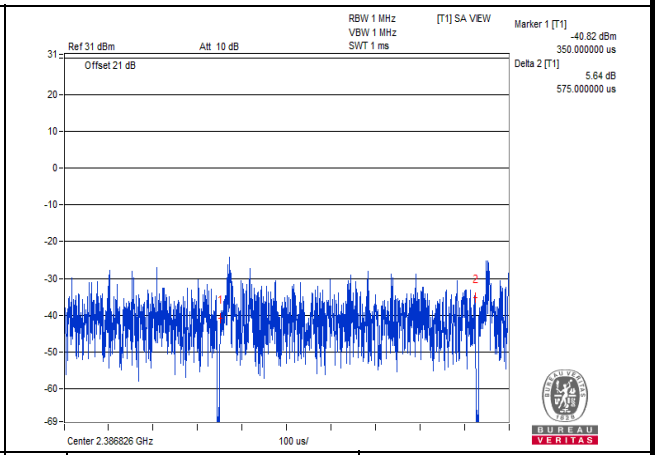
2. (No.): The value was tested under Measuring Mode *Zero Span.

Measuring Mode *Zero Span

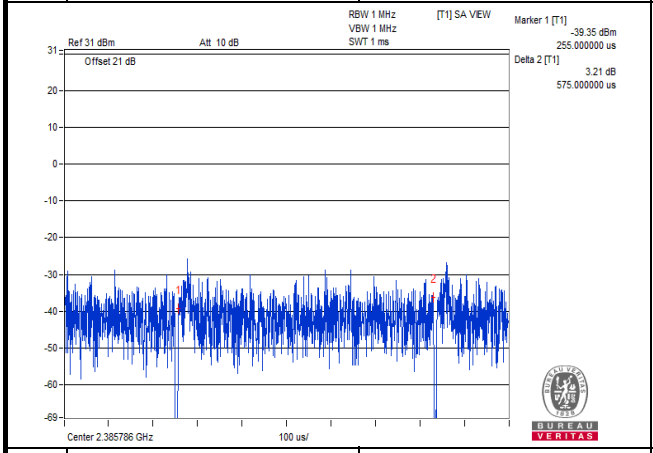
1. Set the spectrum analyzer as below and it takes in a value of all data point.
2. Regarding the all data value, it transforms the “dBm” value into “uW” value.
3. It adds the all values and calculates a grand total. Define a grand total as “P”.
4. It divides “P” by sample data point (ex.501) and calculates the mean value.
5. It reports the mean value.



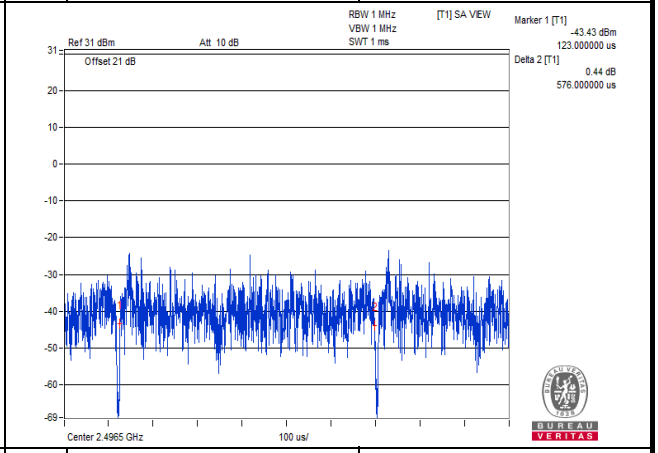
1	2386.133MHz	P = 0.115325uW



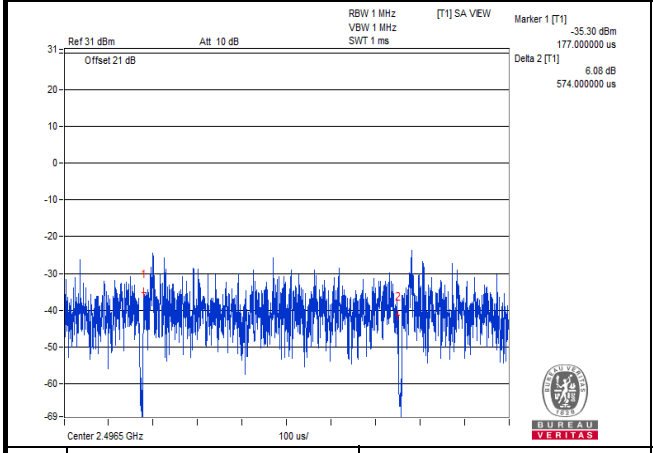
2	2386.826MHz	P = 0.143969uW



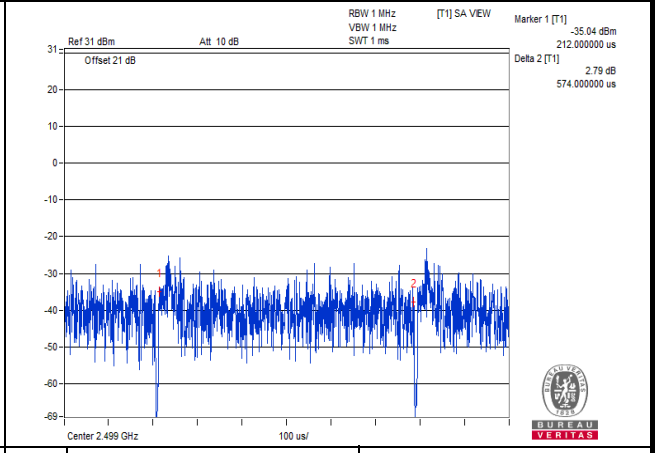
3	2385.786MHz	P = 0.119117uW



4	2496.500MHz	P = 0.178872uW



5	2496.500MHz	P = 0.170181uW



6	2499.000MHz	P = 0.17013uW

Chain 1

TEST CHANNEL		CH 3 (2422MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	111.722	0.018450	0.125	PASS
	1000.0 to 2387.0	2386.826	0.151746	1.25	PASS(1)
	2387.0 to 2400.0	2399.831	10.665961	12.5	PASS
	2483.5 to 2496.5	2487.084	0.843335	12.5	PASS
	2496.5 to 12500.0	3918.247	0.424620	1.25	PASS
$V_{max.}$	30.0 to 1000.0	513.666	0.019454	0.125	PASS
	1000.0 to 2387.0	2386.479	0.142210	1.25	PASS(2)
	2387.0 to 2400.0	2399.900	11.015393	12.5	PASS
	2483.5 to 2496.5	2486.818	0.767361	12.5	PASS
	2496.5 to 12500.0	9076.302	0.382825	1.25	PASS
$V_{min.}$	30.0 to 1000.0	683.173	0.025823	0.125	PASS
	1000.0 to 2387.0	2386.133	0.142241	1.25	PASS(3)
	2387.0 to 2400.0	2399.683	10.990058	12.5	PASS
	2483.5 to 2496.5	2486.920	0.729458	12.5	PASS
	2496.5 to 12500.0	3240.510	0.479733	1.25	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	900.696	0.040926	0.125	PASS
	1000.0 to 2387.0	2376.077	0.228560	1.25	PASS
	2387.0 to 2400.0	2399.899	2.576321	12.5	PASS
	2483.5 to 2496.5	2488.207	4.666594	12.5	PASS
	2496.5 to 12500.0	10092.906	0.397192	1.25	PASS
$V_{max.}$	30.0 to 1000.0	771.322	0.019953	0.125	PASS
	1000.0 to 2387.0	2385.092	0.238781	1.25	PASS
	2387.0 to 2400.0	2399.935	2.786121	12.5	PASS
	2483.5 to 2496.5	2488.284	4.655861	12.5	PASS
	2496.5 to 12500.0	10781.897	0.360579	1.25	PASS
$V_{min.}$	30.0 to 1000.0	370.591	0.019187	0.125	PASS
	1000.0 to 2387.0	2386.479	0.215774	1.25	PASS
	2387.0 to 2400.0	2399.983	2.792544	12.5	PASS
	2483.5 to 2496.5	2488.014	5.152286	12.5	PASS
	2496.5 to 12500.0	2506.503	0.495450	1.25	PASS

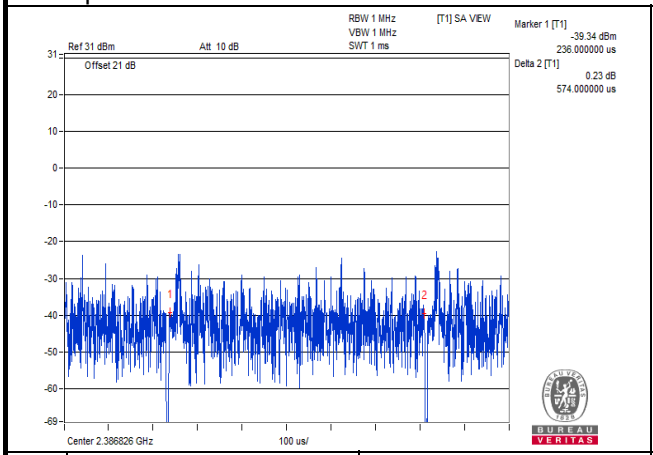
TEST CHANNEL		CH 11 (2462MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	124.938	0.018450	0.125	PASS
	1000.0 to 2387.0	2381.798	0.185780	1.25	PASS
	2387.0 to 2400.0	2388.798	0.271019	12.5	PASS
	2483.5 to 2496.5	2483.589	10.023052	12.5	PASS
	2496.5 to 12500.0	2500.251	0.216522	1.25	PASS(4)
$V_{max.}$	30.0 to 1000.0	354.343	0.018281	0.125	PASS
	1000.0 to 2387.0	2383.012	0.133968	1.25	PASS
	2387.0 to 2400.0	2399.549	0.239883	12.5	PASS
	2483.5 to 2496.5	2495.702	9.705100	12.5	PASS
	2496.5 to 12500.0	2496.500	0.248946	1.25	PASS(5)
$V_{min.}$	30.0 to 1000.0	693.601	0.019999	0.125	PASS
	1000.0 to 2387.0	2382.492	0.128825	1.25	PASS
	2387.0 to 2400.0	2392.546	0.264850	12.5	PASS
	2483.5 to 2496.5	2495.733	9.594006	12.5	PASS
	2496.5 to 12500.0	2497.750	0.261946	1.25	PASS(6)

NOTE: 1. The spectrum plots are attached on the following pages.

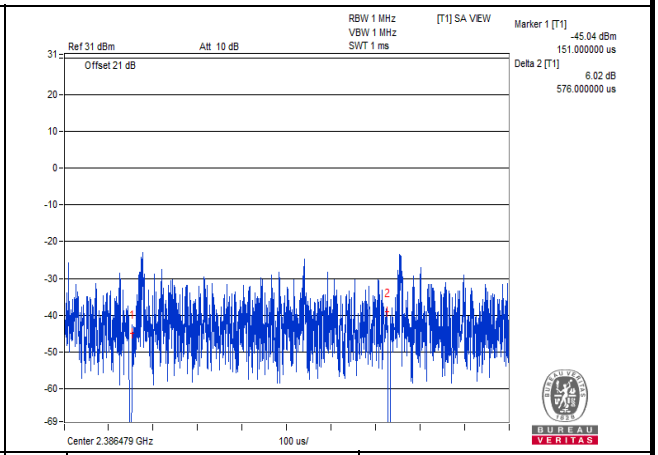
2. (No.): The value was tested under Measuring Mode *Zero Span.

Measuring Mode *Zero Span

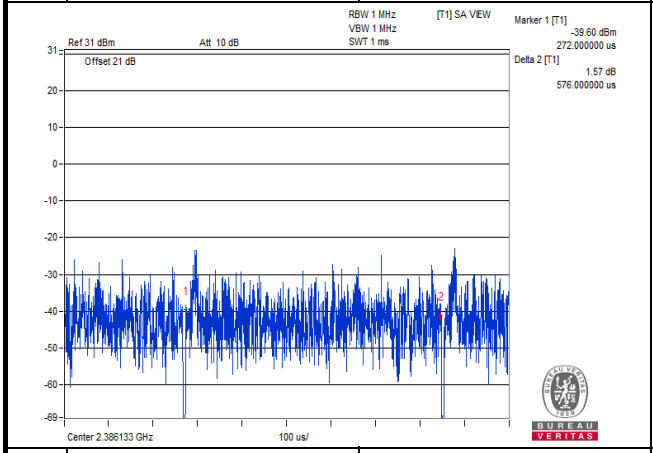
1. Set the spectrum analyzer as below and it takes in a value of all data point.
2. Regarding the all data value, it transforms the “dBm” value into “uW” value.
3. It adds the all values and calculates a grand total. Define a grand total as “P”.
4. It divides “P” by sample data point (ex.501) and calculates the mean value.
5. It reports the mean value.



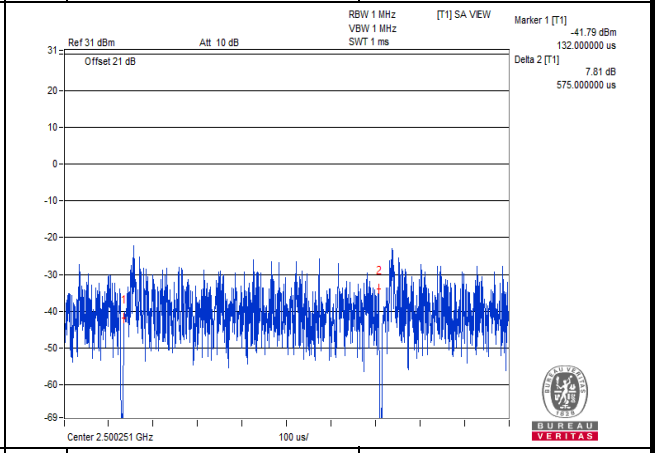
1	2386.826MHz	P = 0.151746uW



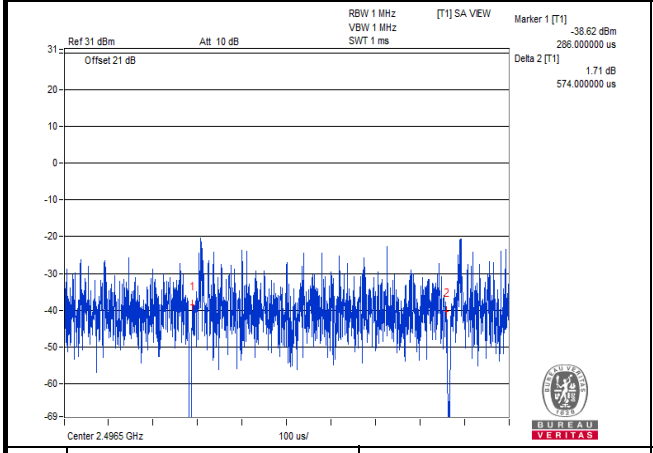
2	2386.479MHz	P = 0.14221uW



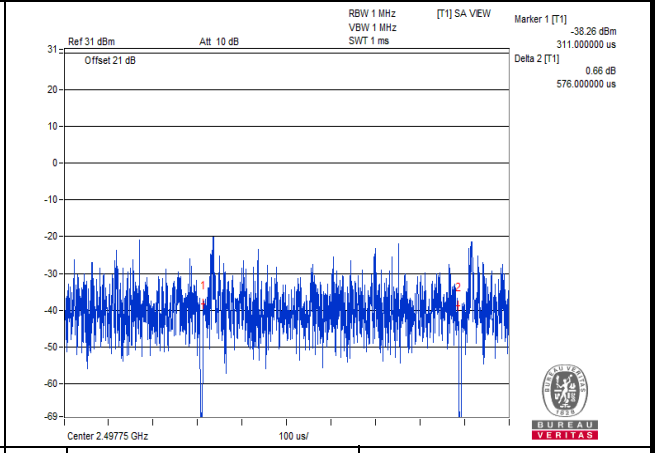
3	2386.133MHz	P = 0.142241uW



4	2500.251MHz	P = 0.216522uW



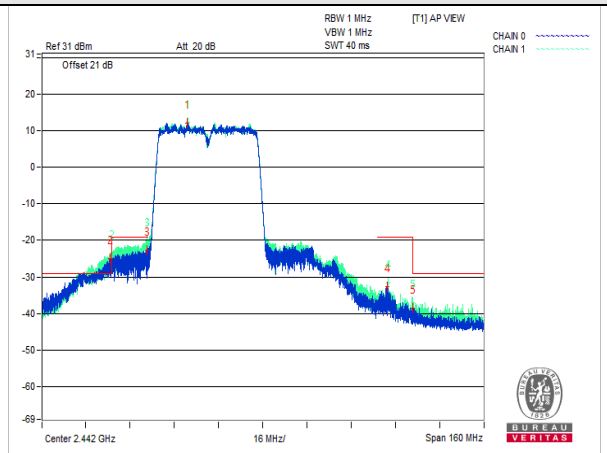
5	2496.500MHz	P = 0.248946uW

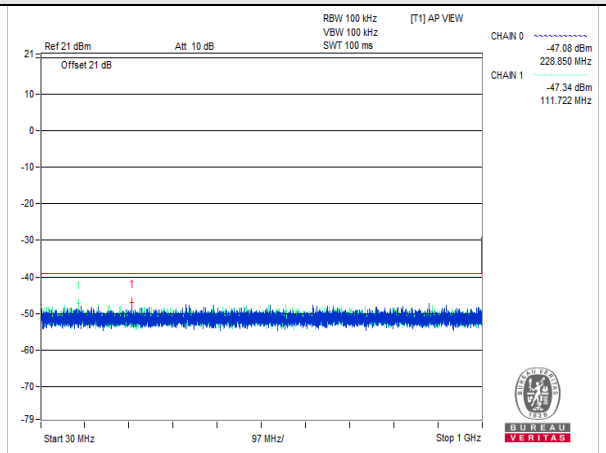


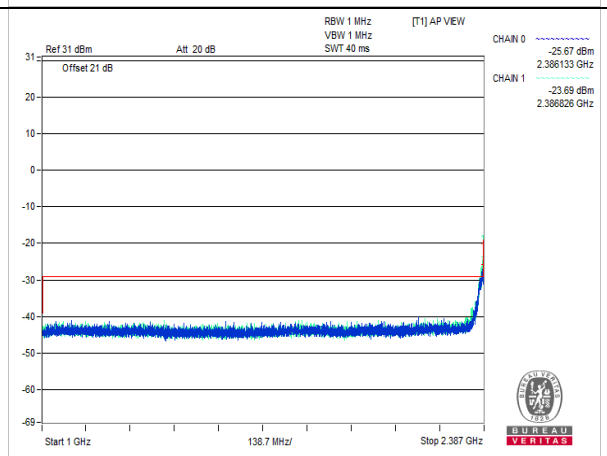
6	2497.750MHz	P = 0.261946uW

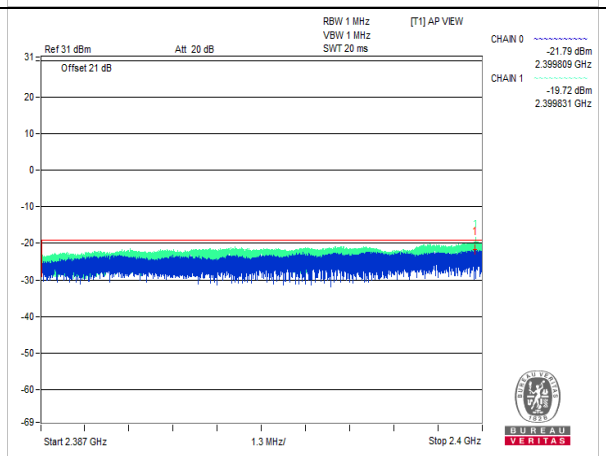
Graph

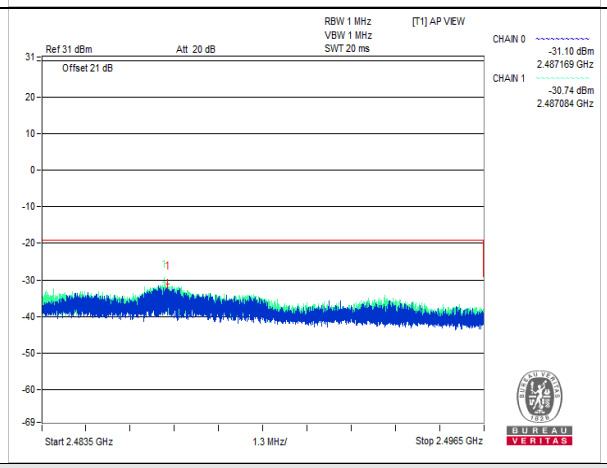
Vnormal

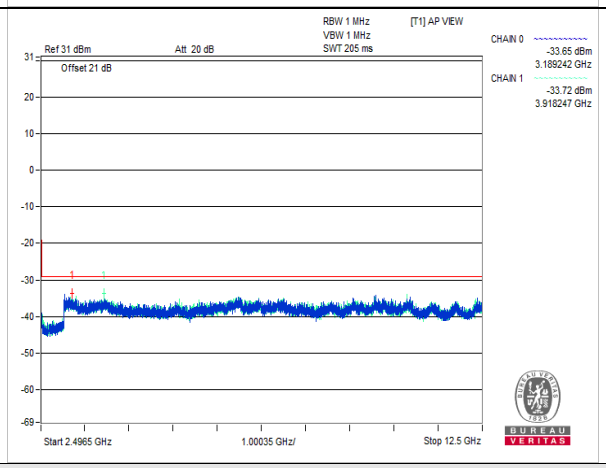






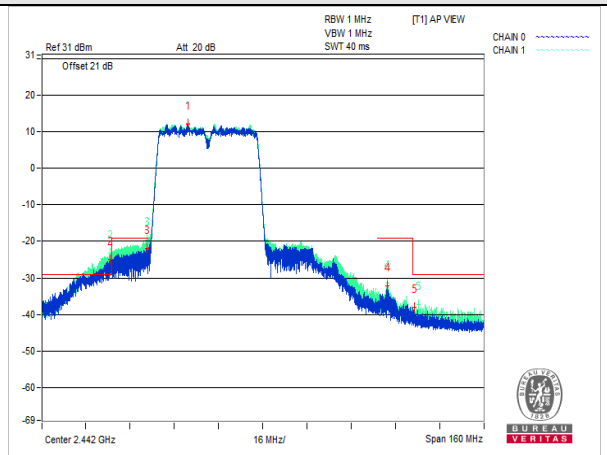


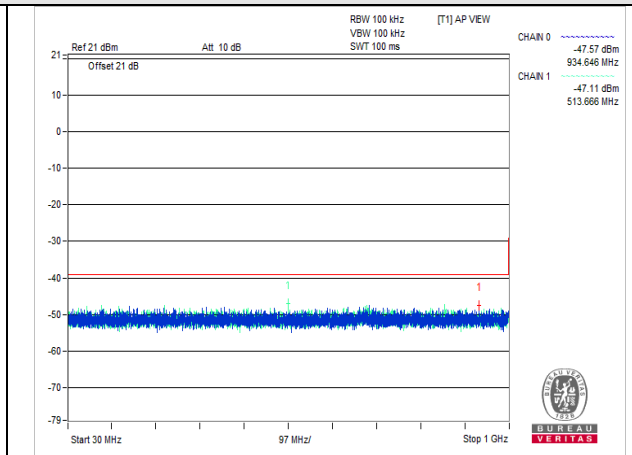


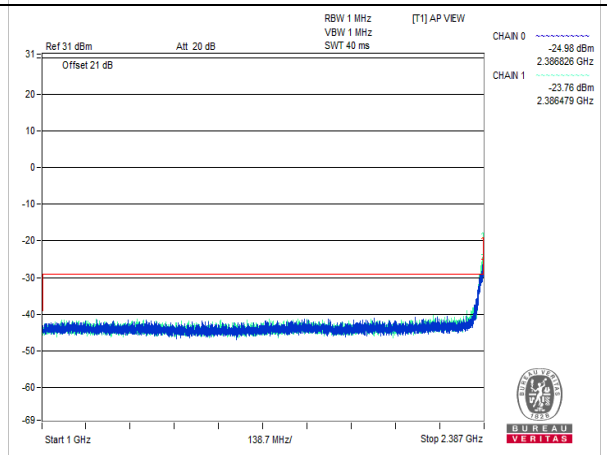


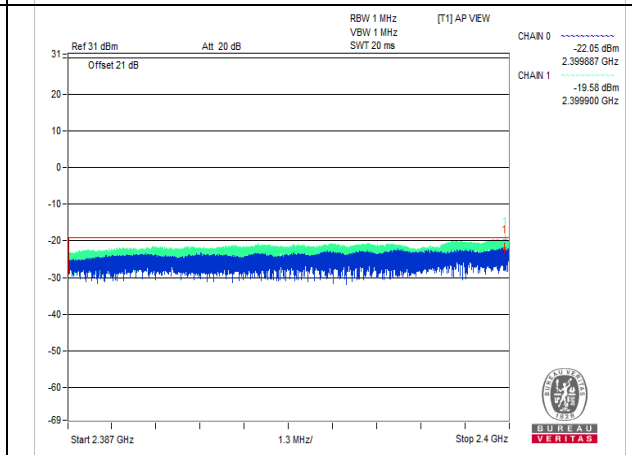
CH 3 (2422MHz)

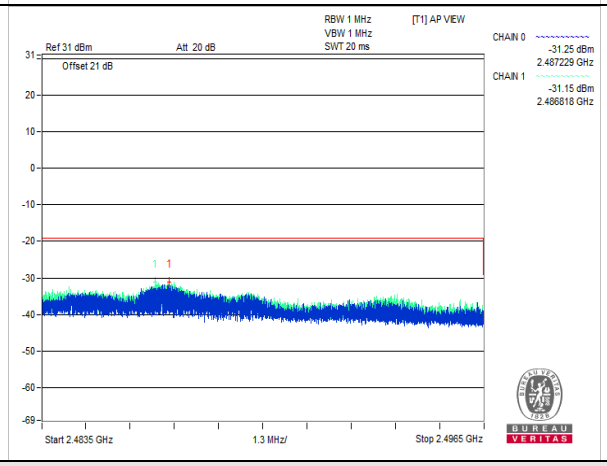
Vmax.

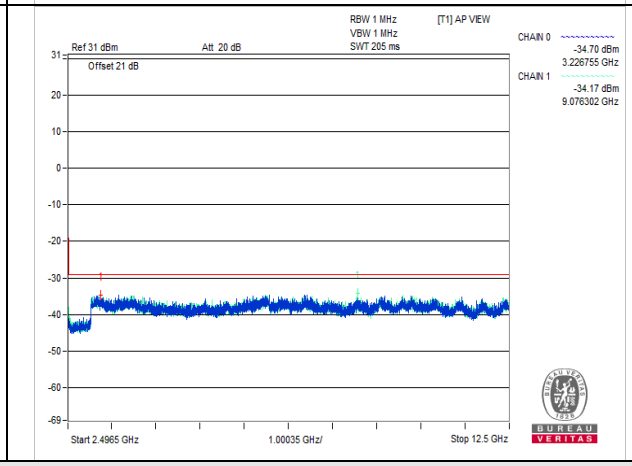






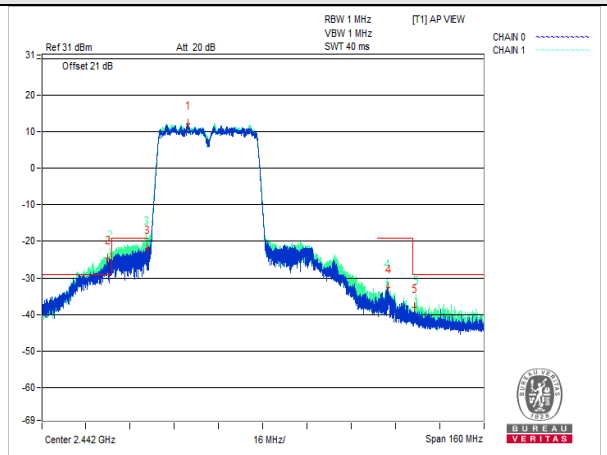


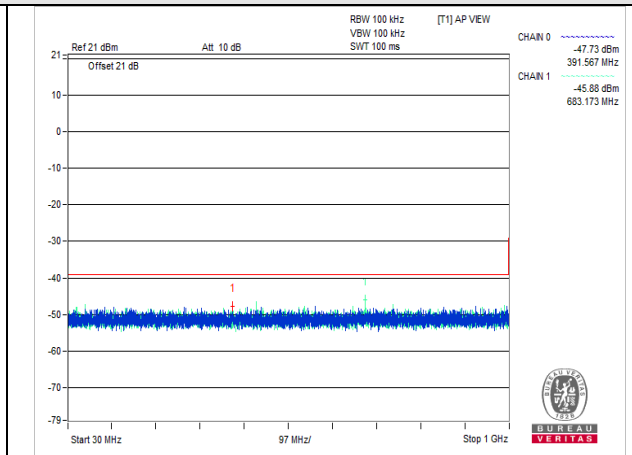


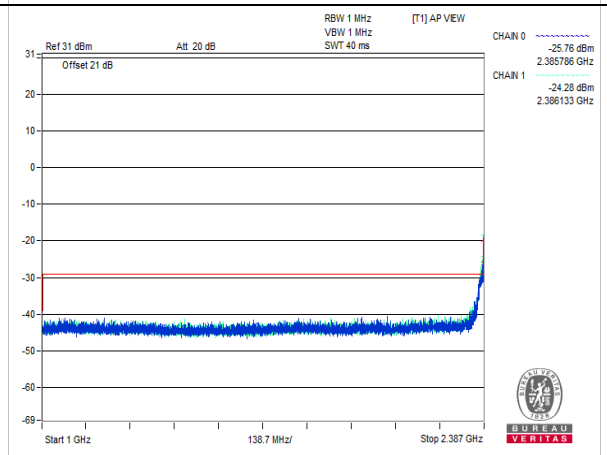


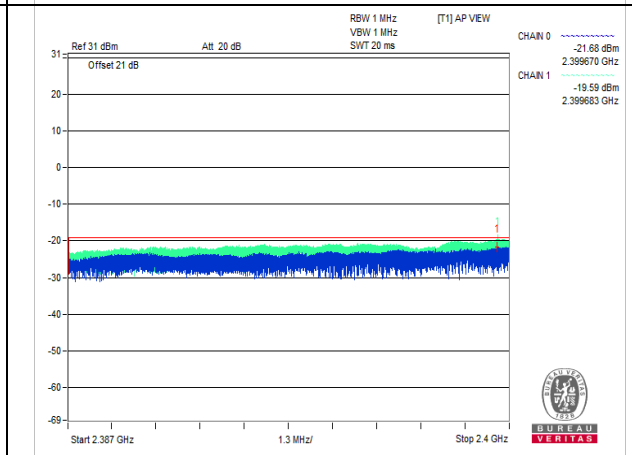
CH 3 (2422MHz)

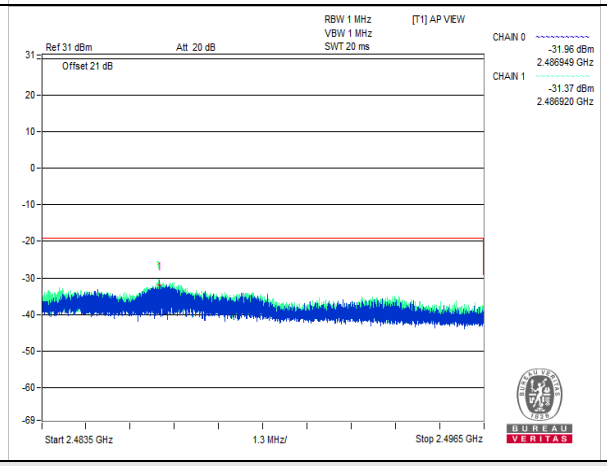
Vmin.

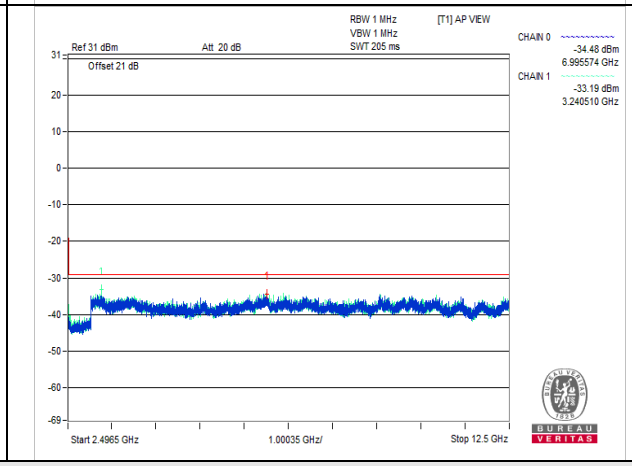






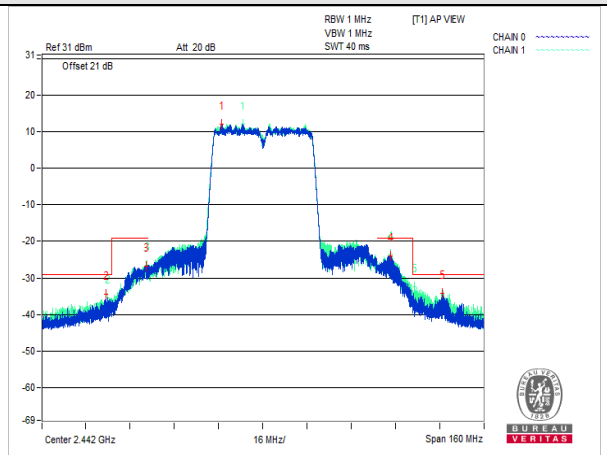


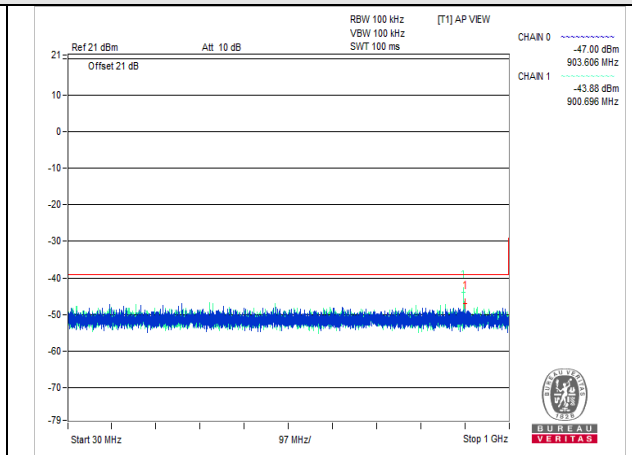


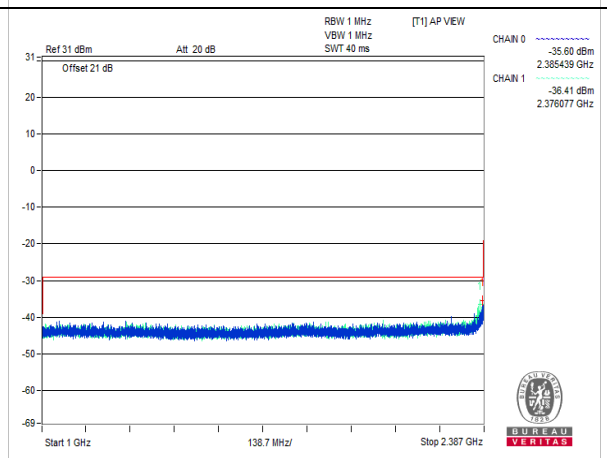


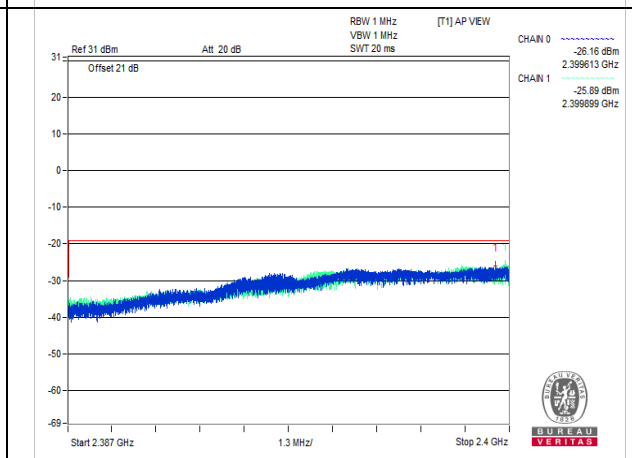
CH 3 (2422MHz)

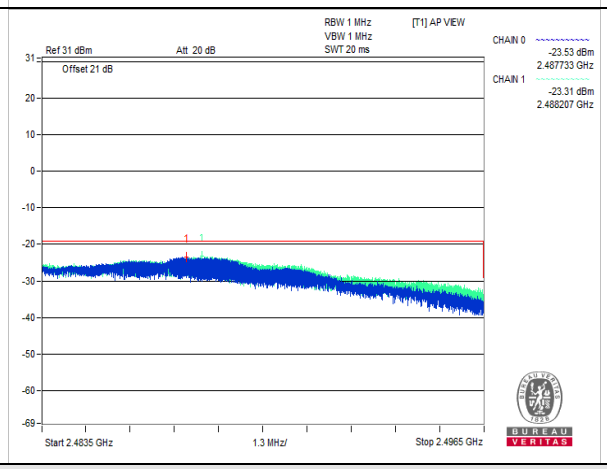
Vnormal

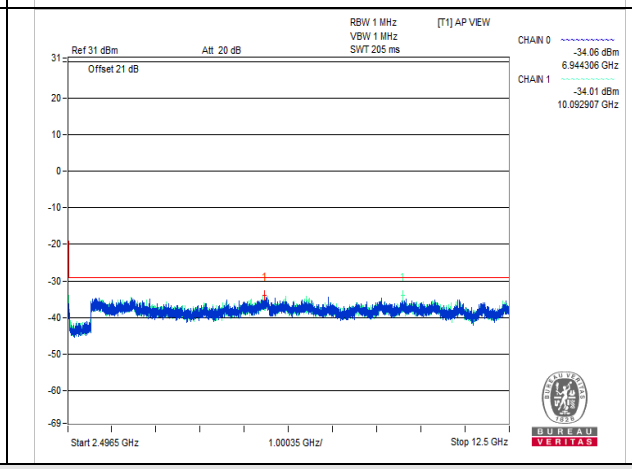






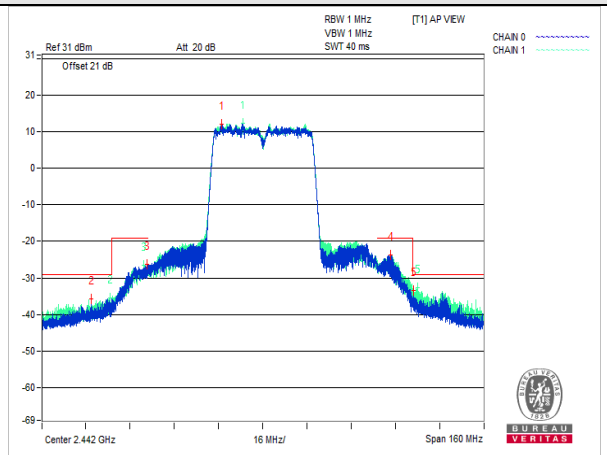


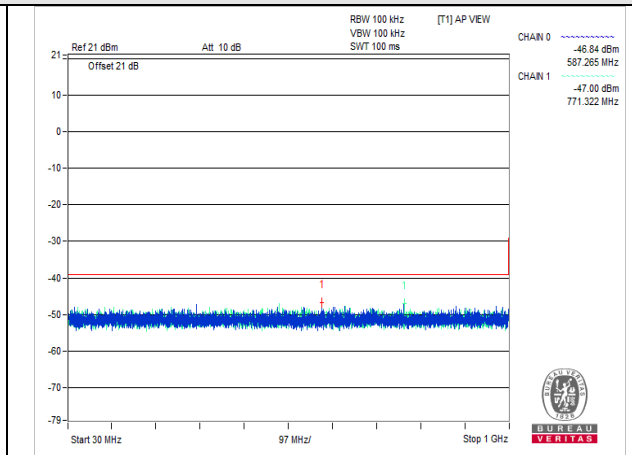


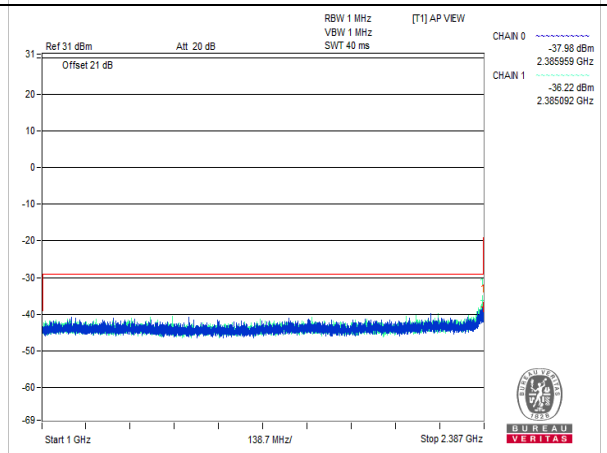


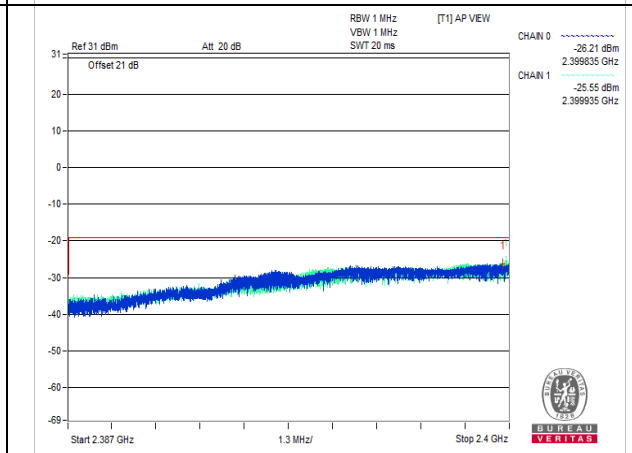
CH 7 (2442MHz)

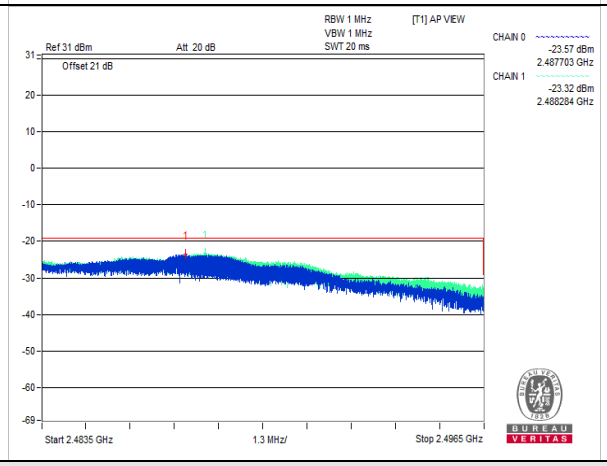
Vmax.

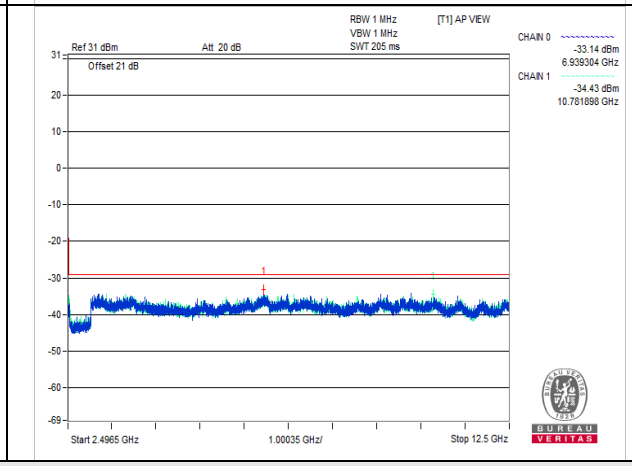






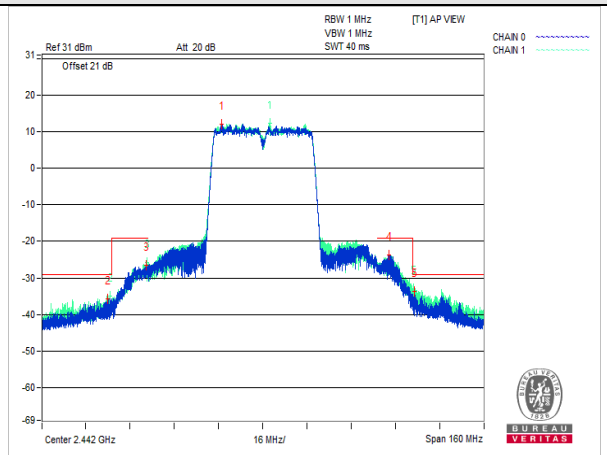


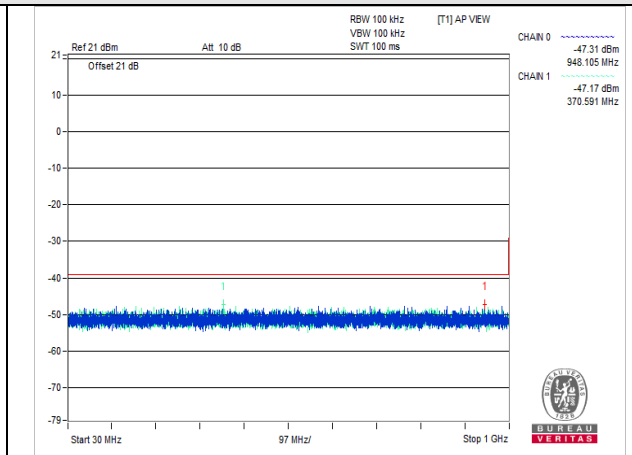


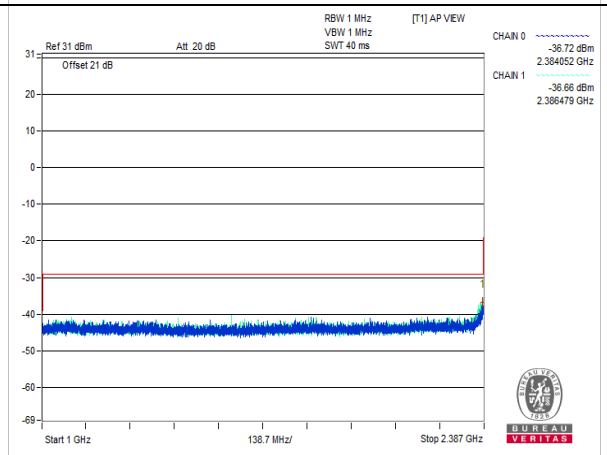


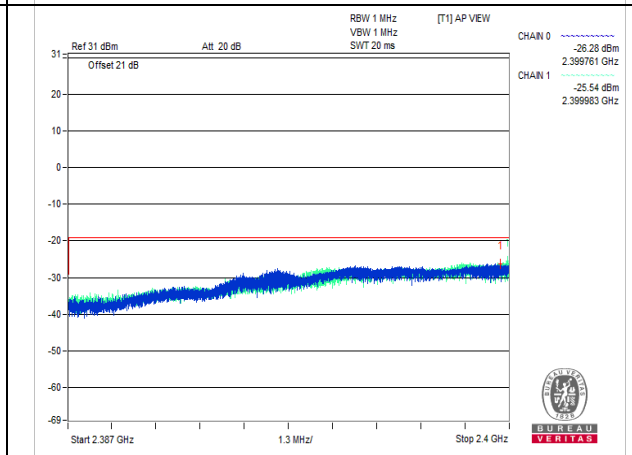
CH 7 (2442MHz)

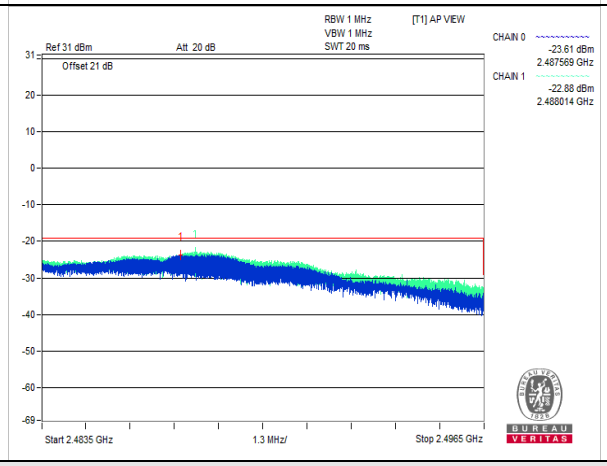
Vmin.

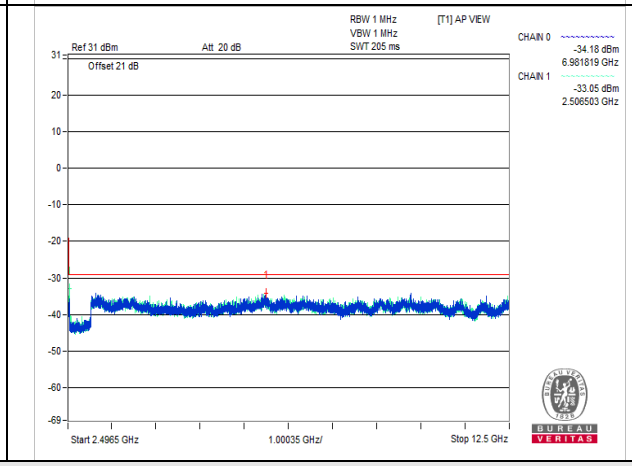






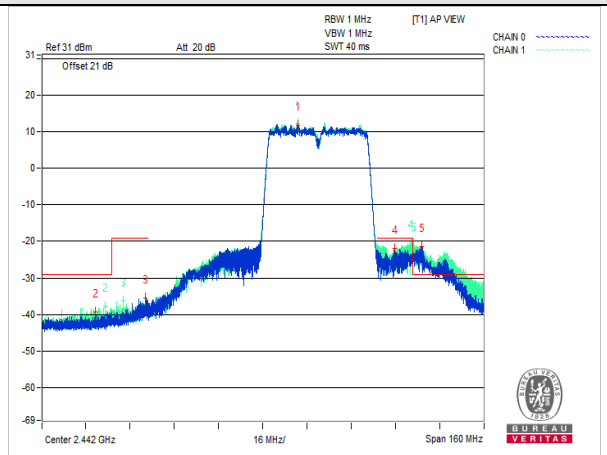


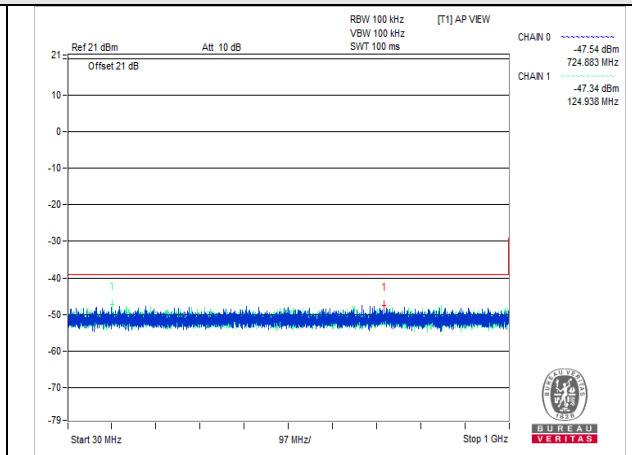


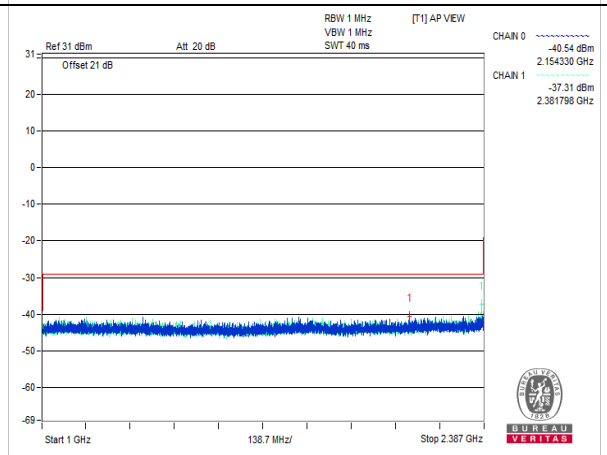


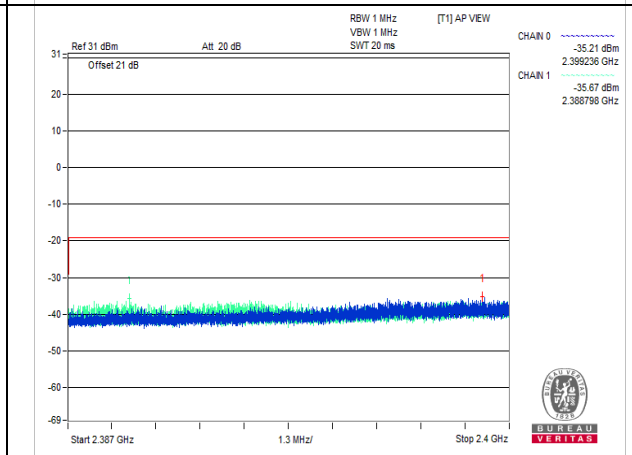
CH 7 (2442MHz)

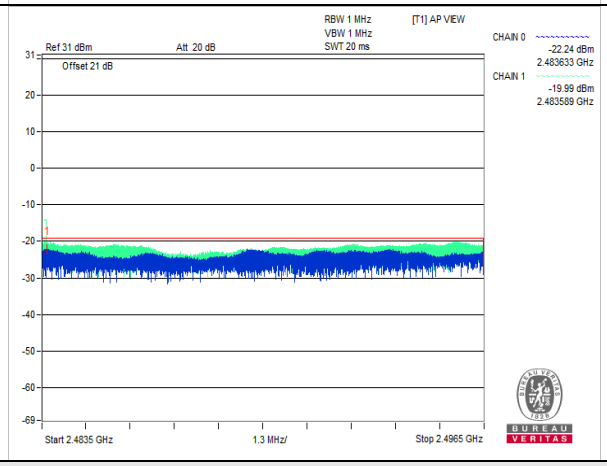
Vnormal

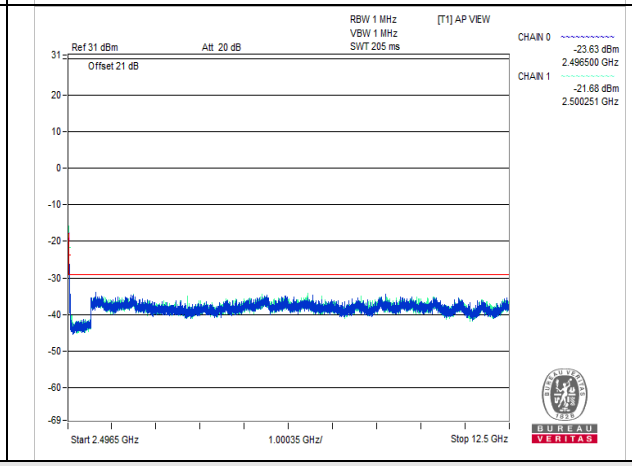






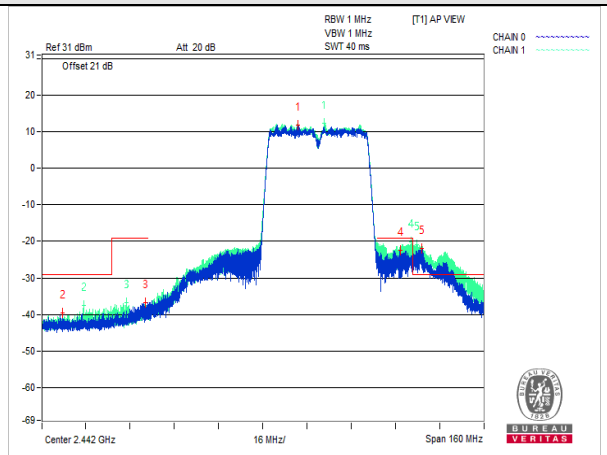


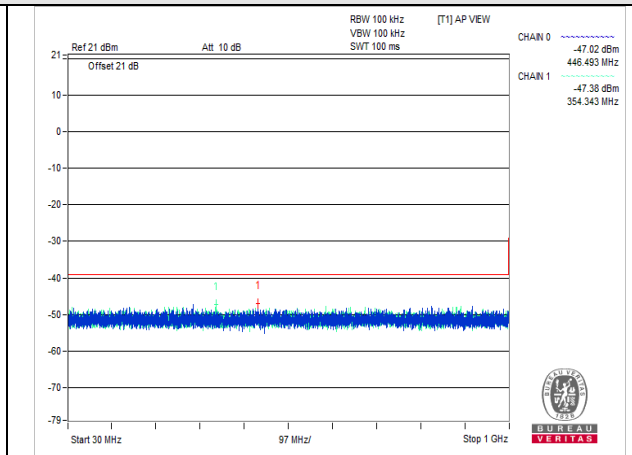


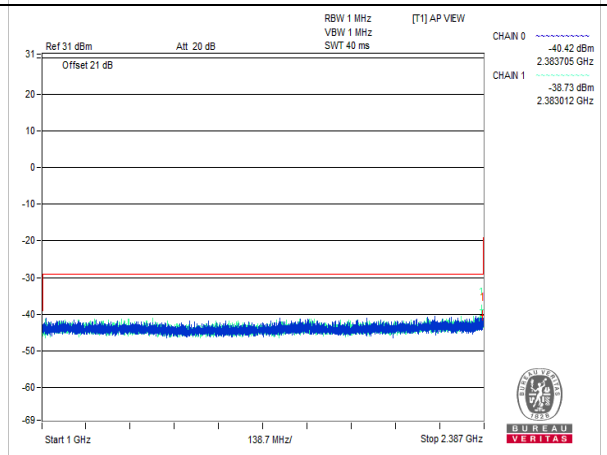


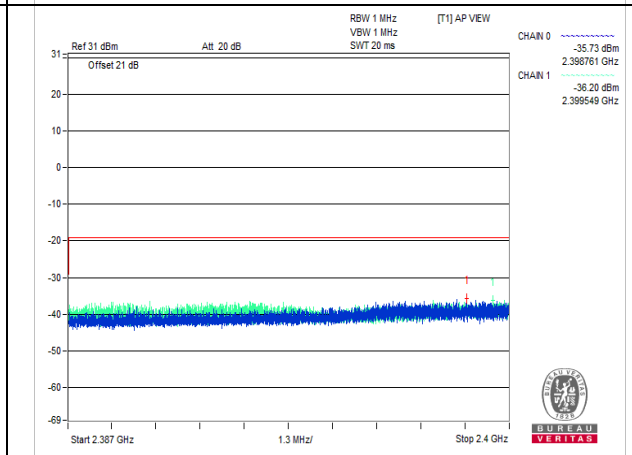
CH 11 (2462MHz)

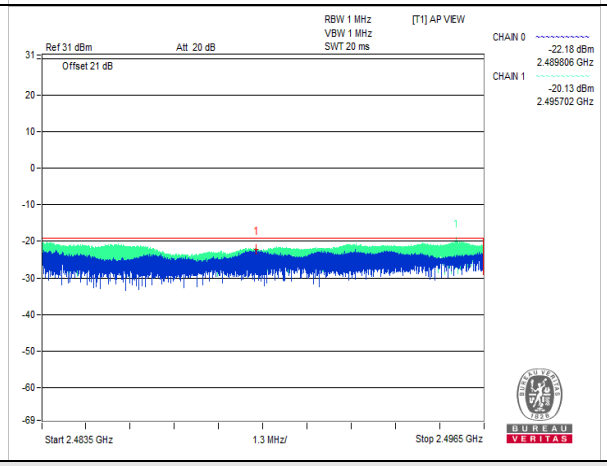
Vmax.

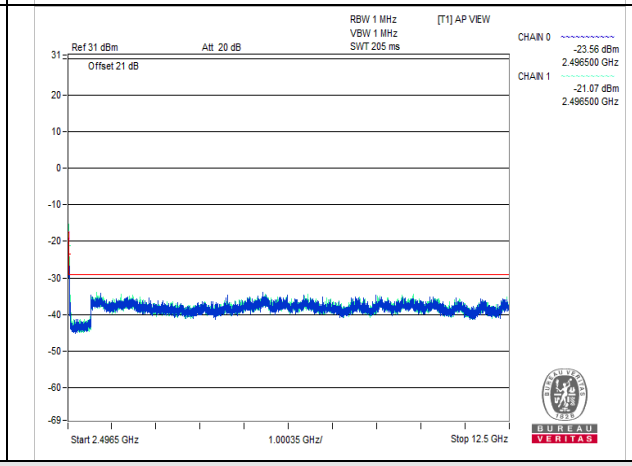






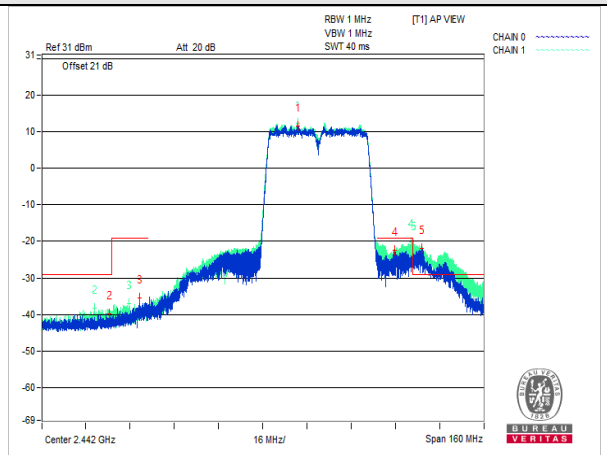


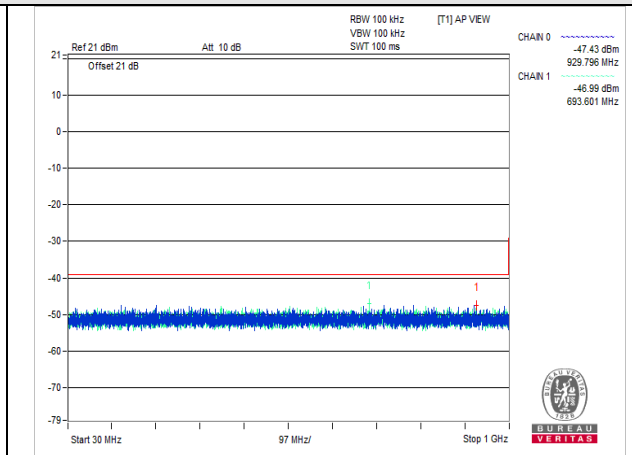


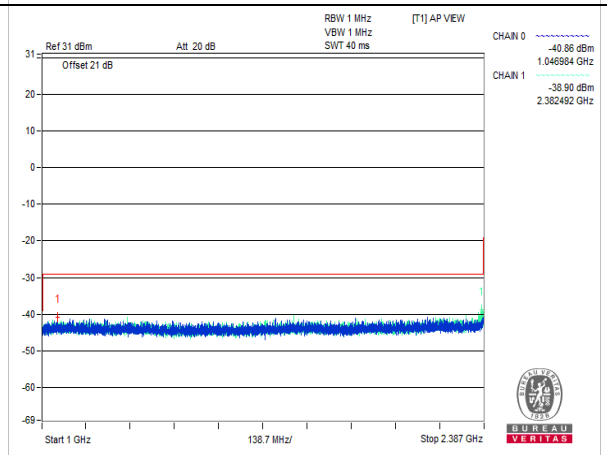


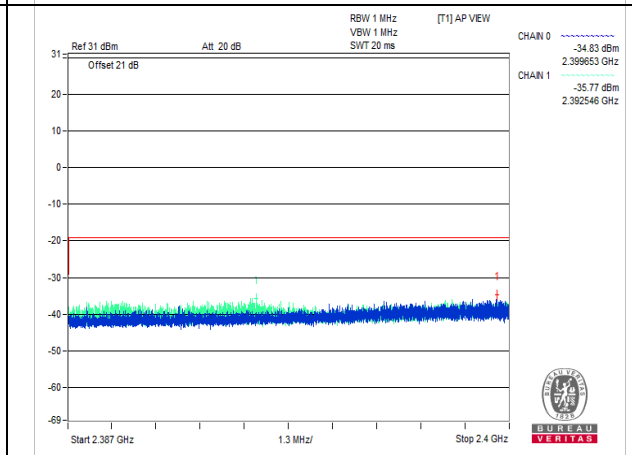
CH 11 (2462MHz)

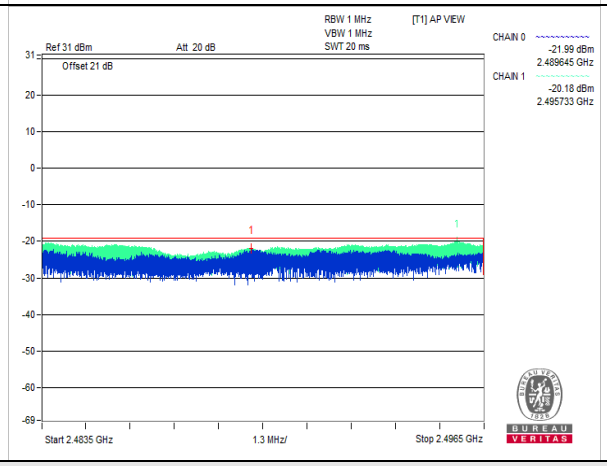
Vmin.

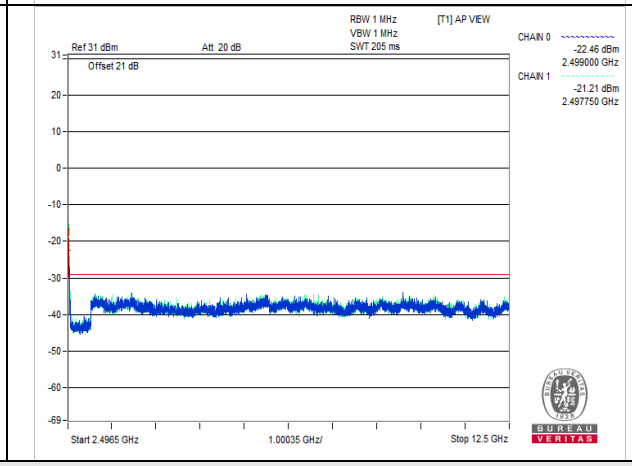












CH 11 (2462MHz)

[Worst result] x [Number of antenna ports]

TEST CHANNEL		CH 3 (2422MHz)		
TEST CONDITION	FREQUENCY RANGE(MHz)	MEASURE. VALUE (uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	0.039176	0.25	PASS
	1000.0 to 2387.0	0.303492	2.5	PASS
	2387.0 to 2400.0	21.331922	25	PASS
	2483.5 to 2496.5	1.686670	25	PASS
	2496.5 to 12500.0	0.863038	2.5	PASS
$V_{max.}$	30.0 to 1000.0	0.038908	0.25	PASS
	1000.0 to 2387.0	0.287938	2.5	PASS
	2387.0 to 2400.0	22.030786	25	PASS
	2483.5 to 2496.5	1.534722	25	PASS
	2496.5 to 12500.0	0.765650	2.5	PASS
$V_{min.}$	30.0 to 1000.0	0.051646	0.25	PASS
	1000.0 to 2387.0	0.284482	2.5	PASS
	2387.0 to 2400.0	21.980116	25	PASS
	2483.5 to 2496.5	1.458916	25	PASS
	2496.5 to 12500.0	0.959466	2.5	PASS
TEST CHANNEL		CH 7 (2442MHz)		
V_{normal}	30.0 to 1000.0	0.081852	0.25	PASS
	1000.0 to 2387.0	0.550846	2.5	PASS
	2387.0 to 2400.0	5.152642	25	PASS
	2483.5 to 2496.5	9.333188	25	PASS
	2496.5 to 12500.0	0.794384	2.5	PASS
$V_{max.}$	30.0 to 1000.0	0.041402	0.25	PASS
	1000.0 to 2387.0	0.477562	2.5	PASS
	2387.0 to 2400.0	5.572242	25	PASS
	2483.5 to 2496.5	9.311722	25	PASS
	2496.5 to 12500.0	0.970578	2.5	PASS
$V_{min.}$	30.0 to 1000.0	0.038374	0.25	PASS
	1000.0 to 2387.0	0.431548	2.5	PASS
	2387.0 to 2400.0	5.585088	25	PASS
	2483.5 to 2496.5	10.304572	25	PASS
	2496.5 to 12500.0	0.990900	2.5	PASS

TEST CHANNEL		CH 11 (2462MHz)		
TEST CONDITION	FREQUENCY RANGE(MHz)	MEASURE. VALUE (uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	0.036900	0.25	PASS
	1000.0 to 2387.0	0.371560	2.5	PASS
	2387.0 to 2400.0	0.602602	25	PASS
	2483.5 to 2496.5	20.046104	25	PASS
	2496.5 to 12500.0	0.433044	2.5	PASS
$V_{max.}$	30.0 to 1000.0	0.039722	0.25	PASS
	1000.0 to 2387.0	0.267936	2.5	PASS
	2387.0 to 2400.0	0.534602	25	PASS
	2483.5 to 2496.5	19.410200	25	PASS
	2496.5 to 12500.0	0.497892	2.5	PASS
$V_{min.}$	30.0 to 1000.0	0.039998	0.25	PASS
	1000.0 to 2387.0	0.257650	2.5	PASS
	2387.0 to 2400.0	0.657704	25	PASS
	2483.5 to 2496.5	19.188012	25	PASS
	2496.5 to 12500.0	0.523892	2.5	PASS

802.11ax (HE20)

Chain 0

TEST CHANNEL		CH 1 (2412MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	722.822	0.020370	0.125	PASS
	1000.0 to 2387.0	2385.613	0.657658	1.25	PASS
	2387.0 to 2400.0	2399.996	7.161434	12.5	PASS
	2483.5 to 2496.5	2483.901	0.095060	12.5	PASS
	2496.5 to 12500.0	3064.198	0.385478	1.25	PASS
$V_{max.}$	30.0 to 1000.0	886.995	0.022182	0.125	PASS
	1000.0 to 2387.0	2385.439	0.605341	1.25	PASS
	2387.0 to 2400.0	2400.000	7.046931	12.5	PASS
	2483.5 to 2496.5	2495.633	0.105682	12.5	PASS
	2496.5 to 12500.0	3170.485	0.400867	1.25	PASS
$V_{min.}$	30.0 to 1000.0	97.293	0.022909	0.125	PASS
	1000.0 to 2387.0	2387.000	0.368129	1.25	PASS
	2387.0 to 2400.0	2399.998	6.982324	12.5	PASS
	2483.5 to 2496.5	2492.889	0.092257	12.5	PASS
	2496.5 to 12500.0	3952.009	0.376704	1.25	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	629.096	0.019588	0.125	PASS
	1000.0 to 2387.0	2182.937	0.082794	1.25	PASS
	2387.0 to 2400.0	2396.366	0.145546	12.5	PASS
	2483.5 to 2496.5	2484.205	0.178649	12.5	PASS
	2496.5 to 12500.0	6916.796	0.407380	1.25	PASS
$V_{max.}$	30.0 to 1000.0	591.872	0.020230	0.125	PASS
	1000.0 to 2387.0	2289.043	0.081283	1.25	PASS
	2387.0 to 2400.0	2396.992	0.123310	12.5	PASS
	2483.5 to 2496.5	2484.296	0.147231	12.5	PASS
	2496.5 to 12500.0	7444.481	0.422669	1.25	PASS
$V_{min.}$	30.0 to 1000.0	717.972	0.018621	0.125	PASS
	1000.0 to 2387.0	2277.253	0.085901	1.25	PASS
	2387.0 to 2400.0	2399.454	0.126765	12.5	PASS
	2483.5 to 2496.5	2483.688	0.169434	12.5	PASS
	2496.5 to 12500.0	7256.915	0.369828	1.25	PASS

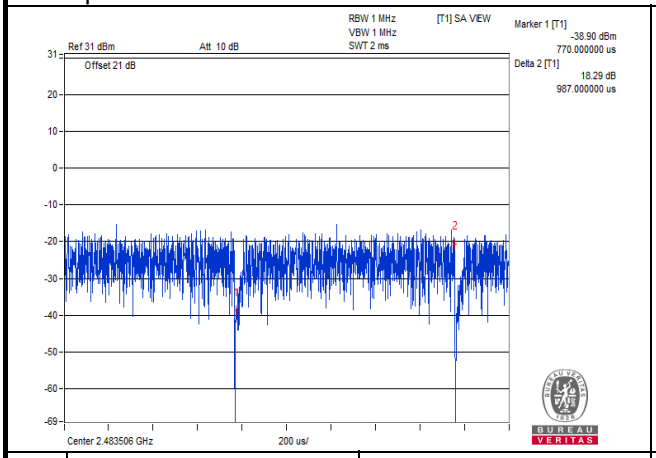
TEST CHANNEL		CH 13 (2472MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	248.128	0.019231	0.125	PASS
	1000.0 to 2387.0	2262.690	0.086497	1.25	PASS
	2387.0 to 2400.0	2392.996	0.092257	12.5	PASS
	2483.5 to 2496.5	2483.506	3.976350	12.5	PASS(1)
	2496.5 to 12500.0	2497.750	0.751623	1.25	PASS
$V_{max.}$	30.0 to 1000.0	239.641	0.017701	0.125	PASS
	1000.0 to 2387.0	2209.637	0.081283	1.25	PASS
	2387.0 to 2400.0	2392.916	0.113501	12.5	PASS
	2483.5 to 2496.5	2483.509	3.764452	12.5	PASS(2)
	2496.5 to 12500.0	2497.750	0.674528	1.25	PASS
$V_{min.}$	30.0 to 1000.0	213.572	0.018197	0.125	PASS
	1000.0 to 2387.0	2092.089	0.086696	1.25	PASS
	2387.0 to 2400.0	2387.836	0.094842	12.5	PASS
	2483.5 to 2496.5	2483.503	3.834615	12.5	PASS(3)
	2496.5 to 12500.0	2496.500	1.191242	1.25	PASS

NOTE: 1. The spectrum plots are attached on the following pages.

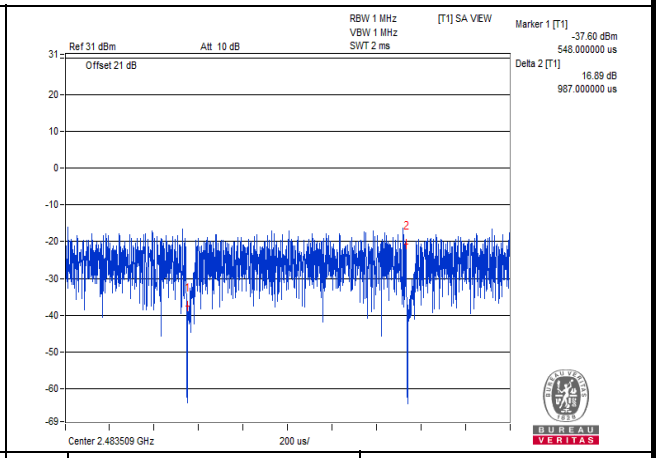
2. (No.): The value was tested under Measuring Mode *Zero Span.

Measuring Mode *Zero Span

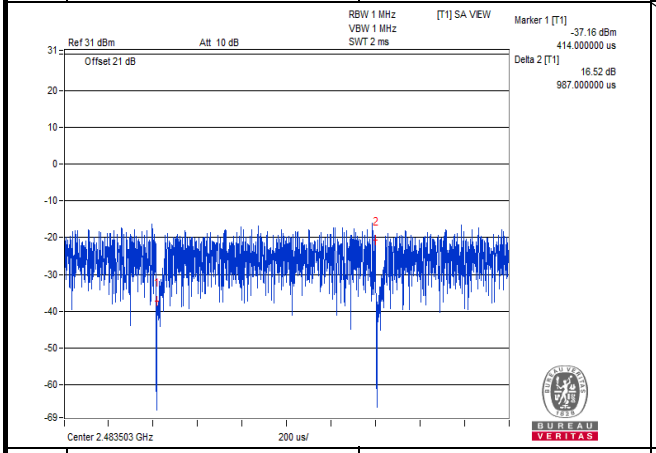
1. Set the spectrum analyzer as below and it takes in a value of all data point.
2. Regarding the all data value, it transforms the “dBm” value into “uW” value.
3. It adds the all values and calculates a grand total. Define a grand total as “P”.
4. It divides “P” by sample data point (ex.501) and calculates the mean value.
5. It reports the mean value.



1	2483.506MHz	P = 3.97635uW



2	2483.509MHz	P = 3.764452uW



3	2483.503MHz	P = 3.834615uW

Chain 1

TEST CHANNEL		CH 1 (2412MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	720.882	0.019011	0.125	PASS
	1000.0 to 2387.0	2386.653	0.038385	1.25	PASS(1)
	2387.0 to 2400.0	2399.904	1.245639	12.5	PASS(2)
	2483.5 to 2496.5	2492.759	0.110154	12.5	PASS
	2496.5 to 12500.0	6622.943	0.502343	1.25	PASS
$V_{max.}$	30.0 to 1000.0	674.322	0.018578	0.125	PASS
	1000.0 to 2387.0	2381.798	0.014695	1.25	PASS(3)
	2387.0 to 2400.0	2398.727	0.965253	12.5	PASS(4)
	2483.5 to 2496.5	2483.816	0.112980	12.5	PASS
	2496.5 to 12500.0	3214.251	0.412098	1.25	PASS
$V_{min.}$	30.0 to 1000.0	127.363	0.019143	0.125	PASS
	1000.0 to 2387.0	2386.133	0.039287	1.25	PASS(5)
	2387.0 to 2400.0	2398.898	1.079831	12.5	PASS(6)
	2483.5 to 2496.5	2485.256	0.111173	12.5	PASS
	2496.5 to 12500.0	7668.309	0.369828	1.25	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	127.000	0.020989	0.125	PASS
	1000.0 to 2387.0	2368.969	0.082414	1.25	PASS
	2387.0 to 2400.0	2399.499	0.273527	12.5	PASS
	2483.5 to 2496.5	2483.550	0.405509	12.5	PASS
	2496.5 to 12500.0	3278.023	0.395367	1.25	PASS
$V_{max.}$	30.0 to 1000.0	698.208	0.021429	0.125	PASS
	1000.0 to 2387.0	2382.318	0.088308	1.25	PASS
	2387.0 to 2400.0	2399.891	0.242661	12.5	PASS
	2483.5 to 2496.5	2483.579	0.416869	12.5	PASS
	2496.5 to 12500.0	6985.570	0.477529	1.25	PASS
$V_{min.}$	30.0 to 1000.0	822.126	0.018836	0.125	PASS
	1000.0 to 2387.0	1093.275	0.094842	1.25	PASS
	2387.0 to 2400.0	2399.627	0.260615	12.5	PASS
	2483.5 to 2496.5	2483.553	0.516416	12.5	PASS
	2496.5 to 12500.0	3044.191	0.349945	1.25	PASS

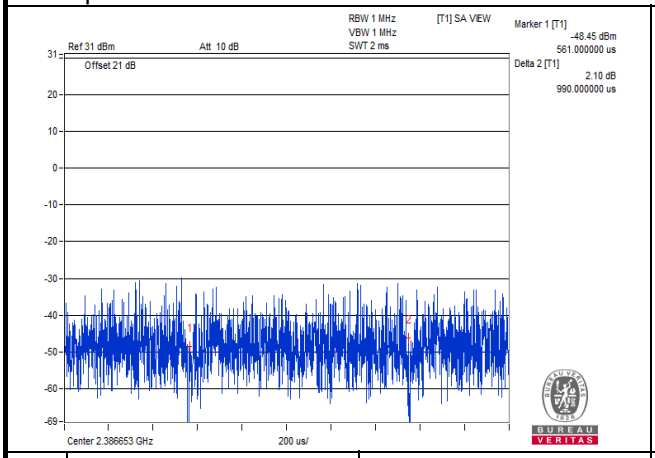
TEST CHANNEL		CH 13 (2472MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	871.596	0.018450	0.125	PASS
	1000.0 to 2387.0	2313.662	0.082414	1.25	PASS
	2387.0 to 2400.0	2392.343	0.101391	12.5	PASS
	2483.5 to 2496.5	2483.503	4.899339	12.5	PASS(7)
	2496.5 to 12500.0	2500.251	0.036582	1.25	PASS(8)
$V_{max.}$	30.0 to 1000.0	621.336	0.019815	0.125	PASS
	1000.0 to 2387.0	2201.315	0.096383	1.25	PASS
	2387.0 to 2400.0	2388.906	0.105196	12.5	PASS
	2483.5 to 2496.5	2483.529	4.697882	12.5	PASS(9)
	2496.5 to 12500.0	2496.500	0.059458	1.25	PASS(10)
$V_{min.}$	30.0 to 1000.0	214.906	0.022029	0.125	PASS
	1000.0 to 2387.0	2214.665	0.112460	1.25	PASS
	2387.0 to 2400.0	2395.558	0.119124	12.5	PASS
	2483.5 to 2496.5	2483.534	4.533270	12.5	PASS(11)
	2496.5 to 12500.0	2496.500	0.066290	1.25	PASS(12)

NOTE: 1. The spectrum plots are attached on the following pages.

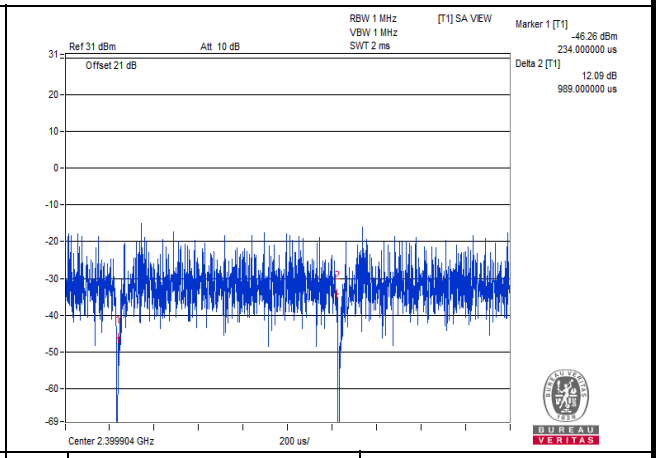
2. (No.): The value was tested under Measuring Mode *Zero Span.

Measuring Mode *Zero Span

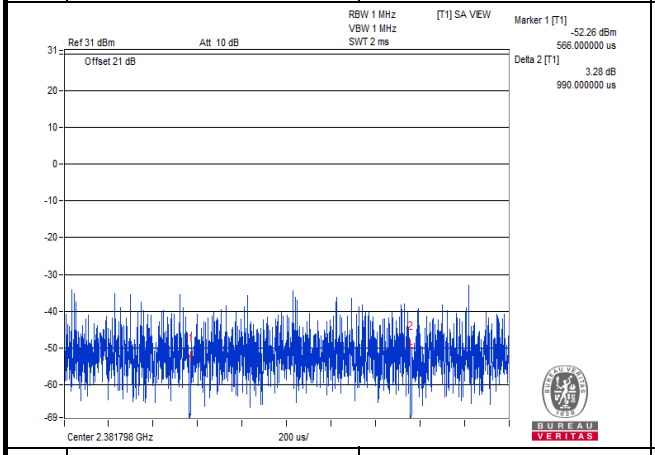
1. Set the spectrum analyzer as below and it takes in a value of all data point.
2. Regarding the all data value, it transforms the “dBm” value into “uW” value.
3. It adds the all values and calculates a grand total. Define a grand total as “P”.
4. It divides “P” by sample data point (ex.501) and calculates the mean value.
5. It reports the mean value.



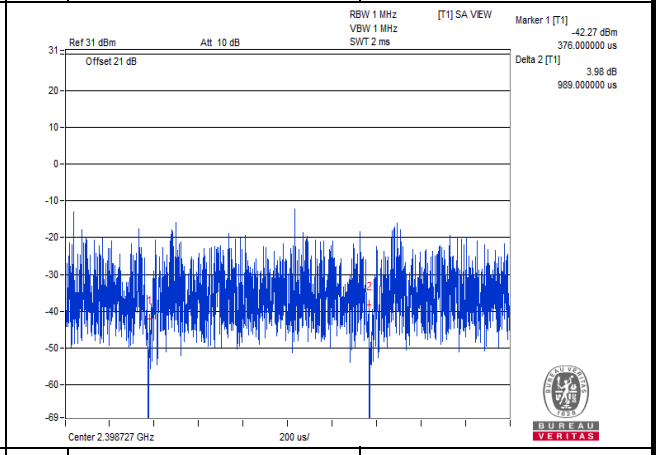
1	2386.653MHz	P = 0.038385uW



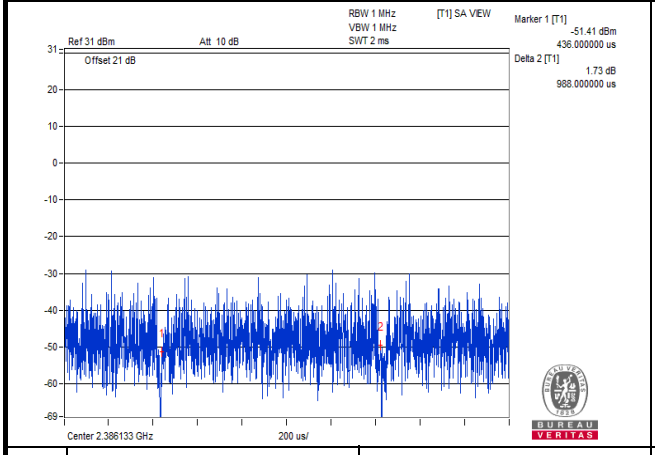
2	2399.904MHz	P = 1.245639uW



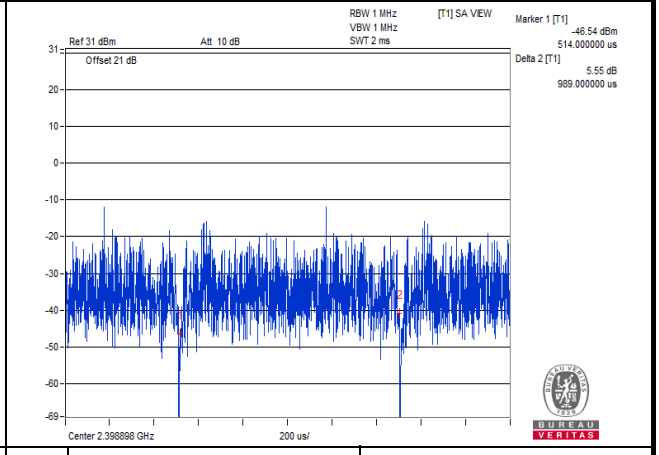
3	2381.798MHz	P = 0.014695uW



4	2398.727MHz	P = 0.965253uW



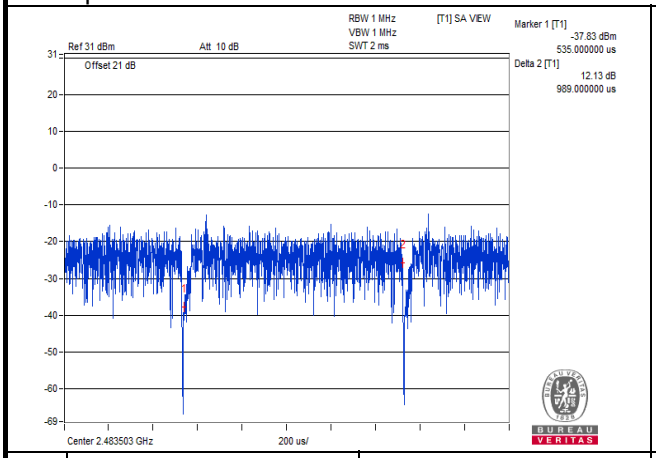
5	2386.133MHz	P = 0.039287uW



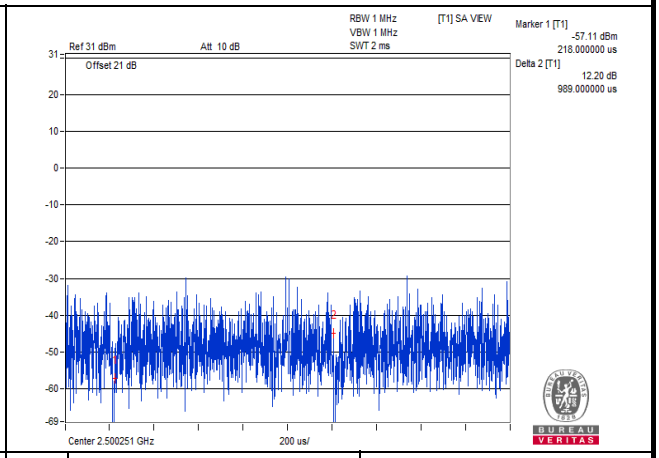
6	2398.898MHz	P = 1.079831uW

Measuring Mode *Zero Span

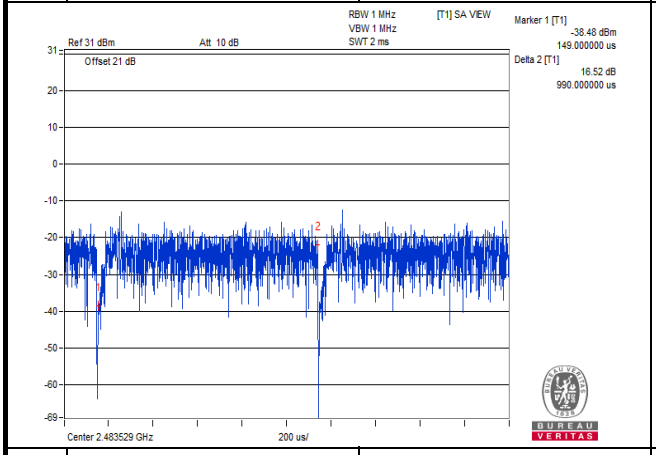
1. Set the spectrum analyzer as below and it takes in a value of all data point.
2. Regarding the all data value, it transforms the “dBm” value into “uW” value.
3. It adds the all values and calculates a grand total. Define a grand total as “P”.
4. It divides “P” by sample data point (ex.501) and calculates the mean value.
5. It reports the mean value.



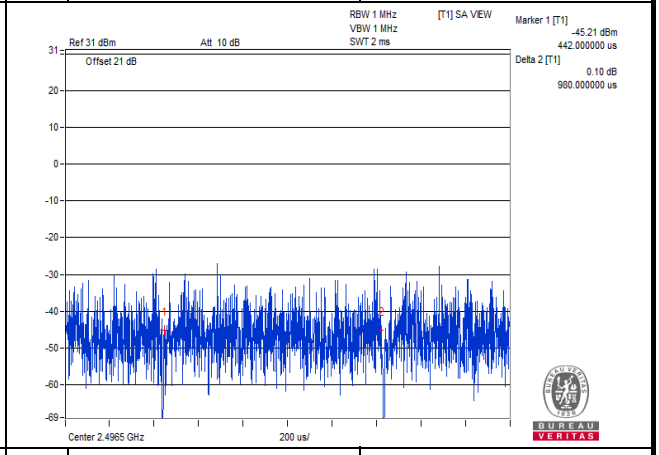
7	2483.503MHz	P = 4.899339uW



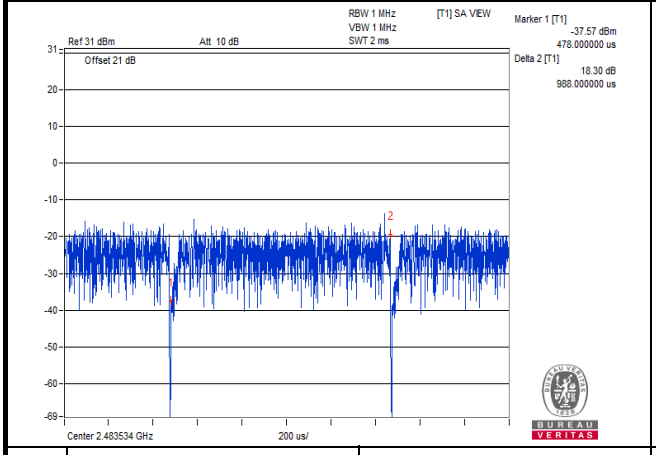
8	2500.251MHz	P = 0.036582uW



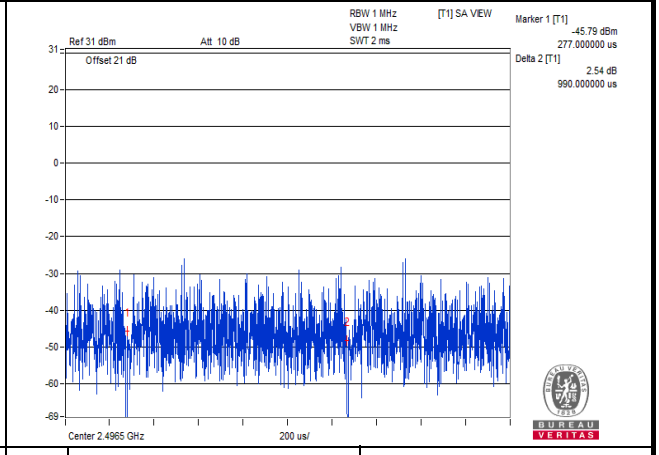
9	2483.529MHz	P = 4.697882uW



10	2496.500MHz	P = 0.059458uW



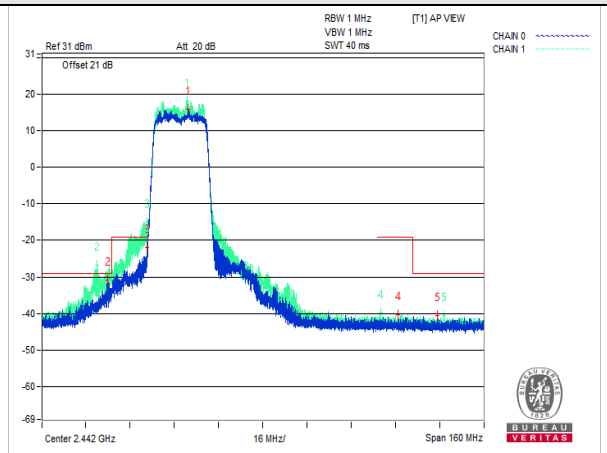
11	2483.534MHz	P = 4.53327uW

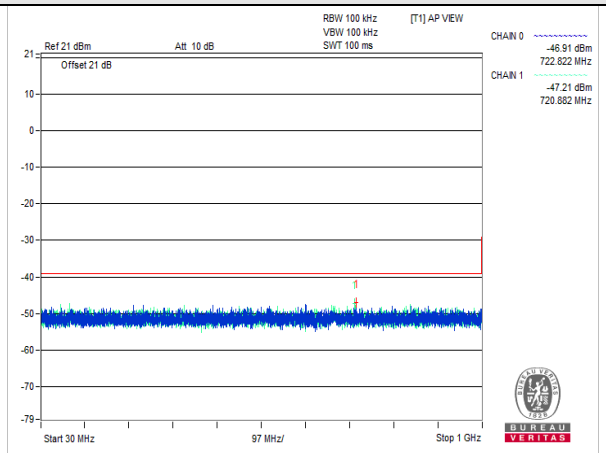


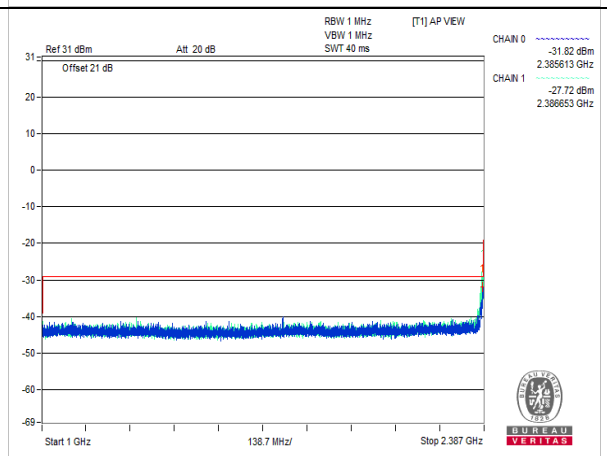
12	2496.500MHz	P = 0.06629uW

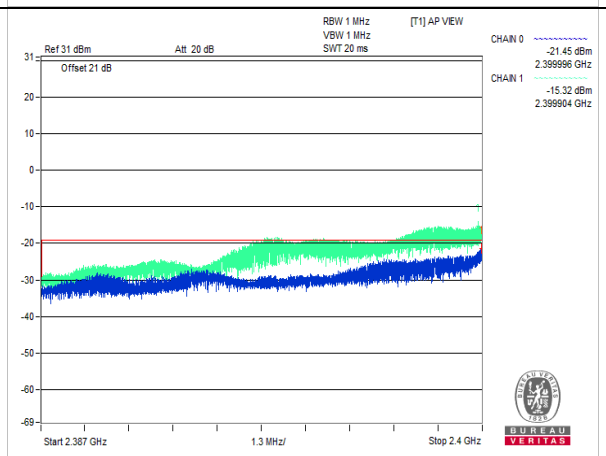
Graph

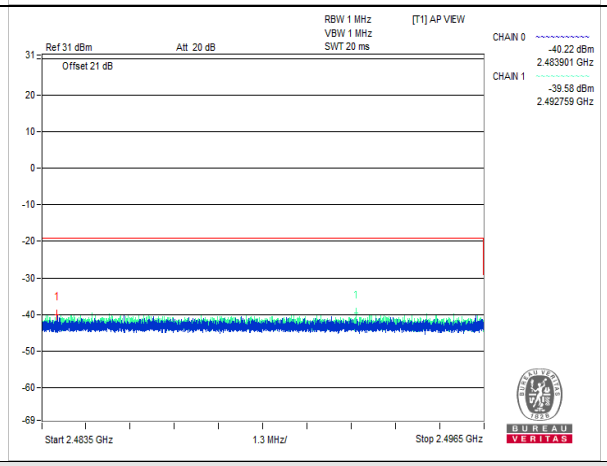
Vnormal

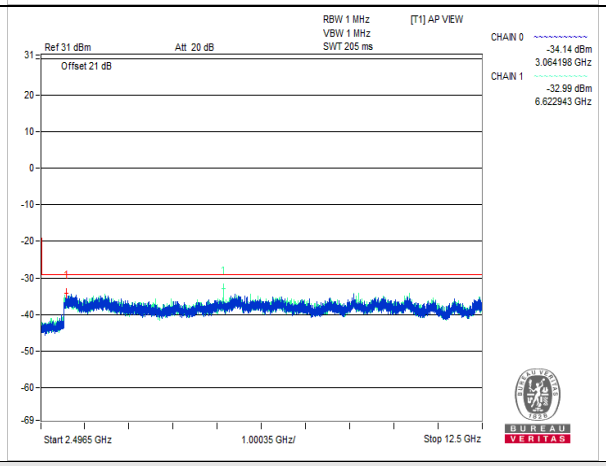






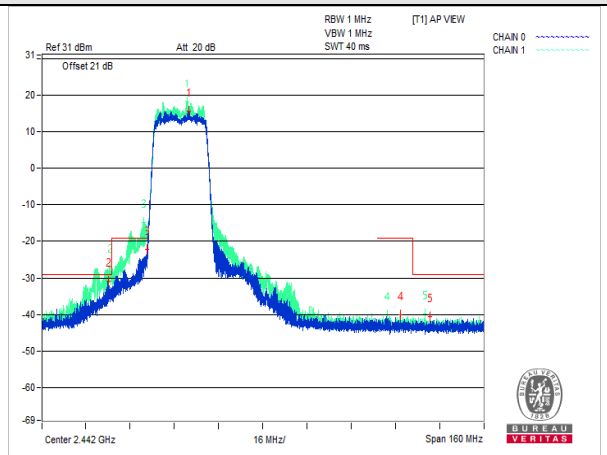


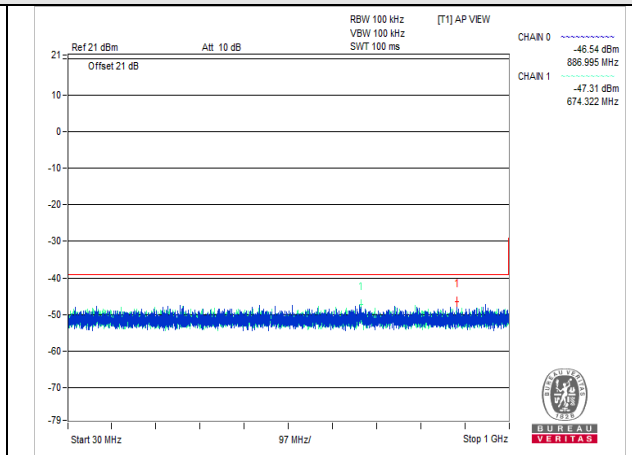


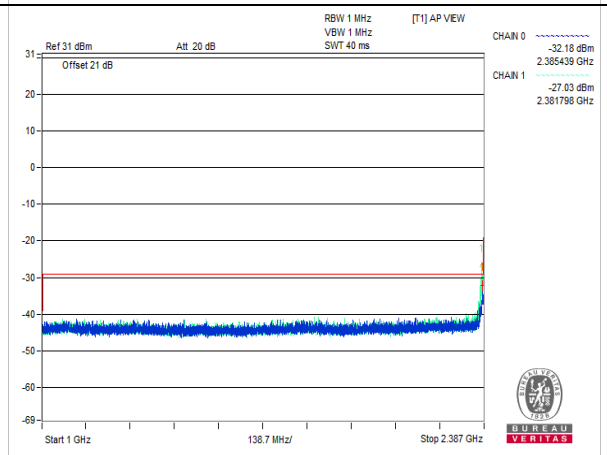


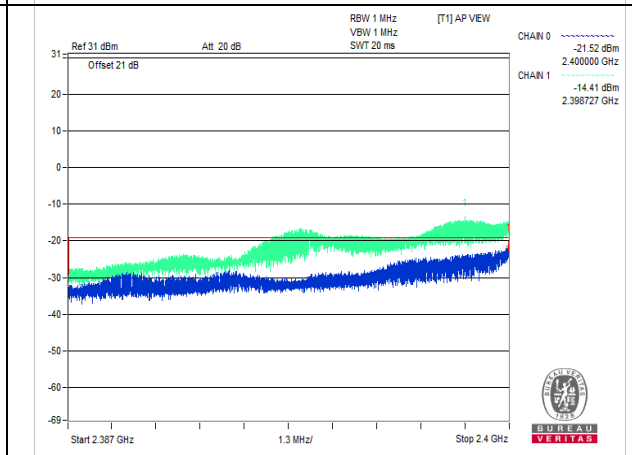
CH 1 (2412MHz)

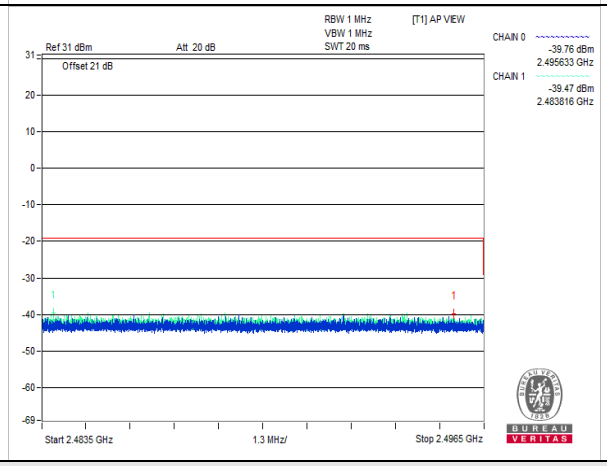
Vmax.

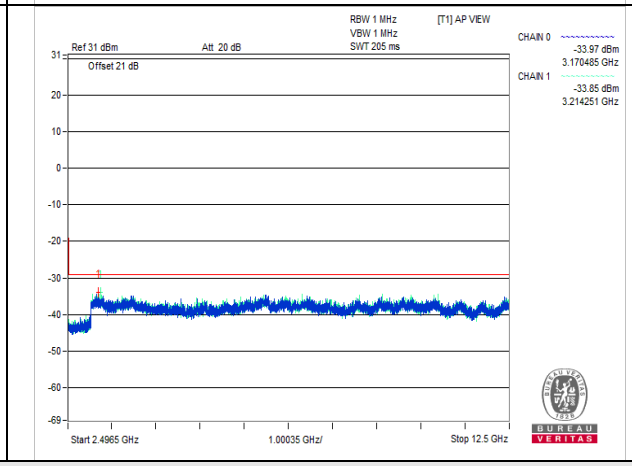






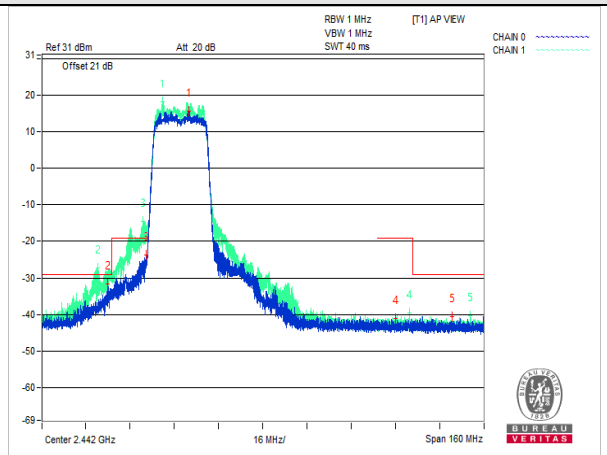


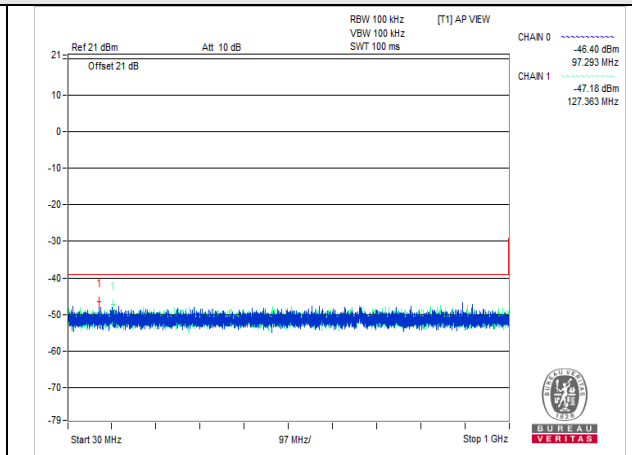


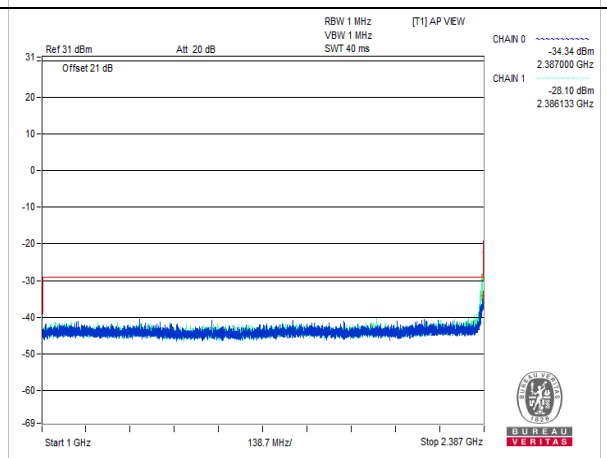


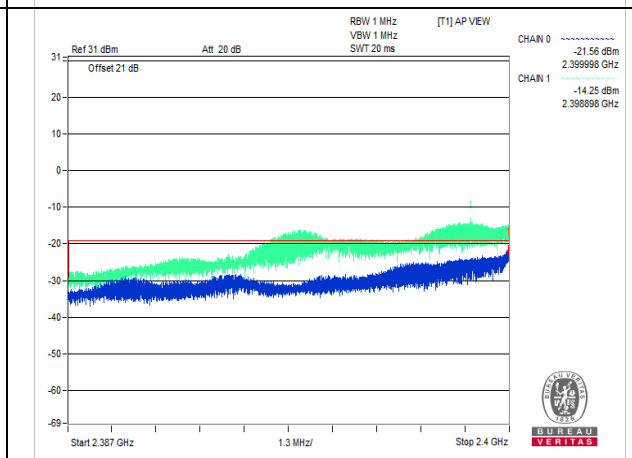
CH 1 (2412MHz)

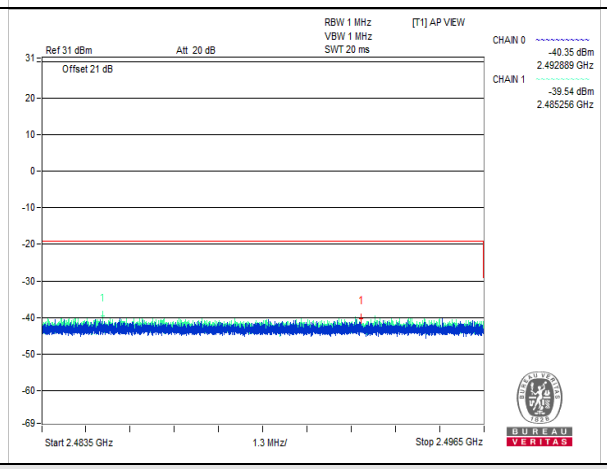
Vmin.

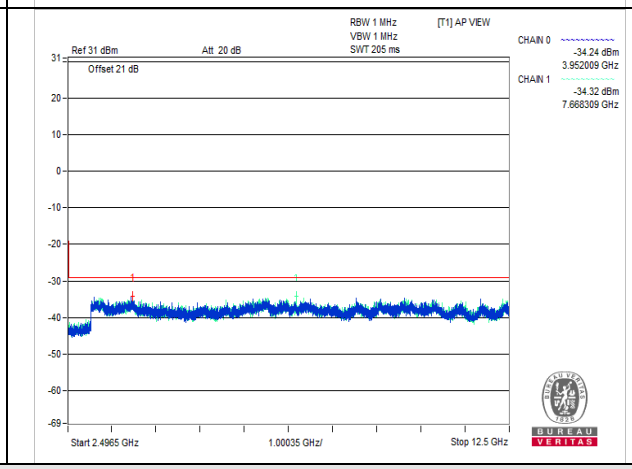






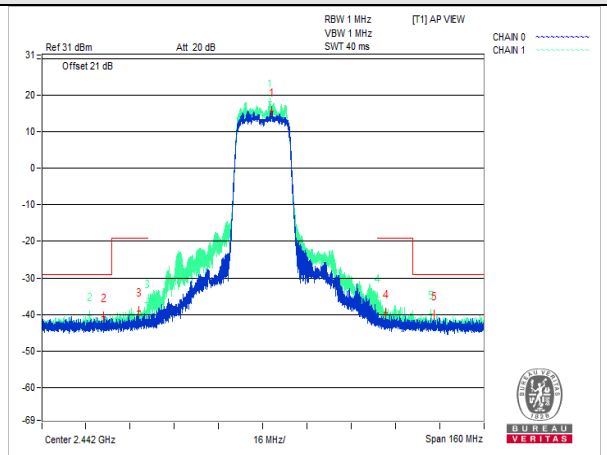


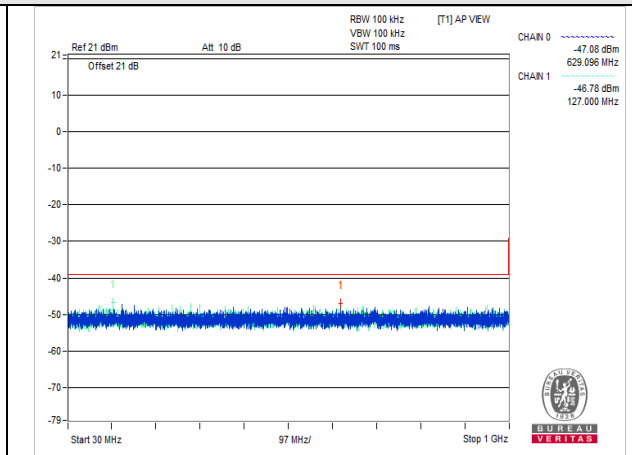


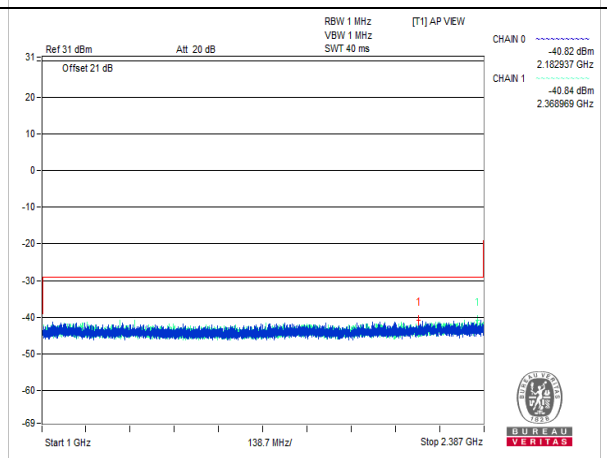


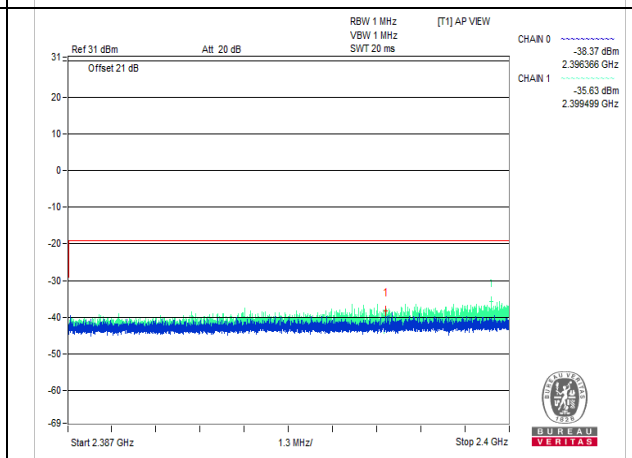
CH 1 (2412MHz)

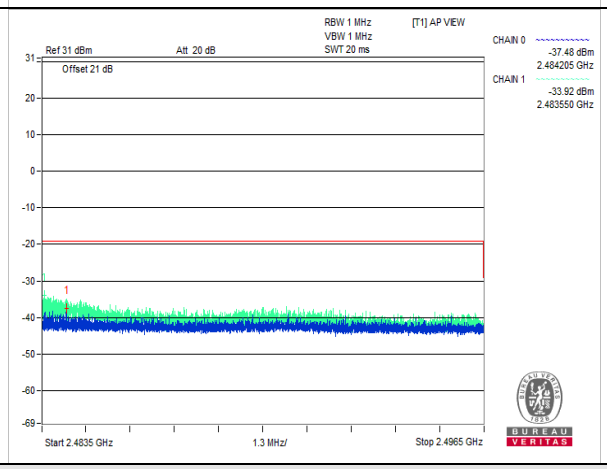
Vnormal

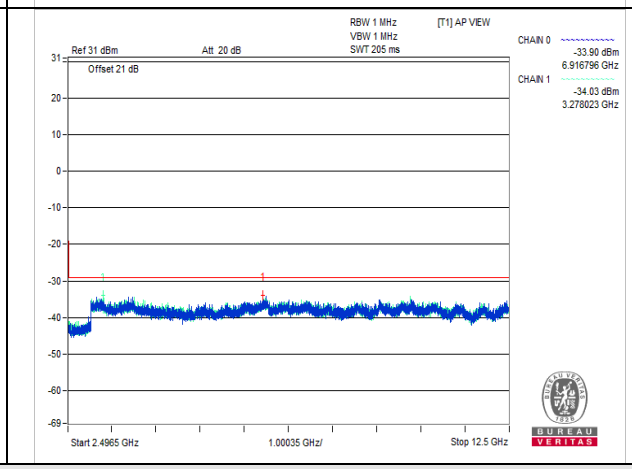






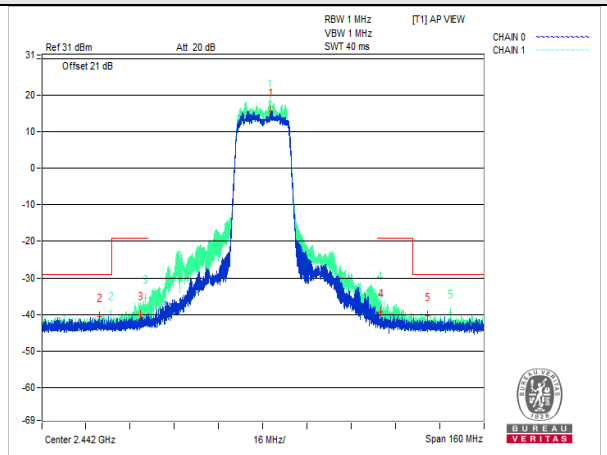


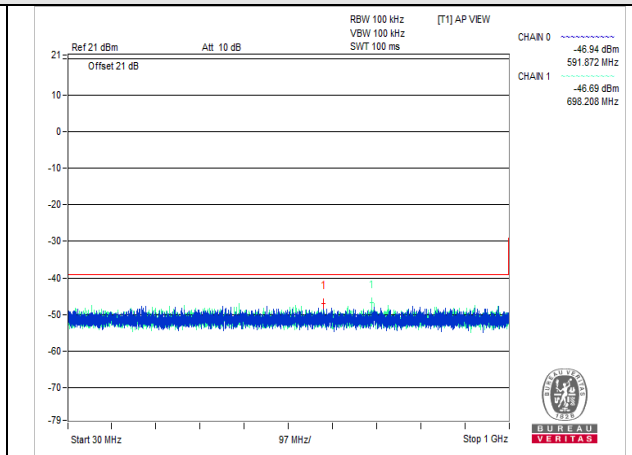


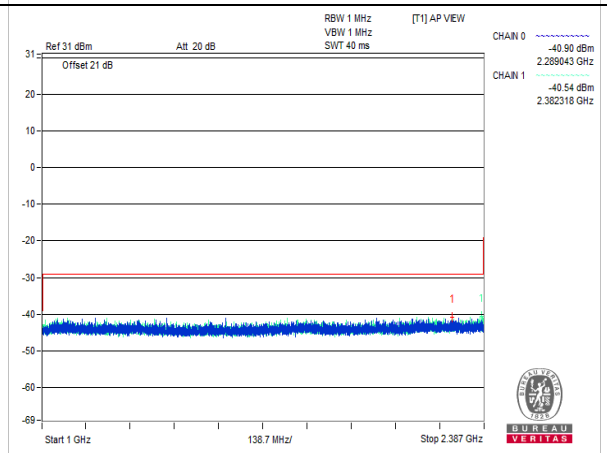


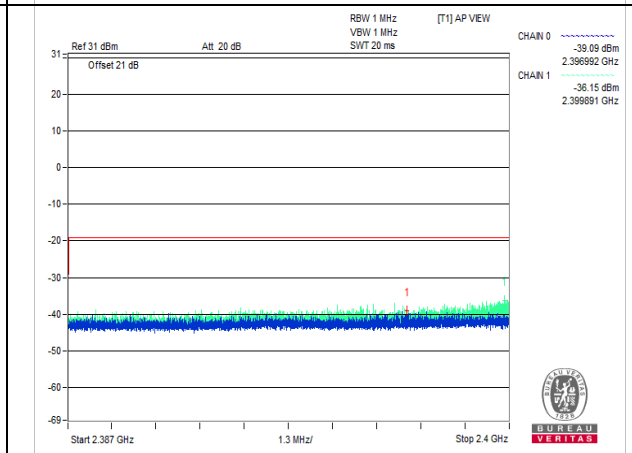
CH 7 (2442MHz)

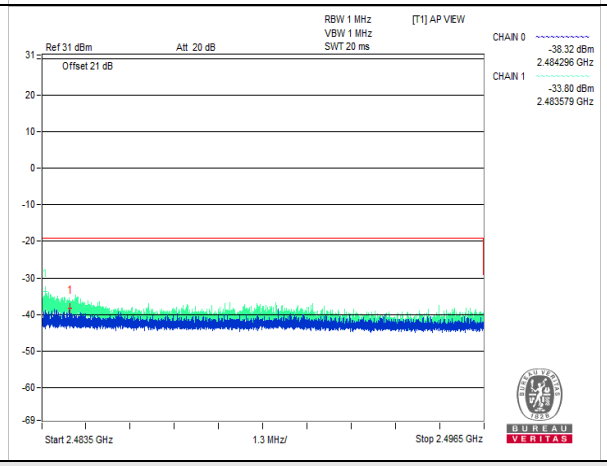
Vmax.

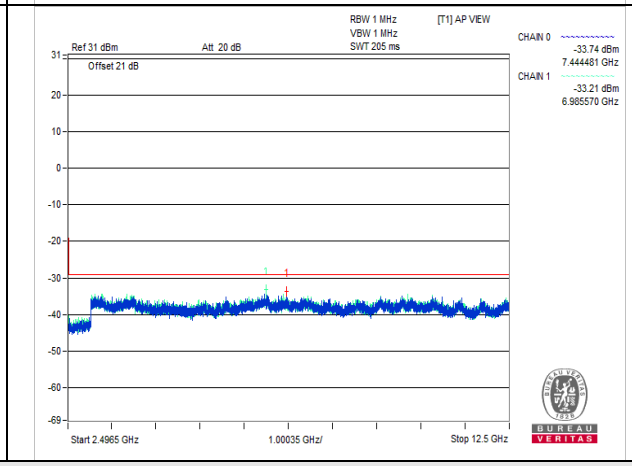






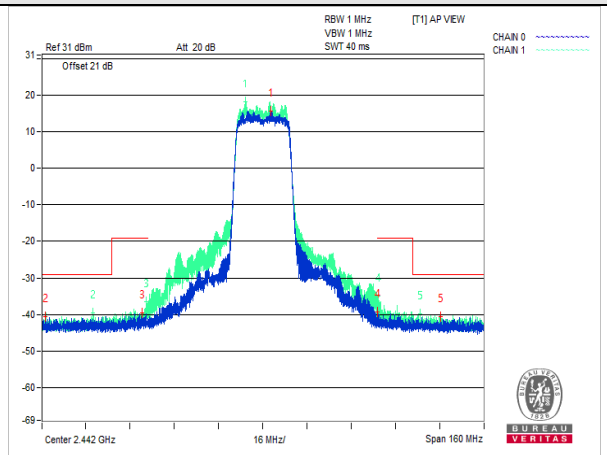


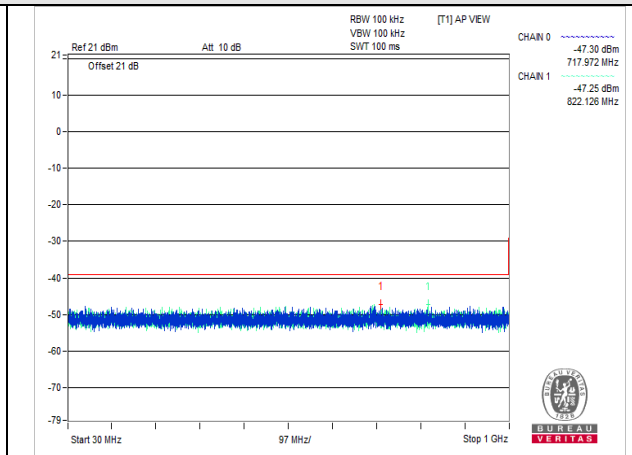


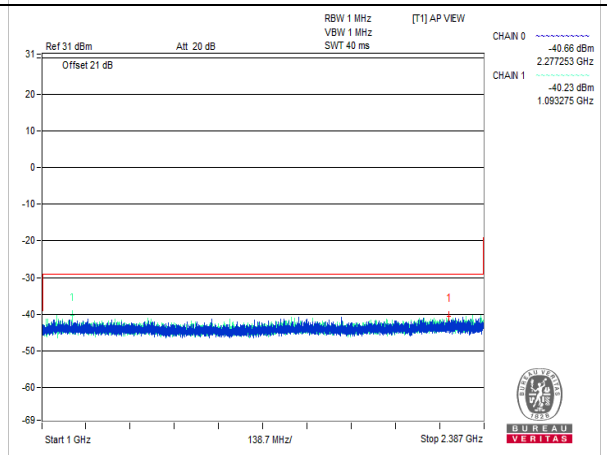


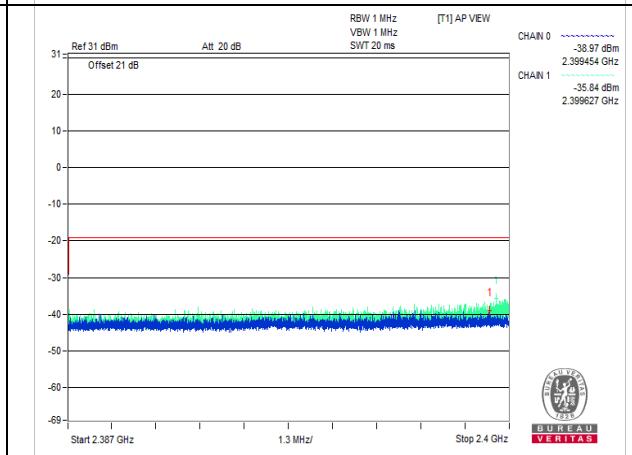
CH 7 (2442MHz)

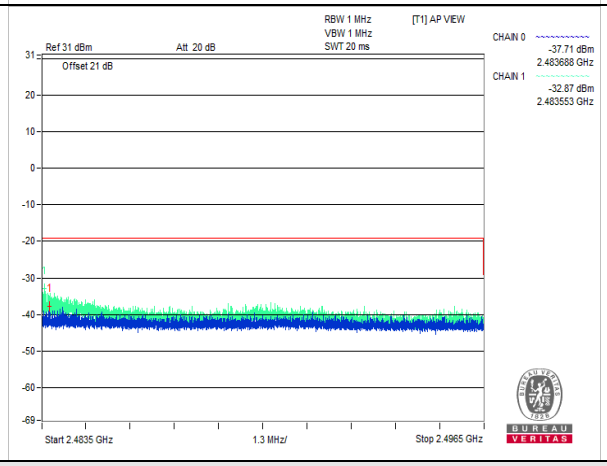
Vmin.

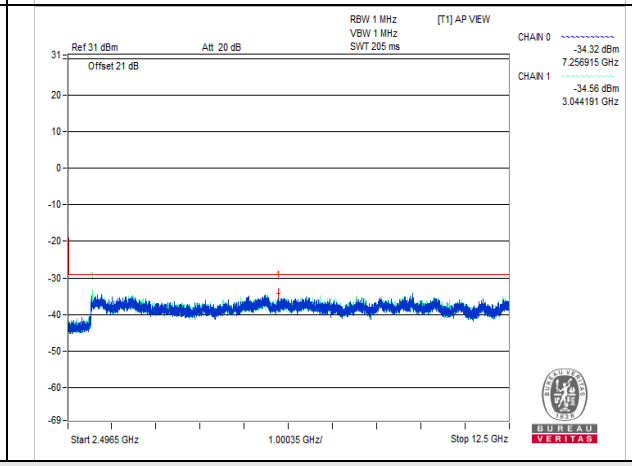






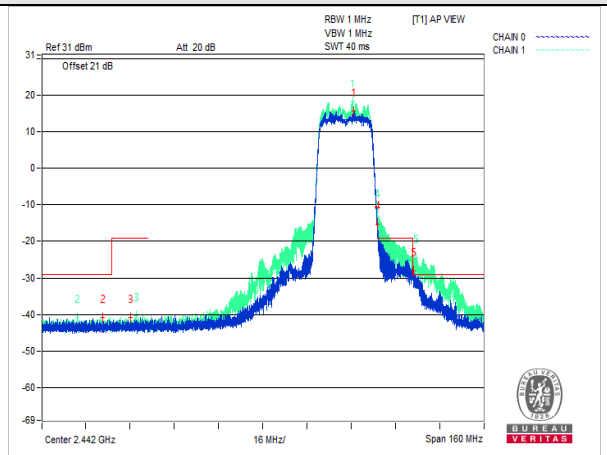


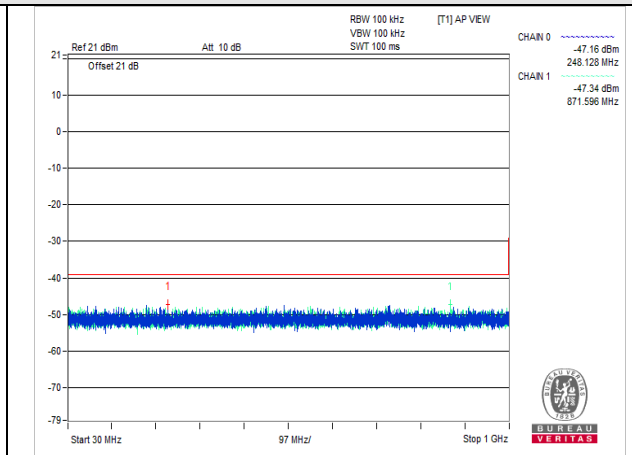


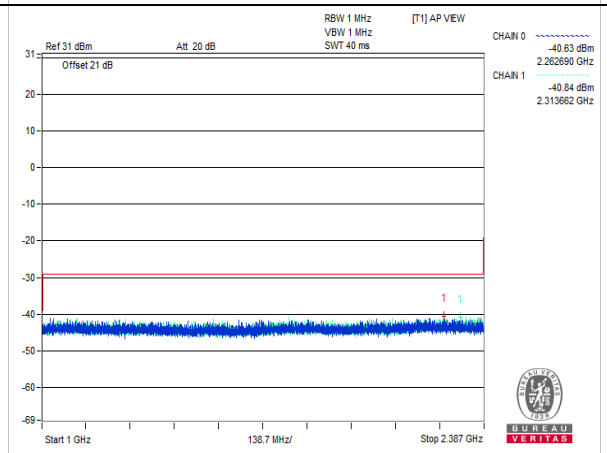


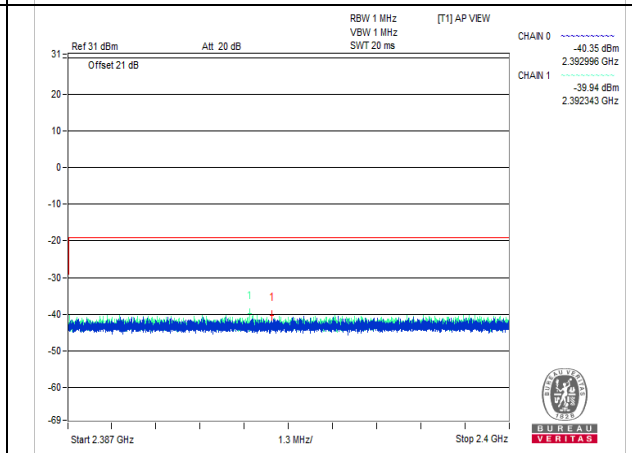
CH 7 (2442MHz)

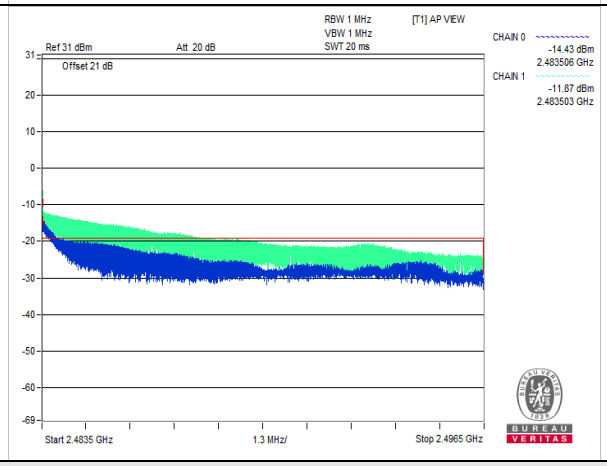
Vnormal

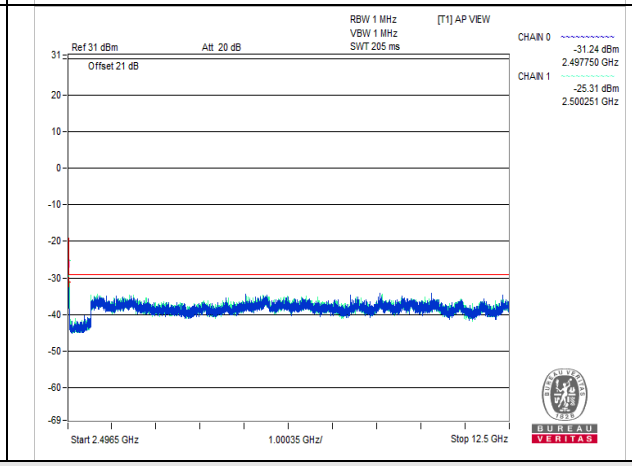






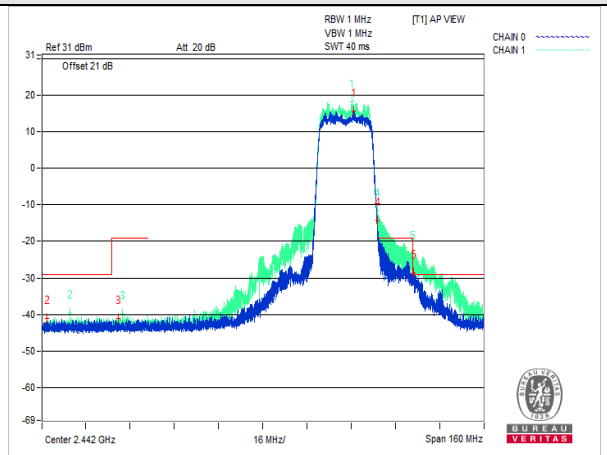


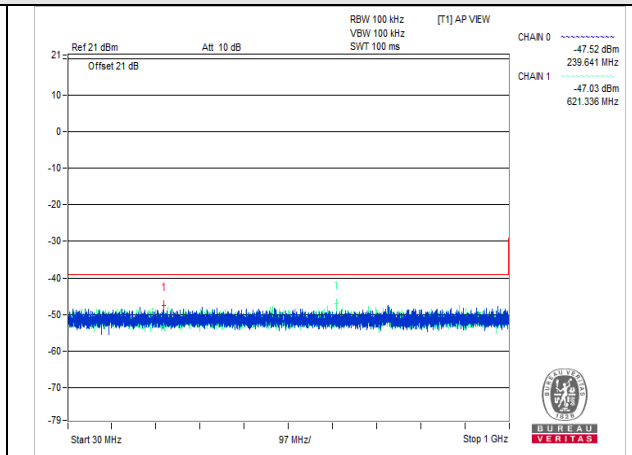


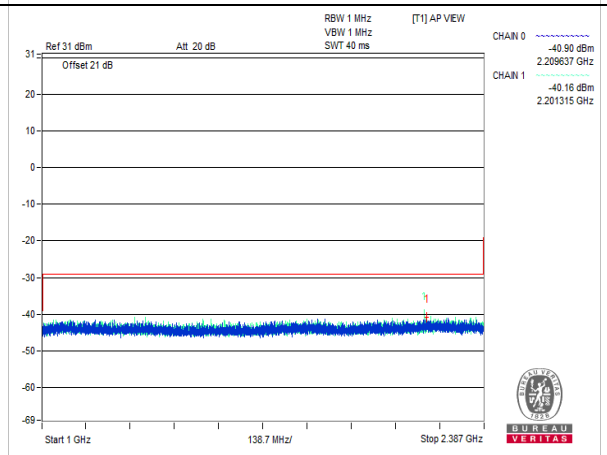


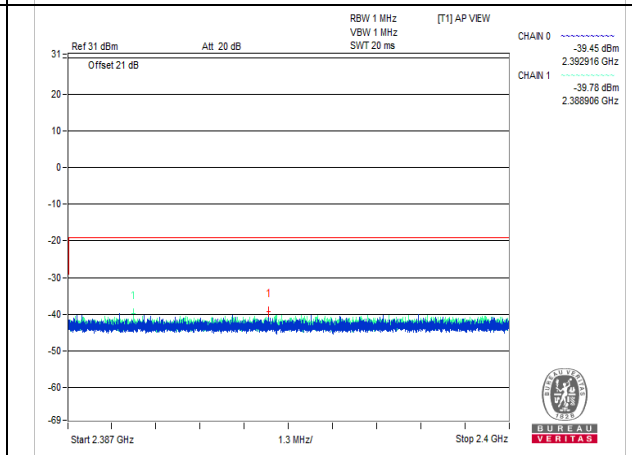
CH 13 (2472MHz)

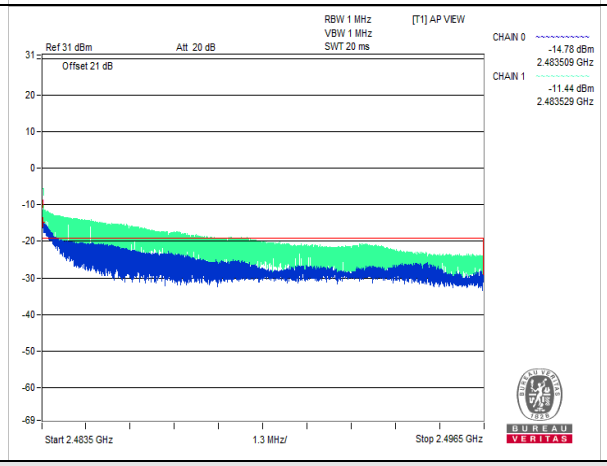
Vmax.

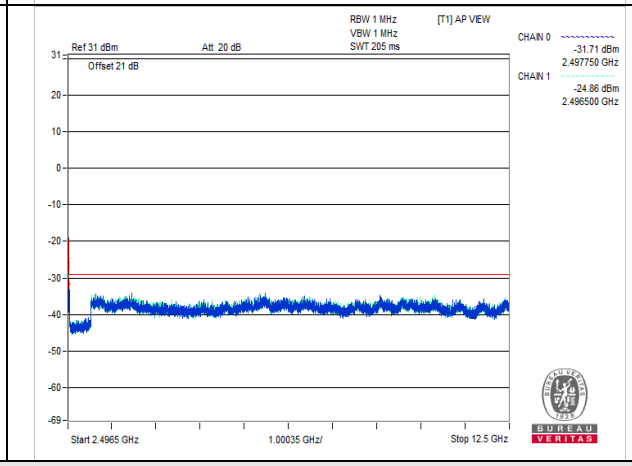






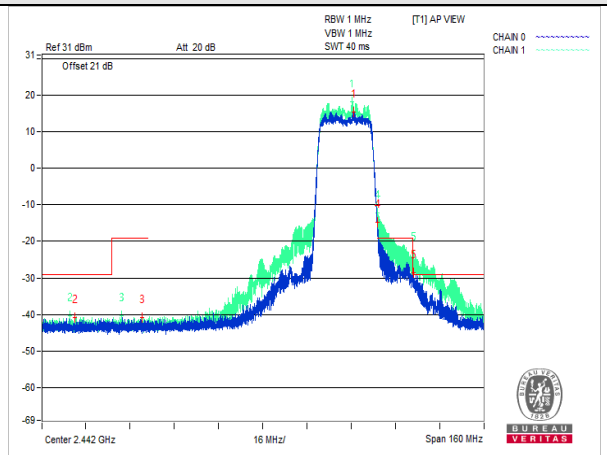


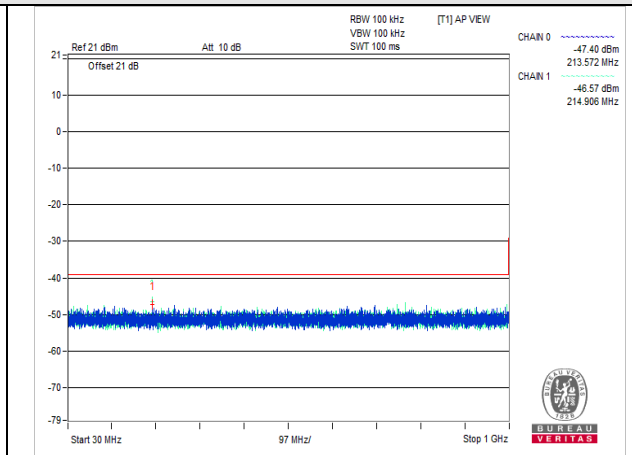


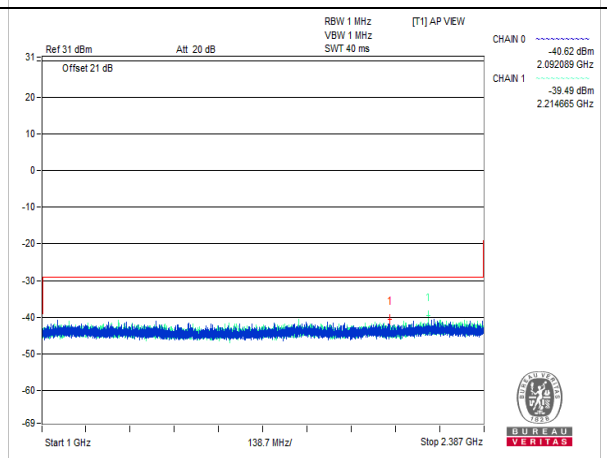


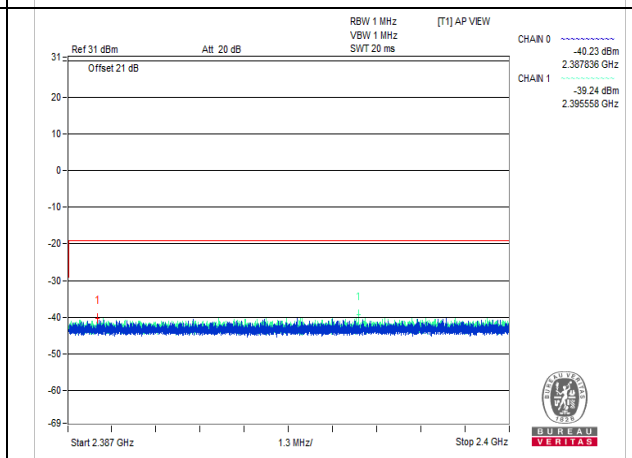
CH 13 (2472MHz)

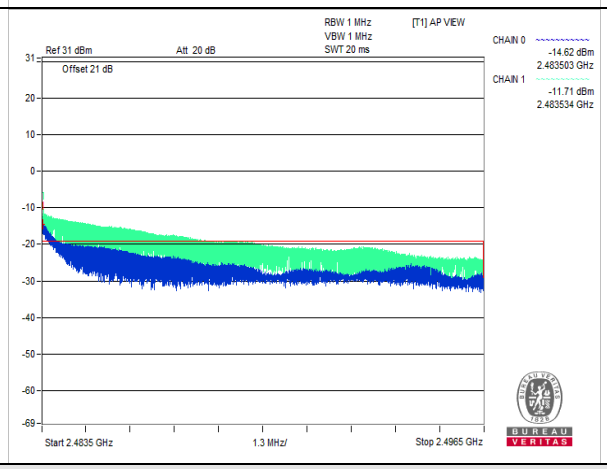
Vmin.

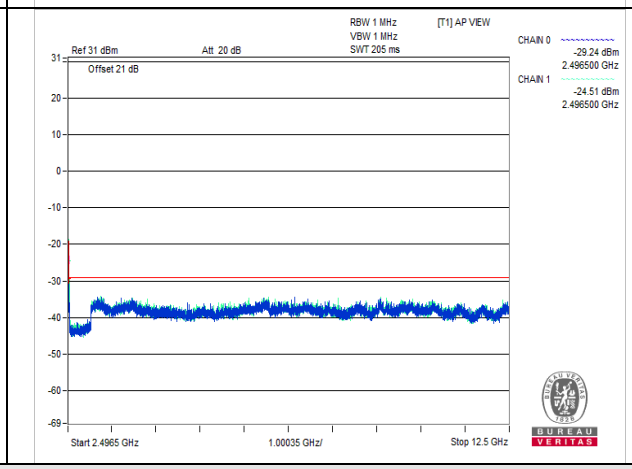












CH 13 (2472MHz)

[Worst result] x [Number of antenna ports]

TEST CHANNEL		CH 1 (2412MHz)		
TEST CONDITION	FREQUENCY RANGE(MHz)	MEASURE. VALUE (uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	0.040740	0.25	PASS
	1000.0 to 2387.0	1.315316	2.5	PASS
	2387.0 to 2400.0	14.322868	25	PASS
	2483.5 to 2496.5	0.220308	25	PASS
	2496.5 to 12500.0	1.004686	2.5	PASS
$V_{max.}$	30.0 to 1000.0	0.044364	0.25	PASS
	1000.0 to 2387.0	1.210682	2.5	PASS
	2387.0 to 2400.0	14.093862	25	PASS
	2483.5 to 2496.5	0.225960	25	PASS
	2496.5 to 12500.0	0.824196	2.5	PASS
$V_{min.}$	30.0 to 1000.0	0.045818	0.25	PASS
	1000.0 to 2387.0	0.736258	2.5	PASS
	2387.0 to 2400.0	13.964648	25	PASS
	2483.5 to 2496.5	0.222346	25	PASS
	2496.5 to 12500.0	0.753408	2.5	PASS
TEST CHANNEL		CH 7 (2442MHz)		
V_{normal}	30.0 to 1000.0	0.041978	0.25	PASS
	1000.0 to 2387.0	0.165588	2.5	PASS
	2387.0 to 2400.0	0.547054	25	PASS
	2483.5 to 2496.5	0.811018	25	PASS
	2496.5 to 12500.0	0.814760	2.5	PASS
$V_{max.}$	30.0 to 1000.0	0.042858	0.25	PASS
	1000.0 to 2387.0	0.176616	2.5	PASS
	2387.0 to 2400.0	0.485322	25	PASS
	2483.5 to 2496.5	0.833738	25	PASS
	2496.5 to 12500.0	0.955058	2.5	PASS
$V_{min.}$	30.0 to 1000.0	0.037672	0.25	PASS
	1000.0 to 2387.0	0.189684	2.5	PASS
	2387.0 to 2400.0	0.521230	25	PASS
	2483.5 to 2496.5	1.032832	25	PASS
	2496.5 to 12500.0	0.739656	2.5	PASS

TEST CHANNEL		CH 13 (2472MHz)		
TEST CONDITION	FREQUENCY RANGE(MHz)	MEASURE. VALUE (uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	0.038462	0.25	PASS
	1000.0 to 2387.0	0.172994	2.5	PASS
	2387.0 to 2400.0	0.202782	25	PASS
	2483.5 to 2496.5	9.798678	25	PASS
	2496.5 to 12500.0	1.503246	2.5	PASS
$V_{max.}$	30.0 to 1000.0	0.039630	0.25	PASS
	1000.0 to 2387.0	0.192766	2.5	PASS
	2387.0 to 2400.0	0.227002	25	PASS
	2483.5 to 2496.5	9.395764	25	PASS
	2496.5 to 12500.0	1.349056	2.5	PASS
$V_{min.}$	30.0 to 1000.0	0.044058	0.25	PASS
	1000.0 to 2387.0	0.224920	2.5	PASS
	2387.0 to 2400.0	0.238248	25	PASS
	2483.5 to 2496.5	9.066540	25	PASS
	2496.5 to 12500.0	2.382484	2.5	PASS

802.11ax (HE40)

Chain 0

TEST CHANNEL		CH 3 (2422MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	361.497	0.020989	0.125	PASS
	1000.0 to 2387.0	2385.266	0.095217	1.25	PASS(1)
	2387.0 to 2400.0	2399.662	6.807694	12.5	PASS
	2483.5 to 2496.5	2486.665	0.404576	12.5	PASS
	2496.5 to 12500.0	10758.139	0.364754	1.25	PASS
$V_{max.}$	30.0 to 1000.0	753.620	0.018281	0.125	PASS
	1000.0 to 2387.0	2384.746	0.108603	1.25	PASS(2)
	2387.0 to 2400.0	2399.575	6.561453	12.5	PASS
	2483.5 to 2496.5	2483.550	0.375837	12.5	PASS
	2496.5 to 12500.0	7031.836	0.512861	1.25	PASS
$V_{min.}$	30.0 to 1000.0	277.107	0.019543	0.125	PASS
	1000.0 to 2387.0	2385.092	0.086236	1.25	PASS(3)
	2387.0 to 2400.0	2399.341	6.109420	12.5	PASS
	2483.5 to 2496.5	2483.724	0.363078	12.5	PASS
	2496.5 to 12500.0	6986.821	0.424620	1.25	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	152.462	0.018155	0.125	PASS
	1000.0 to 2387.0	2385.613	0.463447	1.25	PASS
	2387.0 to 2400.0	2399.636	3.630781	12.5	PASS
	2483.5 to 2496.5	2485.692	3.917419	12.5	PASS
	2496.5 to 12500.0	2500.251	0.446684	1.25	PASS
$V_{max.}$	30.0 to 1000.0	932.585	0.017989	0.125	PASS
	1000.0 to 2387.0	2381.278	0.396278	1.25	PASS
	2387.0 to 2400.0	2399.766	3.758374	12.5	PASS
	2483.5 to 2496.5	2485.680	4.207266	12.5	PASS
	2496.5 to 12500.0	6935.553	0.418794	1.25	PASS
$V_{min.}$	30.0 to 1000.0	796.542	0.019011	0.125	PASS
	1000.0 to 2387.0	2387.000	0.521195	1.25	PASS
	2387.0 to 2400.0	2399.871	3.597493	12.5	PASS
	2483.5 to 2496.5	2485.651	3.732502	12.5	PASS
	2496.5 to 12500.0	2496.500	0.534564	1.25	PASS

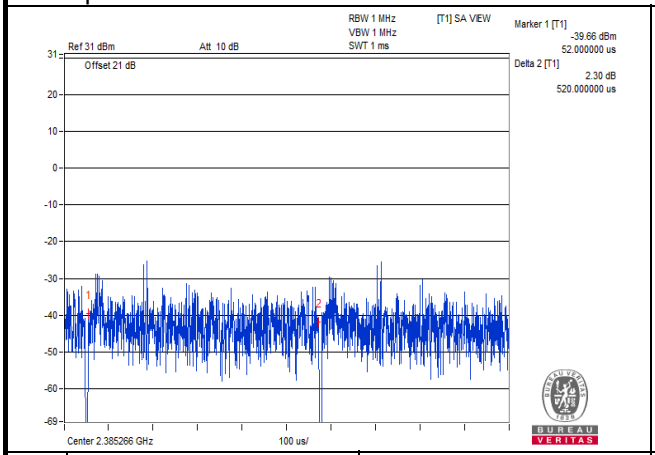
TEST CHANNEL		CH 11 (2462MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	199.992	0.022387	0.125	PASS
	1000.0 to 2387.0	2385.959	0.115878	1.25	PASS
	2387.0 to 2400.0	2399.718	0.353997	12.5	PASS
	2483.5 to 2496.5	2483.500	5.470160	12.5	PASS
	2496.5 to 12500.0	2497.750	0.212947	1.25	PASS(4)
$V_{max.}$	30.0 to 1000.0	641.221	0.021330	0.125	PASS
	1000.0 to 2387.0	2380.585	0.126474	1.25	PASS
	2387.0 to 2400.0	2399.016	0.325837	12.5	PASS
	2483.5 to 2496.5	2483.508	5.395106	12.5	PASS
	2496.5 to 12500.0	2497.750	0.219696	1.25	PASS(5)
$V_{min.}$	30.0 to 1000.0	100.203	0.019409	0.125	PASS
	1000.0 to 2387.0	2382.318	0.107152	1.25	PASS
	2387.0 to 2400.0	2399.603	0.354813	12.5	PASS
	2483.5 to 2496.5	2483.503	5.370318	12.5	PASS
	2496.5 to 12500.0	2499.000	0.254241	1.25	PASS(6)

NOTE: 1. The spectrum plots are attached on the following pages.

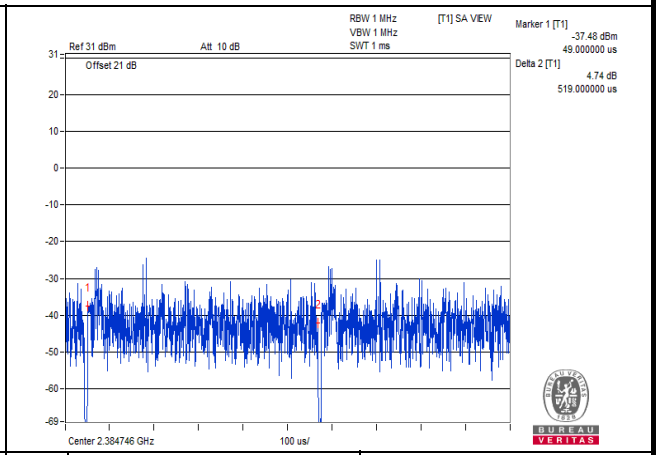
2. (No.): The value was tested under Measuring Mode *Zero Span.

Measuring Mode *Zero Span

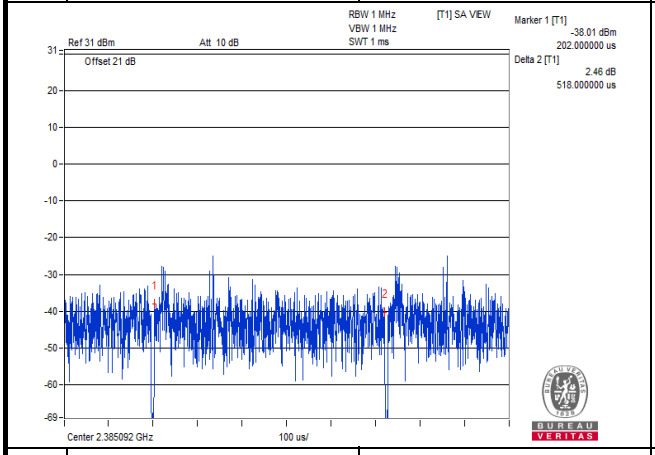
1. Set the spectrum analyzer as below and it takes in a value of all data point.
2. Regarding the all data value, it transforms the “dBm” value into “uW” value.
3. It adds the all values and calculates a grand total. Define a grand total as “P”.
4. It divides “P” by sample data point (ex.501) and calculates the mean value.
5. It reports the mean value.



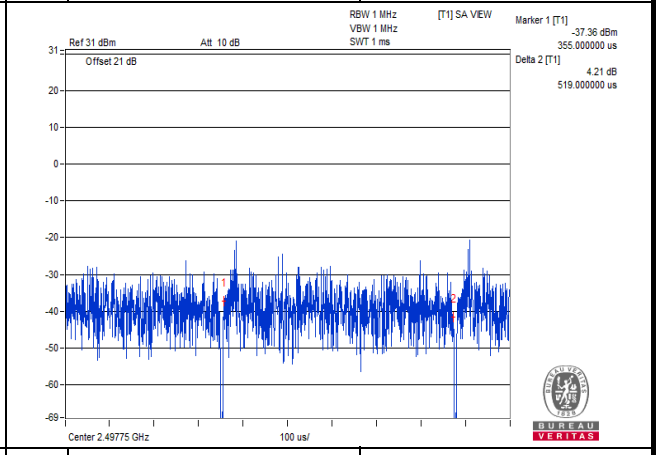
1	2385.266MHz	P = 0.095217uW



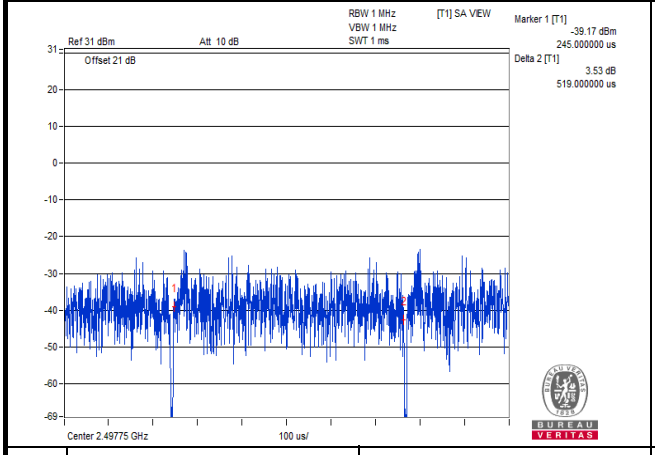
2	2384.746MHz	P = 0.108603uW



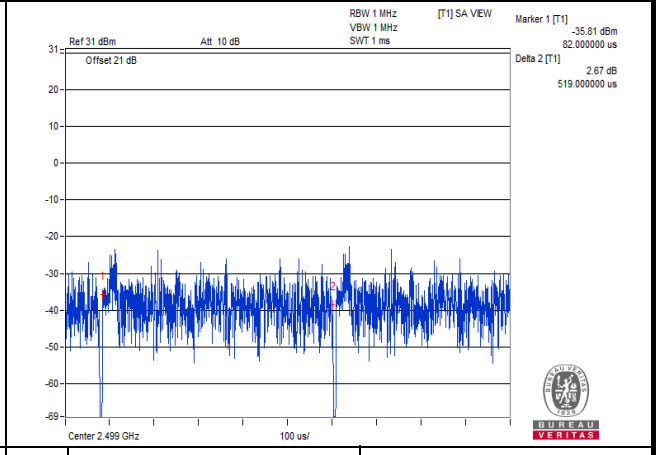
3	2385.092MHz	P = 0.086236uW



4	2497.750MHz	P = 0.212947uW



5	2497.750MHz	P = 0.219696uW



6	2499.000MHz	P = 0.254241uW

Chain 1

TEST CHANNEL		CH 3 (2422MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	477.533	0.019320	0.125	PASS
	1000.0 to 2387.0	2379.718	0.064674	1.25	PASS(1)
	2387.0 to 2400.0	2399.549	0.475869	12.5	PASS(2)
	2483.5 to 2496.5	2483.938	0.619441	12.5	PASS
	2496.5 to 12500.0	7023.083	0.422669	1.25	PASS
$V_{max.}$	30.0 to 1000.0	585.446	0.019275	0.125	PASS
	1000.0 to 2387.0	2387.000	0.098087	1.25	PASS(3)
	2387.0 to 2400.0	2399.608	0.519944	12.5	PASS(4)
	2483.5 to 2496.5	2485.619	0.572796	12.5	PASS
	2496.5 to 12500.0	6984.320	0.382825	1.25	PASS
$V_{min.}$	30.0 to 1000.0	521.062	0.019907	0.125	PASS
	1000.0 to 2387.0	2379.544	0.068777	1.25	PASS(5)
	2387.0 to 2400.0	2399.478	0.504687	12.5	PASS(6)
	2483.5 to 2496.5	2486.013	0.595662	12.5	PASS
	2496.5 to 12500.0	3225.505	0.361410	1.25	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	706.211	0.019999	0.125	PASS
	1000.0 to 2387.0	2386.653	0.318420	1.25	PASS
	2387.0 to 2400.0	2399.439	6.776415	12.5	PASS
	2483.5 to 2496.5	2488.388	7.498942	12.5	PASS
	2496.5 to 12500.0	2496.500	0.636796	1.25	PASS
$V_{max.}$	30.0 to 1000.0	720.276	0.019231	0.125	PASS
	1000.0 to 2387.0	2385.266	0.368978	1.25	PASS
	2387.0 to 2400.0	2399.159	6.776415	12.5	PASS
	2483.5 to 2496.5	2488.355	7.030723	12.5	PASS
	2496.5 to 12500.0	2497.750	0.796159	1.25	PASS
$V_{min.}$	30.0 to 1000.0	903.727	0.019724	0.125	PASS
	1000.0 to 2387.0	2386.133	0.328095	1.25	PASS
	2387.0 to 2400.0	2399.590	6.683439	12.5	PASS
	2483.5 to 2496.5	2488.243	7.691304	12.5	PASS
	2496.5 to 12500.0	2500.251	0.522396	1.25	PASS

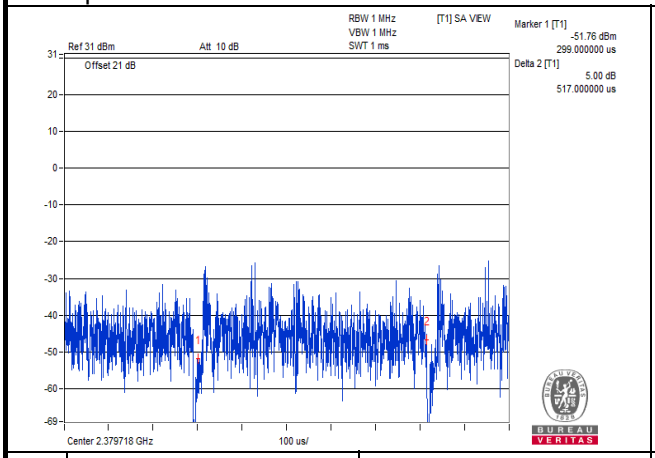
TEST CHANNEL		CH 11 (2462MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	322.818	0.017498	0.125	PASS
	1000.0 to 2387.0	2378.851	0.104713	1.25	PASS
	2387.0 to 2400.0	2399.926	0.358096	12.5	PASS
	2483.5 to 2496.5	2488.136	8.770008	12.5	PASS
	2496.5 to 12500.0	2499.000	0.249522	1.25	PASS(7)
$V_{max.}$	30.0 to 1000.0	713.728	0.019588	0.125	PASS
	1000.0 to 2387.0	2376.077	0.106660	1.25	PASS
	2387.0 to 2400.0	2399.138	0.380189	12.5	PASS
	2483.5 to 2496.5	2488.230	9.375620	12.5	PASS
	2496.5 to 12500.0	2497.750	0.236188	1.25	PASS(8)
$V_{min.}$	30.0 to 1000.0	240.732	0.019187	0.125	PASS
	1000.0 to 2387.0	2384.399	0.093325	1.25	PASS
	2387.0 to 2400.0	2399.982	0.336512	12.5	PASS
	2483.5 to 2496.5	2488.261	9.440609	12.5	PASS
	2496.5 to 12500.0	2496.500	0.229145	1.25	PASS(9)

NOTE: 1. The spectrum plots are attached on the following pages.

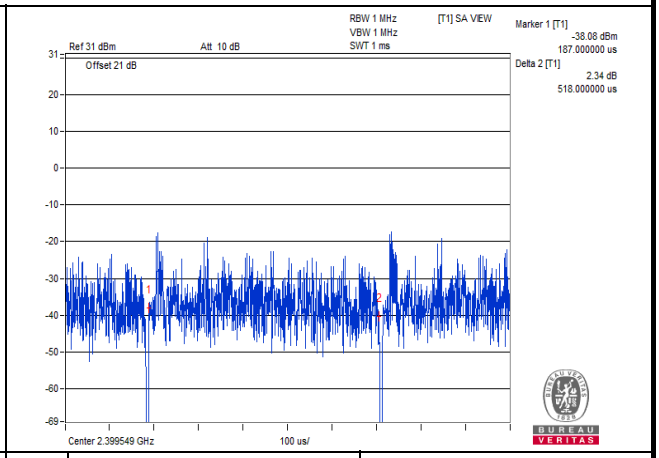
2. (No.): The value was tested under Measuring Mode *Zero Span.

Measuring Mode *Zero Span

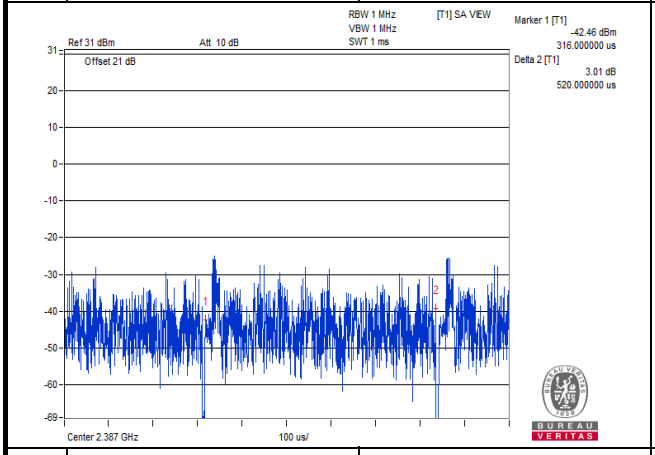
1. Set the spectrum analyzer as below and it takes in a value of all data point.
2. Regarding the all data value, it transforms the “dBm” value into “uW” value.
3. It adds the all values and calculates a grand total. Define a grand total as “P”.
4. It divides “P” by sample data point (ex.501) and calculates the mean value.
5. It reports the mean value.



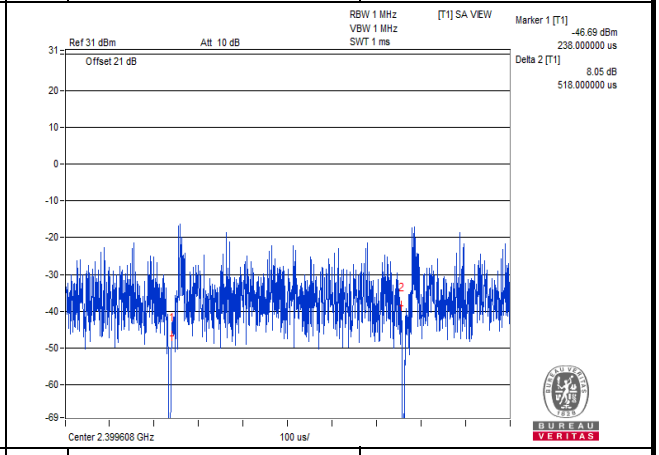
1	2379.718MHz	P = 0.064674uW



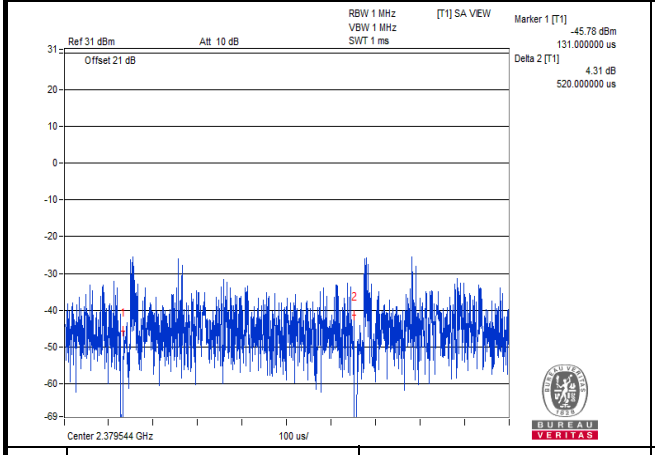
2	2399.549MHz	P = 0.475869uW



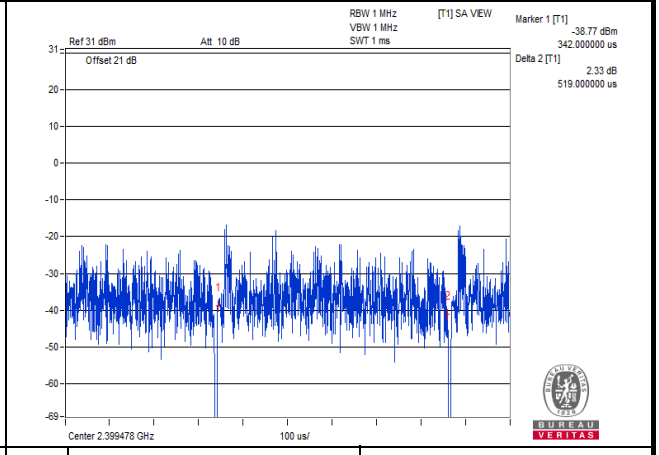
3	2387.000MHz	P = 0.098087uW



4	2399.608MHz	P = 0.519944uW



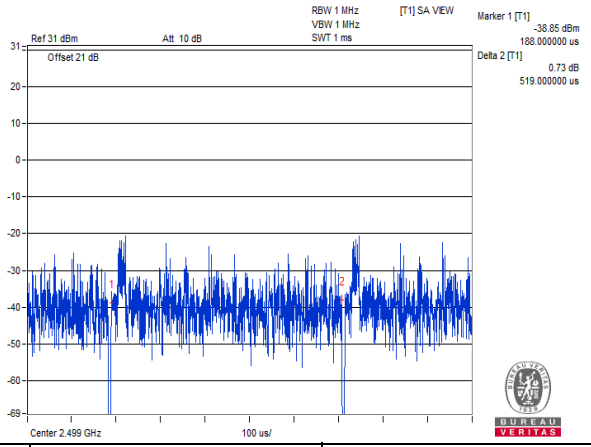
5	2379.544MHz	P = 0.068777uW



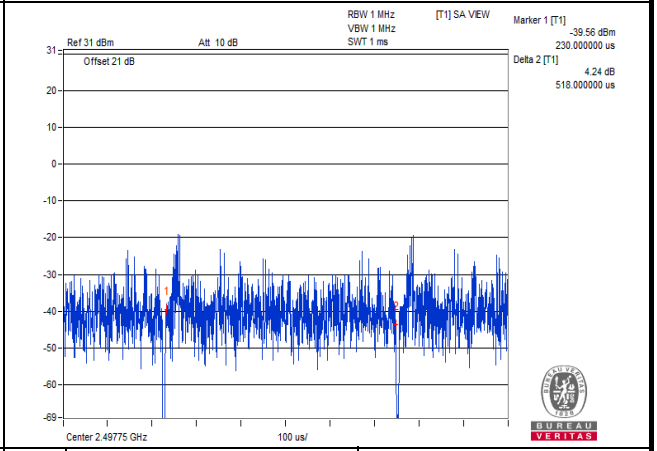
6	2399.478MHz	P = 0.504687uW

Measuring Mode *Zero Span

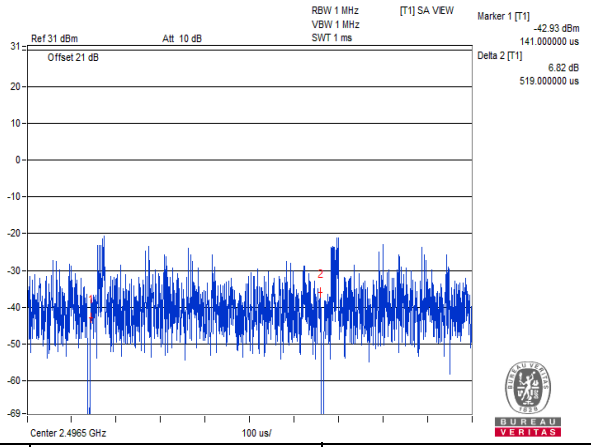
1. Set the spectrum analyzer as below and it takes in a value of all data point.
2. Regarding the all data value, it transforms the “dBm” value into “uW” value.
3. It adds the all values and calculates a grand total. Define a grand total as “P”.
4. It divides “P” by sample data point (ex.501) and calculates the mean value.
5. It reports the mean value.



7	2499.000MHz	P = 0.249522uW



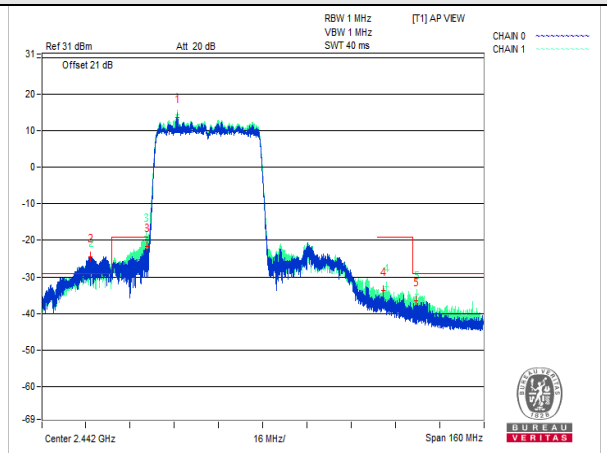
8	2497.750MHz	P = 0.236188uW

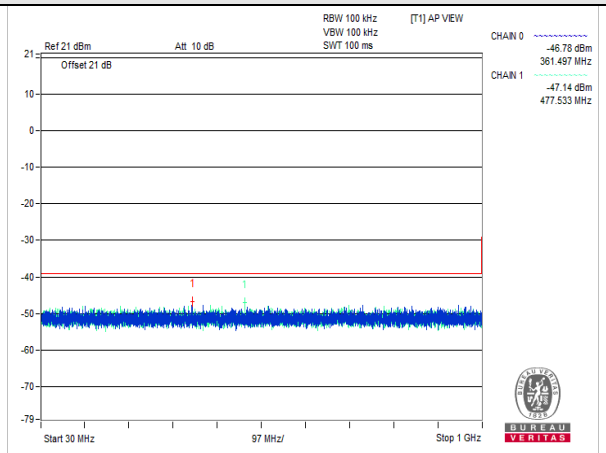


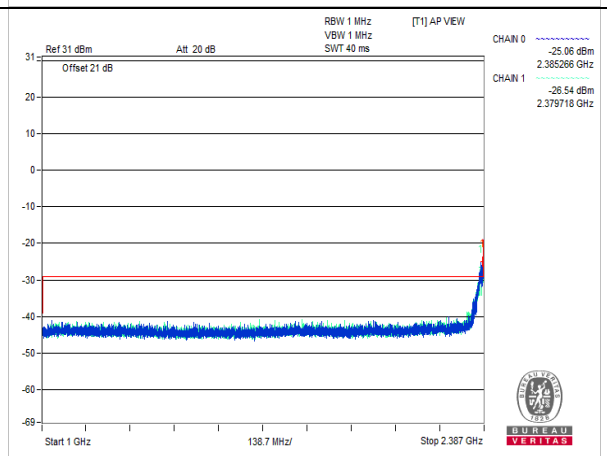
9	2496.500MHz	P = 0.229145uW

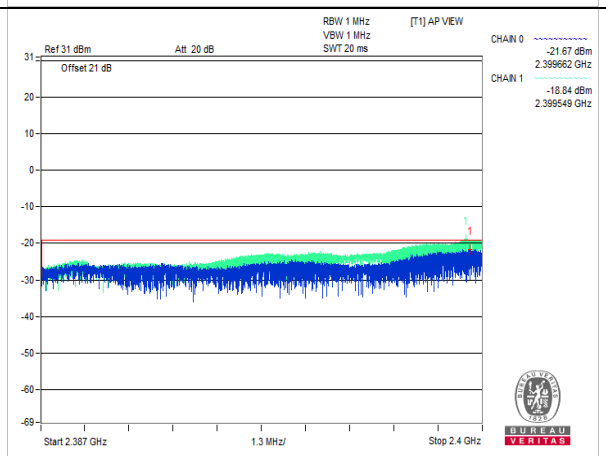
Graph

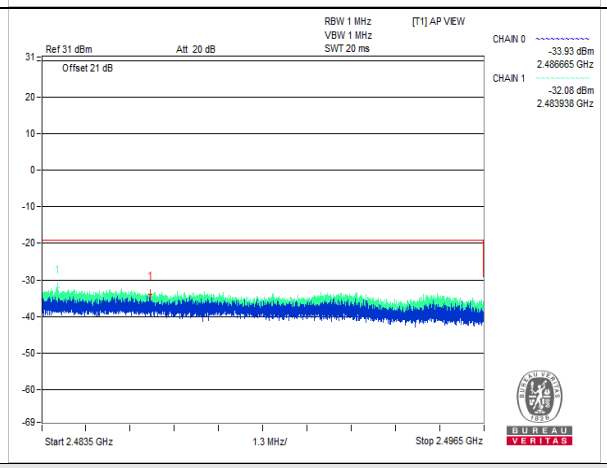
Vnormal

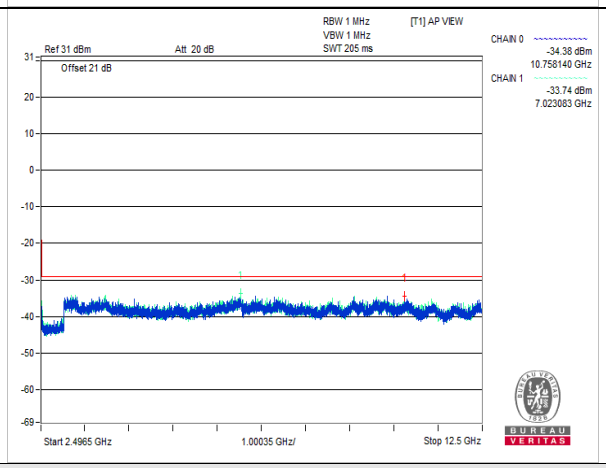






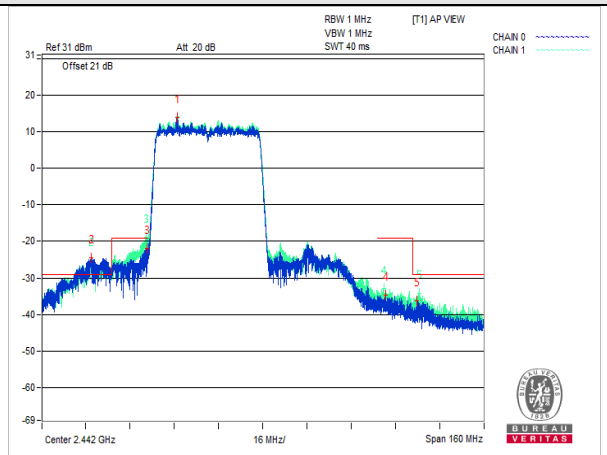


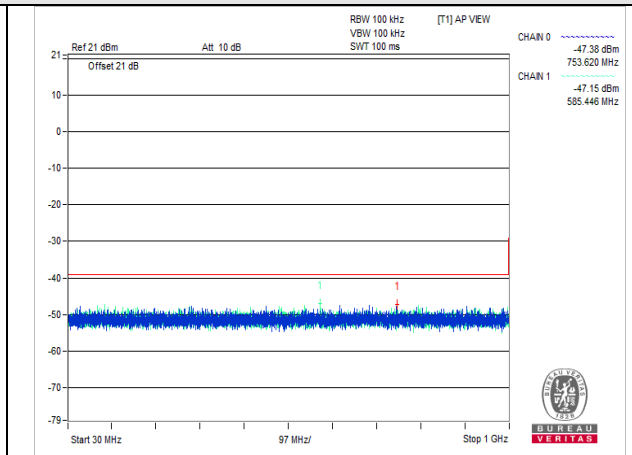


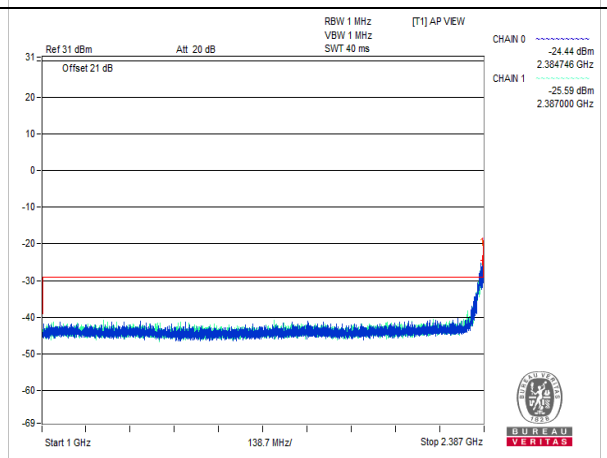


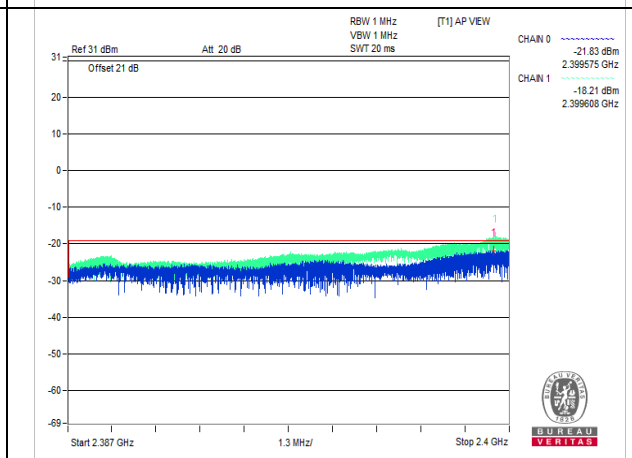
CH 3 (2422MHz)

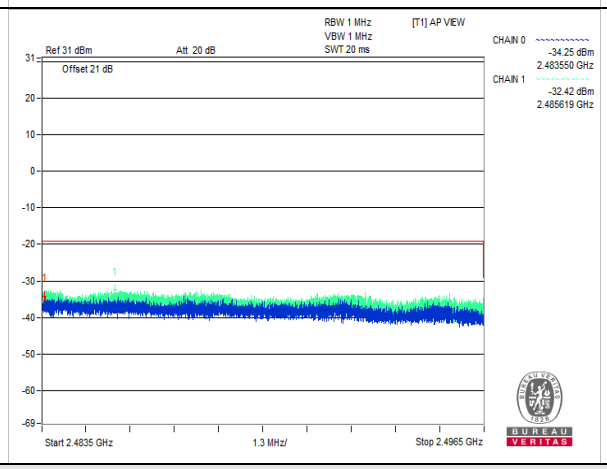
Vmax.

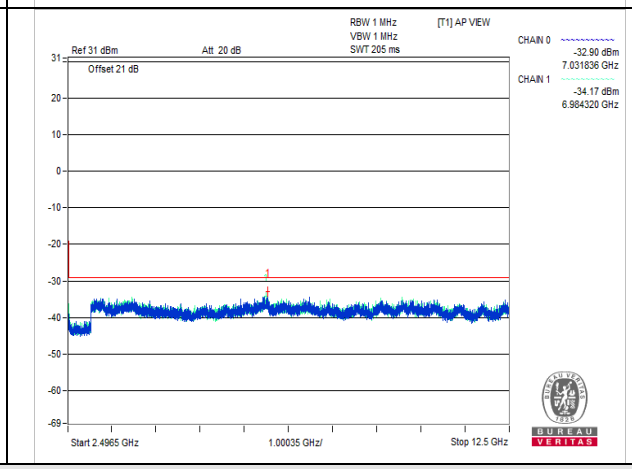






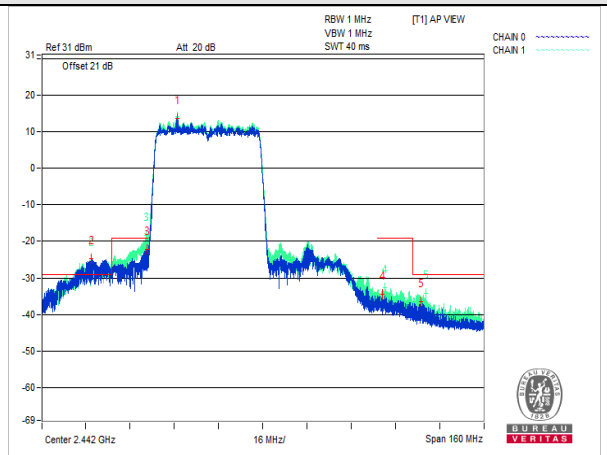


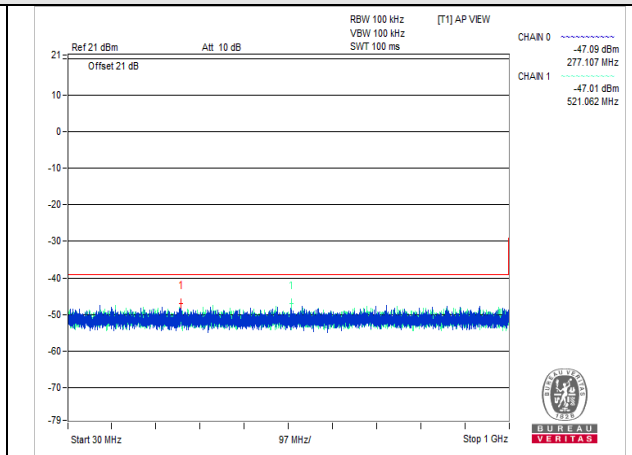


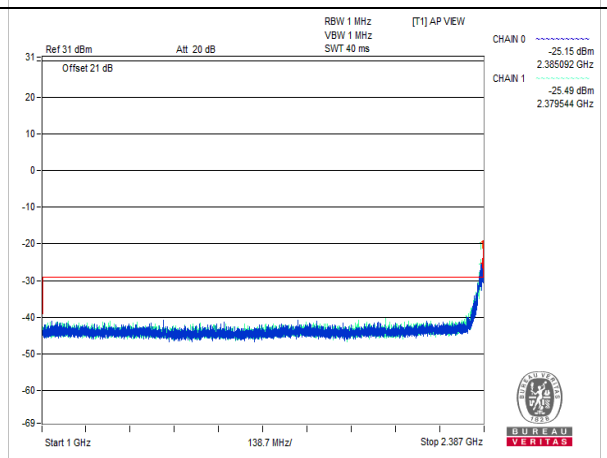


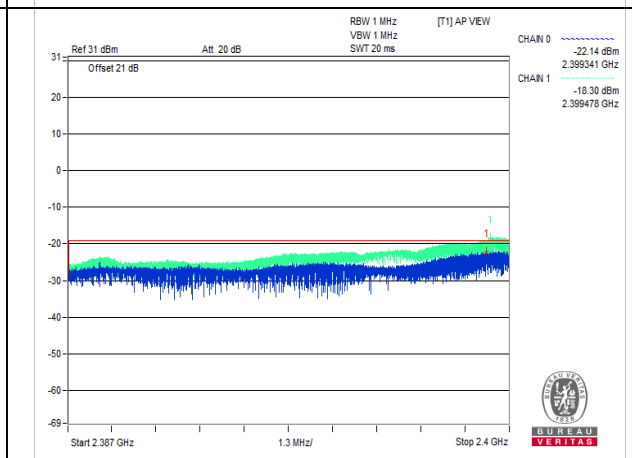
CH 3 (2422MHz)

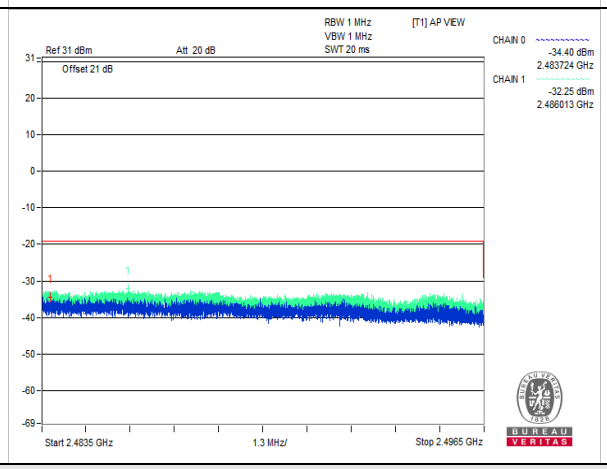
Vmin.

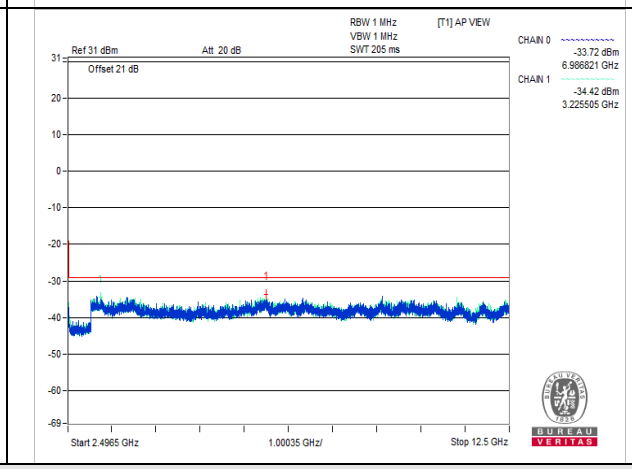






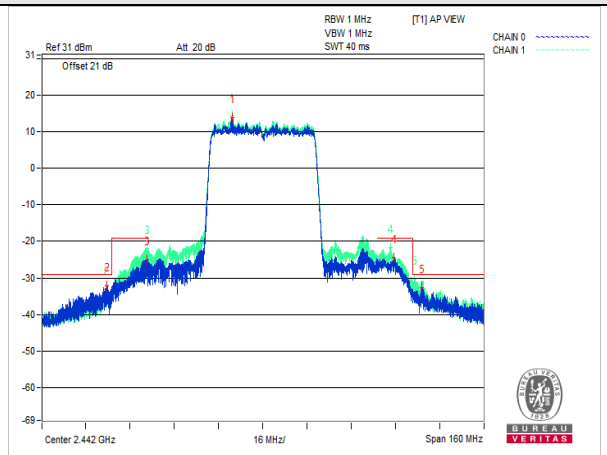


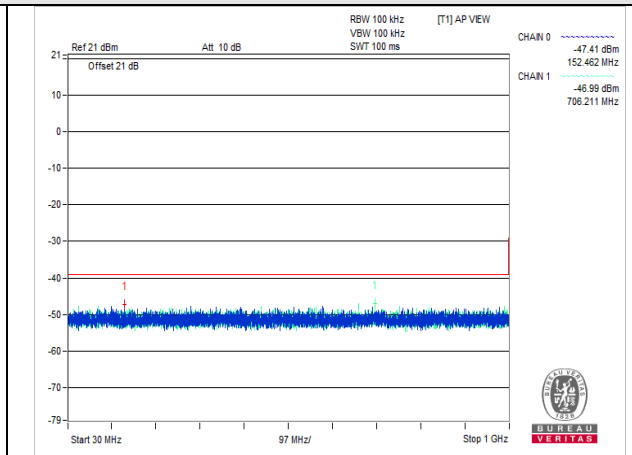


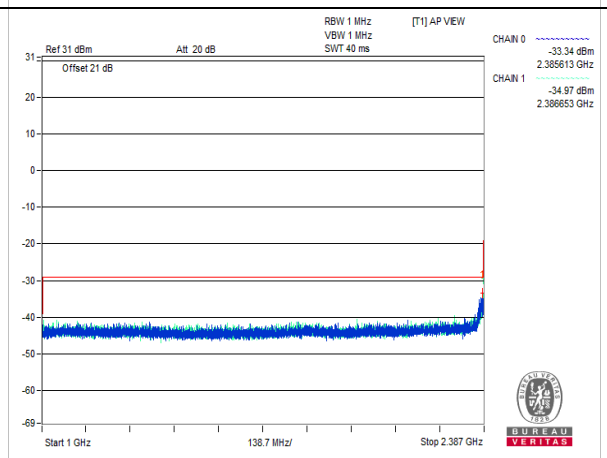


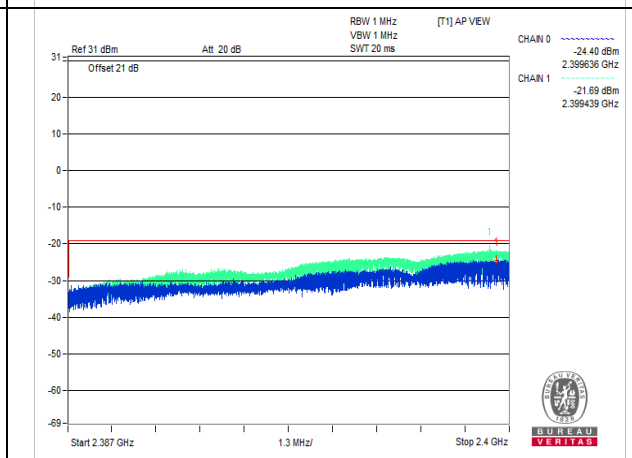
CH 3 (2422MHz)

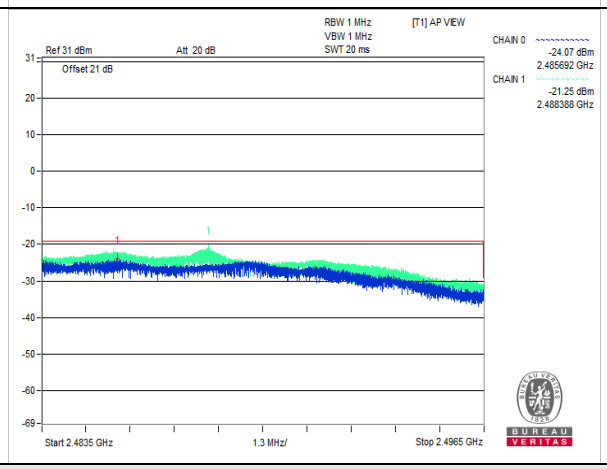
Vnormal

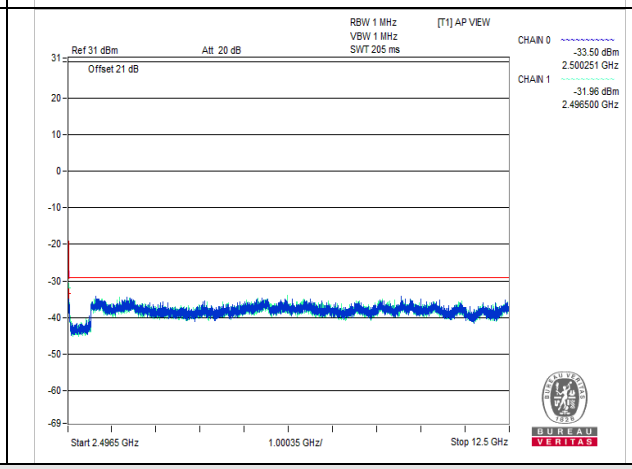






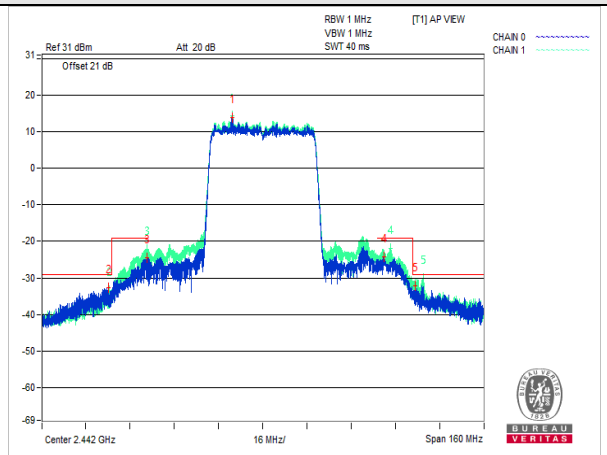


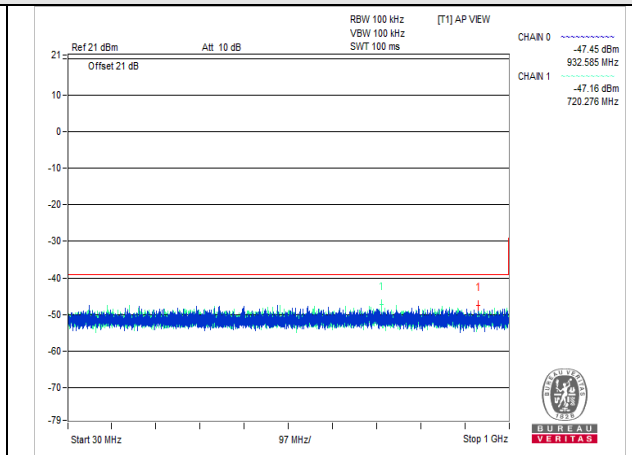


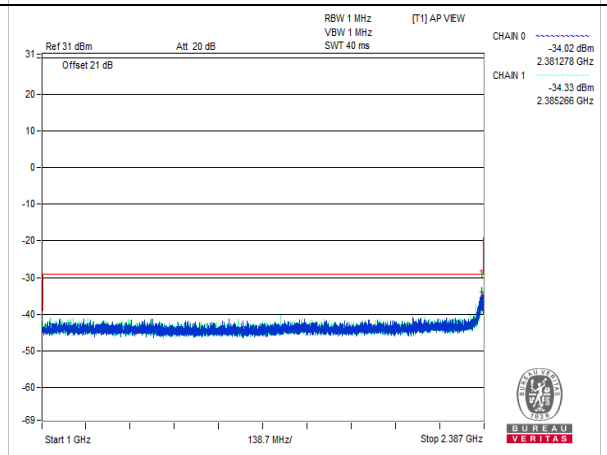


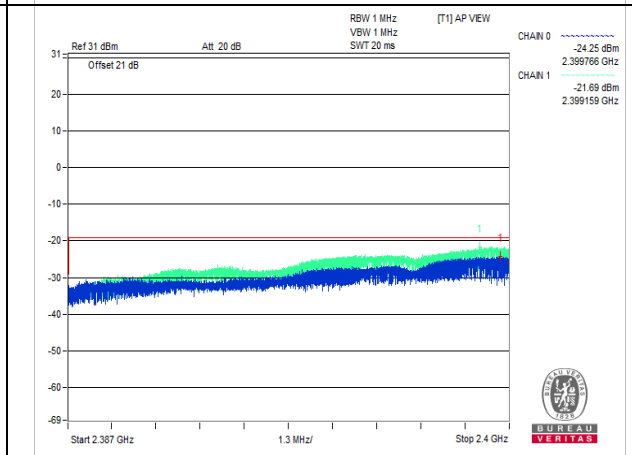
CH 7 (2442MHz)

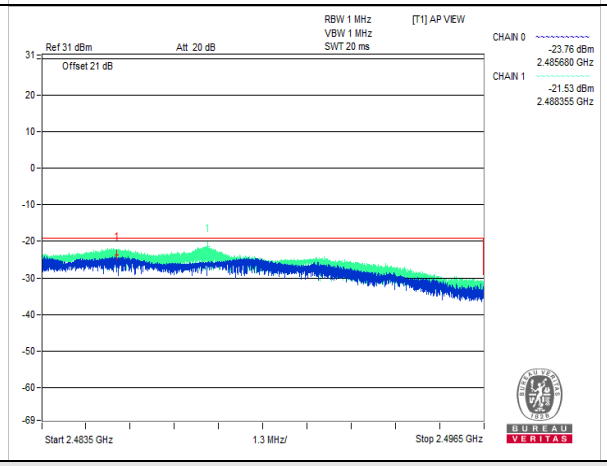
Vmax.

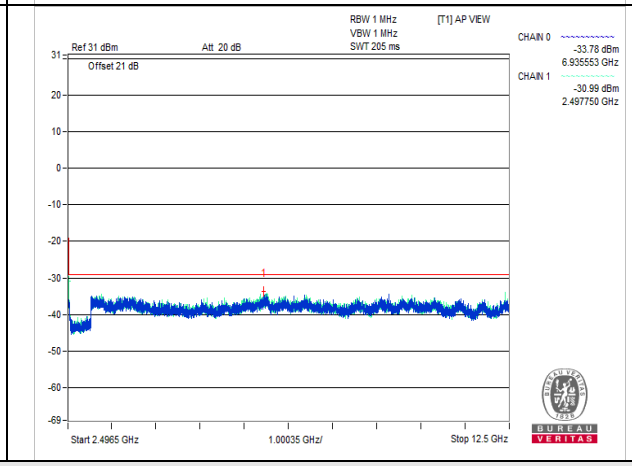






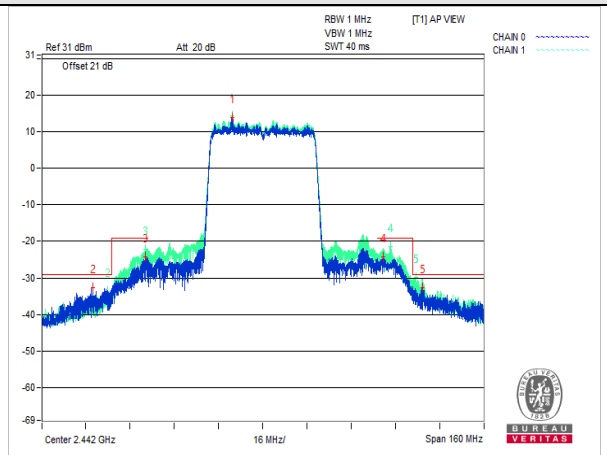


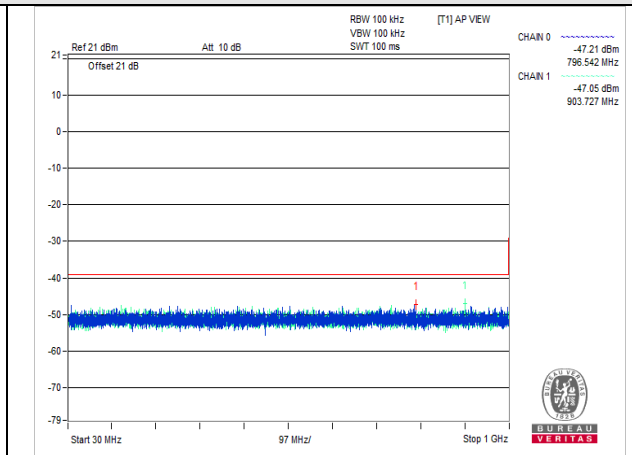


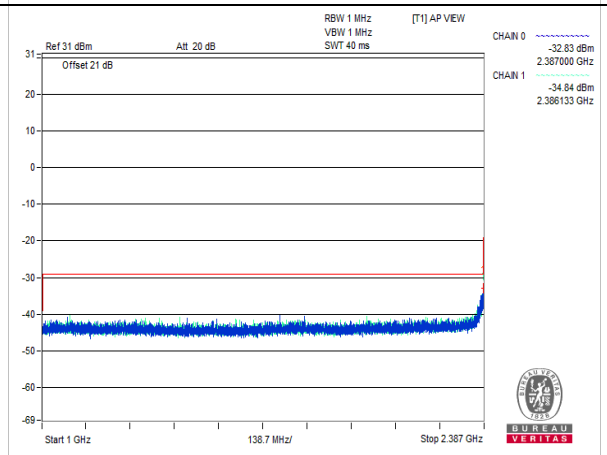


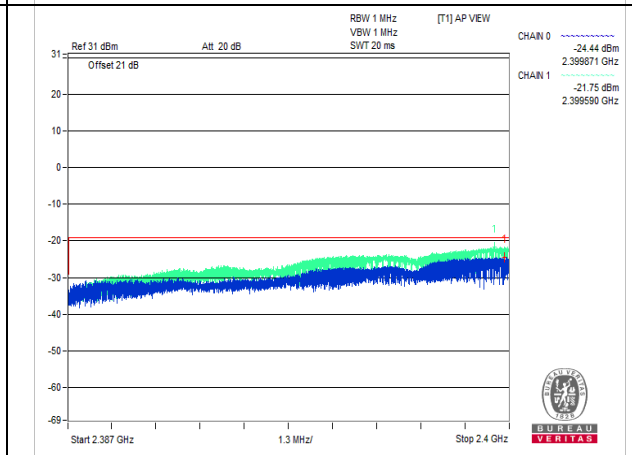
CH 7 (2442MHz)

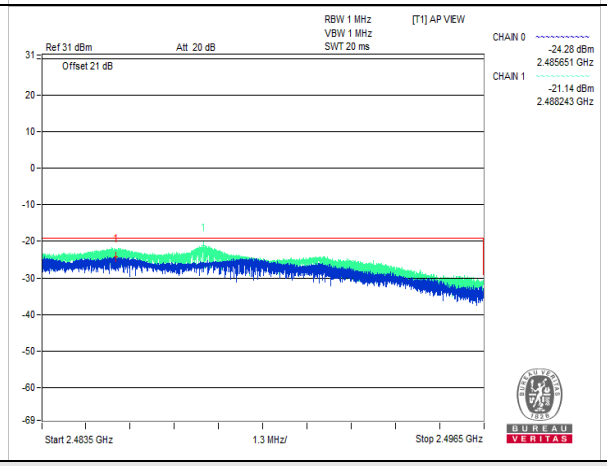
Vmin.

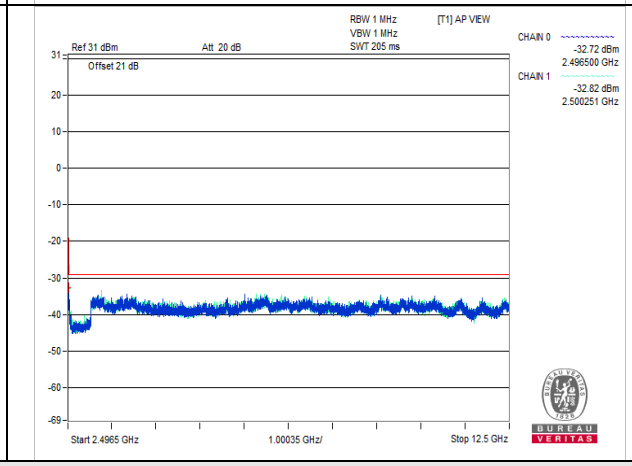






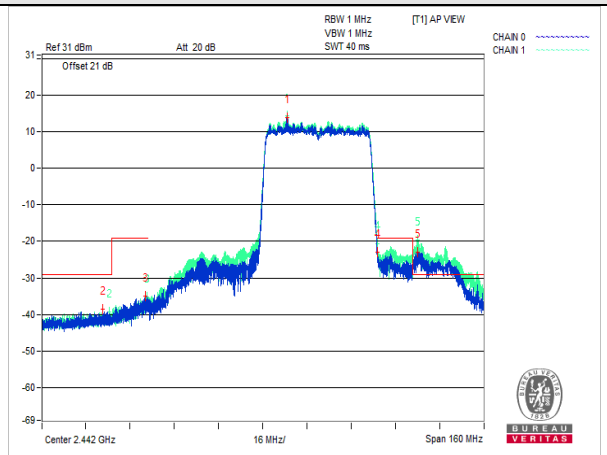


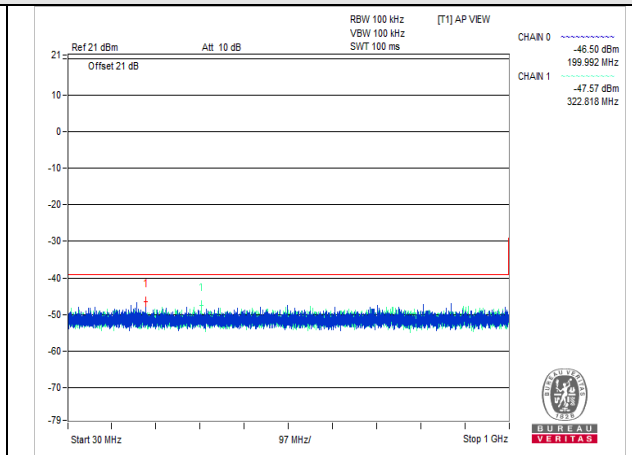


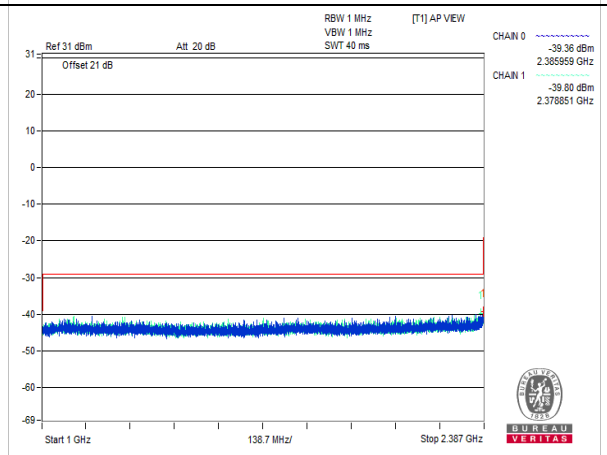


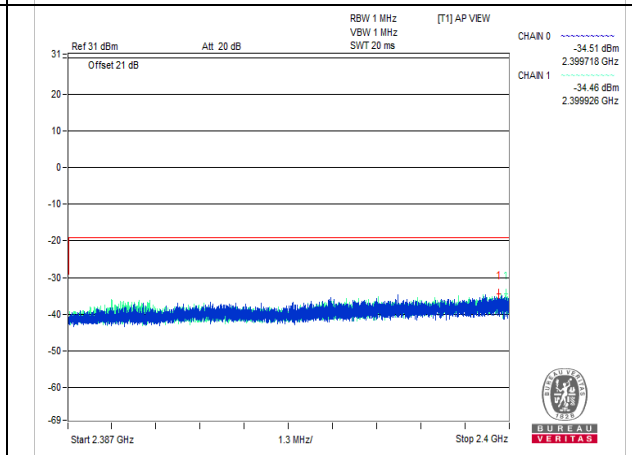
CH 7 (2442MHz)

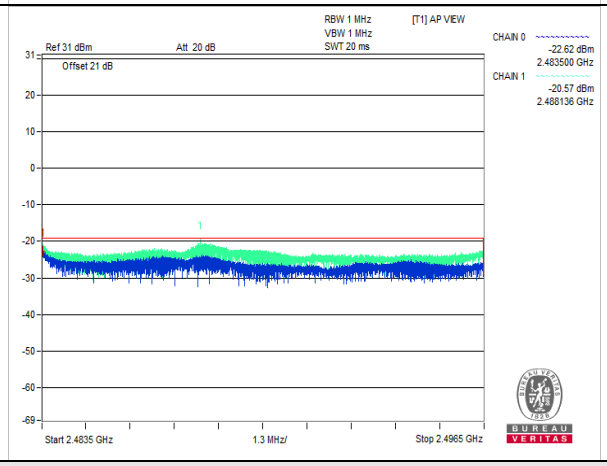
Vnormal

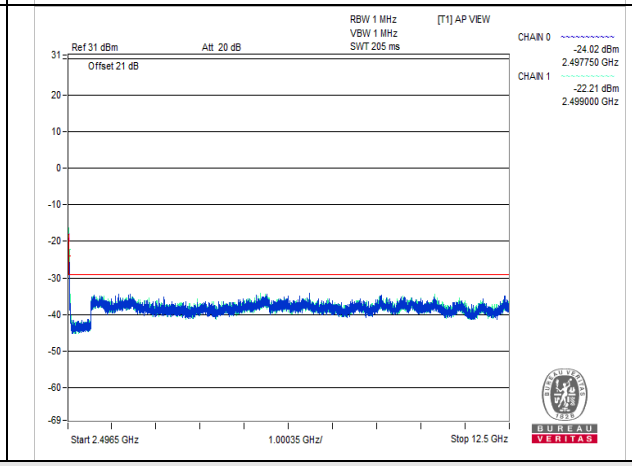






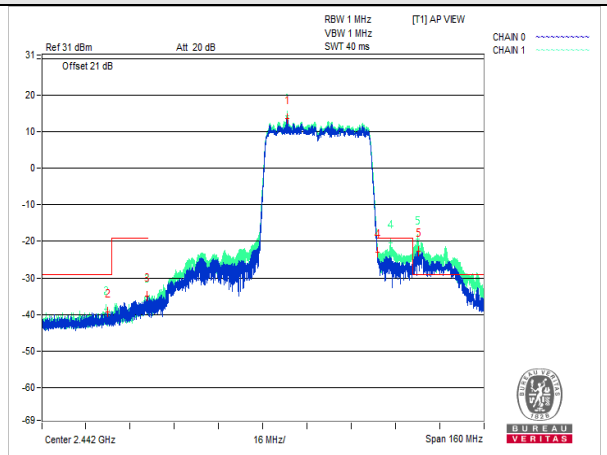


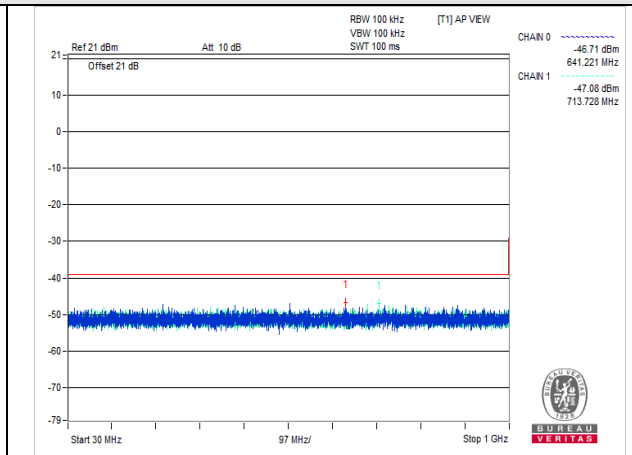


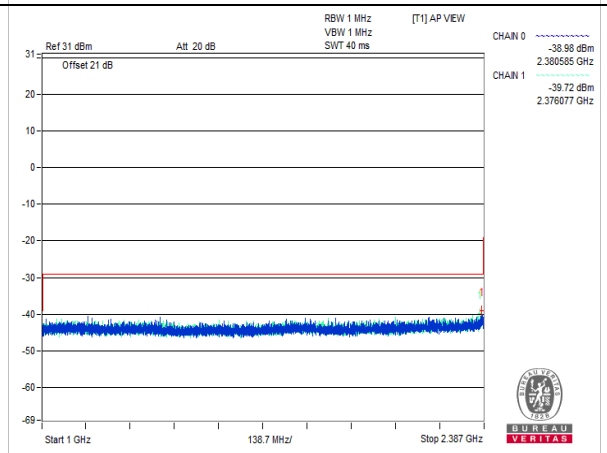


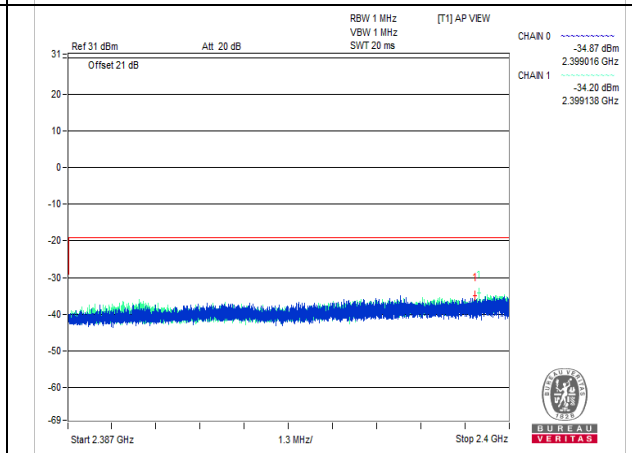
CH 11 (2462MHz)

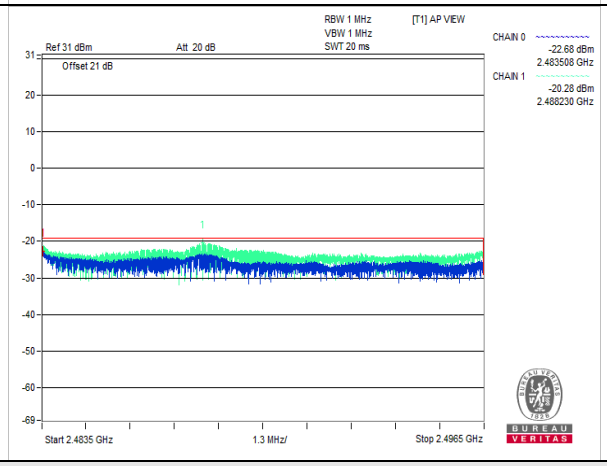
Vmax.

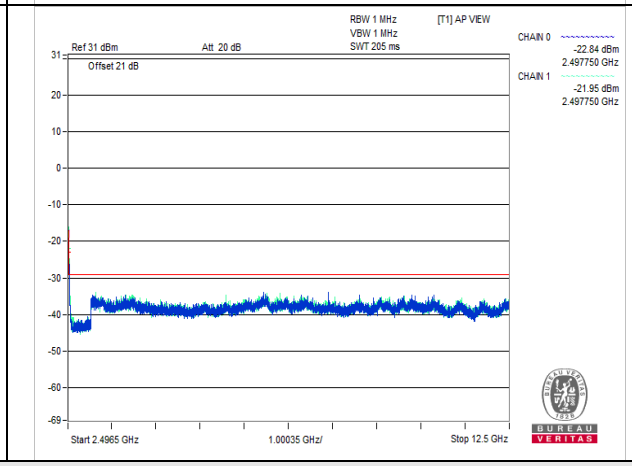






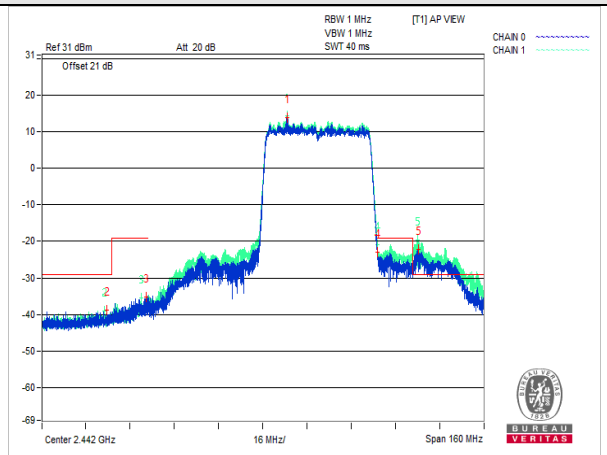


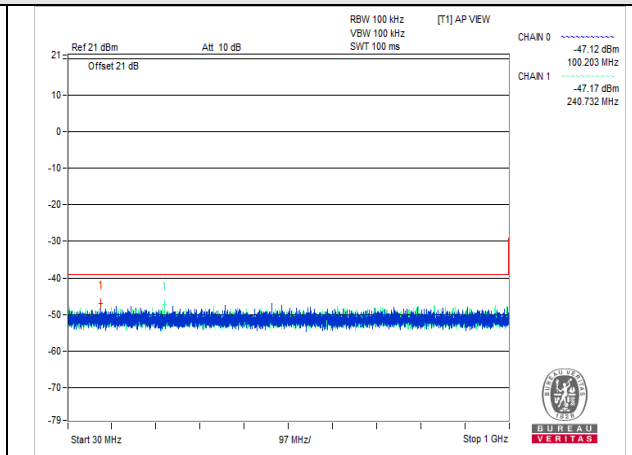


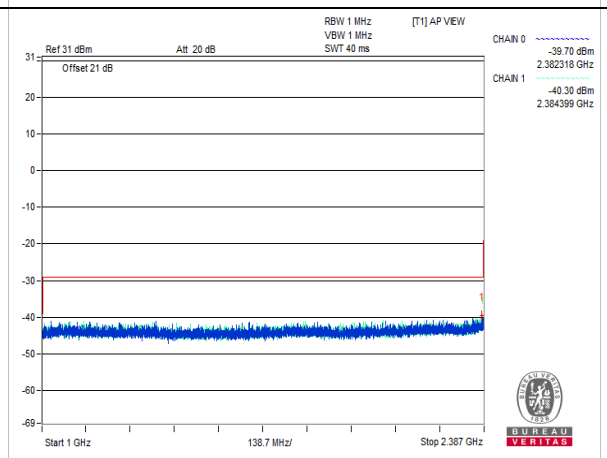


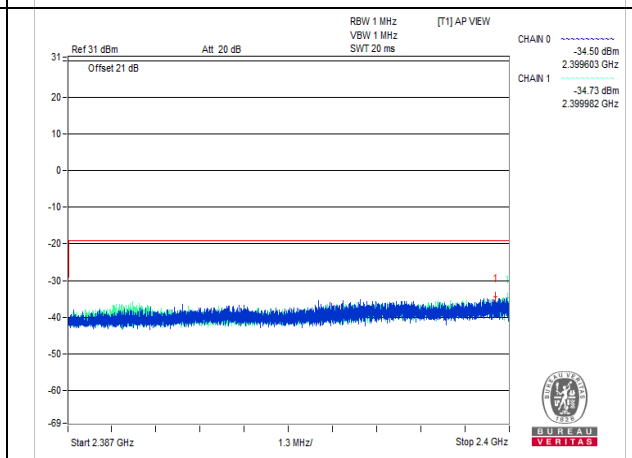
CH 11 (2462MHz)

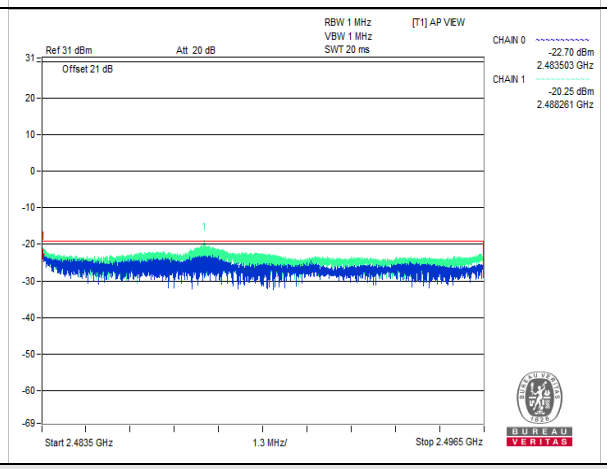
Vmin.

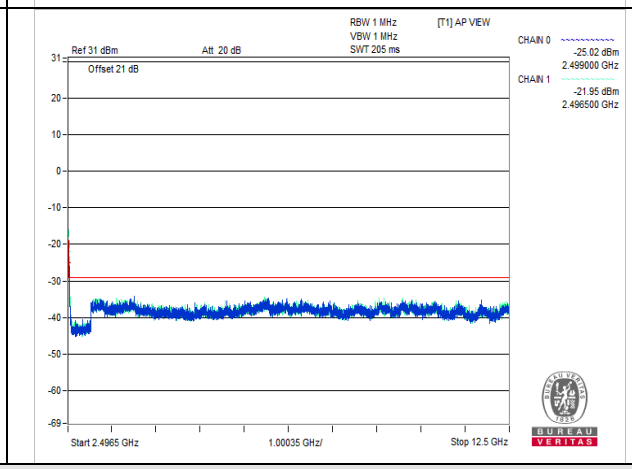












CH 11 (2462MHz)

[Worst result] x [Number of antenna ports]

TEST CHANNEL		CH 3 (2422MHz)		
TEST CONDITION	FREQUENCY RANGE(MHz)	MEASURE. VALUE (uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	0.041978	0.25	PASS
	1000.0 to 2387.0	0.190434	2.5	PASS
	2387.0 to 2400.0	13.615388	25	PASS
	2483.5 to 2496.5	1.238882	25	PASS
	2496.5 to 12500.0	0.845338	2.5	PASS
$V_{max.}$	30.0 to 1000.0	0.038550	0.25	PASS
	1000.0 to 2387.0	0.217206	2.5	PASS
	2387.0 to 2400.0	13.122906	25	PASS
	2483.5 to 2496.5	1.145592	25	PASS
	2496.5 to 12500.0	1.025722	2.5	PASS
$V_{min.}$	30.0 to 1000.0	0.039814	0.25	PASS
	1000.0 to 2387.0	0.172472	2.5	PASS
	2387.0 to 2400.0	12.218840	25	PASS
	2483.5 to 2496.5	1.191324	25	PASS
	2496.5 to 12500.0	0.849240	2.5	PASS
TEST CHANNEL		CH 7 (2442MHz)		
V_{normal}	30.0 to 1000.0	0.039998	0.25	PASS
	1000.0 to 2387.0	0.926894	2.5	PASS
	2387.0 to 2400.0	13.552830	25	PASS
	2483.5 to 2496.5	14.997884	25	PASS
	2496.5 to 12500.0	1.273592	2.5	PASS
$V_{max.}$	30.0 to 1000.0	0.038462	0.25	PASS
	1000.0 to 2387.0	0.792556	2.5	PASS
	2387.0 to 2400.0	13.552830	25	PASS
	2483.5 to 2496.5	14.061446	25	PASS
	2496.5 to 12500.0	1.592318	2.5	PASS
$V_{min.}$	30.0 to 1000.0	0.039448	0.25	PASS
	1000.0 to 2387.0	1.042390	2.5	PASS
	2387.0 to 2400.0	13.366878	25	PASS
	2483.5 to 2496.5	15.382608	25	PASS
	2496.5 to 12500.0	1.069128	2.5	PASS

TEST CHANNEL		CH 11 (2462MHz)		
TEST CONDITION	FREQUENCY RANGE(MHz)	MEASURE. VALUE (uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	0.044774	0.25	PASS
	1000.0 to 2387.0	0.231756	2.5	PASS
	2387.0 to 2400.0	0.716192	25	PASS
	2483.5 to 2496.5	17.540016	25	PASS
	2496.5 to 12500.0	0.499044	2.5	PASS
$V_{max.}$	30.0 to 1000.0	0.042660	0.25	PASS
	1000.0 to 2387.0	0.252948	2.5	PASS
	2387.0 to 2400.0	0.760378	25	PASS
	2483.5 to 2496.5	18.751240	25	PASS
	2496.5 to 12500.0	0.472376	2.5	PASS
$V_{min.}$	30.0 to 1000.0	0.038818	0.25	PASS
	1000.0 to 2387.0	0.214304	2.5	PASS
	2387.0 to 2400.0	0.709626	25	PASS
	2483.5 to 2496.5	18.881218	25	PASS
	2496.5 to 12500.0	0.508482	2.5	PASS

802.11ax (RU26)

Chain 0

TEST CHANNEL		CH 1 (2412MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	962.170	0.002286	0.125	PASS
	1000.0 to 2387.0	1264.743	0.171002	1.25	PASS
	2387.0 to 2400.0	2399.046	0.879023	12.5	PASS
	2483.5 to 2496.5	2485.950	0.230144	12.5	PASS
	2496.5 to 12500.0	6928.050	0.497737	1.25	PASS
$V_{max.}$	30.0 to 1000.0	877.416	0.001968	0.125	PASS
	1000.0 to 2387.0	1601.091	0.184927	1.25	PASS
	2387.0 to 2400.0	2399.496	0.853100	12.5	PASS
	2483.5 to 2496.5	2489.853	0.236048	12.5	PASS
	2496.5 to 12500.0	5830.166	0.481948	1.25	PASS
$V_{min.}$	30.0 to 1000.0	979.266	0.002393	0.125	PASS
	1000.0 to 2387.0	2056.373	0.190546	1.25	PASS
	2387.0 to 2400.0	2399.910	0.874984	12.5	PASS
	2483.5 to 2496.5	2493.433	0.238781	12.5	PASS
	2496.5 to 12500.0	5856.425	0.500035	1.25	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	915.367	0.002265	0.125	PASS
	1000.0 to 2387.0	1793.190	0.174181	1.25	PASS
	2387.0 to 2400.0	2394.923	0.209411	12.5	PASS
	2483.5 to 2496.5	2487.554	0.225944	12.5	PASS
	2496.5 to 12500.0	5893.938	0.503501	1.25	PASS
$V_{max.}$	30.0 to 1000.0	912.942	0.002168	0.125	PASS
	1000.0 to 2387.0	1166.960	0.204174	1.25	PASS
	2387.0 to 2400.0	2388.810	0.187499	12.5	PASS
	2483.5 to 2496.5	2489.584	0.205116	12.5	PASS
	2496.5 to 12500.0	5733.882	0.449780	1.25	PASS
$V_{min.}$	30.0 to 1000.0	738.827	0.002099	0.125	PASS
	1000.0 to 2387.0	2189.352	0.176198	1.25	PASS
	2387.0 to 2400.0	2388.907	0.187932	12.5	PASS
	2483.5 to 2496.5	2489.948	0.221820	12.5	PASS
	2496.5 to 12500.0	6759.241	0.508159	1.25	PASS

TEST CHANNEL		CH 13 (2472MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	910.032	0.001936	0.125	PASS
	1000.0 to 2387.0	2198.541	0.192752	1.25	PASS
	2387.0 to 2400.0	2389.520	0.182810	12.5	PASS
	2483.5 to 2496.5	2483.513	4.931738	12.5	PASS
	2496.5 to 12500.0	6155.280	0.422669	1.25	PASS
$V_{max.}$	30.0 to 1000.0	949.681	0.002296	0.125	PASS
	1000.0 to 2387.0	2179.816	0.187068	1.25	PASS
	2387.0 to 2400.0	2390.940	0.213796	12.5	PASS
	2483.5 to 2496.5	2483.526	9.162205	12.5	PASS
	2496.5 to 12500.0	5812.660	0.414000	1.25	PASS
$V_{min.}$	30.0 to 1000.0	641.948	0.002344	0.125	PASS
	1000.0 to 2387.0	2296.324	0.194984	1.25	PASS
	2387.0 to 2400.0	2398.355	0.188365	12.5	PASS
	2483.5 to 2496.5	2483.547	8.550667	12.5	PASS
	2496.5 to 12500.0	5890.187	0.490908	1.25	PASS

NOTE: 1. The spectrum plots are attached on the following pages.

Chain 1

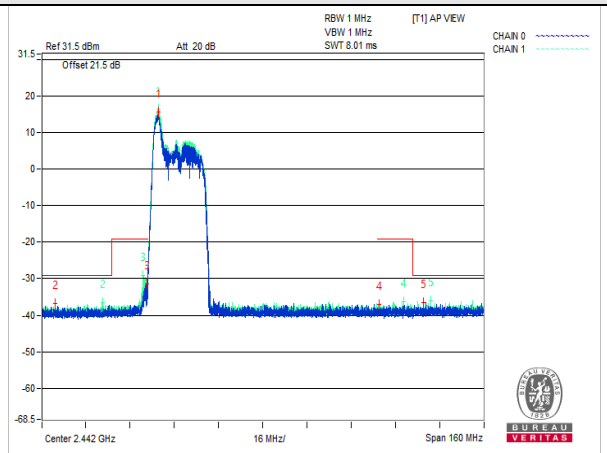
TEST CHANNEL		CH 1 (2412MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	788.782	0.002080	0.125	PASS
	1000.0 to 2387.0	2046.838	0.176198	1.25	PASS
	2387.0 to 2400.0	2398.734	1.374042	12.5	PASS
	2483.5 to 2496.5	2488.160	0.198609	12.5	PASS
	2496.5 to 12500.0	6622.943	0.474242	1.25	PASS
$V_{max.}$	30.0 to 1000.0	927.128	0.002084	0.125	PASS
	1000.0 to 2387.0	1744.819	0.190985	1.25	PASS
	2387.0 to 2400.0	2398.877	1.221800	12.5	PASS
	2483.5 to 2496.5	2490.845	0.208449	12.5	PASS
	2496.5 to 12500.0	6317.837	0.433511	1.25	PASS
$V_{min.}$	30.0 to 1000.0	944.952	0.002844	0.125	PASS
	1000.0 to 2387.0	2241.018	0.184927	1.25	PASS
	2387.0 to 2400.0	2398.937	1.406048	12.5	PASS
	2483.5 to 2496.5	2491.400	0.216272	12.5	PASS
	2496.5 to 12500.0	5902.691	0.514044	1.25	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	838.010	0.002244	0.125	PASS
	1000.0 to 2387.0	2211.891	0.199067	1.25	PASS
	2387.0 to 2400.0	2388.724	0.223872	12.5	PASS
	2483.5 to 2496.5	2491.899	0.270396	12.5	PASS
	2496.5 to 12500.0	6784.250	0.472063	1.25	PASS
$V_{max.}$	30.0 to 1000.0	887.722	0.002138	0.125	PASS
	1000.0 to 2387.0	2188.138	0.188799	1.25	PASS
	2387.0 to 2400.0	2394.748	0.252348	12.5	PASS
	2483.5 to 2496.5	2494.930	0.208449	12.5	PASS
	2496.5 to 12500.0	6989.321	0.550808	1.25	PASS
$V_{min.}$	30.0 to 1000.0	973.810	0.001936	0.125	PASS
	1000.0 to 2387.0	1584.793	0.193197	1.25	PASS
	2387.0 to 2400.0	2393.643	0.218776	12.5	PASS
	2483.5 to 2496.5	2490.222	0.226986	12.5	PASS
	2496.5 to 12500.0	5815.161	0.460257	1.25	PASS

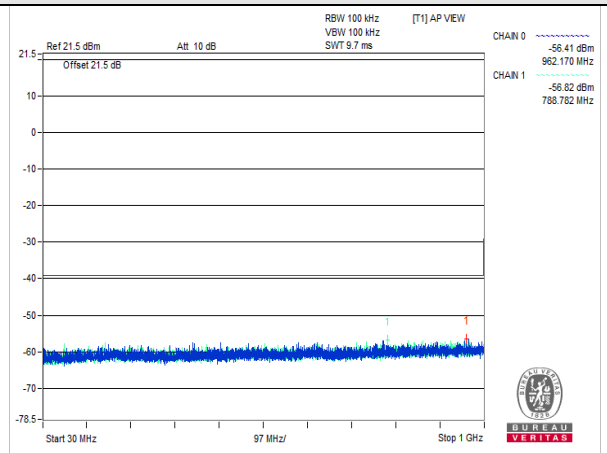
TEST CHANNEL		CH 13 (2472MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	910.517	0.002183	0.125	PASS
	1000.0 to 2387.0	2204.089	0.171791	1.25	PASS
	2387.0 to 2400.0	2397.287	0.202302	12.5	PASS
	2483.5 to 2496.5	2483.506	4.786301	12.5	PASS
	2496.5 to 12500.0	6656.705	0.528445	1.25	PASS
$V_{max.}$	30.0 to 1000.0	778.597	0.002028	0.125	PASS
	1000.0 to 2387.0	2152.943	0.189671	1.25	PASS
	2387.0 to 2400.0	2389.476	0.187932	12.5	PASS
	2483.5 to 2496.5	2483.521	4.742420	12.5	PASS
	2496.5 to 12500.0	5811.409	0.460257	1.25	PASS
$V_{min.}$	30.0 to 1000.0	934.403	0.002582	0.125	PASS
	1000.0 to 2387.0	2211.544	0.178649	1.25	PASS
	2387.0 to 2400.0	2397.640	0.207491	12.5	PASS
	2483.5 to 2496.5	2483.503	4.335109	12.5	PASS
	2496.5 to 12500.0	5822.663	0.448745	1.25	PASS

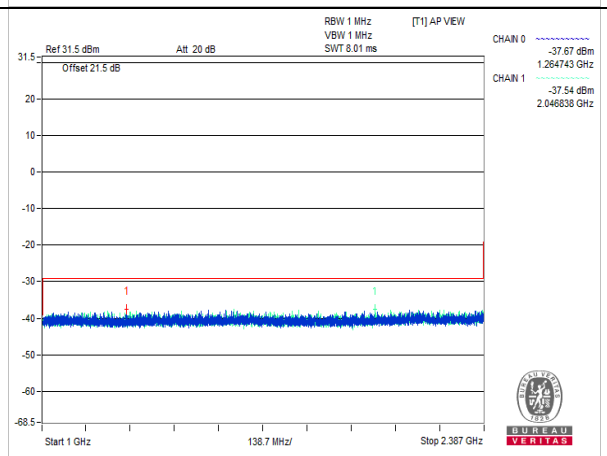
NOTE: 1. The spectrum plots are attached on the following pages.

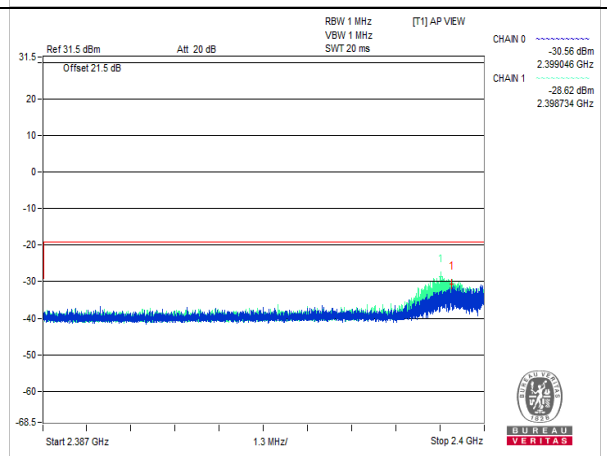
Graph

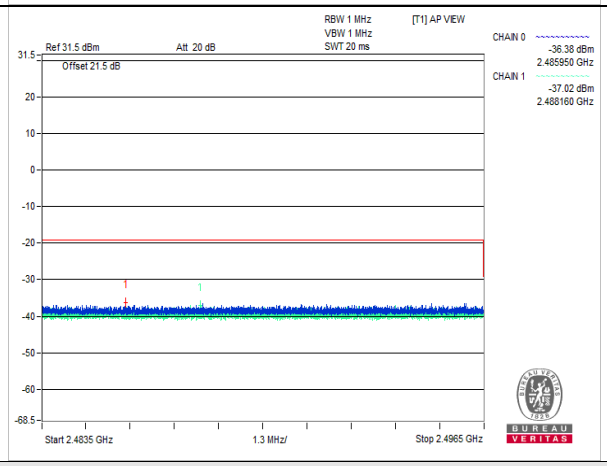
Vnormal

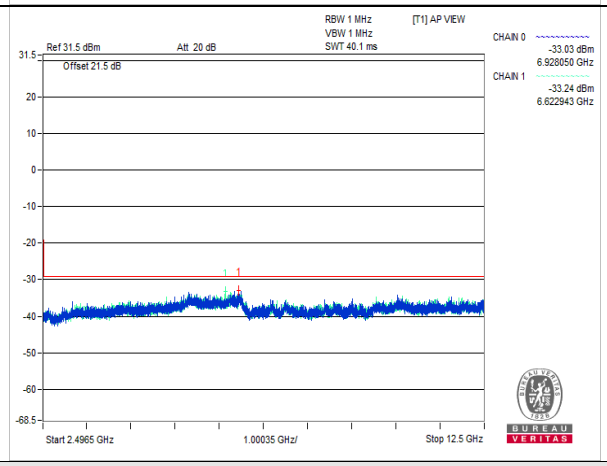






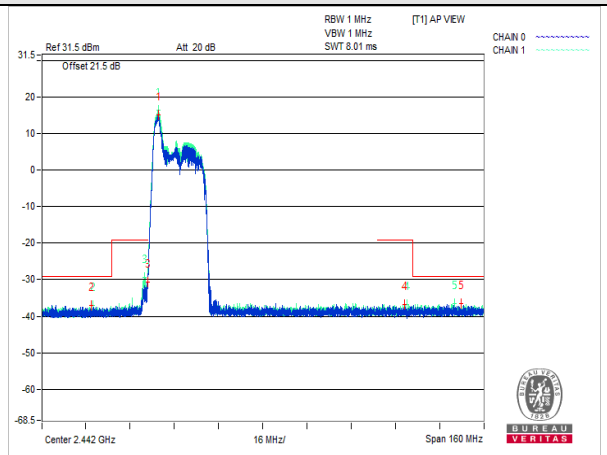


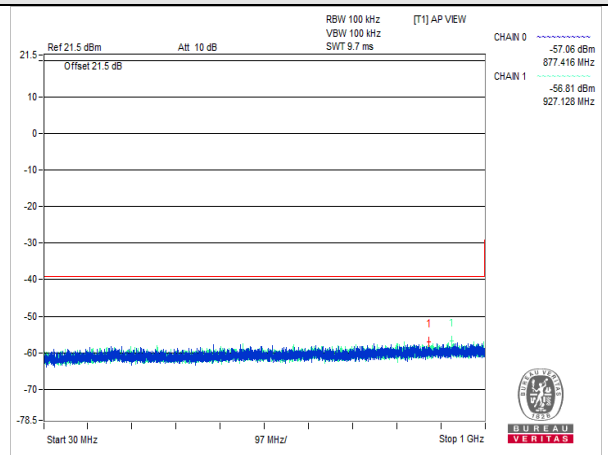


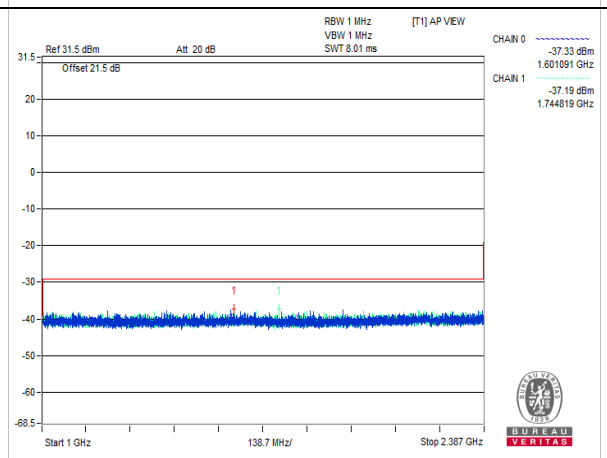


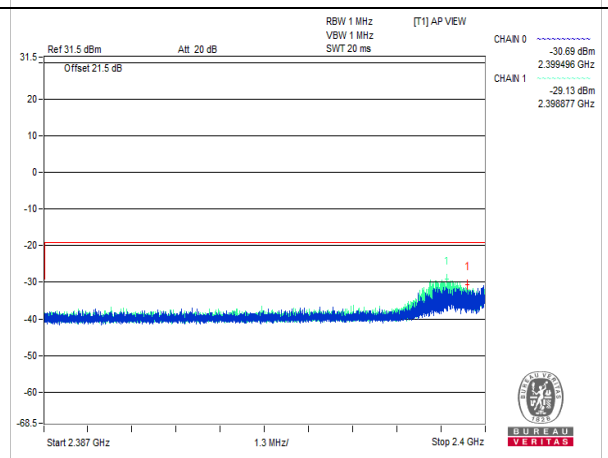
CH 1 (2412MHz)

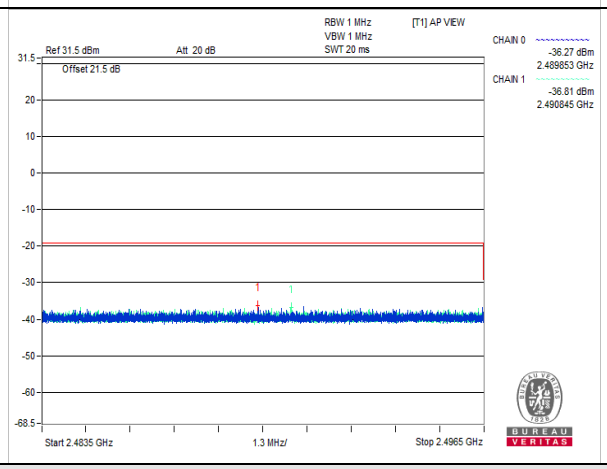
Vmax.

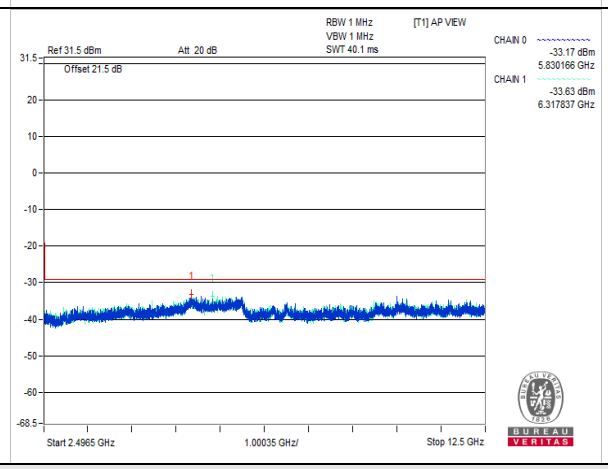






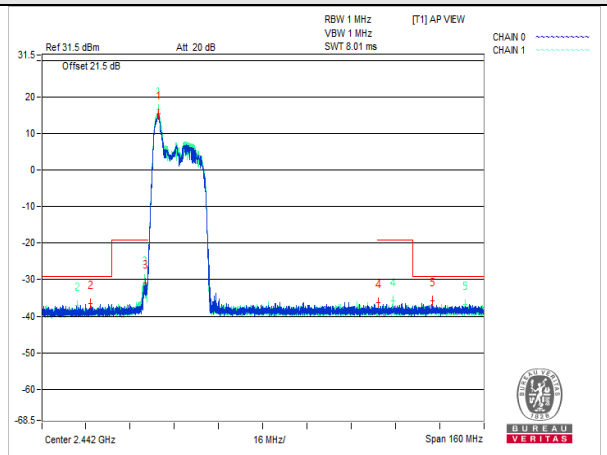


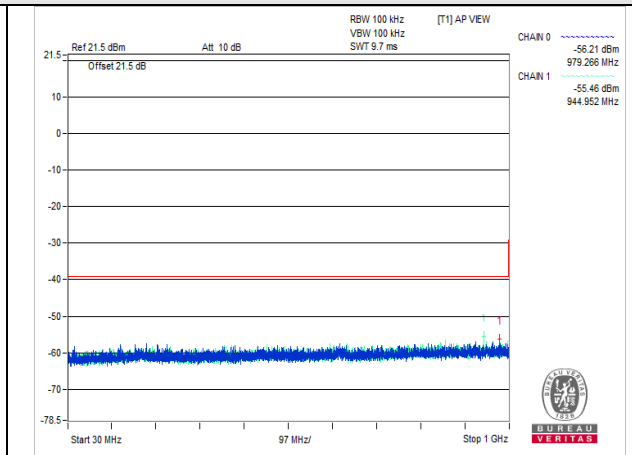


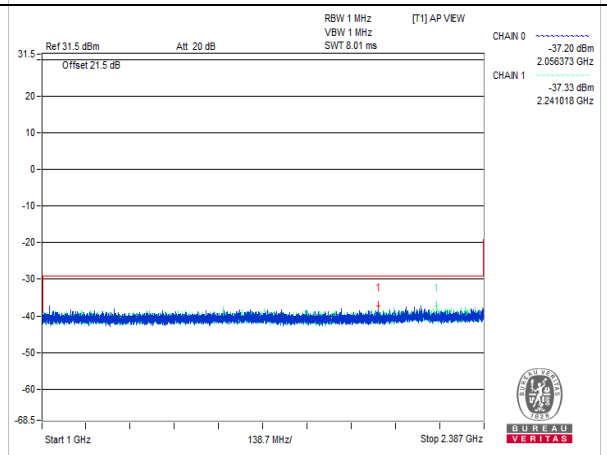


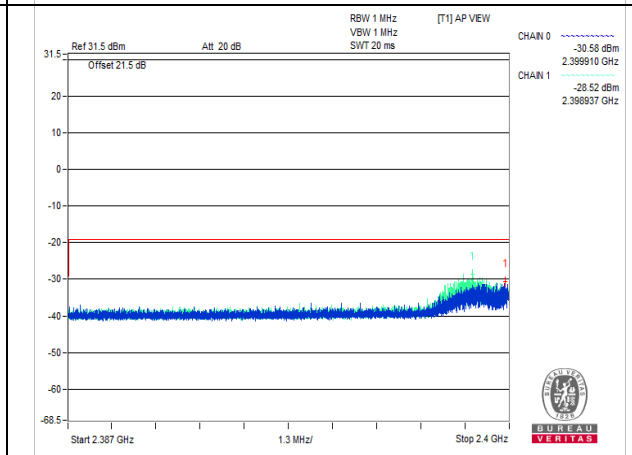
CH 1 (2412MHz)

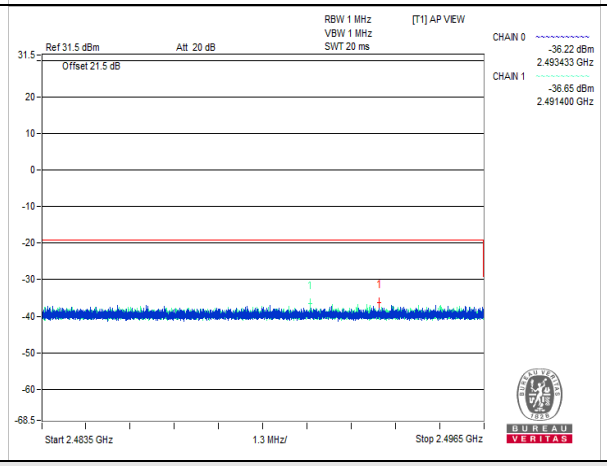
Vmin.

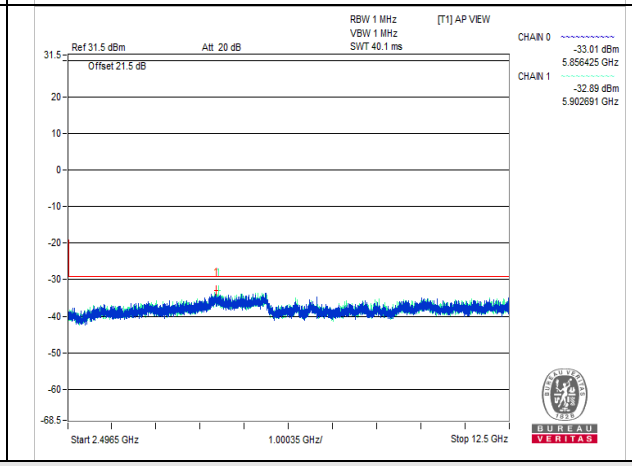






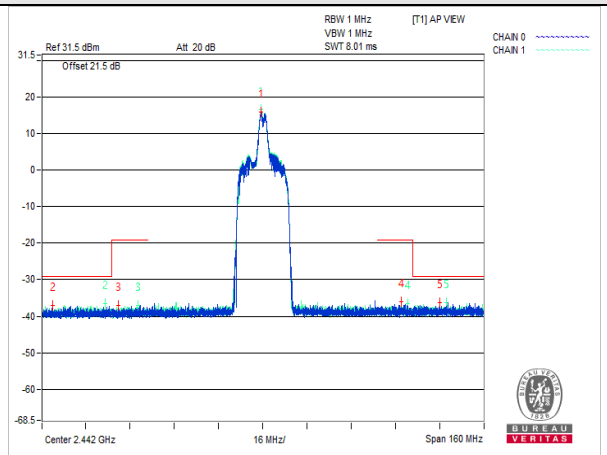


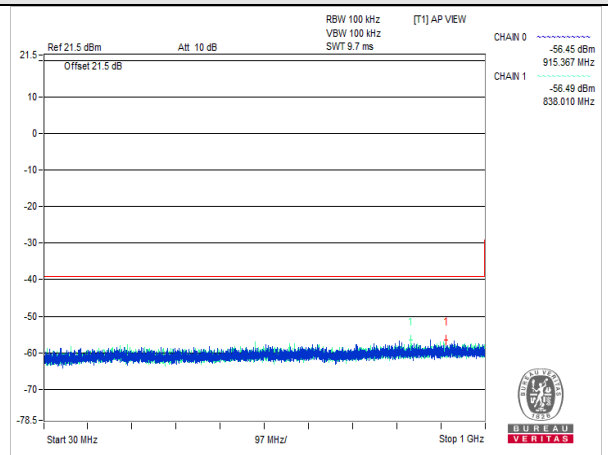


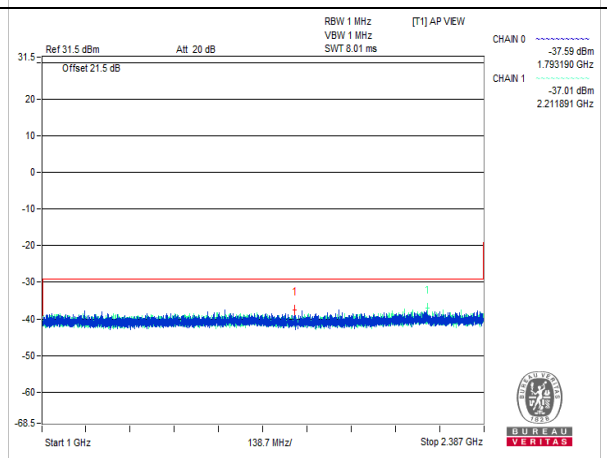


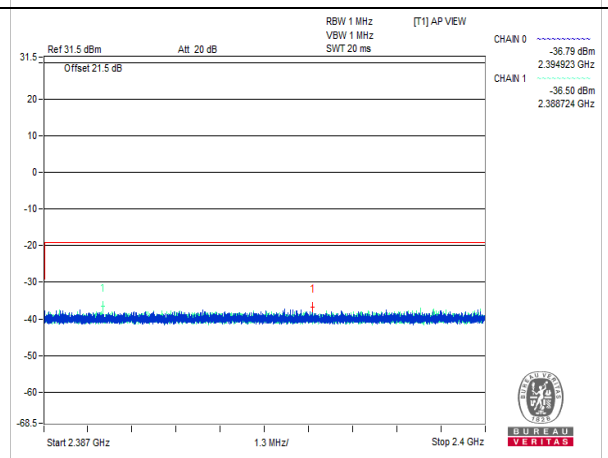
CH 1 (2412MHz)

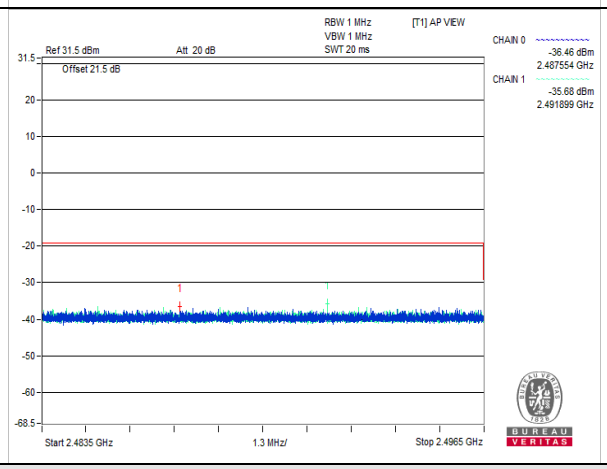
Vnormal

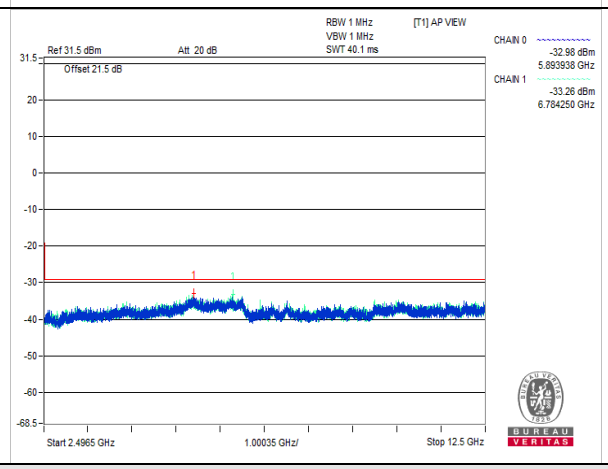






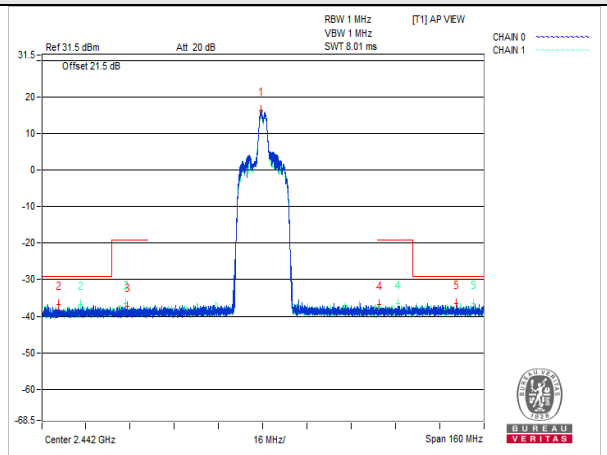


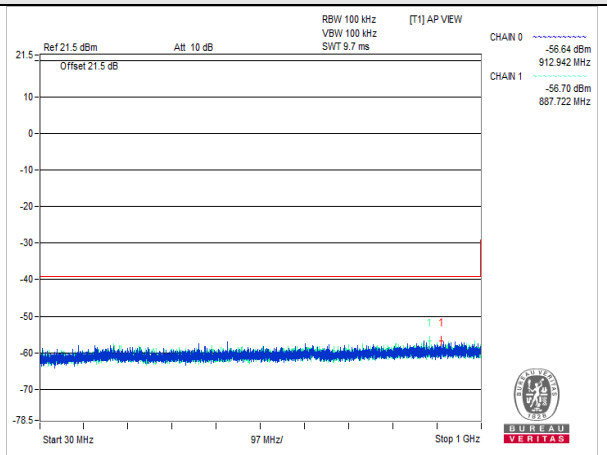


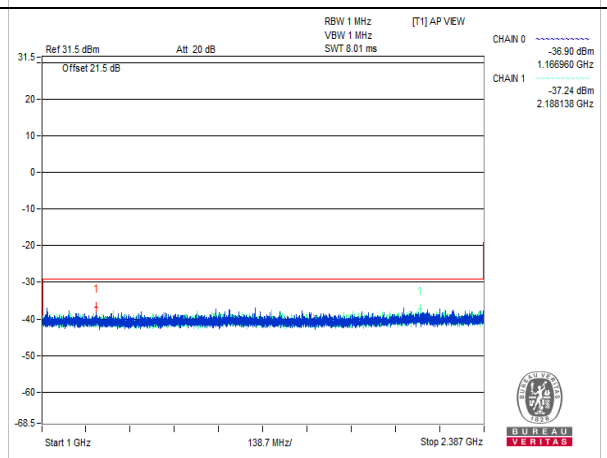


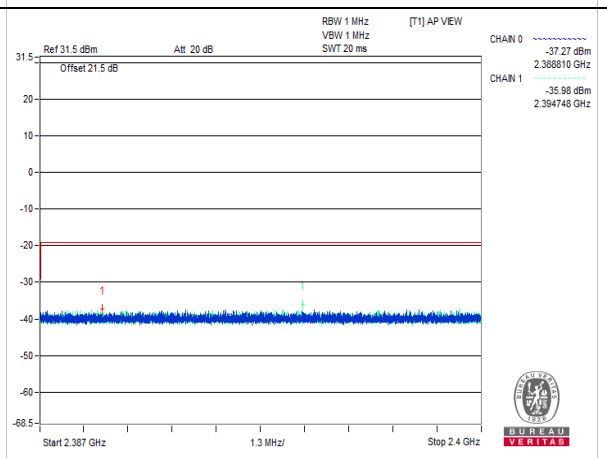
CH 7 (2442MHz)

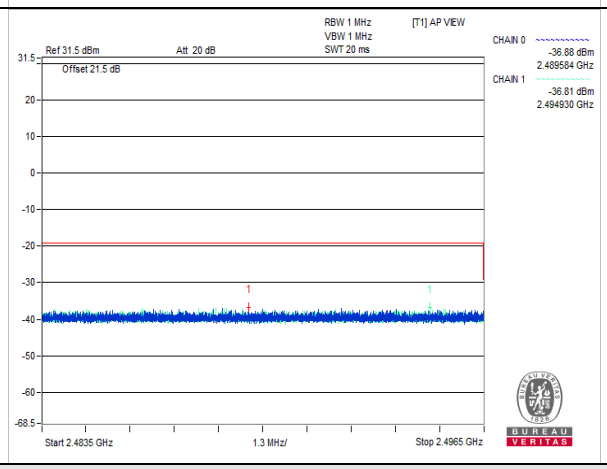
Vmax.

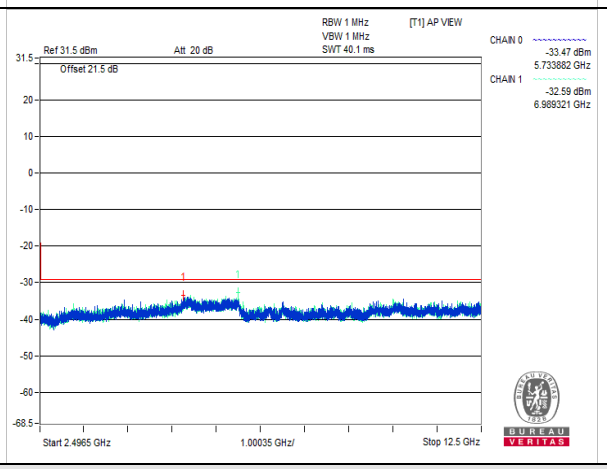






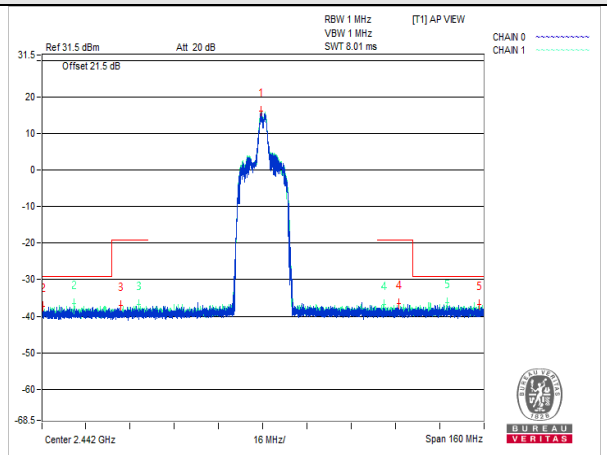


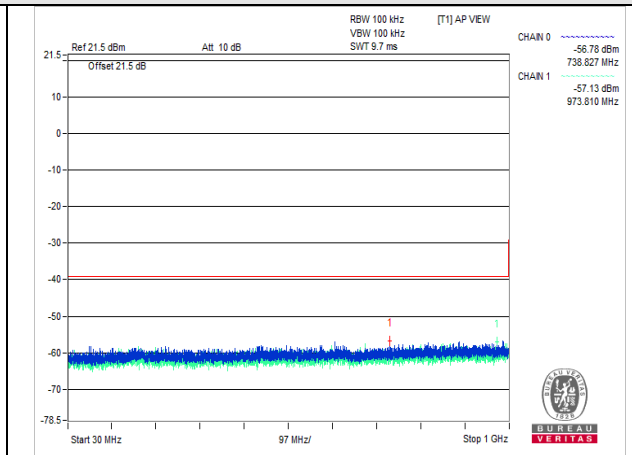


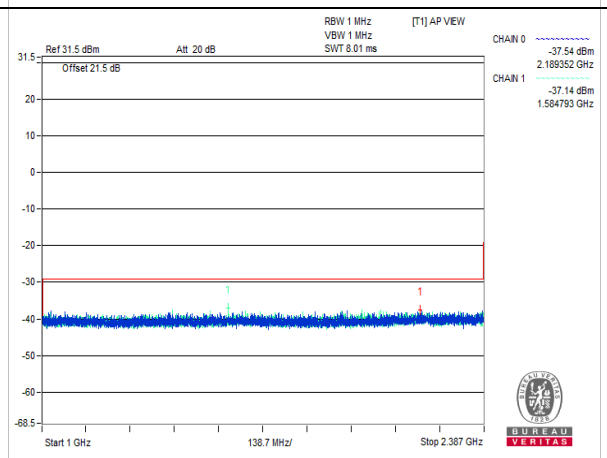


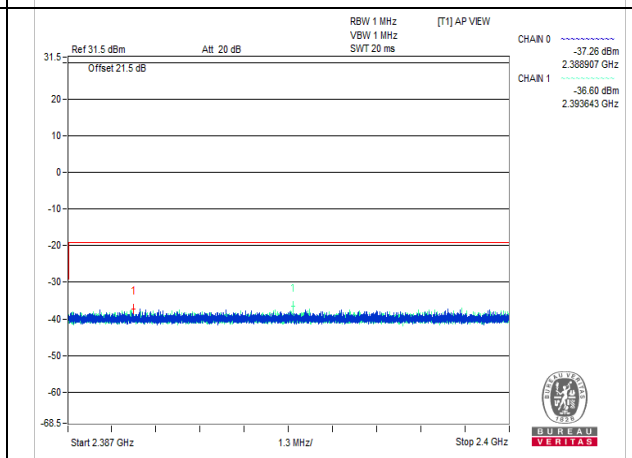
CH 7 (2442MHz)

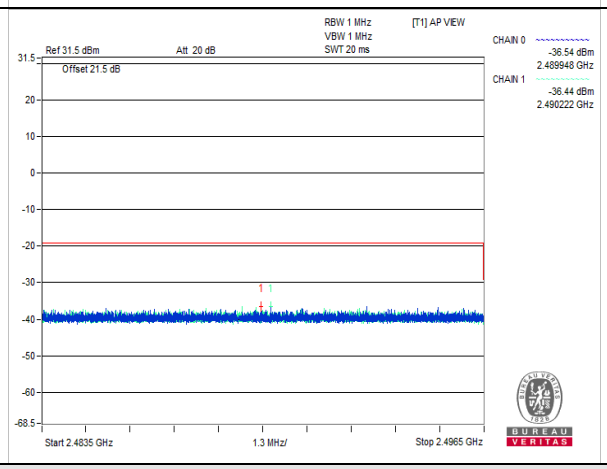
Vmin.

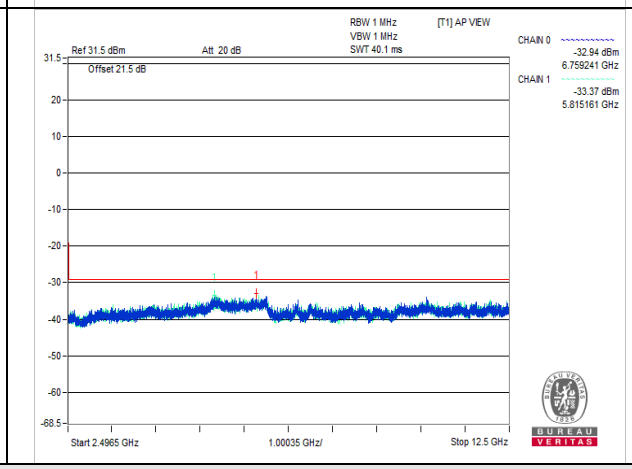






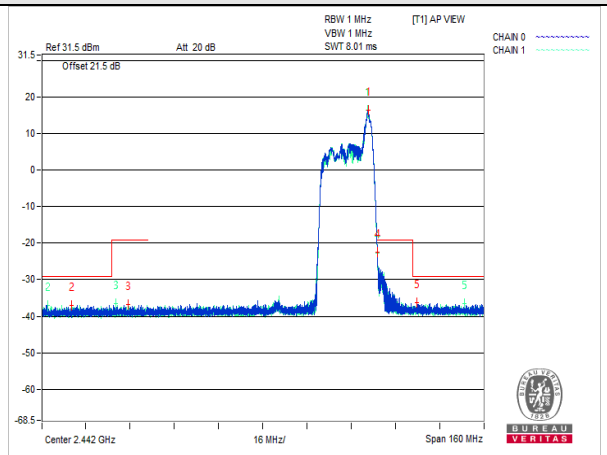


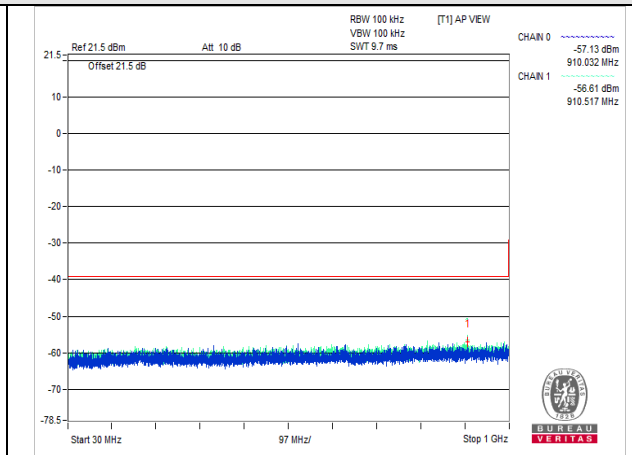


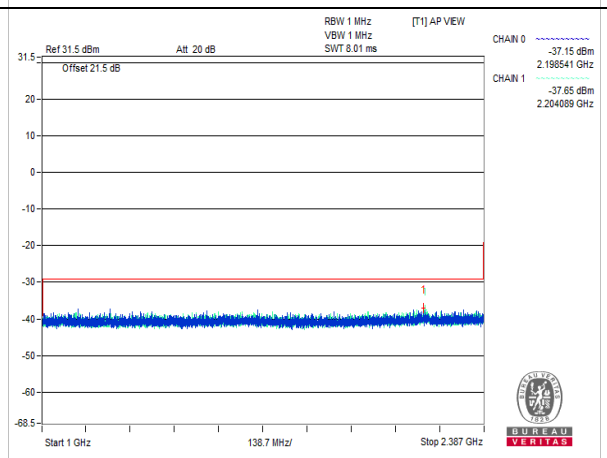


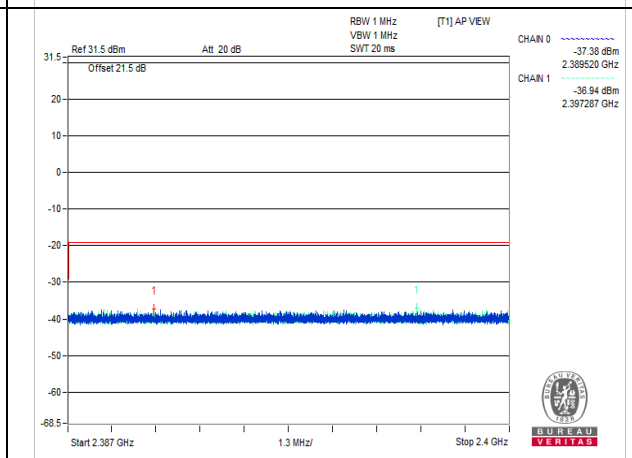
CH 7 (2442MHz)

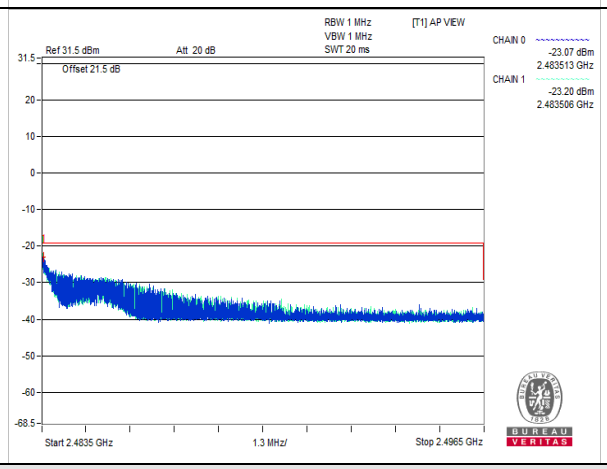
Vnormal

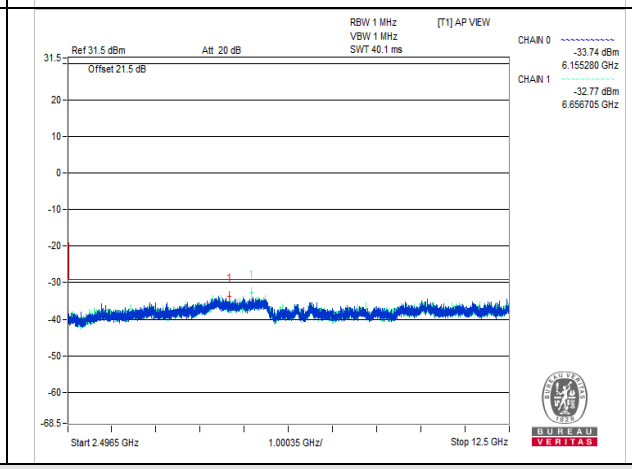






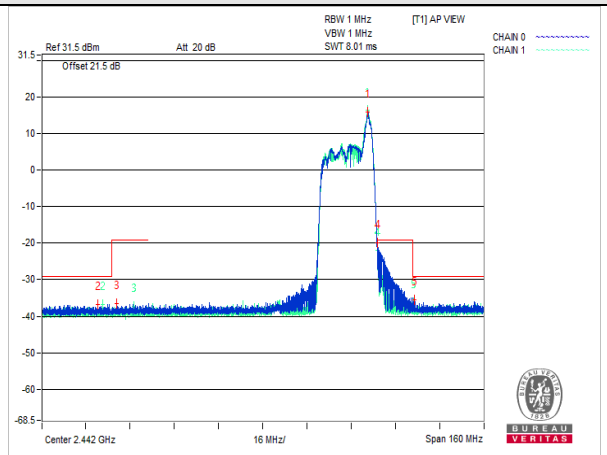


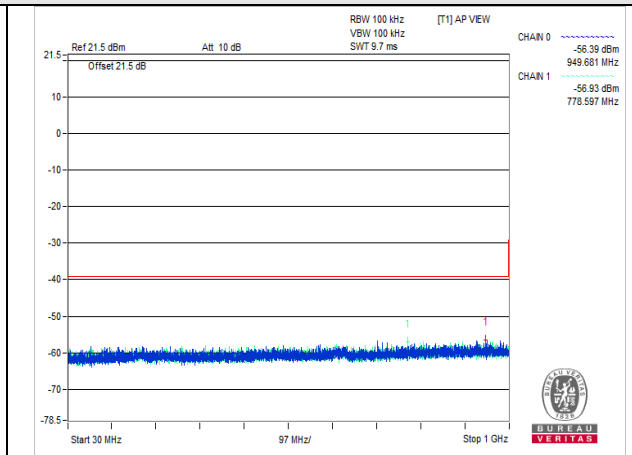


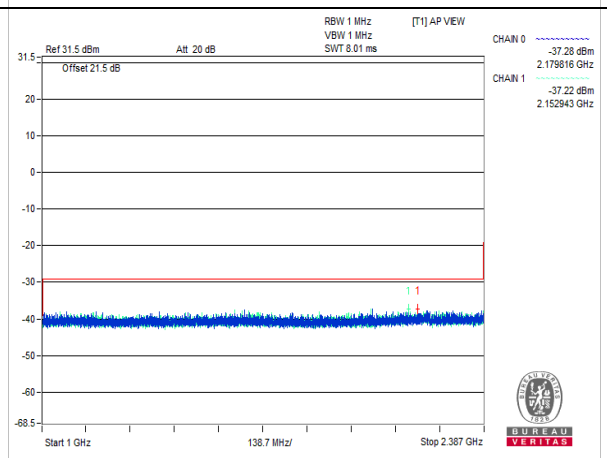


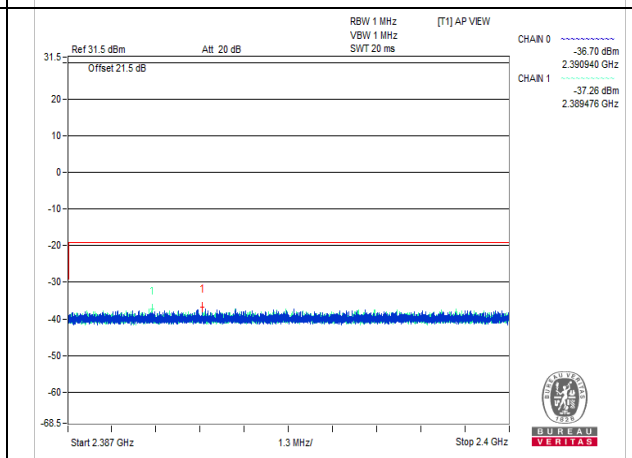
CH 13 (2472MHz)

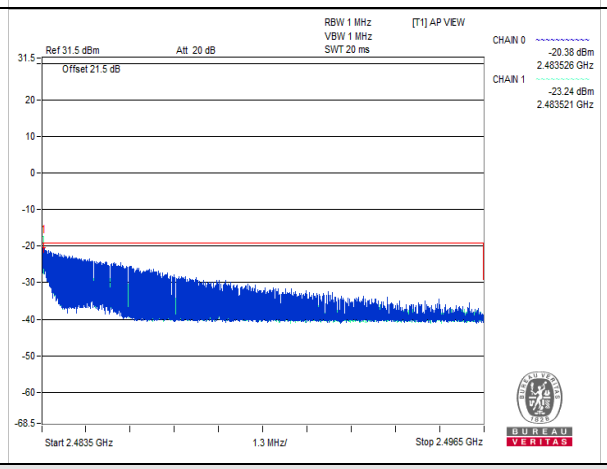
Vmax.

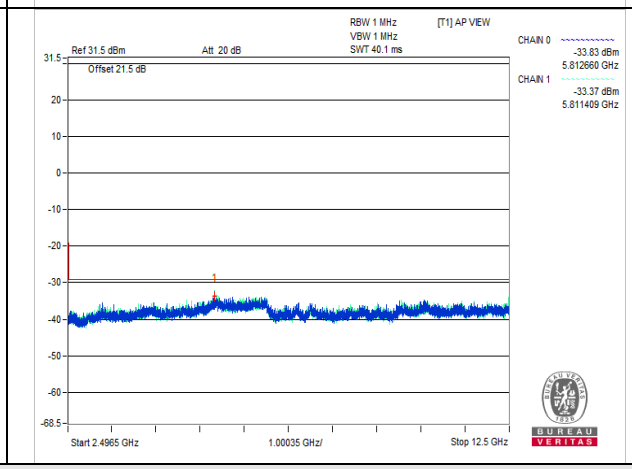






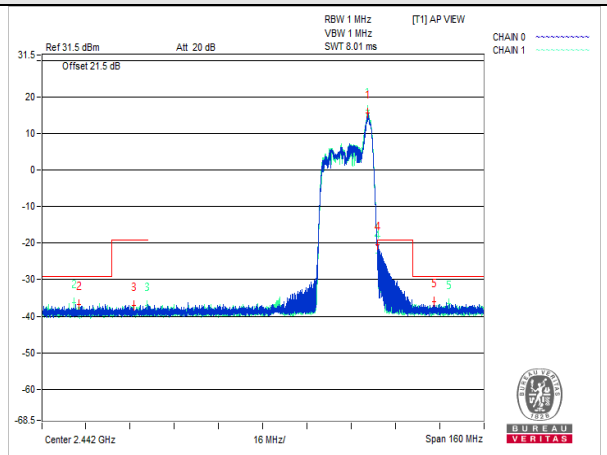


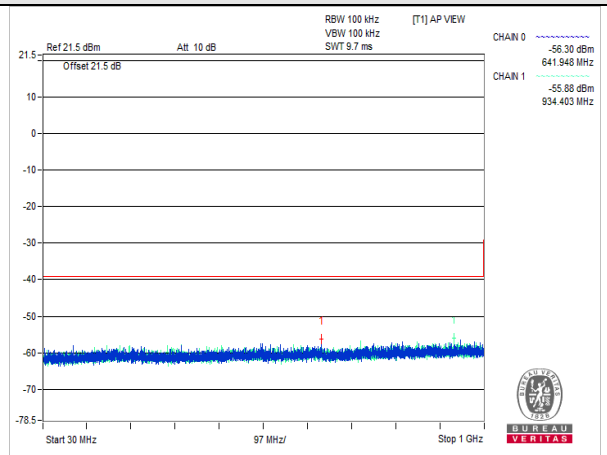


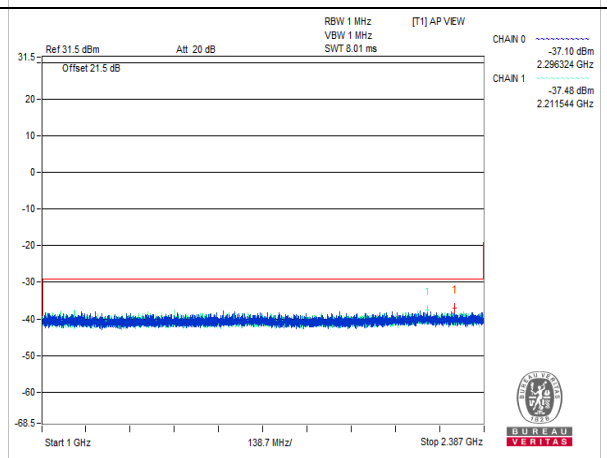


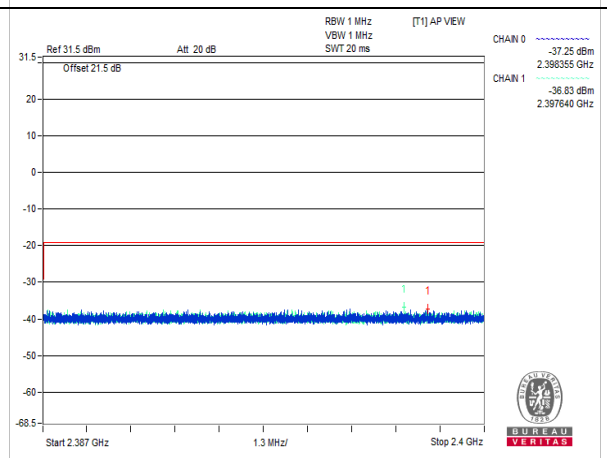
CH 13 (2472MHz)

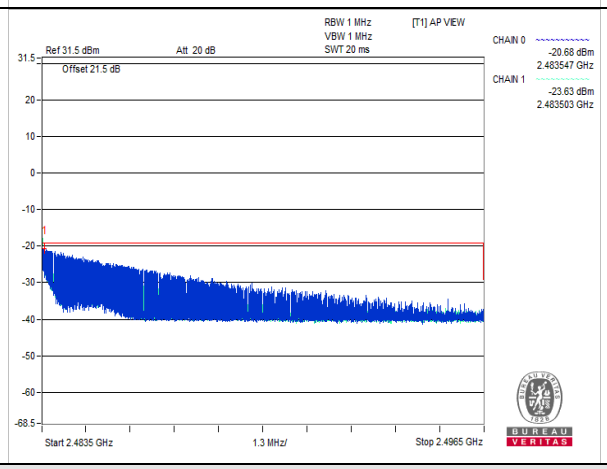
Vmin.

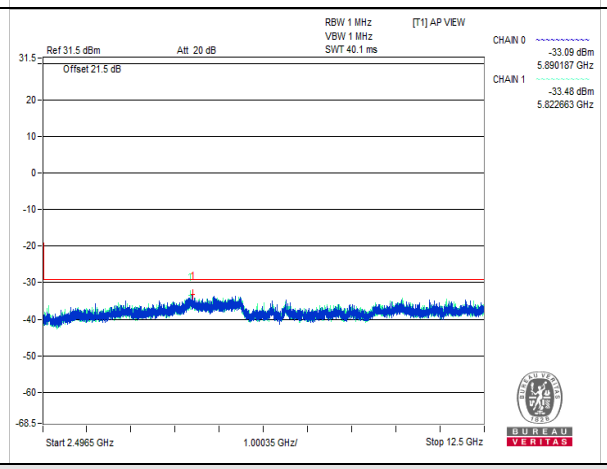












CH 13 (2472MHz)

[Worst result] x [Number of antenna ports]

TEST CHANNEL		CH 1 (2412MHz)		
TEST CONDITION	FREQUENCY RANGE(MHz)	MEASURE. VALUE (uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	0.004572	0.25	PASS
	1000.0 to 2387.0	0.352396	2.5	PASS
	2387.0 to 2400.0	2.748084	25	PASS
	2483.5 to 2496.5	0.460288	25	PASS
	2496.5 to 12500.0	0.995474	2.5	PASS
$V_{max.}$	30.0 to 1000.0	0.004168	0.25	PASS
	1000.0 to 2387.0	0.381970	2.5	PASS
	2387.0 to 2400.0	2.443600	25	PASS
	2483.5 to 2496.5	0.472096	25	PASS
	2496.5 to 12500.0	0.963896	2.5	PASS
$V_{min.}$	30.0 to 1000.0	0.005688	0.25	PASS
	1000.0 to 2387.0	0.381092	2.5	PASS
	2387.0 to 2400.0	2.812096	25	PASS
	2483.5 to 2496.5	0.477562	25	PASS
	2496.5 to 12500.0	1.028088	2.5	PASS
TEST CHANNEL		CH 7 (2442MHz)		
V_{normal}	30.0 to 1000.0	0.004530	0.25	PASS
	1000.0 to 2387.0	0.398134	2.5	PASS
	2387.0 to 2400.0	0.447744	25	PASS
	2483.5 to 2496.5	0.540792	25	PASS
	2496.5 to 12500.0	1.007002	2.5	PASS
$V_{max.}$	30.0 to 1000.0	0.004336	0.25	PASS
	1000.0 to 2387.0	0.408348	2.5	PASS
	2387.0 to 2400.0	0.504696	25	PASS
	2483.5 to 2496.5	0.416898	25	PASS
	2496.5 to 12500.0	1.101616	2.5	PASS
$V_{min.}$	30.0 to 1000.0	0.004198	0.25	PASS
	1000.0 to 2387.0	0.386394	2.5	PASS
	2387.0 to 2400.0	0.437552	25	PASS
	2483.5 to 2496.5	0.453972	25	PASS
	2496.5 to 12500.0	1.016318	2.5	PASS

TEST CHANNEL		CH 13 (2472MHz)		
TEST CONDITION	FREQUENCY RANGE(MHz)	MEASURE. VALUE (uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	0.004366	0.25	PASS
	1000.0 to 2387.0	0.385504	2.5	PASS
	2387.0 to 2400.0	0.404604	25	PASS
	2483.5 to 2496.5	9.863476	25	PASS
	2496.5 to 12500.0	1.056890	2.5	PASS
$V_{max.}$	30.0 to 1000.0	0.004592	0.25	PASS
	1000.0 to 2387.0	0.379342	2.5	PASS
	2387.0 to 2400.0	0.427592	25	PASS
	2483.5 to 2496.5	18.324410	25	PASS
	2496.5 to 12500.0	0.920514	2.5	PASS
$V_{min.}$	30.0 to 1000.0	0.005164	0.25	PASS
	1000.0 to 2387.0	0.389968	2.5	PASS
	2387.0 to 2400.0	0.414982	25	PASS
	2483.5 to 2496.5	17.101334	25	PASS
	2496.5 to 12500.0	0.981816	2.5	PASS

802.11ax (RU52)

Chain 0

TEST CHANNEL		CH 1 (2412MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	980.478	0.002377	0.125	PASS
	1000.0 to 2387.0	1675.642	0.178649	1.25	PASS
	2387.0 to 2400.0	2399.891	0.864968	12.5	PASS
	2483.5 to 2496.5	2495.198	0.251768	12.5	PASS
	2496.5 to 12500.0	6727.980	0.477529	1.25	PASS
$V_{max.}$	30.0 to 1000.0	575.018	0.001816	0.125	PASS
	1000.0 to 2387.0	1636.459	0.209411	1.25	PASS
	2387.0 to 2400.0	2399.397	0.891251	12.5	PASS
	2483.5 to 2496.5	2493.040	0.215278	12.5	PASS
	2496.5 to 12500.0	5958.961	0.574116	1.25	PASS
$V_{min.}$	30.0 to 1000.0	773.141	0.002183	0.125	PASS
	1000.0 to 2387.0	2313.142	0.187499	1.25	PASS
	2387.0 to 2400.0	2399.948	0.901571	12.5	PASS
	2483.5 to 2496.5	2495.473	0.236048	12.5	PASS
	2496.5 to 12500.0	6996.824	0.516416	1.25	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	964.595	0.002084	0.125	PASS
	1000.0 to 2387.0	2211.024	0.196336	1.25	PASS
	2387.0 to 2400.0	2397.175	0.191426	12.5	PASS
	2483.5 to 2496.5	2496.191	0.205116	12.5	PASS
	2496.5 to 12500.0	5893.938	0.467735	1.25	PASS
$V_{max.}$	30.0 to 1000.0	528.095	0.001945	0.125	PASS
	1000.0 to 2387.0	2340.535	0.203236	1.25	PASS
	2387.0 to 2400.0	2393.311	0.200909	12.5	PASS
	2483.5 to 2496.5	2485.773	0.224905	12.5	PASS
	2496.5 to 12500.0	5776.397	0.447713	1.25	PASS
$V_{min.}$	30.0 to 1000.0	952.712	0.002113	0.125	PASS
	1000.0 to 2387.0	2122.083	0.183231	1.25	PASS
	2387.0 to 2400.0	2392.526	0.207014	12.5	PASS
	2483.5 to 2496.5	2487.370	0.218273	12.5	PASS
	2496.5 to 12500.0	5856.425	0.453942	1.25	PASS

TEST CHANNEL		CH 13 (2472MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	966.898	0.002118	0.125	PASS
	1000.0 to 2387.0	2314.876	0.190108	1.25	PASS
	2387.0 to 2400.0	2394.401	0.192752	12.5	PASS
	2483.5 to 2496.5	2483.621	10.351422	12.5	PASS
	2496.5 to 12500.0	5800.155	0.487528	1.25	PASS
$V_{max.}$	30.0 to 1000.0	973.810	0.002350	0.125	PASS
	1000.0 to 2387.0	1956.856	0.207970	1.25	PASS
	2387.0 to 2400.0	2397.577	0.210378	12.5	PASS
	2483.5 to 2496.5	2483.522	10.185914	12.5	PASS
	2496.5 to 12500.0	6926.800	0.473151	1.25	PASS
$V_{min.}$	30.0 to 1000.0	966.050	0.002500	0.125	PASS
	1000.0 to 2387.0	1773.425	0.203236	1.25	PASS
	2387.0 to 2400.0	2394.271	0.194536	12.5	PASS
	2483.5 to 2496.5	2483.558	10.162487	12.5	PASS
	2496.5 to 12500.0	6989.321	0.447713	1.25	PASS

NOTE: 1. The spectrum plots are attached on the following pages.

Chain 1

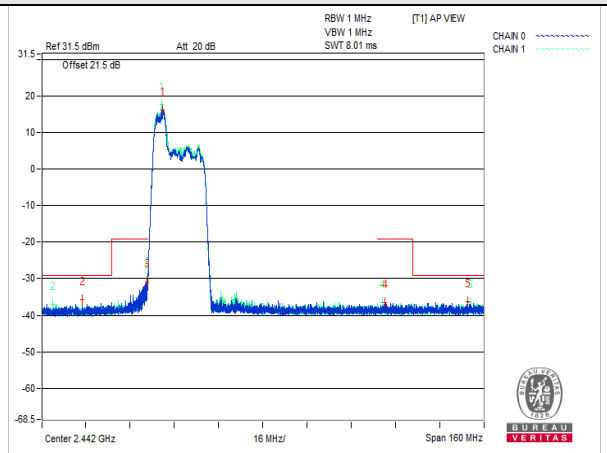
TEST CHANNEL		CH 1 (2412MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	944.225	0.002153	0.125	PASS
	1000.0 to 2387.0	1969.339	0.200909	1.25	PASS
	2387.0 to 2400.0	2399.928	0.993116	12.5	PASS
	2483.5 to 2496.5	2486.022	0.208930	12.5	PASS
	2496.5 to 12500.0	6951.808	0.459198	1.25	PASS
$V_{max.}$	30.0 to 1000.0	850.983	0.001954	0.125	PASS
	1000.0 to 2387.0	1573.524	0.183654	1.25	PASS
	2387.0 to 2400.0	2399.970	1.399587	12.5	PASS
	2483.5 to 2496.5	2491.538	0.215774	12.5	PASS
	2496.5 to 12500.0	5893.938	0.465586	1.25	PASS
$V_{min.}$	30.0 to 1000.0	993.937	0.002056	0.125	PASS
	1000.0 to 2387.0	1147.368	0.182810	1.25	PASS
	2387.0 to 2400.0	2399.965	0.995405	12.5	PASS
	2483.5 to 2496.5	2493.324	0.204644	12.5	PASS
	2496.5 to 12500.0	6958.061	0.509331	1.25	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	992.967	0.002198	0.125	PASS
	1000.0 to 2387.0	1015.257	0.183654	1.25	PASS
	2387.0 to 2400.0	2393.244	0.202768	12.5	PASS
	2483.5 to 2496.5	2486.668	0.213796	12.5	PASS
	2496.5 to 12500.0	6836.768	0.468813	1.25	PASS
$V_{max.}$	30.0 to 1000.0	997.575	0.002070	0.125	PASS
	1000.0 to 2387.0	2240.671	0.187932	1.25	PASS
	2387.0 to 2400.0	2391.858	0.196336	12.5	PASS
	2483.5 to 2496.5	2485.037	0.214783	12.5	PASS
	2496.5 to 12500.0	6696.719	0.550808	1.25	PASS
$V_{min.}$	30.0 to 1000.0	976.598	0.002234	0.125	PASS
	1000.0 to 2387.0	1403.443	0.173380	1.25	PASS
	2387.0 to 2400.0	2390.937	0.226986	12.5	PASS
	2483.5 to 2496.5	2493.682	0.220800	12.5	PASS
	2496.5 to 12500.0	6081.504	0.602560	1.25	PASS

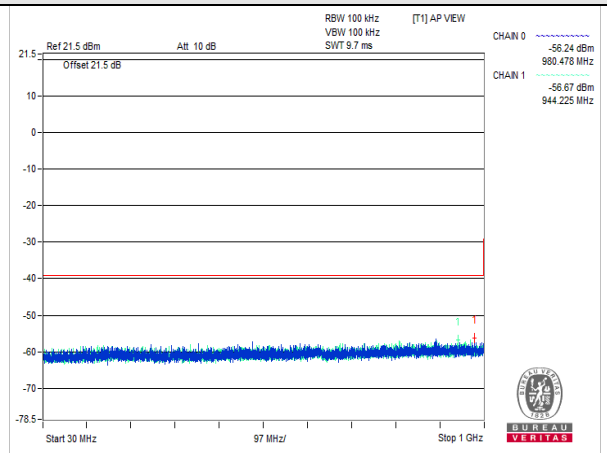
TEST CHANNEL		CH 13 (2472MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	493.660	0.001936	0.125	PASS
	1000.0 to 2387.0	1647.035	0.185353	1.25	PASS
	2387.0 to 2400.0	2395.300	0.213796	12.5	PASS
	2483.5 to 2496.5	2483.526	8.649679	12.5	PASS
	2496.5 to 12500.0	6747.987	0.486407	1.25	PASS
$V_{max.}$	30.0 to 1000.0	934.888	0.001995	0.125	PASS
	1000.0 to 2387.0	1703.382	0.186638	1.25	PASS
	2387.0 to 2400.0	2398.781	0.201837	12.5	PASS
	2483.5 to 2496.5	2483.511	8.472274	12.5	PASS
	2496.5 to 12500.0	6844.271	0.441570	1.25	PASS
$V_{min.}$	30.0 to 1000.0	906.758	0.002113	0.125	PASS
	1000.0 to 2387.0	2157.104	0.188799	1.25	PASS
	2387.0 to 2400.0	2389.782	0.224905	12.5	PASS
	2483.5 to 2496.5	2483.509	8.770008	12.5	PASS
	2496.5 to 12500.0	6686.716	0.452898	1.25	PASS

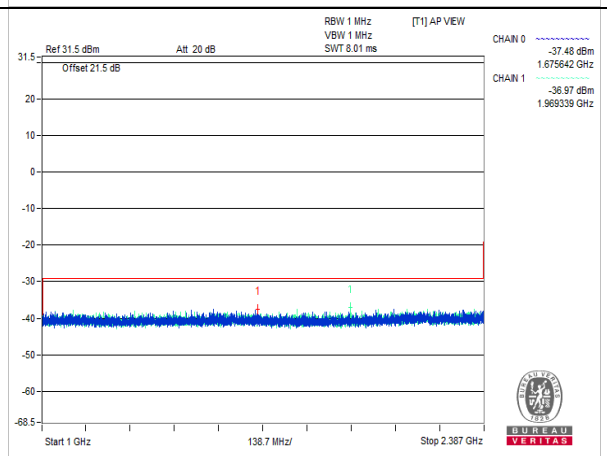
NOTE: 1. The spectrum plots are attached on the following pages.

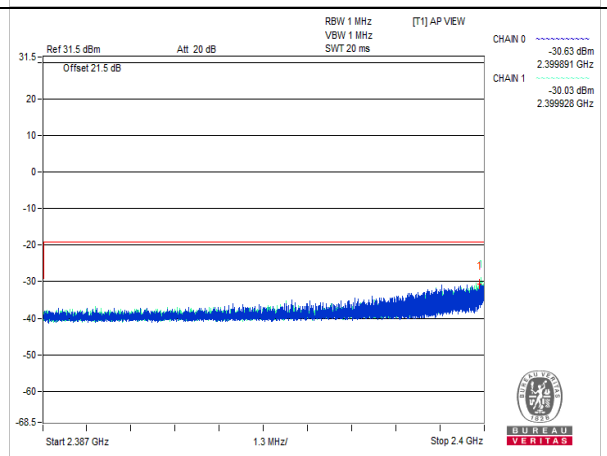
Graph

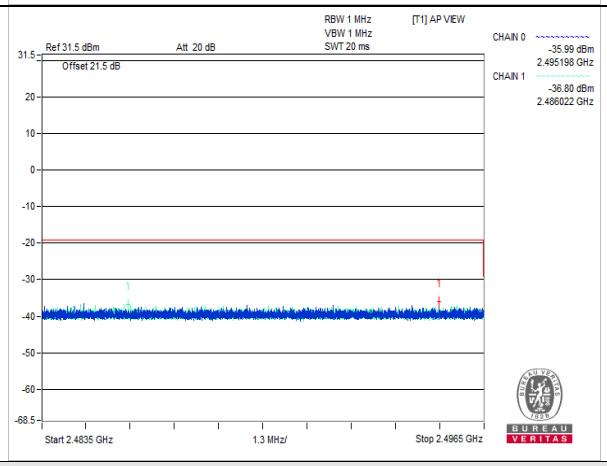
Vnormal

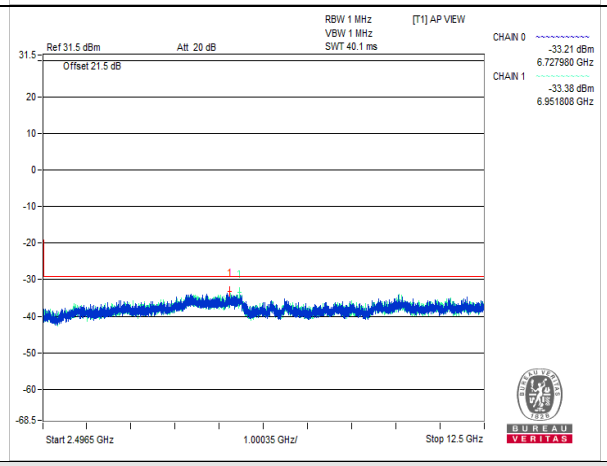






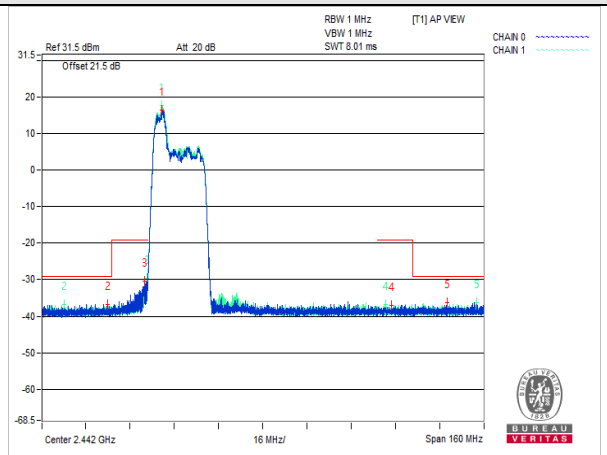


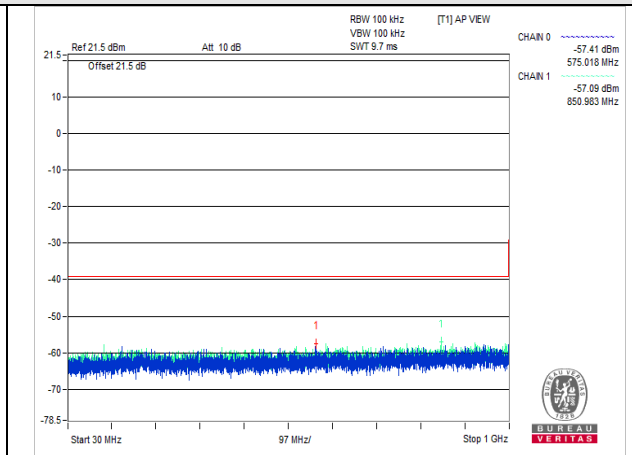


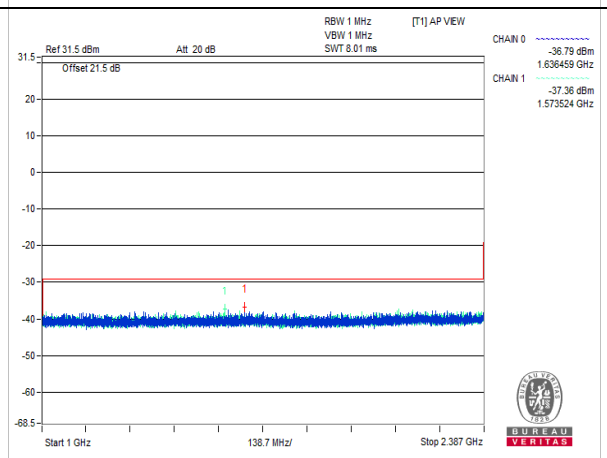


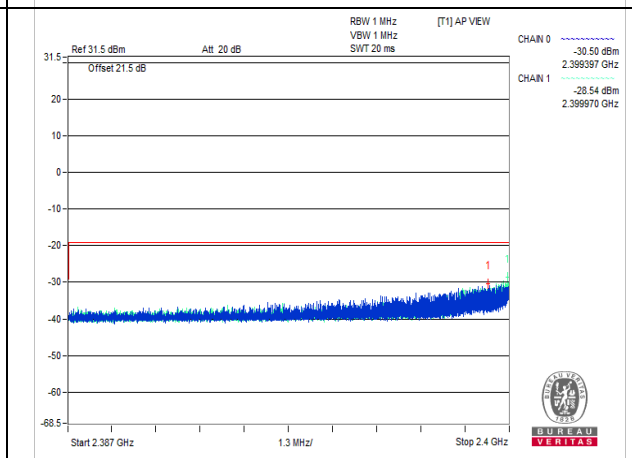
CH 1 (2412MHz)

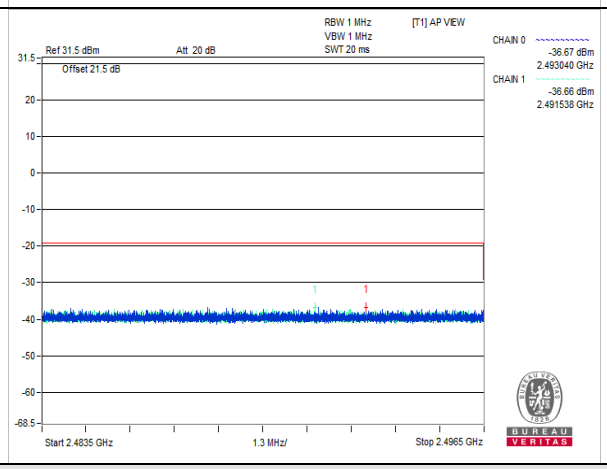
Vmax.

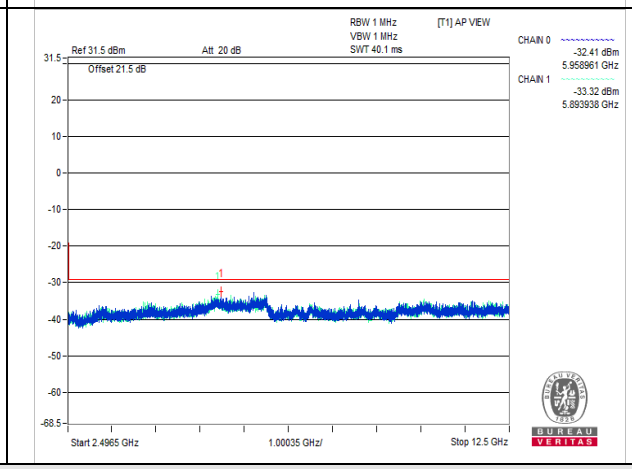






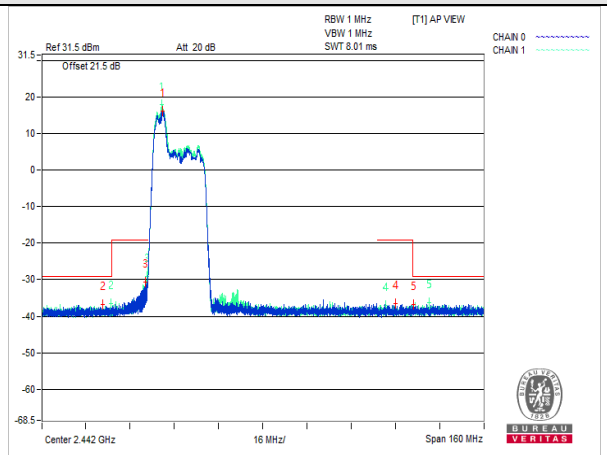


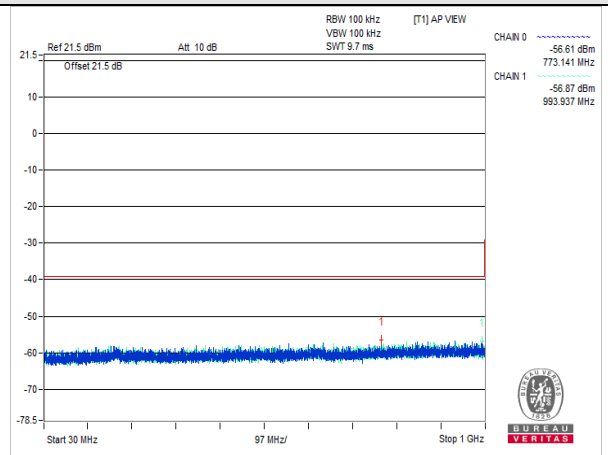


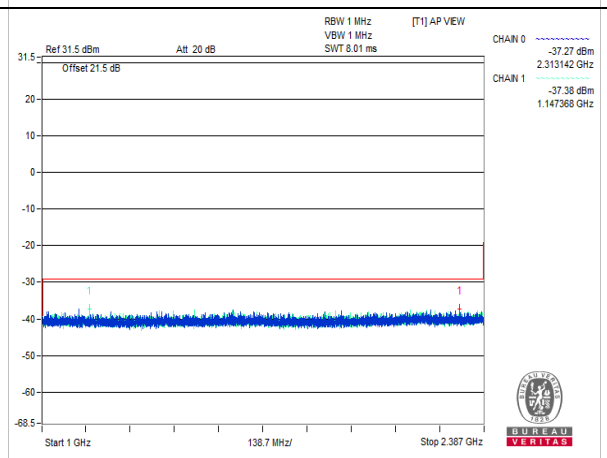


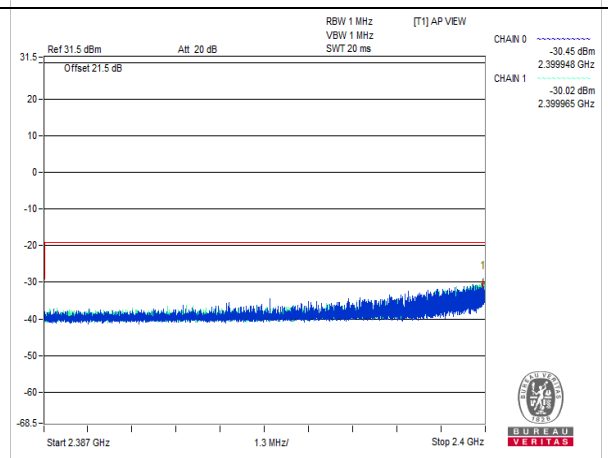
CH 1 (2412MHz)

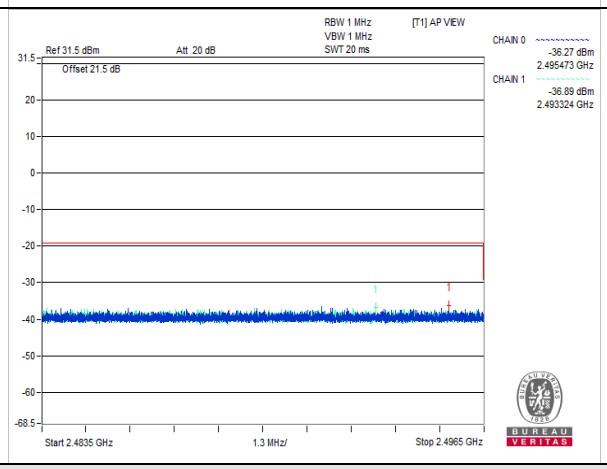
Vmin.

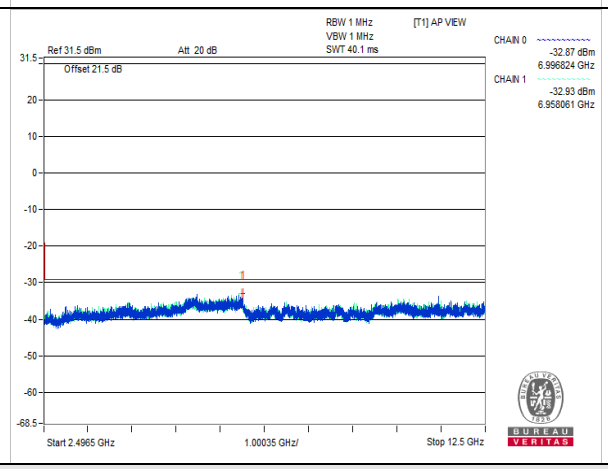






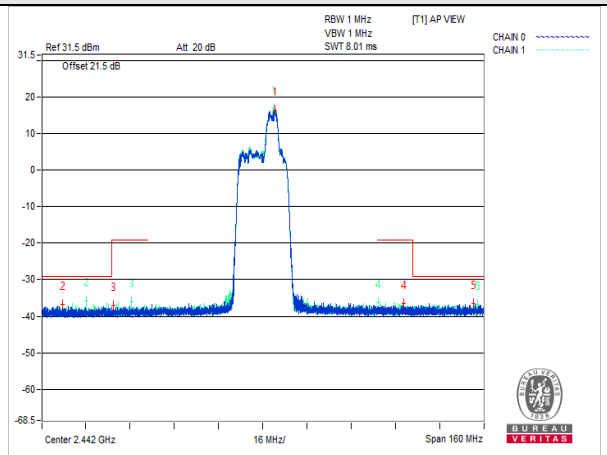


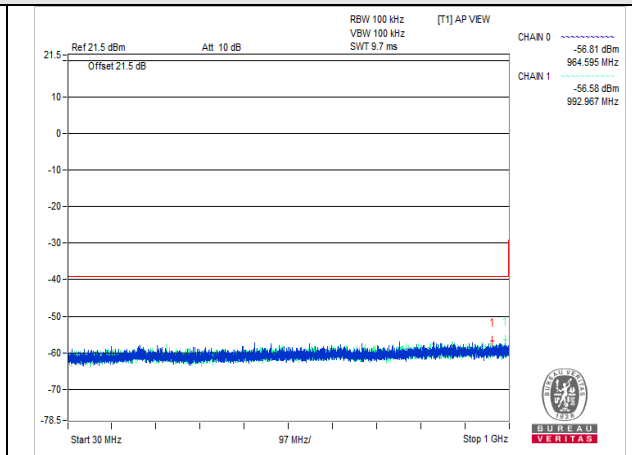


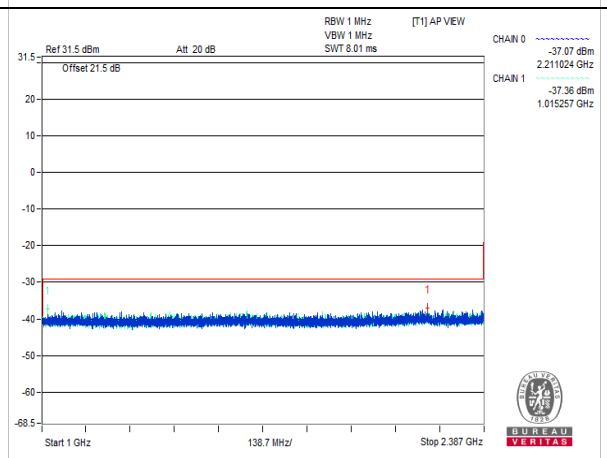


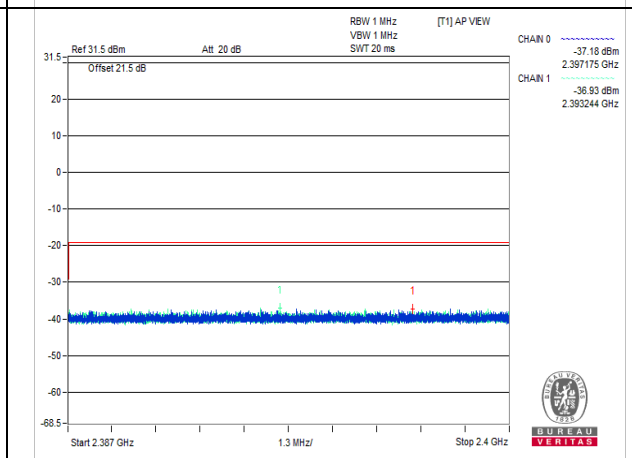
CH 1 (2412MHz)

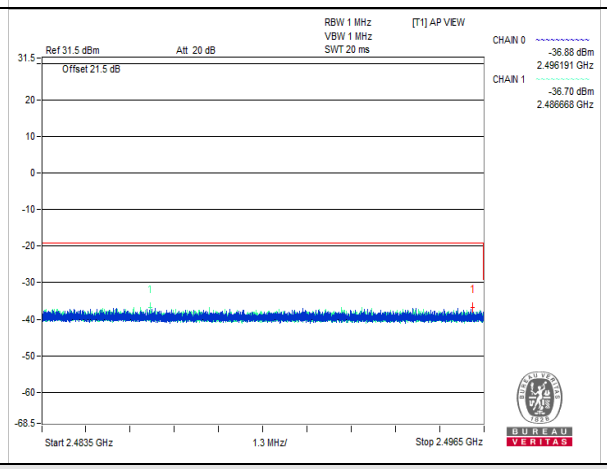
Vnormal

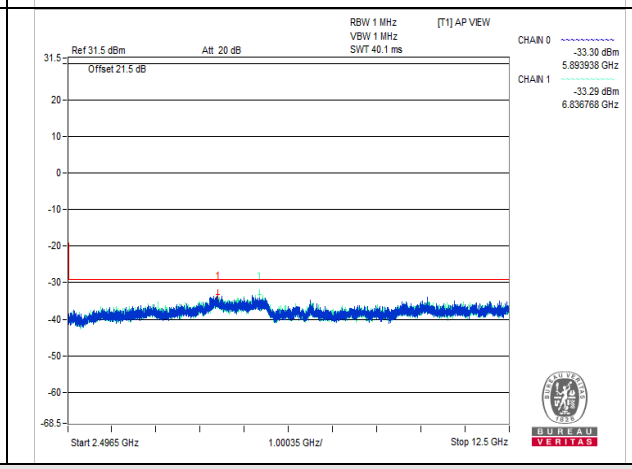






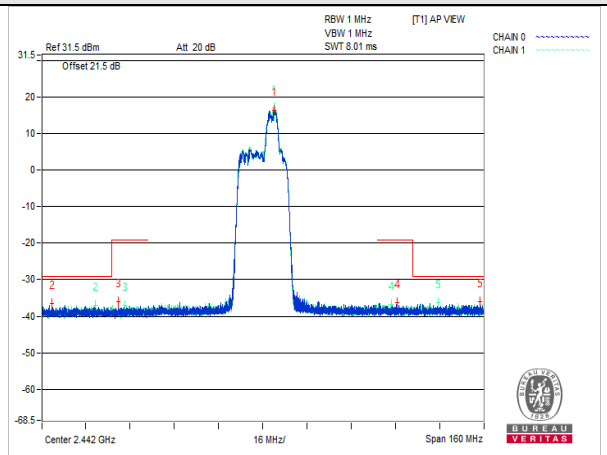


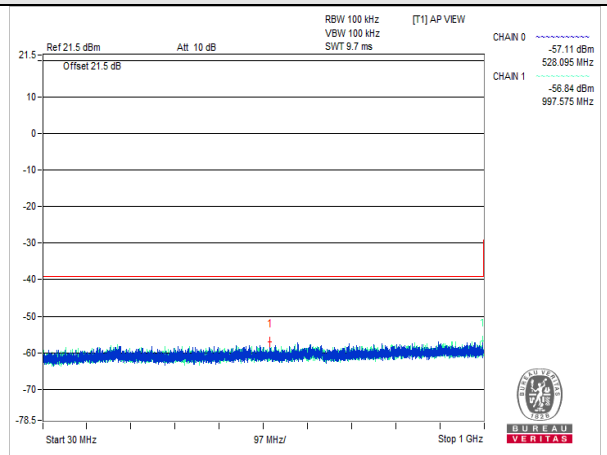


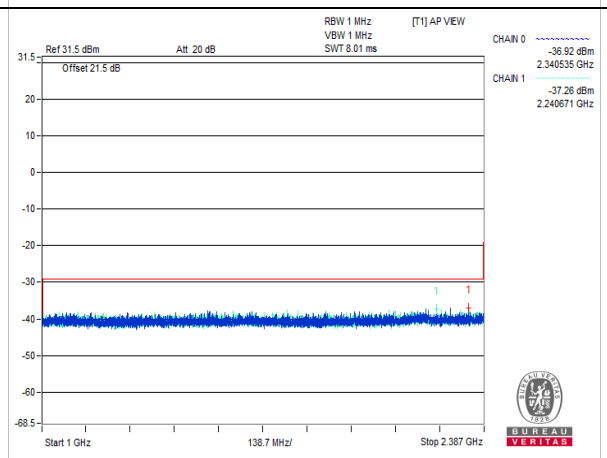


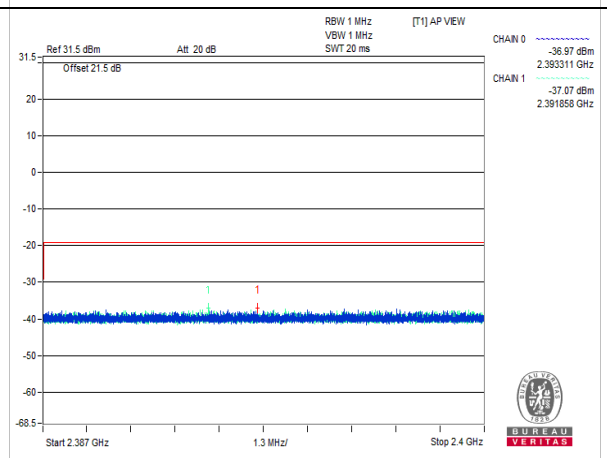
CH 7 (2442MHz)

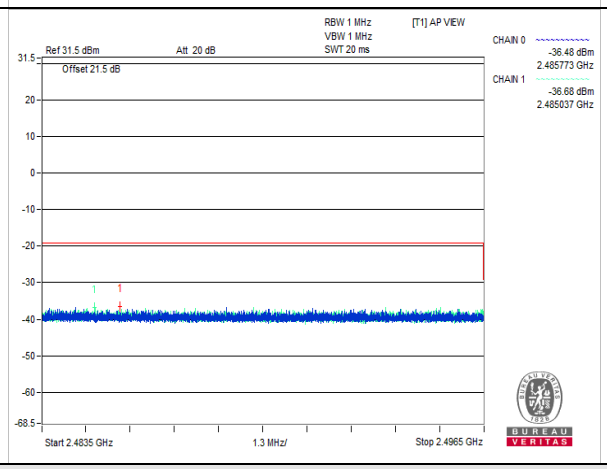
Vmax.

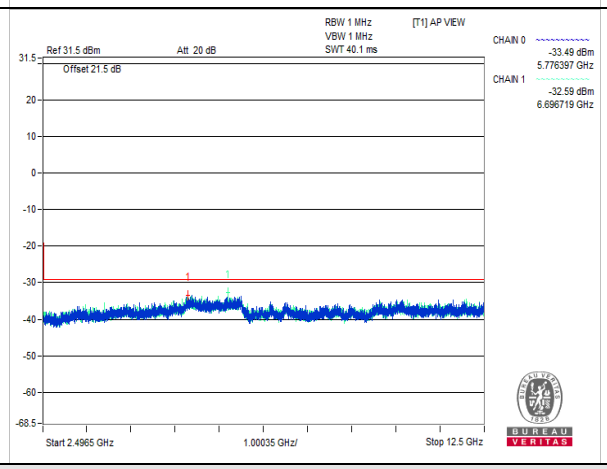






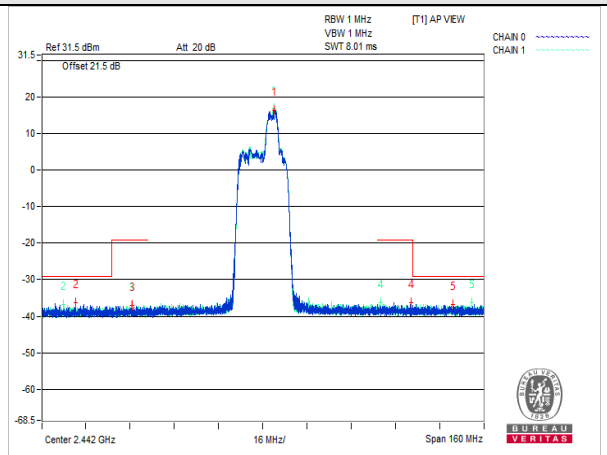


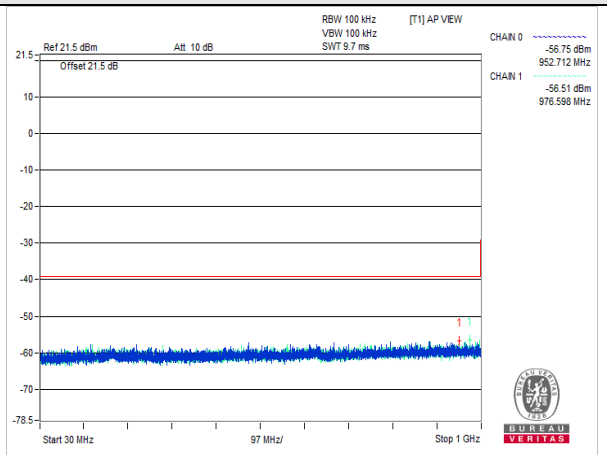


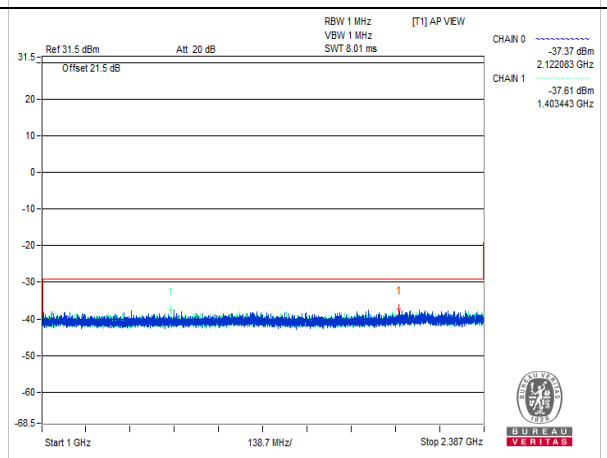


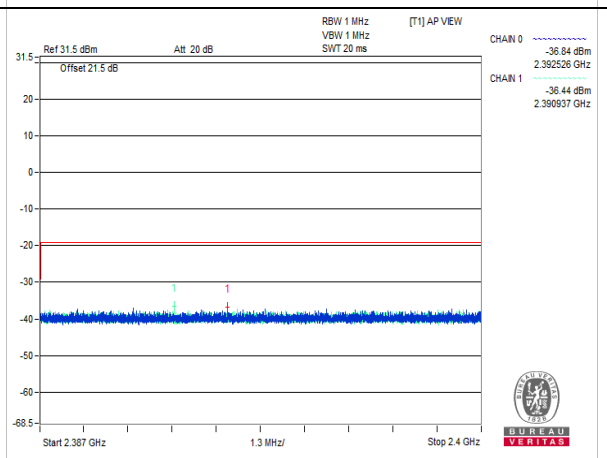
CH 7 (2442MHz)

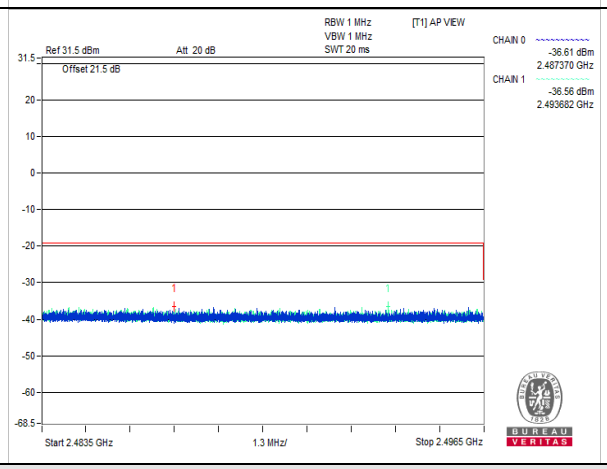
Vmin.

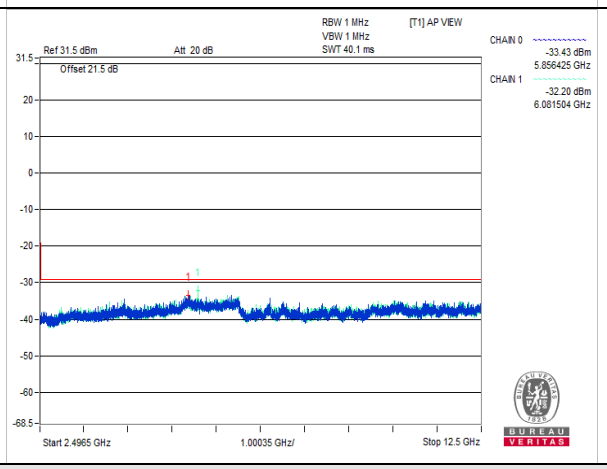






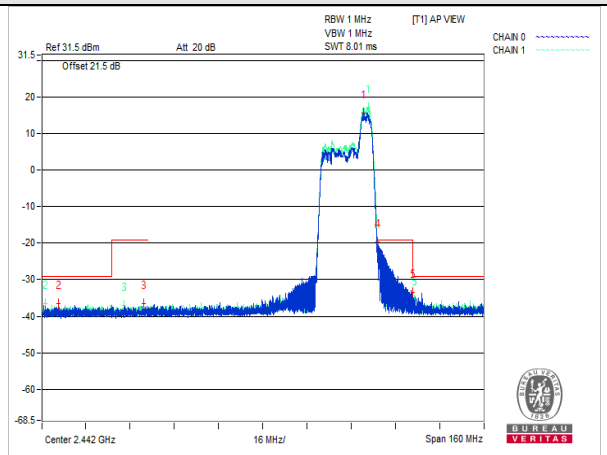


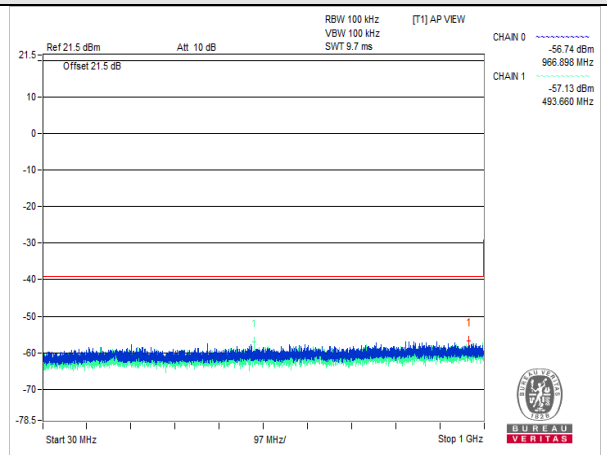


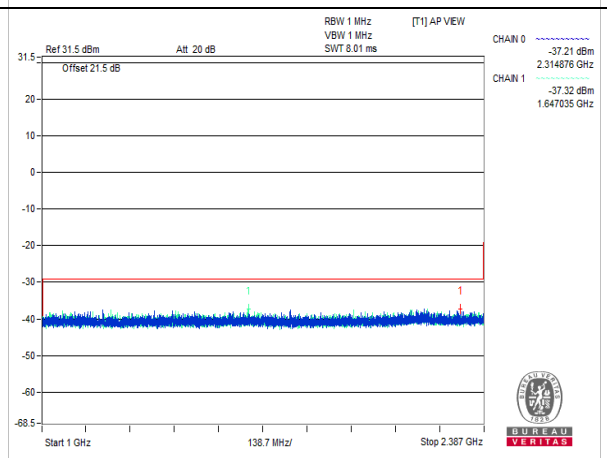


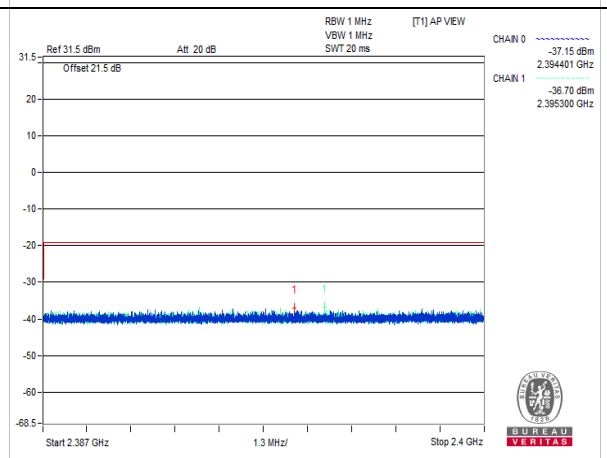
CH 7 (2442MHz)

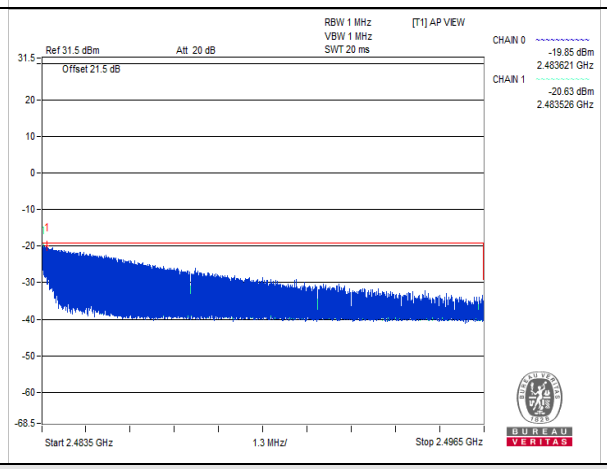
Vnormal

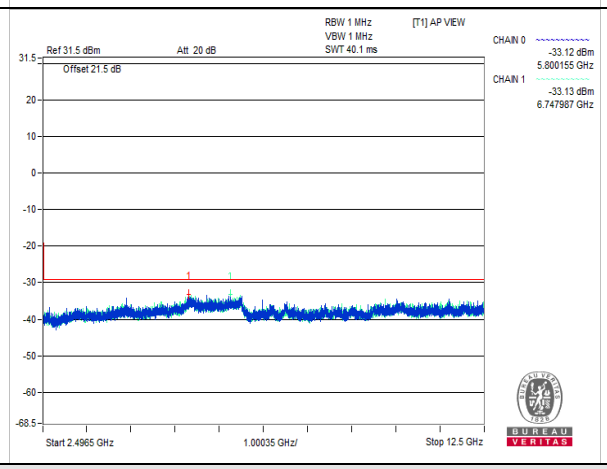






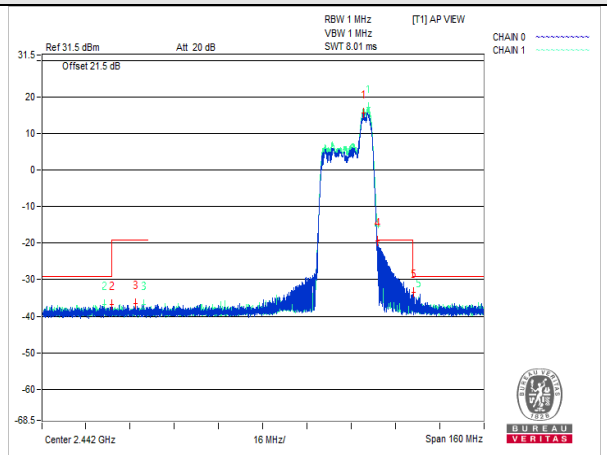


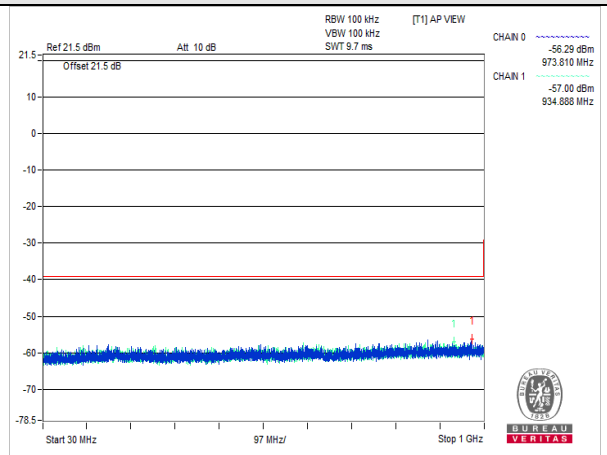


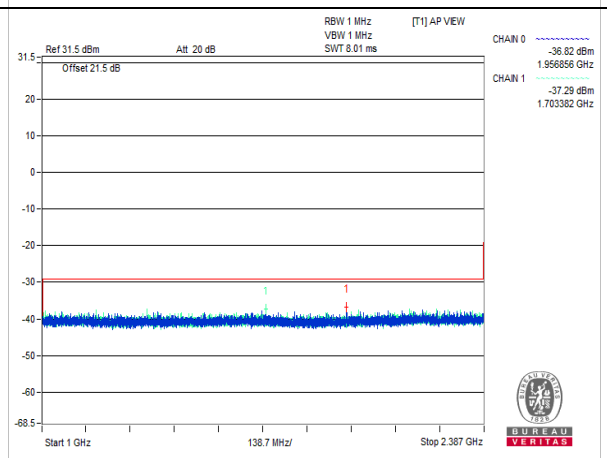


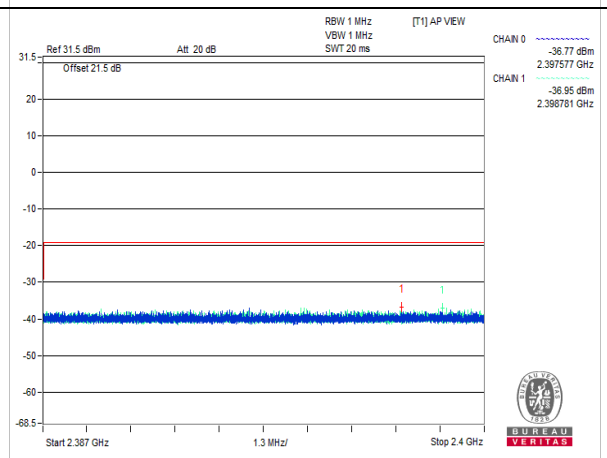
CH 13 (2472MHz)

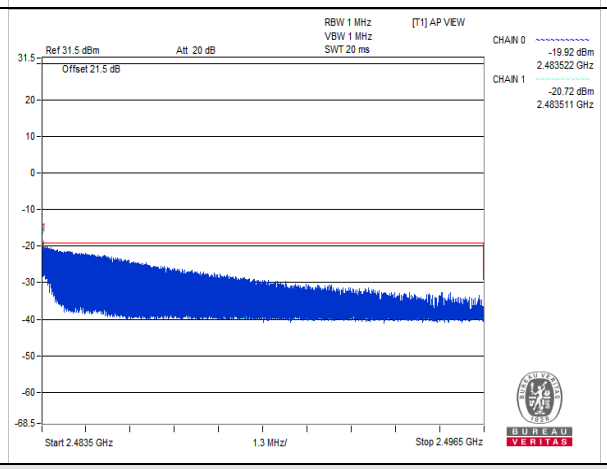
Vmax.

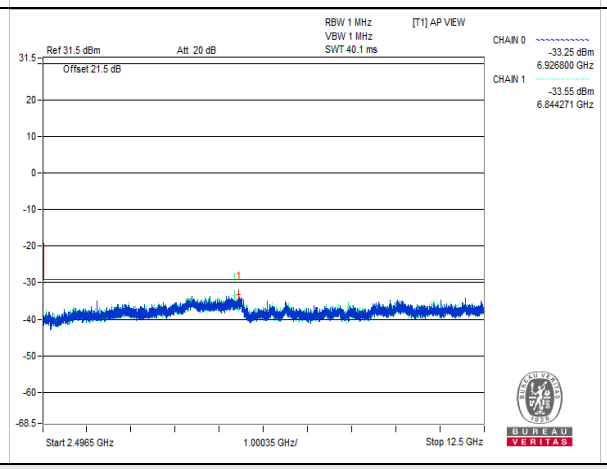






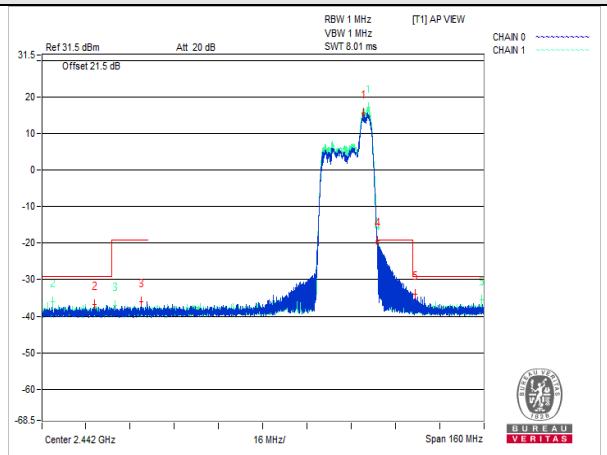


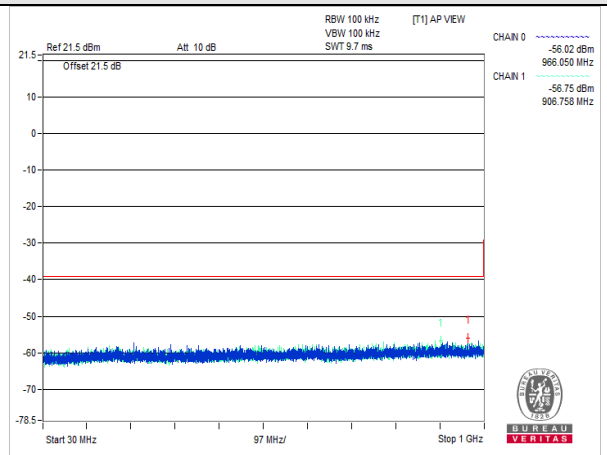


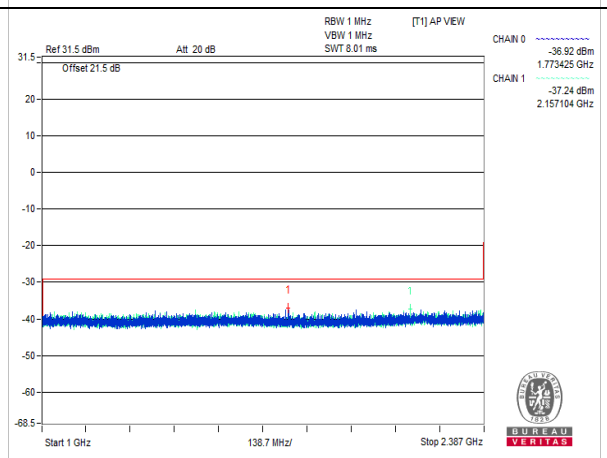


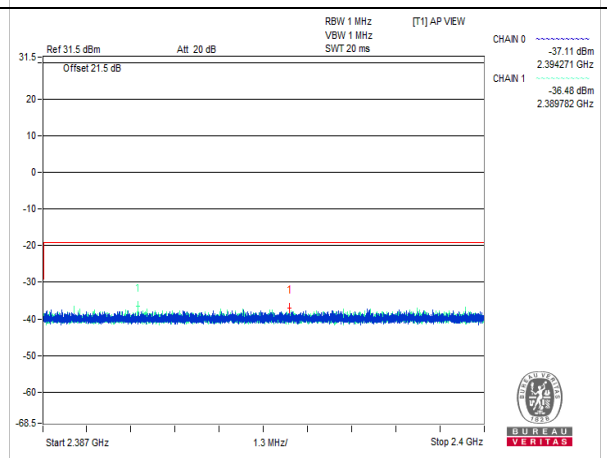
CH 13 (2472MHz)

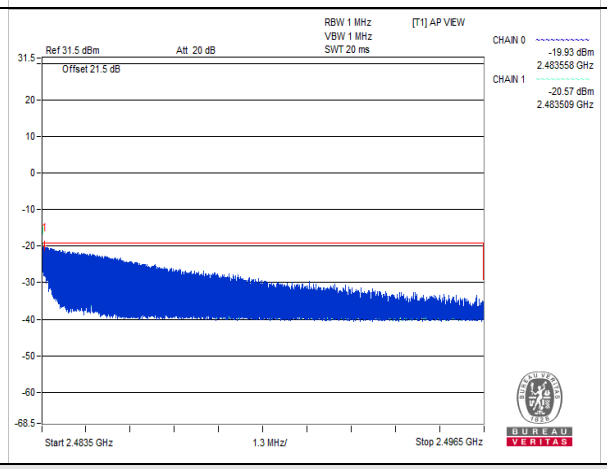
Vmin.

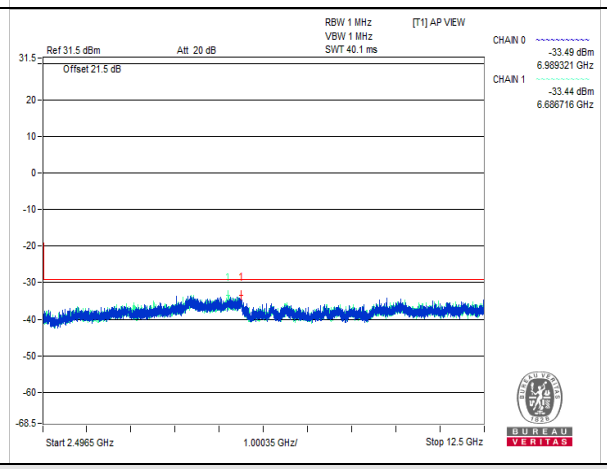












CH 13 (2472MHz)

[Worst result] x [Number of antenna ports]

TEST CHANNEL		CH 1 (2412MHz)		
TEST CONDITION	FREQUENCY RANGE(MHz)	MEASURE. VALUE (uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	0.004754	0.25	PASS
	1000.0 to 2387.0	0.401818	2.5	PASS
	2387.0 to 2400.0	1.986232	25	PASS
	2483.5 to 2496.5	0.503536	25	PASS
	2496.5 to 12500.0	0.955058	2.5	PASS
$V_{max.}$	30.0 to 1000.0	0.003908	0.25	PASS
	1000.0 to 2387.0	0.418822	2.5	PASS
	2387.0 to 2400.0	2.799174	25	PASS
	2483.5 to 2496.5	0.431548	25	PASS
	2496.5 to 12500.0	1.148232	2.5	PASS
$V_{min.}$	30.0 to 1000.0	0.004366	0.25	PASS
	1000.0 to 2387.0	0.374998	2.5	PASS
	2387.0 to 2400.0	1.990810	25	PASS
	2483.5 to 2496.5	0.472096	25	PASS
	2496.5 to 12500.0	1.032832	2.5	PASS
TEST CHANNEL		CH 7 (2442MHz)		
V_{normal}	30.0 to 1000.0	0.004396	0.25	PASS
	1000.0 to 2387.0	0.392672	2.5	PASS
	2387.0 to 2400.0	0.405536	25	PASS
	2483.5 to 2496.5	0.427592	25	PASS
	2496.5 to 12500.0	0.937626	2.5	PASS
$V_{max.}$	30.0 to 1000.0	0.004140	0.25	PASS
	1000.0 to 2387.0	0.406472	2.5	PASS
	2387.0 to 2400.0	0.401818	25	PASS
	2483.5 to 2496.5	0.449810	25	PASS
	2496.5 to 12500.0	1.101616	2.5	PASS
$V_{min.}$	30.0 to 1000.0	0.004468	0.25	PASS
	1000.0 to 2387.0	0.366462	2.5	PASS
	2387.0 to 2400.0	0.453972	25	PASS
	2483.5 to 2496.5	0.441600	25	PASS
	2496.5 to 12500.0	1.205120	2.5	PASS

TEST CHANNEL		CH 13 (2472MHz)		
TEST CONDITION	FREQUENCY RANGE(MHz)	MEASURE. VALUE (uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	0.004236	0.25	PASS
	1000.0 to 2387.0	0.380216	2.5	PASS
	2387.0 to 2400.0	0.427592	25	PASS
	2483.5 to 2496.5	20.702844	25	PASS
	2496.5 to 12500.0	0.975056	2.5	PASS
$V_{max.}$	30.0 to 1000.0	0.004700	0.25	PASS
	1000.0 to 2387.0	0.415940	2.5	PASS
	2387.0 to 2400.0	0.420756	25	PASS
	2483.5 to 2496.5	20.371828	25	PASS
	2496.5 to 12500.0	0.946302	2.5	PASS
$V_{min.}$	30.0 to 1000.0	0.005000	0.25	PASS
	1000.0 to 2387.0	0.406472	2.5	PASS
	2387.0 to 2400.0	0.449810	25	PASS
	2483.5 to 2496.5	20.324974	25	PASS
	2496.5 to 12500.0	0.905796	2.5	PASS

802.11ax (RU106)

Chain 0

TEST CHANNEL		CH 1 (2412MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	740.403	0.001866	0.125	PASS
	1000.0 to 2387.0	2385.613	0.187932	1.25	PASS
	2387.0 to 2400.0	2400.000	0.820352	12.5	PASS
	2483.5 to 2496.5	2487.960	0.220293	12.5	PASS
	2496.5 to 12500.0	6694.218	0.429536	1.25	PASS
$V_{max.}$	30.0 to 1000.0	769.018	0.001982	0.125	PASS
	1000.0 to 2387.0	1498.626	0.195884	1.25	PASS
	2387.0 to 2400.0	2399.948	0.814704	12.5	PASS
	2483.5 to 2496.5	2490.238	0.242103	12.5	PASS
	2496.5 to 12500.0	6961.812	0.454988	1.25	PASS
$V_{min.}$	30.0 to 1000.0	837.403	0.001766	0.125	PASS
	1000.0 to 2387.0	1852.658	0.184927	1.25	PASS
	2387.0 to 2400.0	2399.985	0.835603	12.5	PASS
	2483.5 to 2496.5	2491.356	0.248313	12.5	PASS
	2496.5 to 12500.0	5852.674	0.512861	1.25	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	850.498	0.002133	0.125	PASS
	1000.0 to 2387.0	1996.212	0.186638	1.25	PASS
	2387.0 to 2400.0	2396.394	0.213304	12.5	PASS
	2483.5 to 2496.5	2494.621	0.234423	12.5	PASS
	2496.5 to 12500.0	5861.427	0.477529	1.25	PASS
$V_{max.}$	30.0 to 1000.0	913.548	0.002350	0.125	PASS
	1000.0 to 2387.0	1491.171	0.188799	1.25	PASS
	2387.0 to 2400.0	2395.692	0.225944	12.5	PASS
	2483.5 to 2496.5	2485.872	0.246604	12.5	PASS
	2496.5 to 12500.0	6690.467	0.529663	1.25	PASS
$V_{min.}$	30.0 to 1000.0	885.055	0.002138	0.125	PASS
	1000.0 to 2387.0	1682.230	0.190108	1.25	PASS
	2387.0 to 2400.0	2399.517	0.196336	12.5	PASS
	2483.5 to 2496.5	2488.612	0.237137	12.5	PASS
	2496.5 to 12500.0	6946.807	0.434510	1.25	PASS

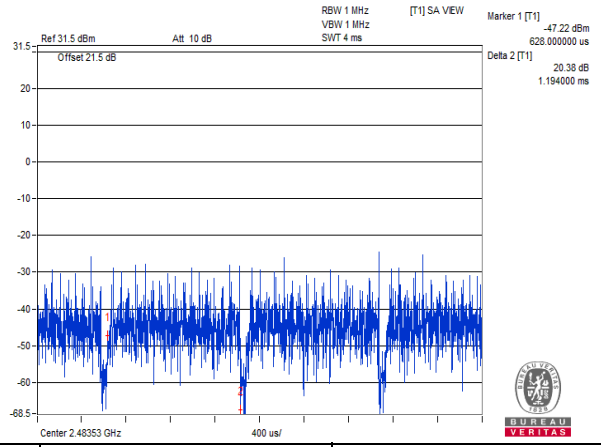
TEST CHANNEL		CH 13 (2472MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	793.390	0.001556	0.125	PASS
	1000.0 to 2387.0	2341.055	0.189234	1.25	PASS
	2387.0 to 2400.0	2390.805	0.187068	12.5	PASS
	2483.5 to 2496.5	2483.530	0.079486	12.5	PASS(1)
	2496.5 to 12500.0	5855.175	0.447713	1.25	PASS
$V_{max.}$	30.0 to 1000.0	806.485	0.002339	0.125	PASS
	1000.0 to 2387.0	2324.758	0.221309	1.25	PASS
	2387.0 to 2400.0	2392.679	0.192752	12.5	PASS
	2483.5 to 2496.5	2483.504	0.077273	12.5	PASS(2)
	2496.5 to 12500.0	6898.040	0.435512	1.25	PASS
$V_{min.}$	30.0 to 1000.0	776.536	0.001995	0.125	PASS
	1000.0 to 2387.0	2231.482	0.177828	1.25	PASS
	2387.0 to 2400.0	2393.841	0.200909	12.5	PASS
	2483.5 to 2496.5	2483.501	0.073238	12.5	PASS(3)
	2496.5 to 12500.0	6784.250	0.430527	1.25	PASS

NOTE: 1. The spectrum plots are attached on the following pages.

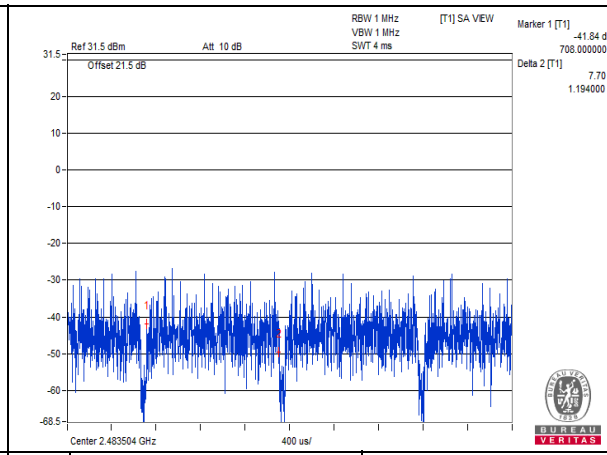
2. (No.): The value was tested under Measuring Mode *Zero Span.

Measuring Mode *Zero Span

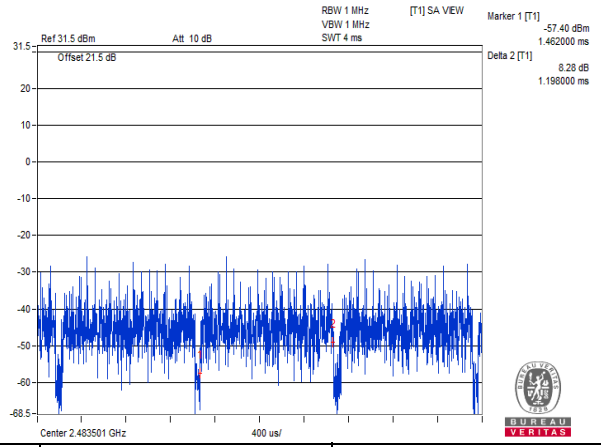
1. Set the spectrum analyzer as below and it takes in a value of all data point.
2. Regarding the all data value, it transforms the “dBm” value into “uW” value.
3. It adds the all values and calculates a grand total. Define a grand total as “P”.
4. It divides “P” by sample data point (ex.501) and calculates the mean value.
5. It reports the mean value.



1	2483.530MHz	P = 0.079486uW



2	2483.504MHz	P = 0.077273uW



3	2483.501MHz	P = 0.073238uW

Chain 1

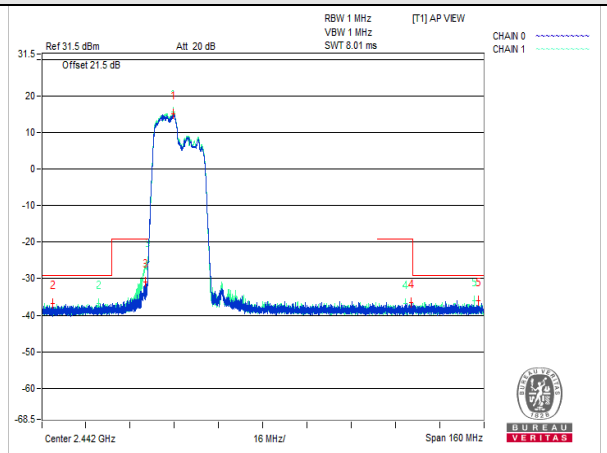
TEST CHANNEL		CH 1 (2412MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	598.177	0.002213	0.125	PASS
	1000.0 to 2387.0	1183.430	0.149279	1.25	PASS
	2387.0 to 2400.0	2399.857	2.747894	12.5	PASS
	2483.5 to 2496.5	2488.838	0.213796	12.5	PASS
	2496.5 to 12500.0	6800.505	0.467735	1.25	PASS
$V_{max.}$	30.0 to 1000.0	943.376	0.001866	0.125	PASS
	1000.0 to 2387.0	2297.191	0.175388	1.25	PASS
	2387.0 to 2400.0	2399.468	2.857591	12.5	PASS
	2483.5 to 2496.5	2485.827	0.211836	12.5	PASS
	2496.5 to 12500.0	5851.423	0.566239	1.25	PASS
$V_{min.}$	30.0 to 1000.0	946.165	0.001941	0.125	PASS
	1000.0 to 2387.0	2204.089	0.191426	1.25	PASS
	2387.0 to 2400.0	2399.796	2.703958	12.5	PASS
	2483.5 to 2496.5	2495.708	0.233884	12.5	PASS
	2496.5 to 12500.0	10593.082	0.437522	1.25	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	920.823	0.001932	0.125	PASS
	1000.0 to 2387.0	1554.279	0.176604	1.25	PASS
	2387.0 to 2400.0	2390.709	0.223872	12.5	PASS
	2483.5 to 2496.5	2486.247	0.215278	12.5	PASS
	2496.5 to 12500.0	6730.481	0.518800	1.25	PASS
$V_{max.}$	30.0 to 1000.0	992.603	0.002168	0.125	PASS
	1000.0 to 2387.0	1399.109	0.192752	1.25	PASS
	2387.0 to 2400.0	2392.620	0.213796	12.5	PASS
	2483.5 to 2496.5	2493.269	0.246604	12.5	PASS
	2496.5 to 12500.0	5892.688	0.478630	1.25	PASS
$V_{min.}$	30.0 to 1000.0	505.057	0.002032	0.125	PASS
	1000.0 to 2387.0	2198.368	0.194089	1.25	PASS
	2387.0 to 2400.0	2395.914	0.199526	12.5	PASS
	2483.5 to 2496.5	2486.046	0.237137	12.5	PASS
	2496.5 to 12500.0	5778.898	0.433511	1.25	PASS

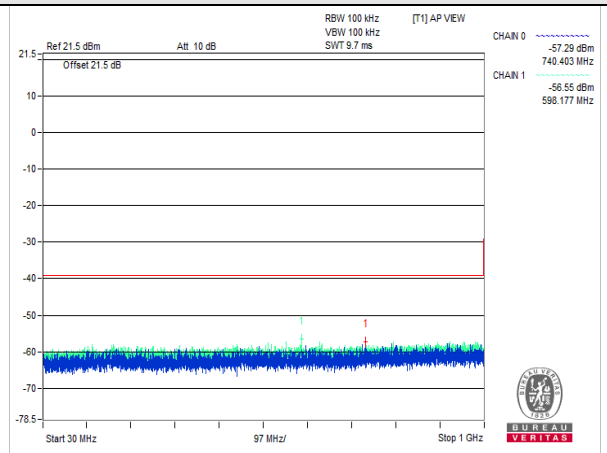
TEST CHANNEL		CH 13 (2472MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	936.586	0.002133	0.125	PASS
	1000.0 to 2387.0	2384.399	0.170608	1.25	PASS
	2387.0 to 2400.0	2397.115	0.183231	12.5	PASS
	2483.5 to 2496.5	2483.517	3.899420	12.5	PASS
	2496.5 to 12500.0	6504.152	0.465586	1.25	PASS
$V_{max.}$	30.0 to 1000.0	418.606	0.002393	0.125	PASS
	1000.0 to 2387.0	2384.226	0.184502	1.25	PASS
	2387.0 to 2400.0	2399.470	0.191867	12.5	PASS
	2483.5 to 2496.5	2483.513	3.881504	12.5	PASS
	2496.5 to 12500.0	5981.469	0.427563	1.25	PASS
$V_{min.}$	30.0 to 1000.0	992.361	0.002198	0.125	PASS
	1000.0 to 2387.0	2254.541	0.215774	1.25	PASS
	2387.0 to 2400.0	2393.238	0.205116	12.5	PASS
	2483.5 to 2496.5	2483.521	3.597493	12.5	PASS
	2496.5 to 12500.0	6981.819	0.542001	1.25	PASS

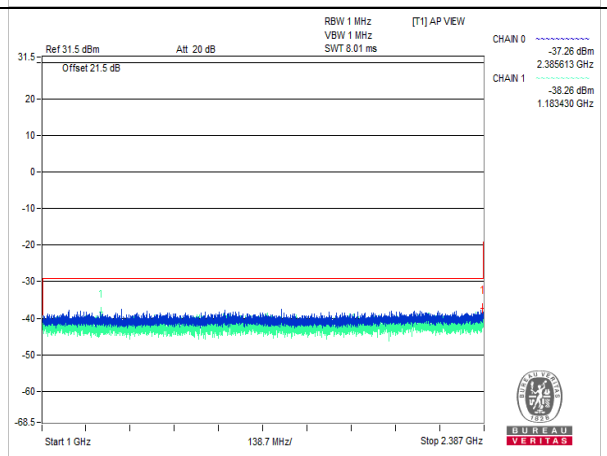
NOTE: 1. The spectrum plots are attached on the following pages.

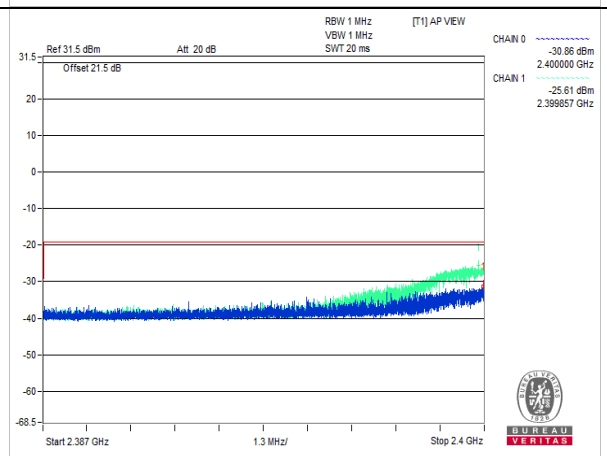
Graph

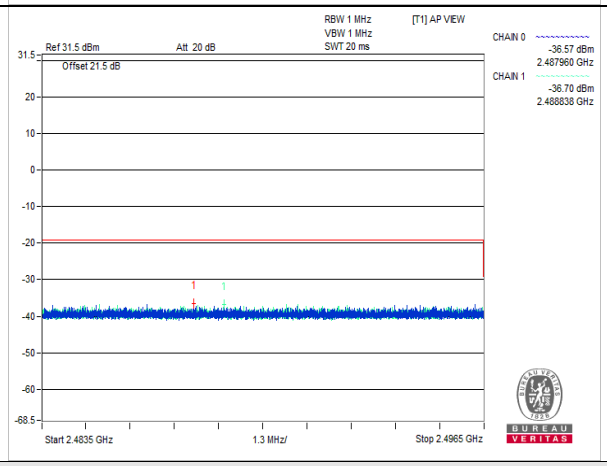
Vnormal

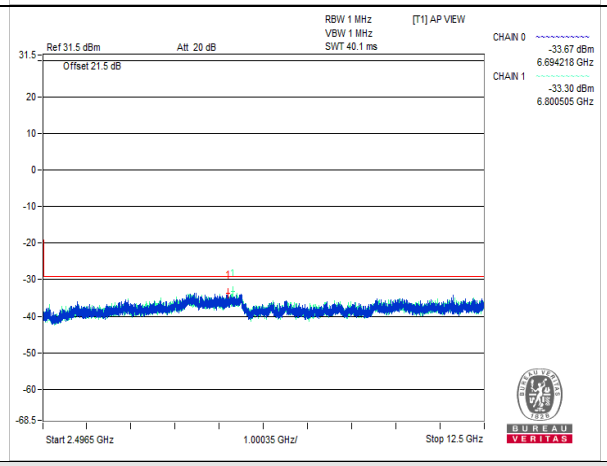






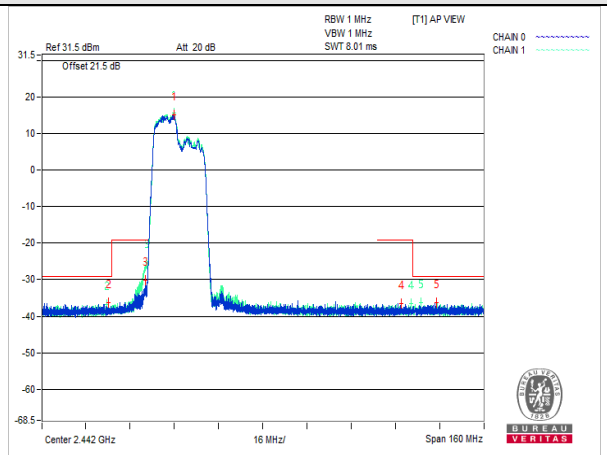


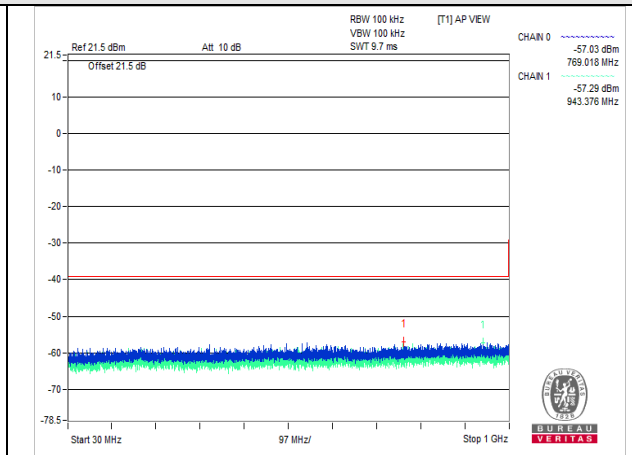


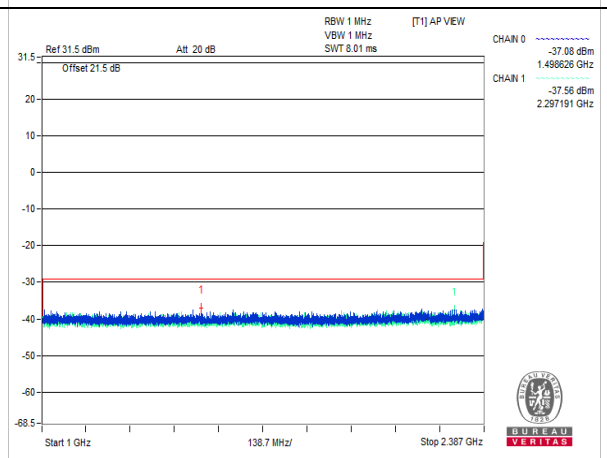


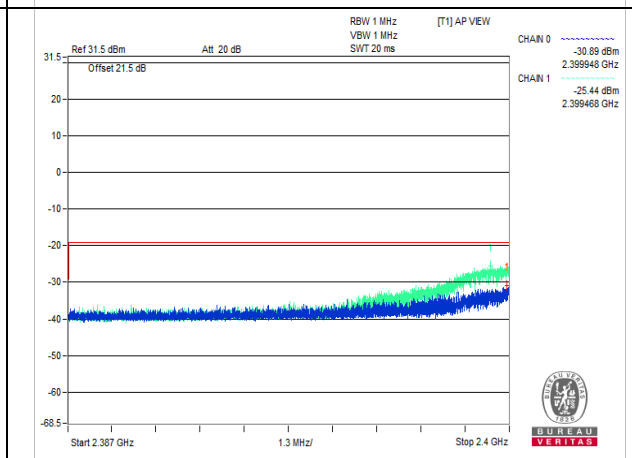
CH 1 (2412MHz)

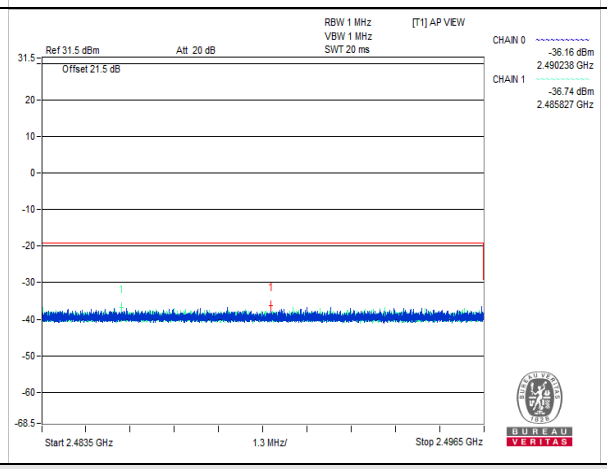
Vmax.

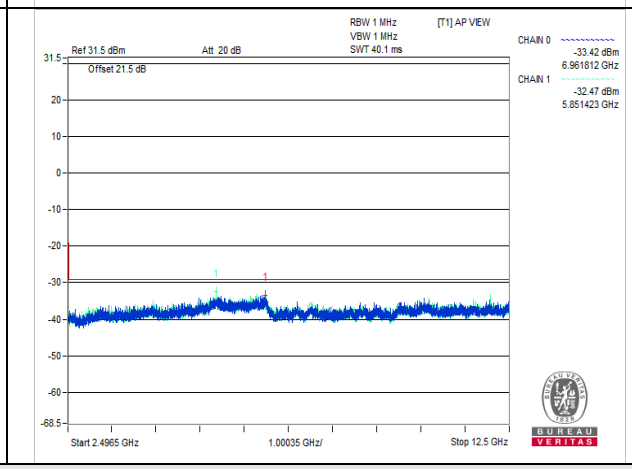






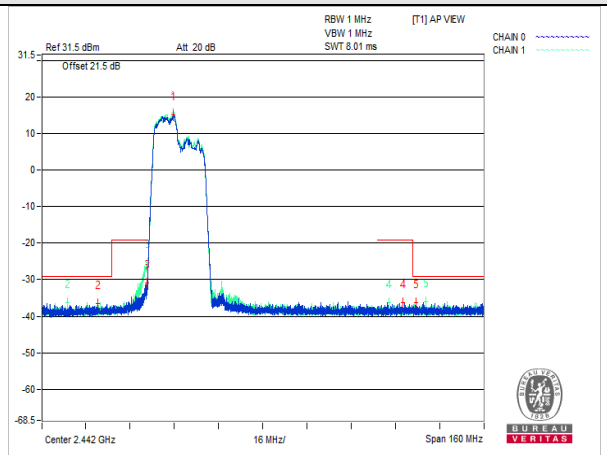


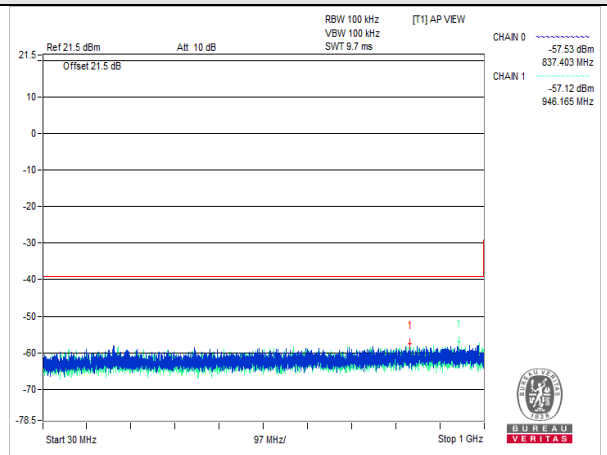


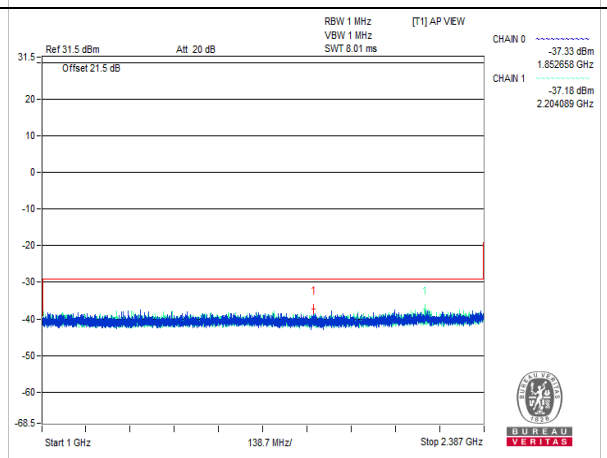


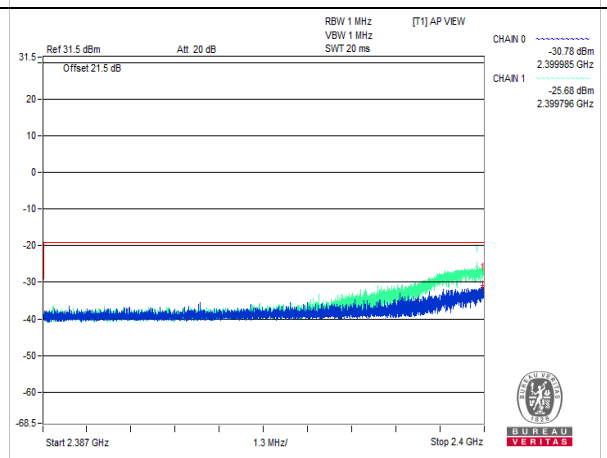
CH 1 (2412MHz)

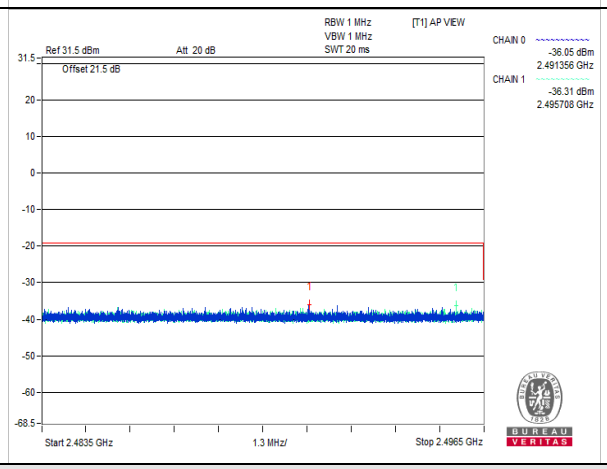
Vmin.

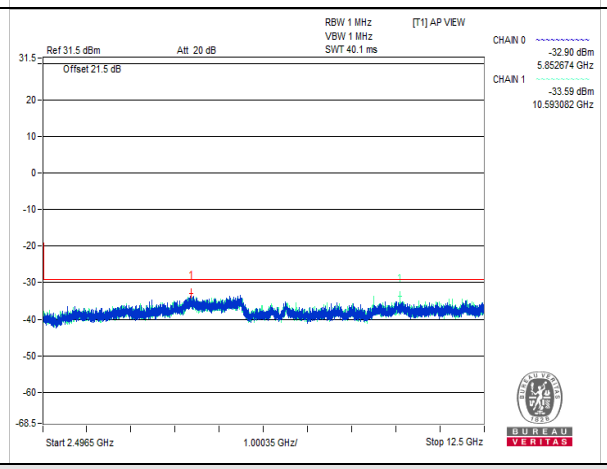






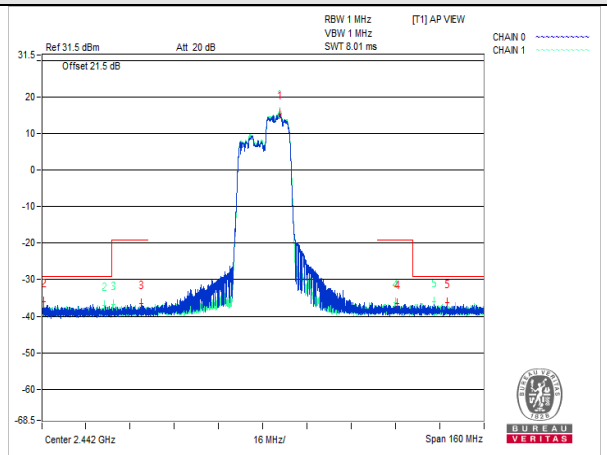


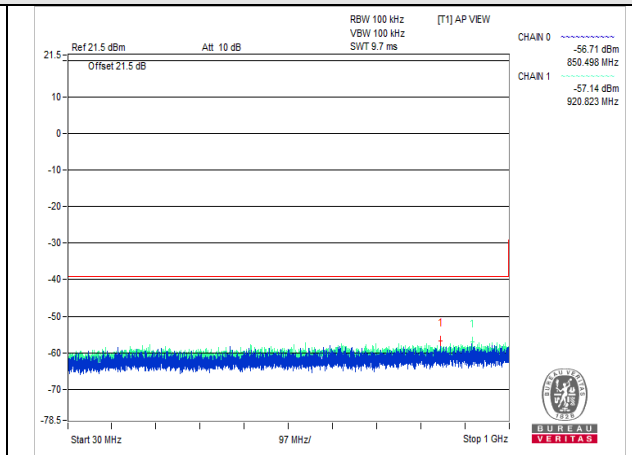


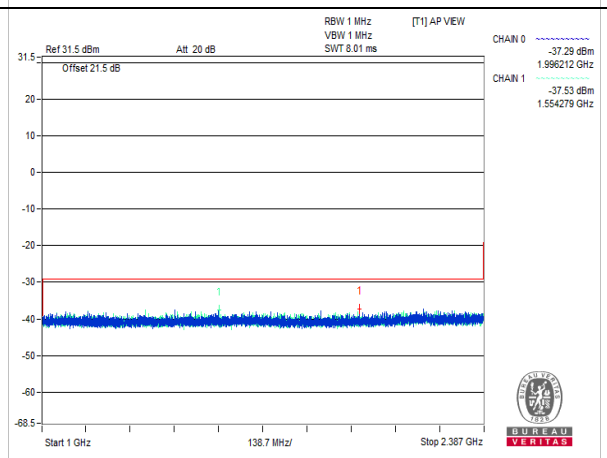


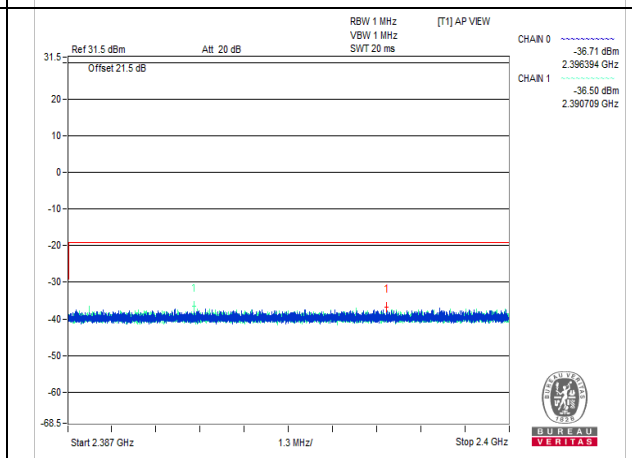
CH 1 (2412MHz)

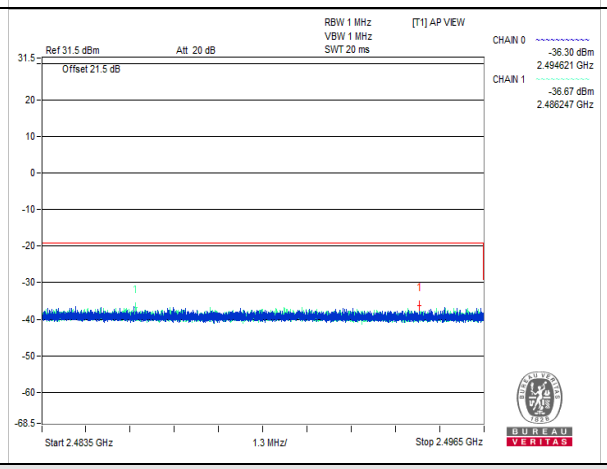
Vnormal

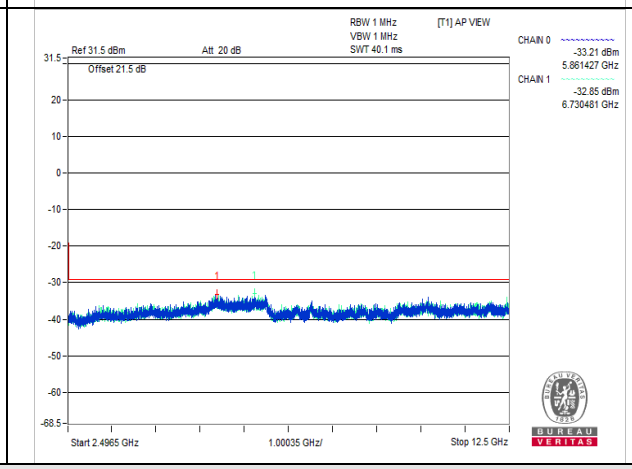






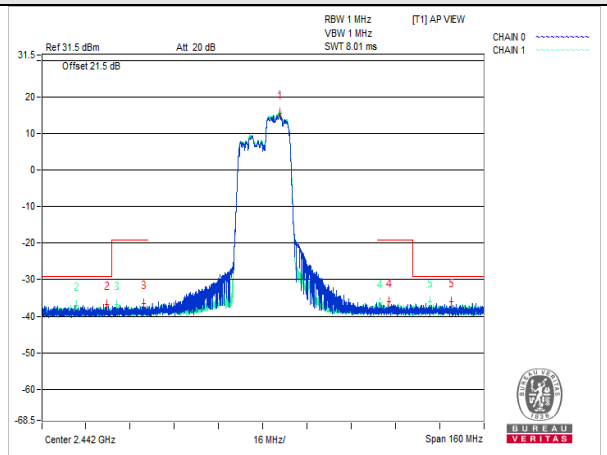


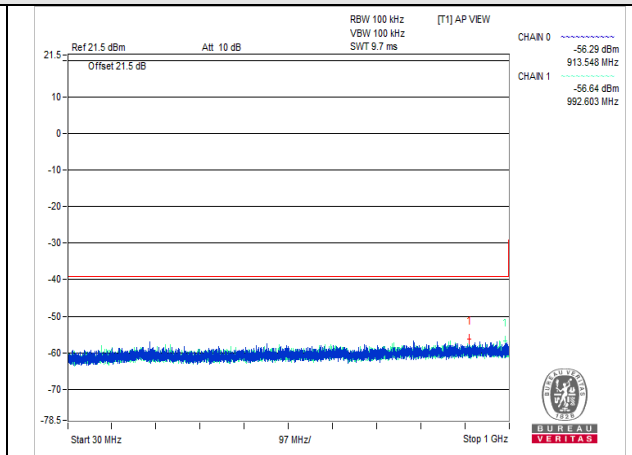


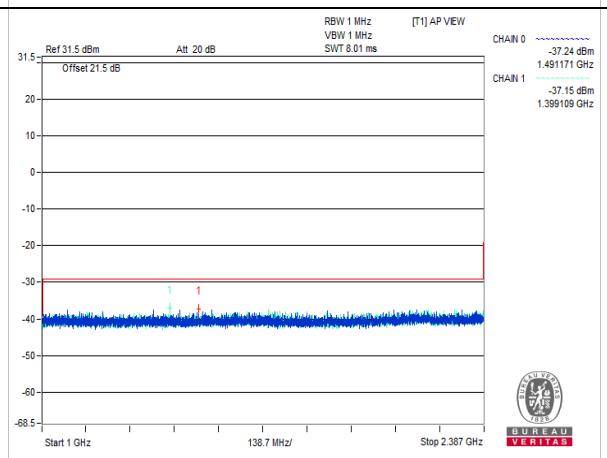


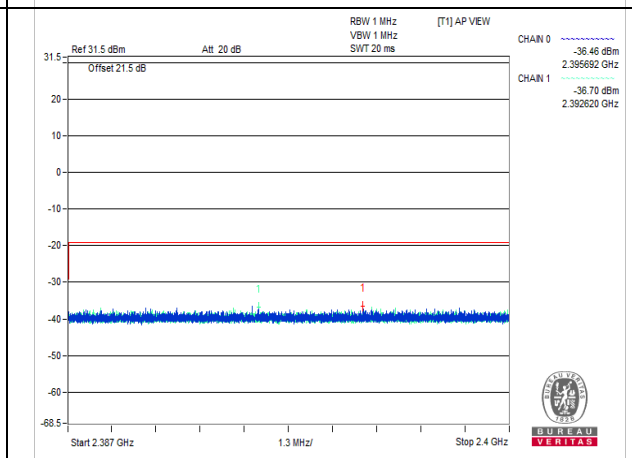
CH 7 (2442MHz)

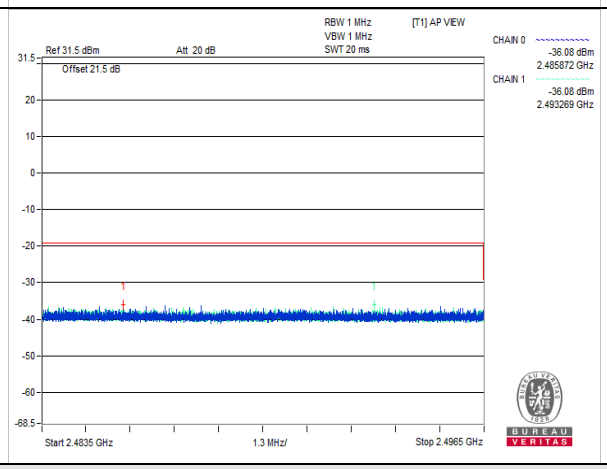
Vmax.

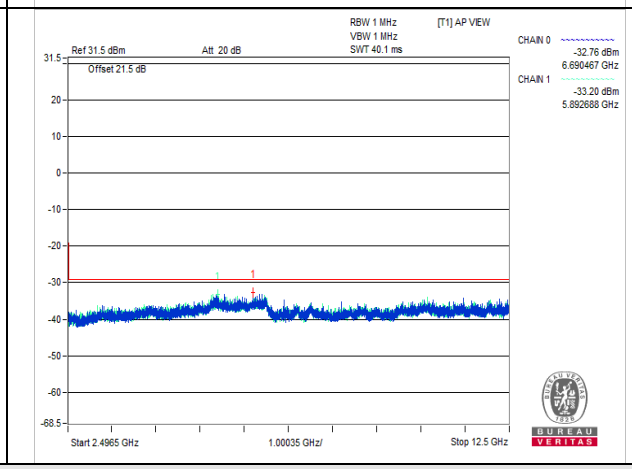






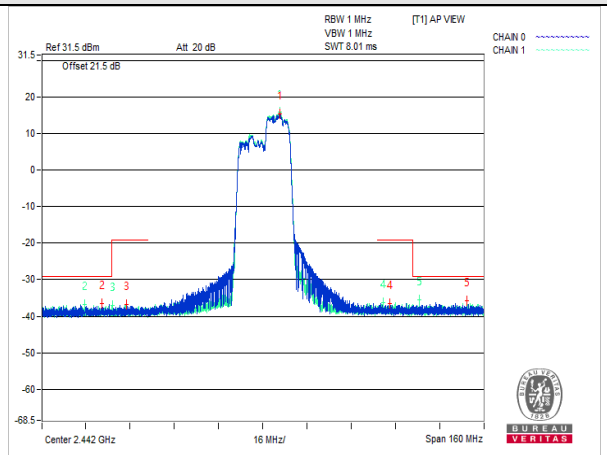


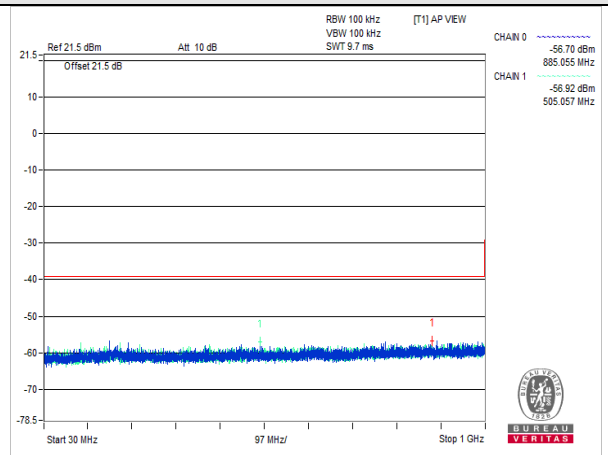


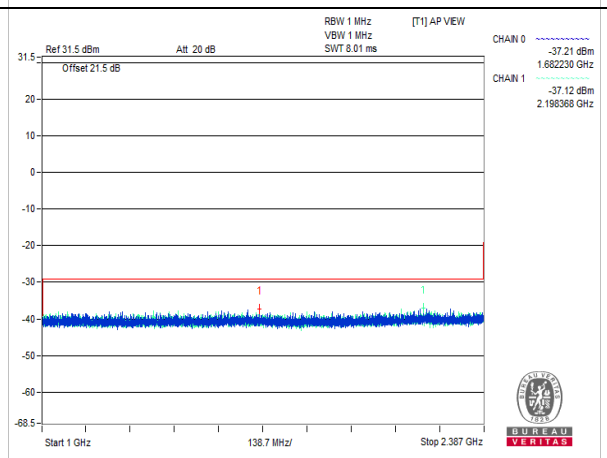


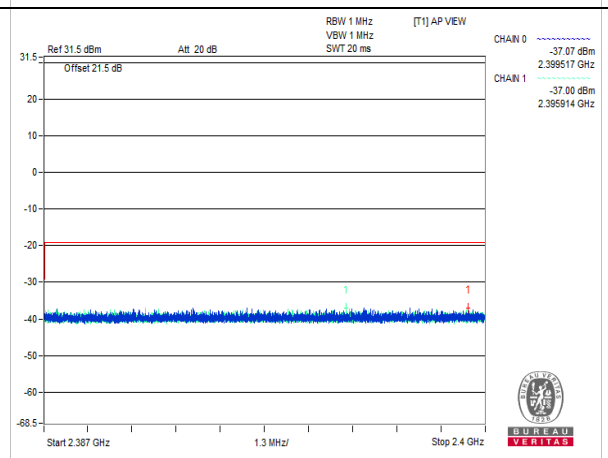
CH 7 (2442MHz)

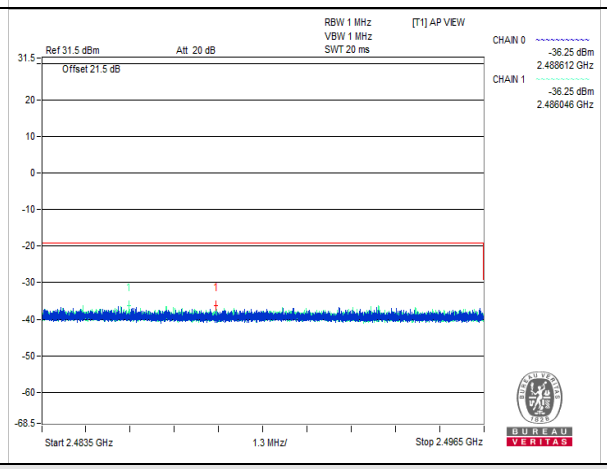
Vmin.

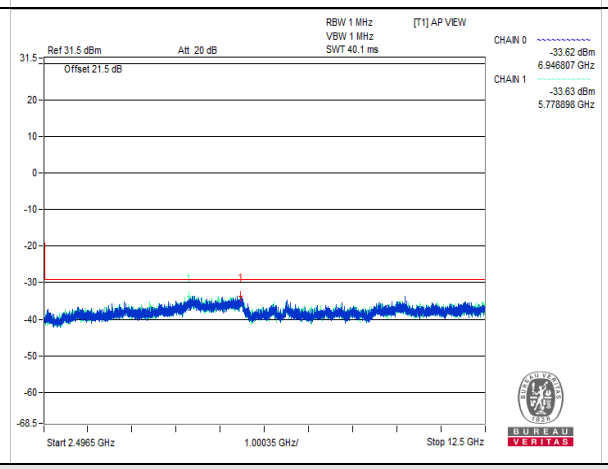






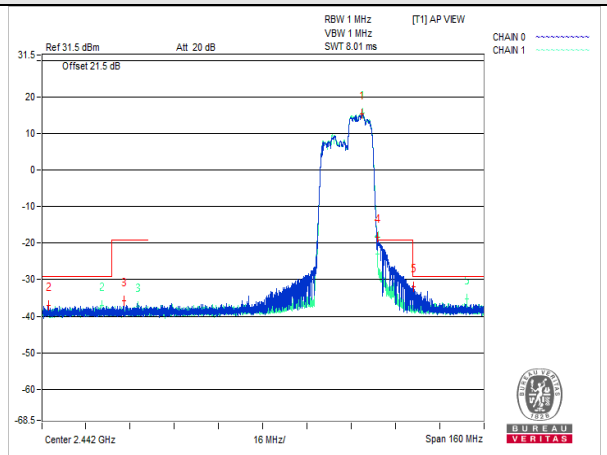


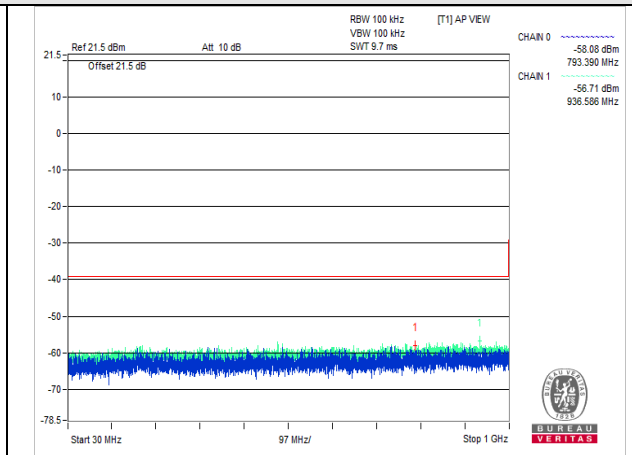


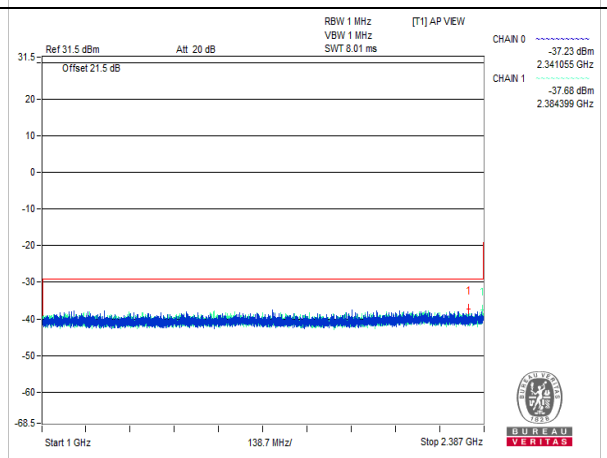


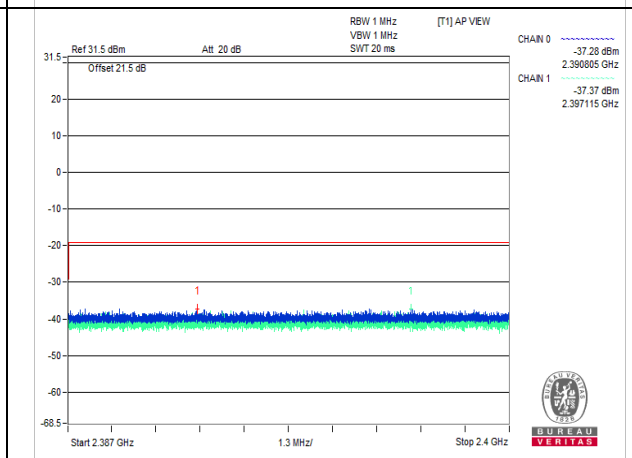
CH 7 (2442MHz)

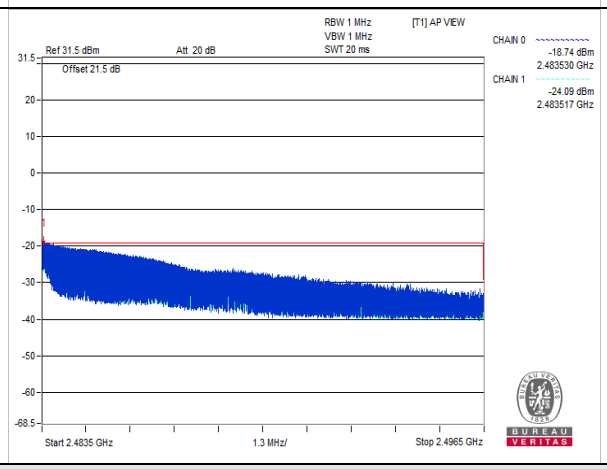
Vnormal

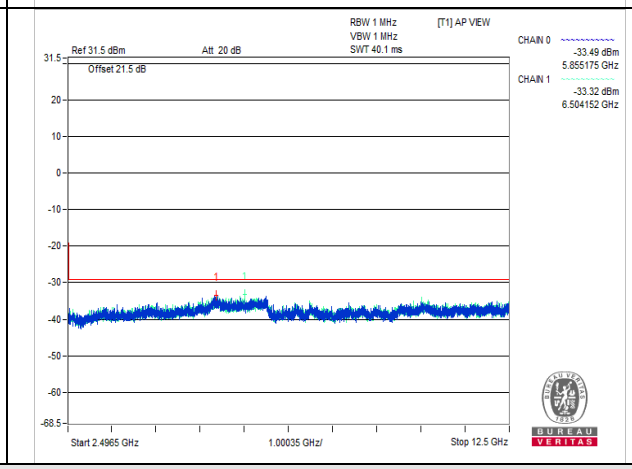






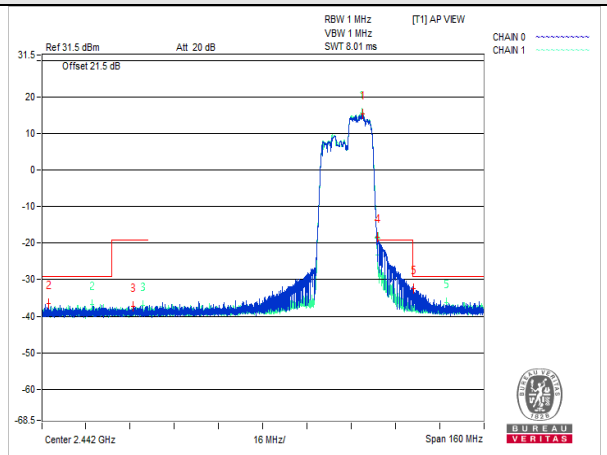


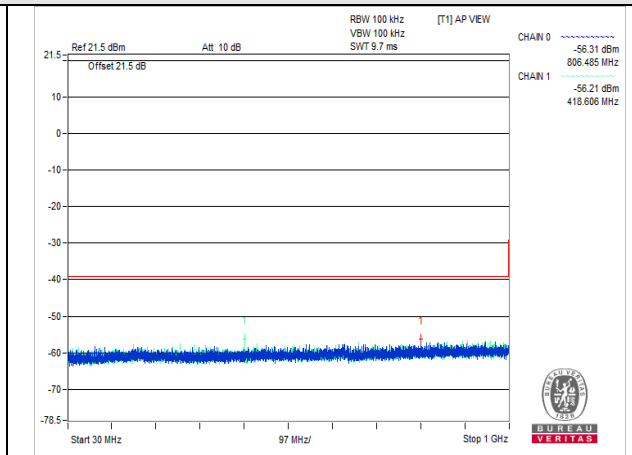


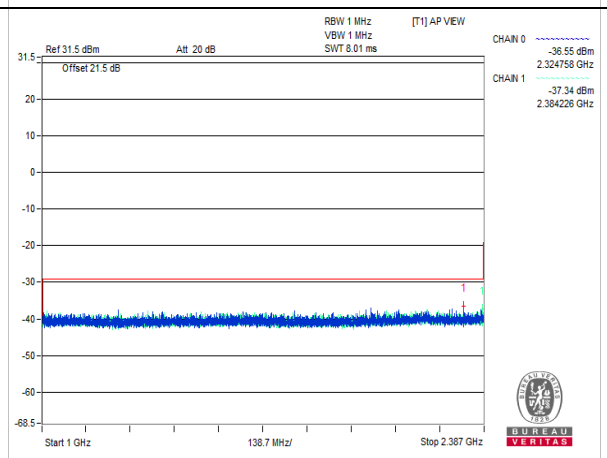


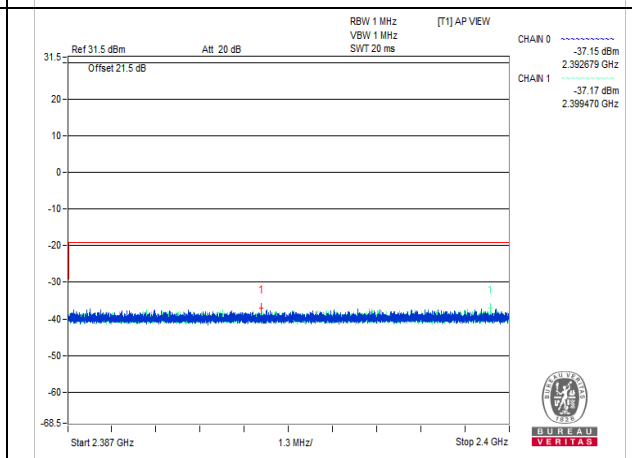
CH 13 (2472MHz)

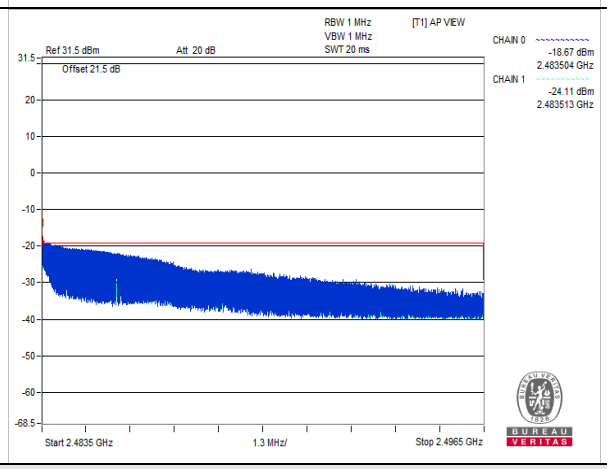
Vmax.

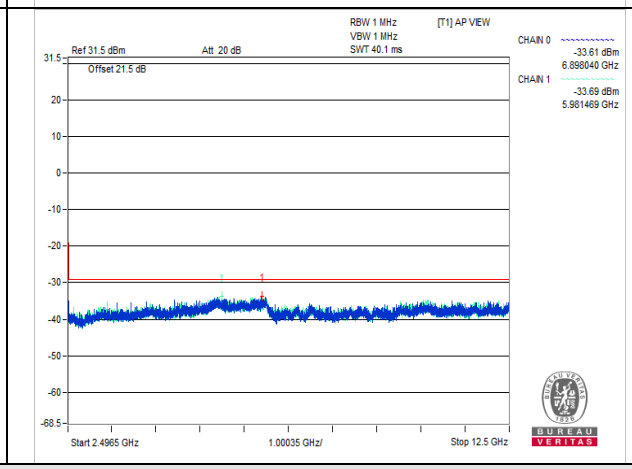






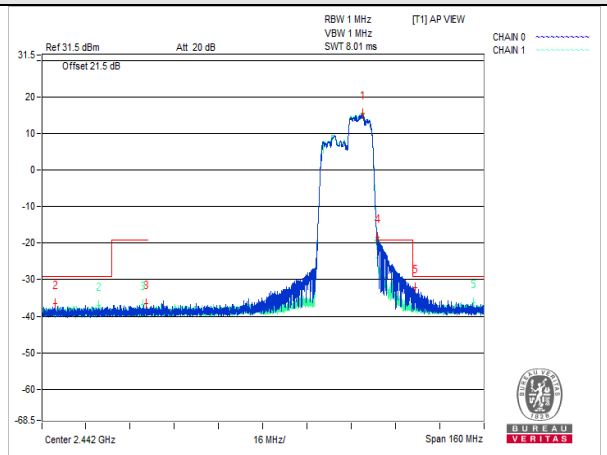


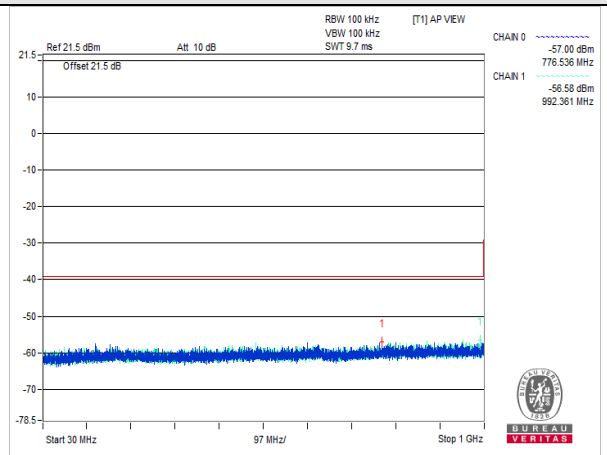


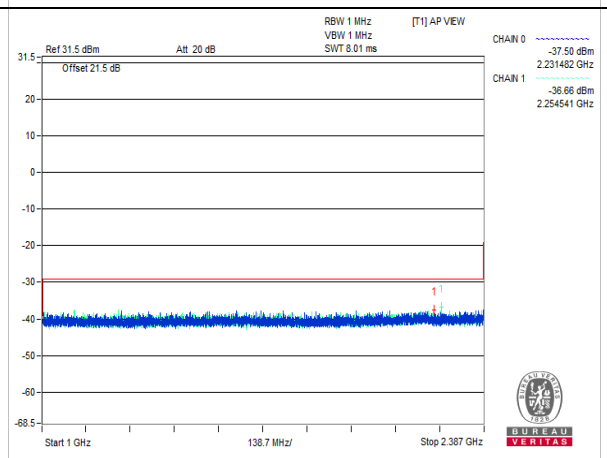


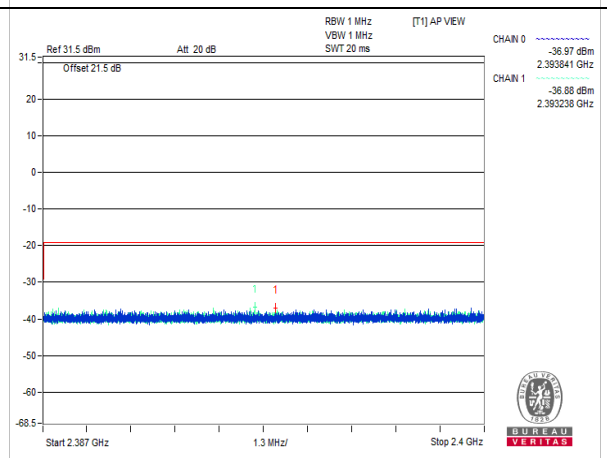
CH 13 (2472MHz)

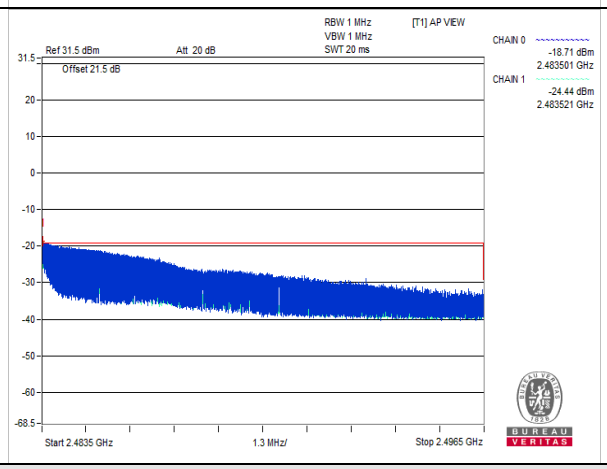
Vmin.

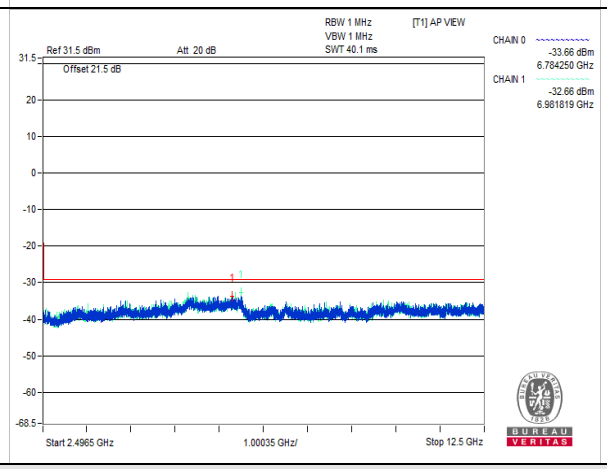












CH 13 (2472MHz)

[Worst result] x [Number of antenna ports]

TEST CHANNEL		CH 1 (2412MHz)		
TEST CONDITION	FREQUENCY RANGE(MHz)	MEASURE. VALUE (uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	0.004426	0.25	PASS
	1000.0 to 2387.0	0.375864	2.5	PASS
	2387.0 to 2400.0	5.495788	25	PASS
	2483.5 to 2496.5	0.440586	25	PASS
	2496.5 to 12500.0	0.935470	2.5	PASS
$V_{max.}$	30.0 to 1000.0	0.003964	0.25	PASS
	1000.0 to 2387.0	0.391768	2.5	PASS
	2387.0 to 2400.0	5.715182	25	PASS
	2483.5 to 2496.5	0.484206	25	PASS
	2496.5 to 12500.0	1.132478	2.5	PASS
$V_{min.}$	30.0 to 1000.0	0.003882	0.25	PASS
	1000.0 to 2387.0	0.382852	2.5	PASS
	2387.0 to 2400.0	5.407916	25	PASS
	2483.5 to 2496.5	0.496626	25	PASS
	2496.5 to 12500.0	1.025722	2.5	PASS
TEST CHANNEL		CH 7 (2442MHz)		
V_{normal}	30.0 to 1000.0	0.004266	0.25	PASS
	1000.0 to 2387.0	0.373276	2.5	PASS
	2387.0 to 2400.0	0.447744	25	PASS
	2483.5 to 2496.5	0.468846	25	PASS
	2496.5 to 12500.0	1.037600	2.5	PASS
$V_{max.}$	30.0 to 1000.0	0.004700	0.25	PASS
	1000.0 to 2387.0	0.385504	2.5	PASS
	2387.0 to 2400.0	0.451888	25	PASS
	2483.5 to 2496.5	0.493208	25	PASS
	2496.5 to 12500.0	1.059326	2.5	PASS
$V_{min.}$	30.0 to 1000.0	0.004276	0.25	PASS
	1000.0 to 2387.0	0.388178	2.5	PASS
	2387.0 to 2400.0	0.399052	25	PASS
	2483.5 to 2496.5	0.474274	25	PASS
	2496.5 to 12500.0	0.869020	2.5	PASS

TEST CHANNEL		CH 13 (2472MHz)		
TEST CONDITION	FREQUENCY RANGE(MHz)	MEASURE. VALUE (uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	0.004266	0.25	PASS
	1000.0 to 2387.0	0.378468	2.5	PASS
	2387.0 to 2400.0	0.374136	25	PASS
	2483.5 to 2496.5	7.798840	25	PASS
	2496.5 to 12500.0	0.931172	2.5	PASS
$V_{max.}$	30.0 to 1000.0	0.004786	0.25	PASS
	1000.0 to 2387.0	0.442618	2.5	PASS
	2387.0 to 2400.0	0.385504	25	PASS
	2483.5 to 2496.5	7.763008	25	PASS
	2496.5 to 12500.0	0.871024	2.5	PASS
$V_{min.}$	30.0 to 1000.0	0.004396	0.25	PASS
	1000.0 to 2387.0	0.431548	2.5	PASS
	2387.0 to 2400.0	0.410232	25	PASS
	2483.5 to 2496.5	7.194986	25	PASS
	2496.5 to 12500.0	1.084002	2.5	PASS

4.4.4 Test Results (Mode 2)

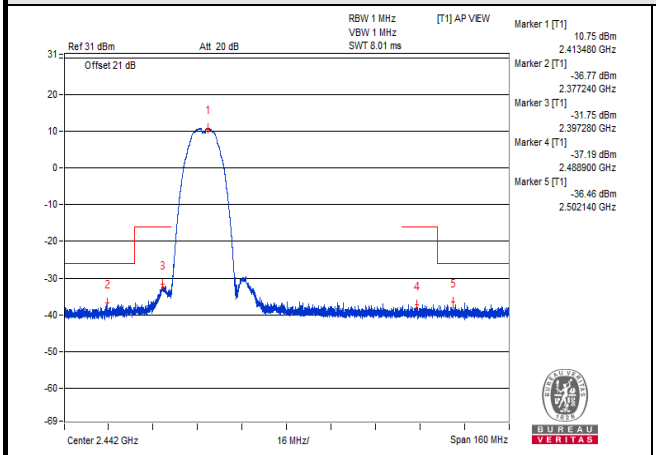
802.11b

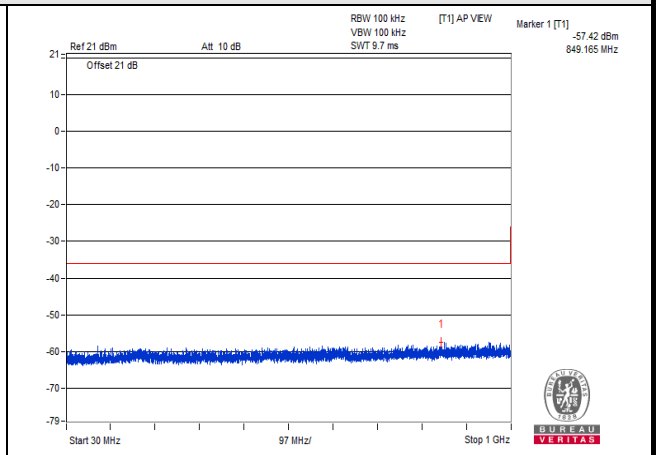
TEST CHANNEL		CH 1 (2412MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	849.165	0.001811	0.25	PASS
	1000.0 to 2387.0	2385.959	0.182810	2.5	PASS
	2387.0 to 2400.0	2398.555	0.737904	25	PASS
	2483.5 to 2496.5	2485.583	0.243781	25	PASS
	2496.5 to 12500.0	6949.307	0.532108	2.5	PASS
$V_{max.}$	30.0 to 1000.0	955.016	0.001766	0.25	PASS
	1000.0 to 2387.0	2382.492	0.186209	2.5	PASS
	2387.0 to 2400.0	2397.339	0.758578	25	PASS
	2483.5 to 2496.5	2489.419	0.218776	25	PASS
	2496.5 to 12500.0	6020.232	0.434510	2.5	PASS
$V_{min.}$	30.0 to 1000.0	947.620	0.002094	0.25	PASS
	1000.0 to 2387.0	2386.826	0.232274	2.5	PASS
	2387.0 to 2400.0	2396.707	0.691831	25	PASS
	2483.5 to 2496.5	2488.128	0.220800	25	PASS
	2496.5 to 12500.0	6899.290	0.445656	2.5	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	926.522	0.001816	0.25	PASS
	1000.0 to 2387.0	2103.011	0.153815	2.5	PASS
	2387.0 to 2400.0	2388.568	0.228560	25	PASS
	2483.5 to 2496.5	2484.059	0.245471	25	PASS
	2496.5 to 12500.0	6870.530	0.434510	2.5	PASS
$V_{max.}$	30.0 to 1000.0	951.257	0.002009	0.25	PASS
	1000.0 to 2387.0	1002.774	0.153462	2.5	PASS
	2387.0 to 2400.0	2389.226	0.230144	25	PASS
	2483.5 to 2496.5	2487.455	0.235505	25	PASS
	2496.5 to 12500.0	6707.973	0.432514	2.5	PASS
$V_{min.}$	30.0 to 1000.0	850.741	0.001667	0.25	PASS
	1000.0 to 2387.0	2203.569	0.179061	2.5	PASS
	2387.0 to 2400.0	2396.085	0.226986	25	PASS
	2483.5 to 2496.5	2496.006	0.246037	25	PASS
	2496.5 to 12500.0	6007.728	0.432514	2.5	PASS

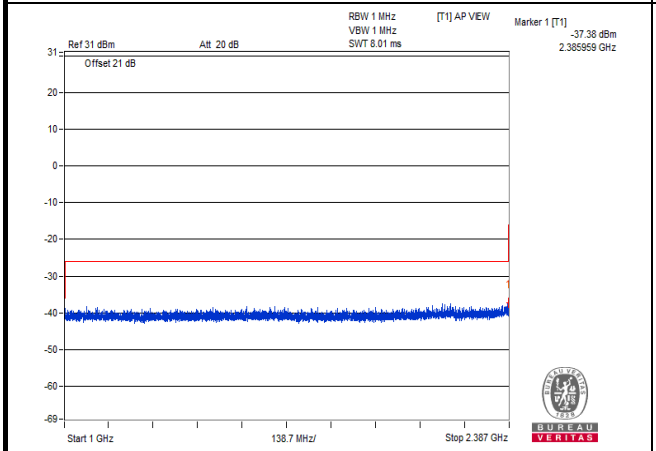
TEST CHANNEL		CH 13 (2472MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	847.467	0.001828	0.25	PASS
	1000.0 to 2387.0	1166.440	0.190108	2.5	PASS
	2387.0 to 2400.0	2399.432	0.207014	25	PASS
	2483.5 to 2496.5	2485.021	1.496236	25	PASS
	2496.5 to 12500.0	6068.999	0.493174	2.5	PASS
$V_{max.}$	30.0 to 1000.0	945.073	0.002070	0.25	PASS
	1000.0 to 2387.0	1152.396	0.199067	2.5	PASS
	2387.0 to 2400.0	2399.943	0.227510	25	PASS
	2483.5 to 2496.5	2485.253	1.492794	25	PASS
	2496.5 to 12500.0	6994.323	0.451856	2.5	PASS
$V_{min.}$	30.0 to 1000.0	535.733	0.002118	0.25	PASS
	1000.0 to 2387.0	2347.643	0.159956	2.5	PASS
	2387.0 to 2400.0	2394.858	0.194984	25	PASS
	2483.5 to 2496.5	2484.783	1.348963	25	PASS
	2496.5 to 12500.0	5828.915	0.433511	2.5	PASS
TEST CHANNEL		CH 14 (2484MHz)			
V_{normal}	30.0 to 1000.0	998.181	0.002228	0.25	PASS
	1000.0 to 2458.0	2454.355	0.212814	2.5	PASS
	2458.0 to 2471.0	2466.256	3.962780	25	PASS
	2497.0 to 2510.0	2501.849	7.430191	25	PASS
	2510.0 to 12500.0	5820.436	0.474242	2.5	PASS
$V_{max.}$	30.0 to 1000.0	887.843	0.002344	0.25	PASS
	1000.0 to 2458.0	2455.084	0.210378	2.5	PASS
	2458.0 to 2471.0	2466.713	3.981072	25	PASS
	2497.0 to 2510.0	2501.847	7.816278	25	PASS
	2510.0 to 12500.0	5830.426	0.419759	2.5	PASS
$V_{min.}$	30.0 to 1000.0	895.482	0.002084	0.25	PASS
	1000.0 to 2458.0	2451.985	0.200447	2.5	PASS
	2458.0 to 2471.0	2466.711	3.962780	25	PASS
	2497.0 to 2510.0	2502.133	7.762471	25	PASS
	2510.0 to 12500.0	6737.018	0.414954	2.5	PASS

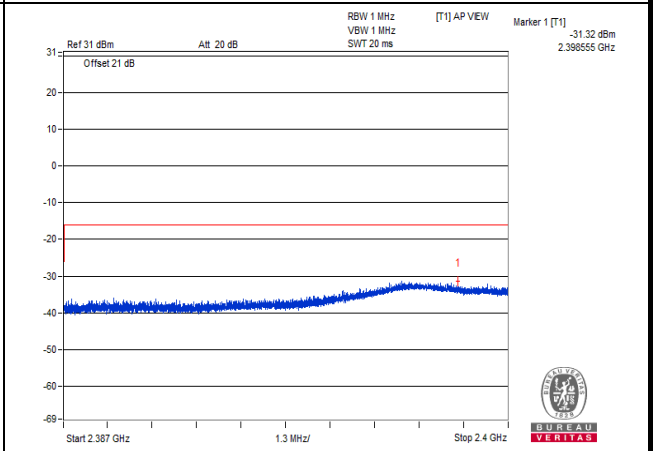
NOTE: 1. The spectrum plots are attached on the following pages.

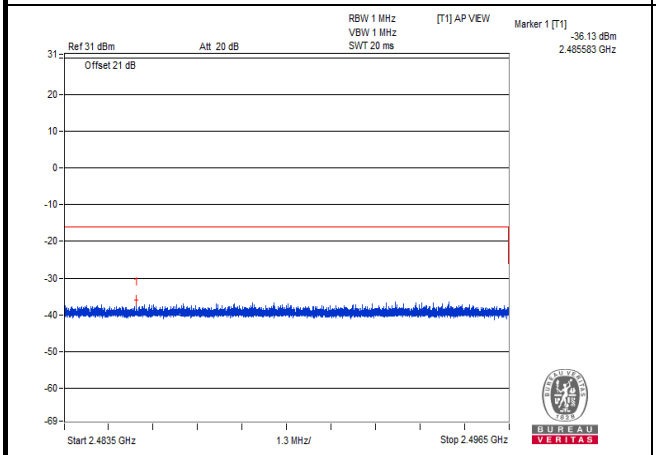
Vnormal

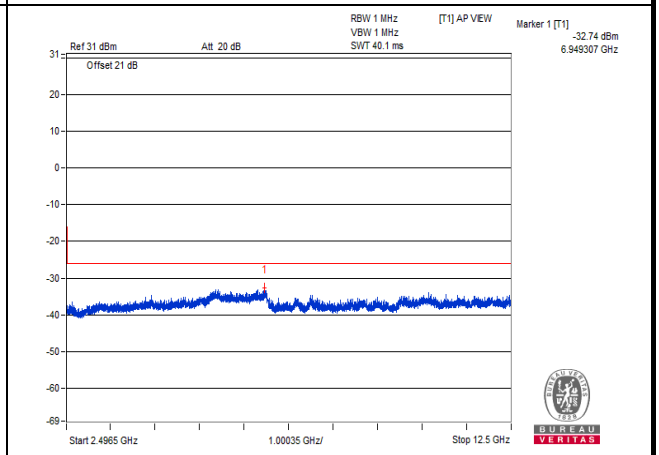






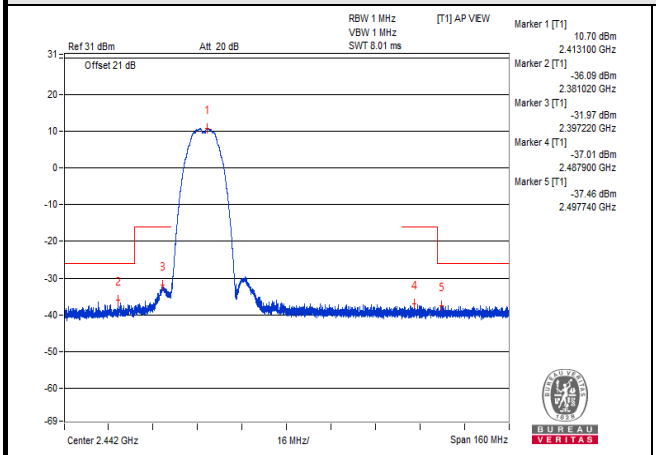


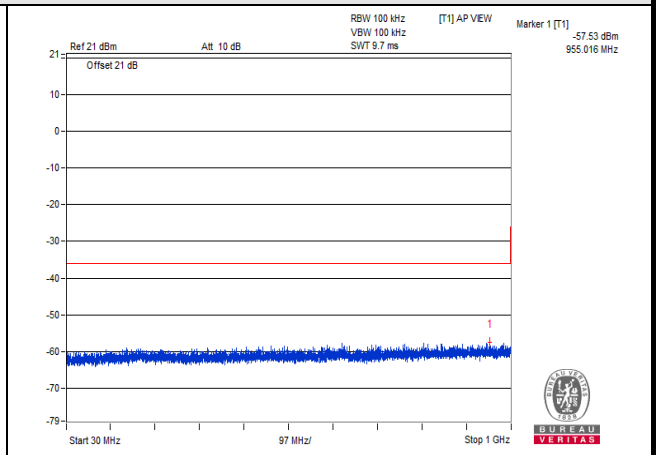


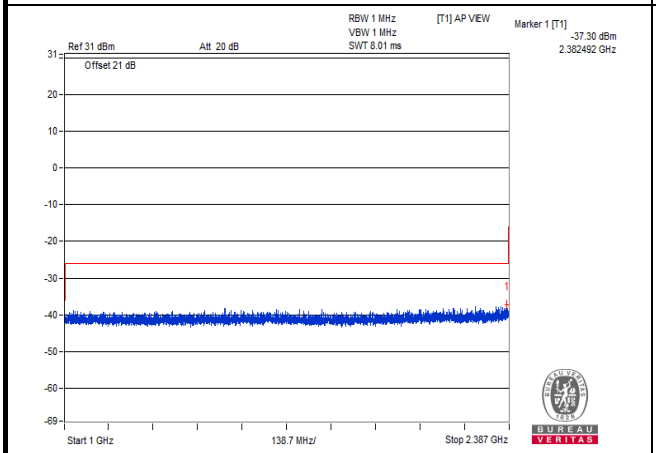


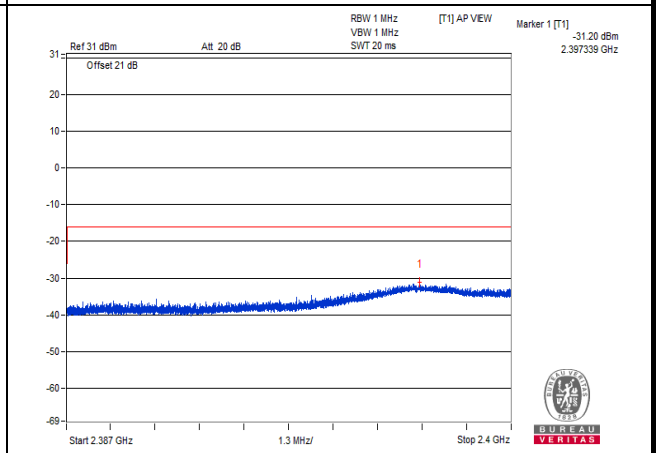
CH 1 (2412MHz)

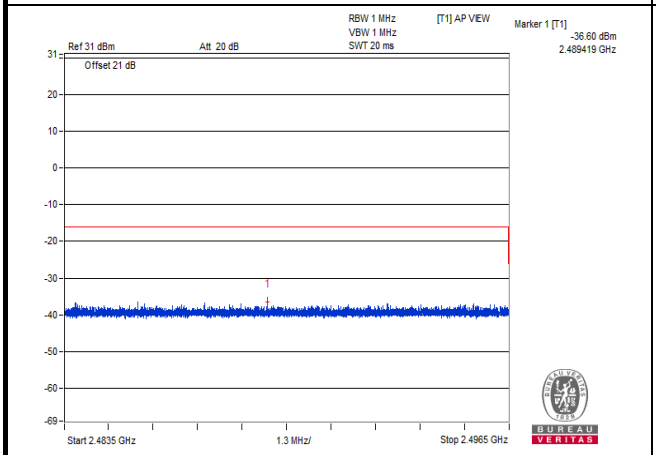
Vmax.

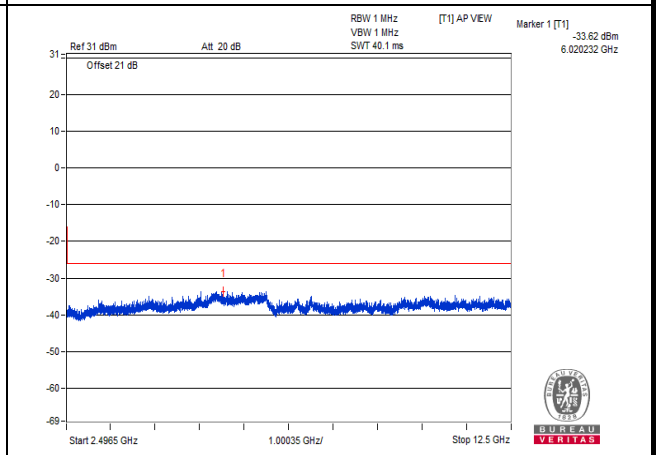






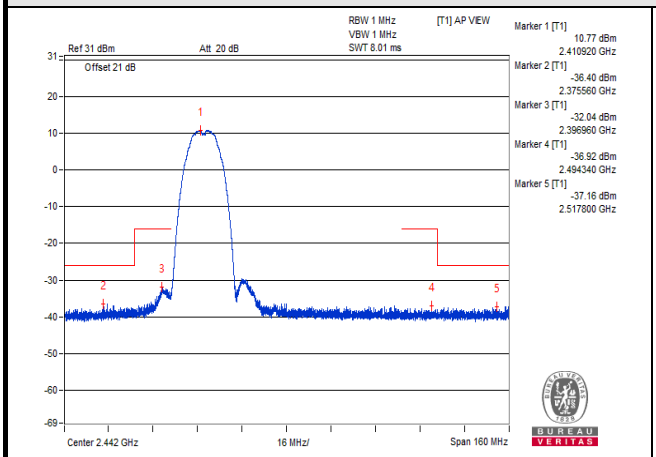


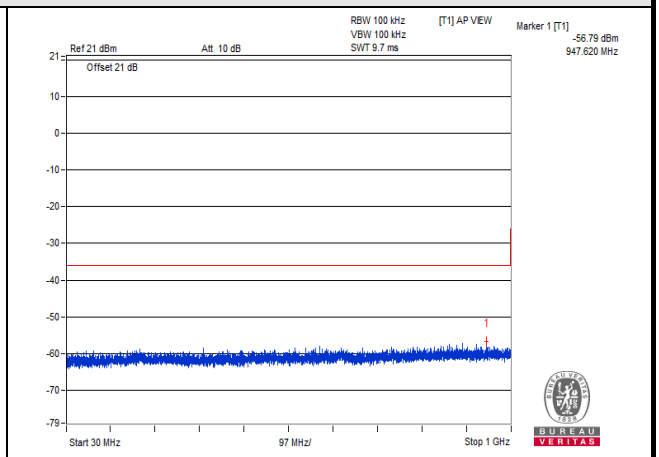


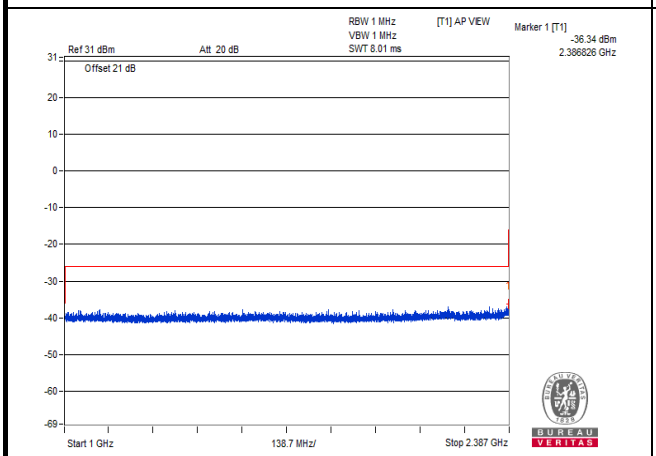


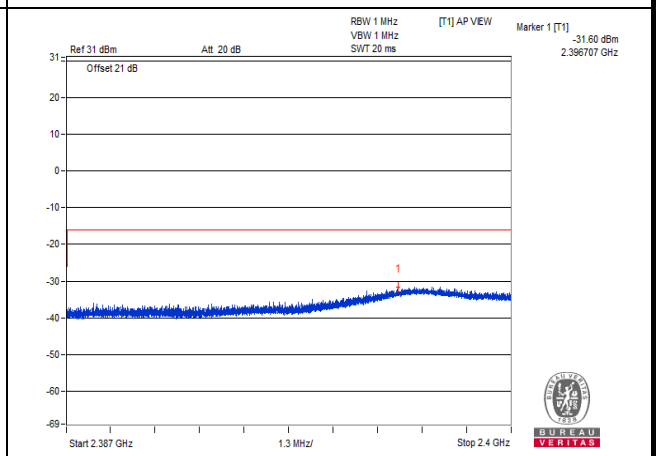
CH 1 (2412MHz)

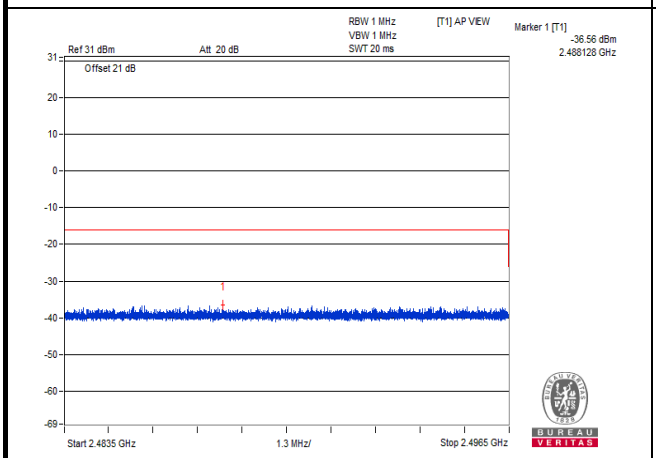
Vmin.

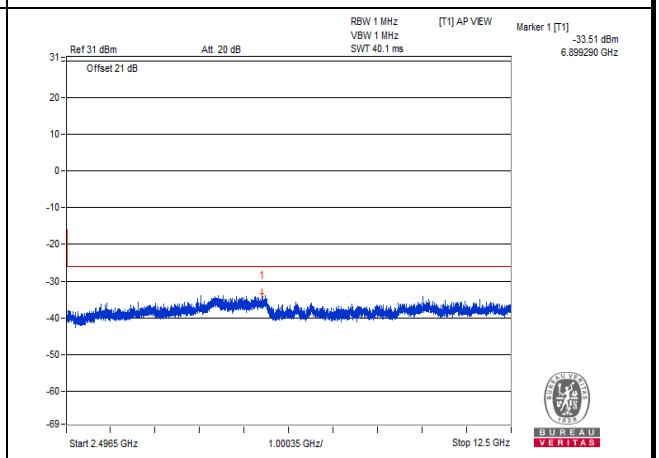






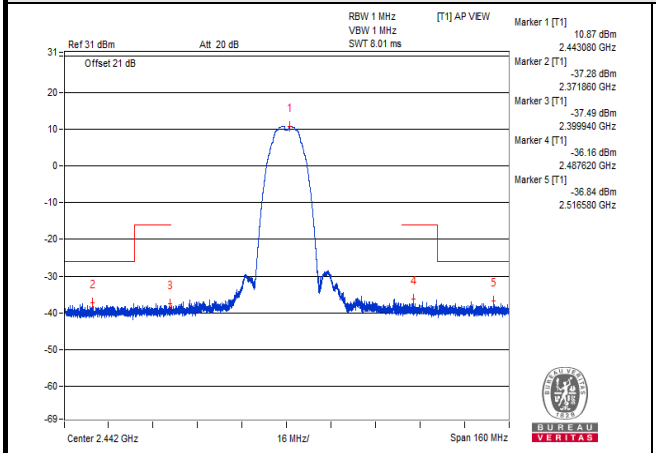


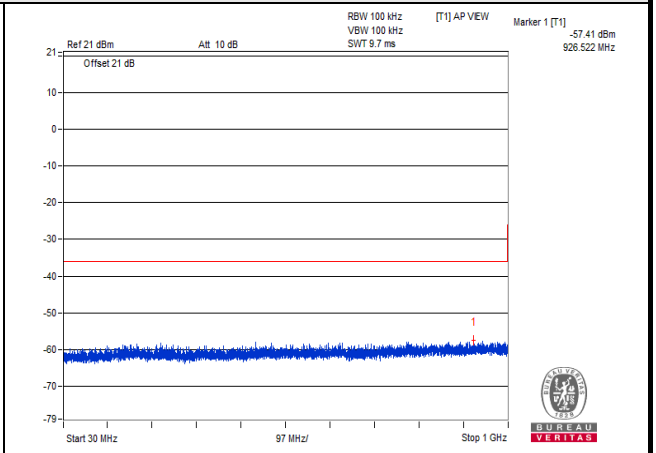


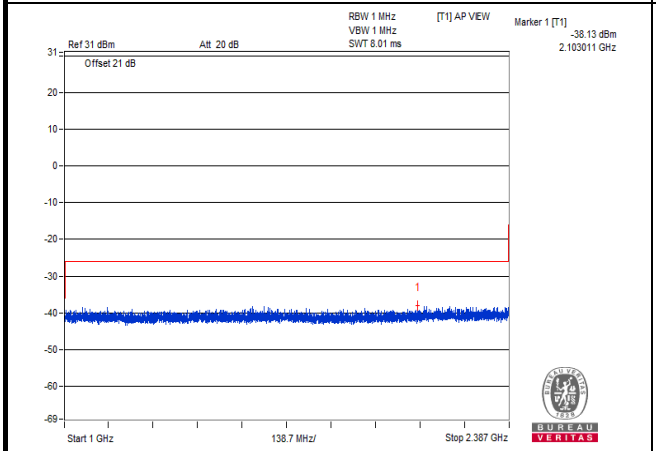


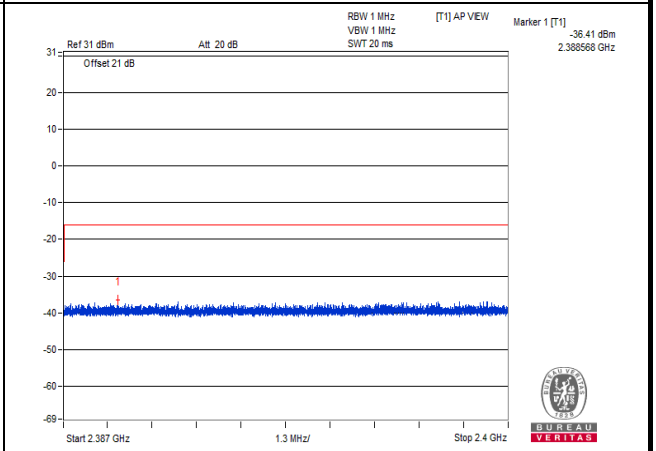
CH 1 (2412MHz)

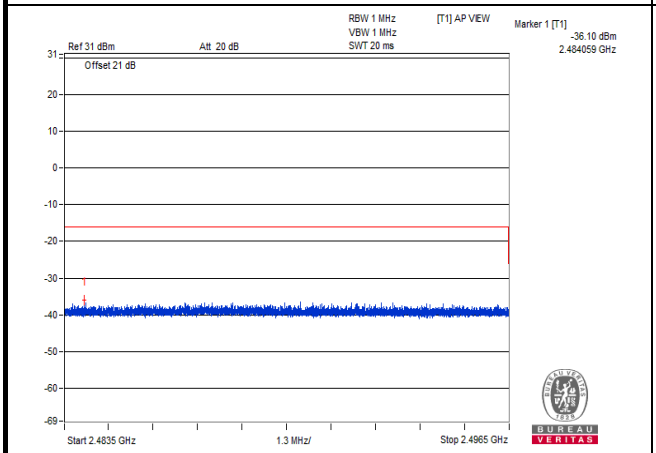
Vnormal

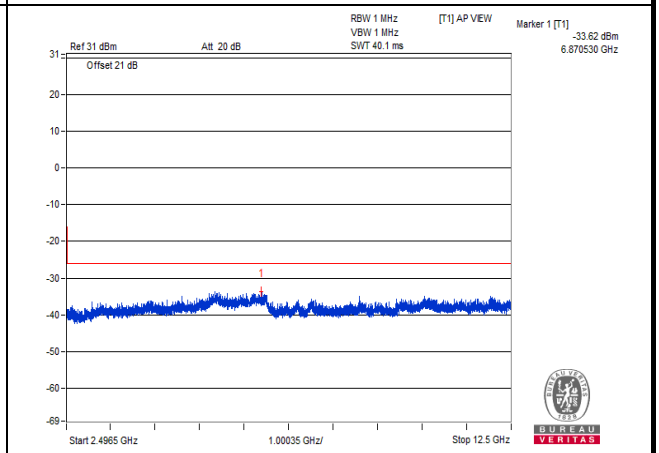






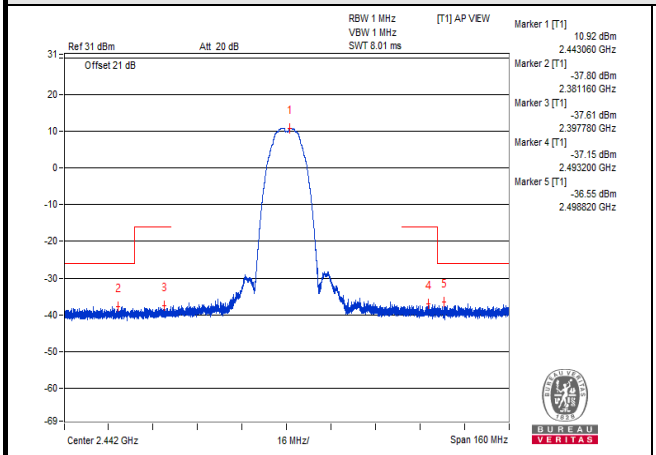


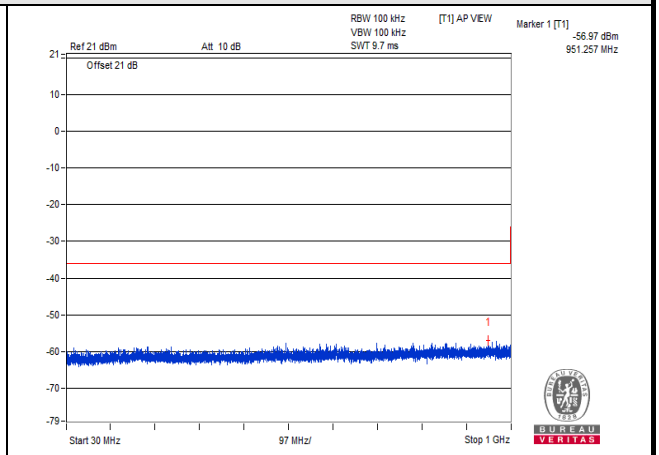


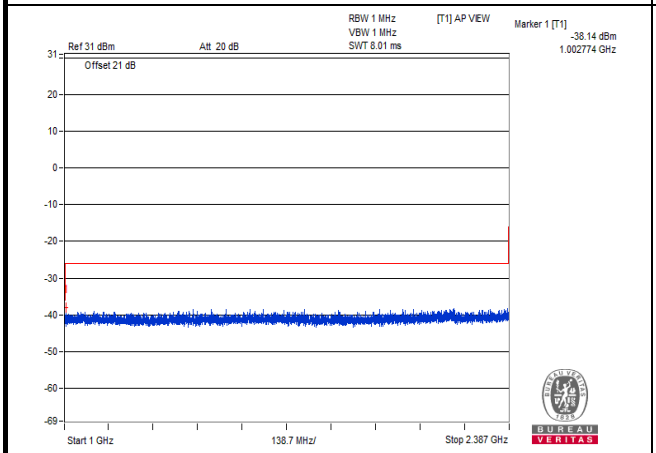


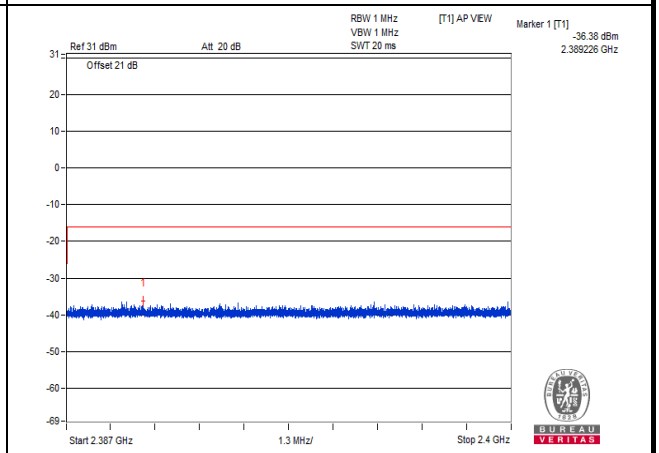
CH 7 (2442MHz)

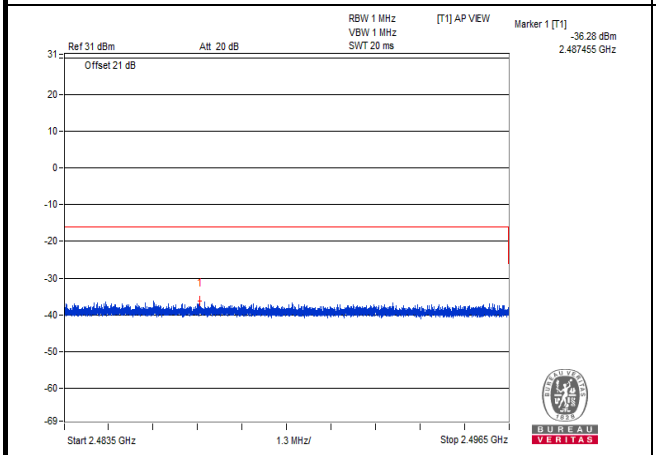
Vmax.

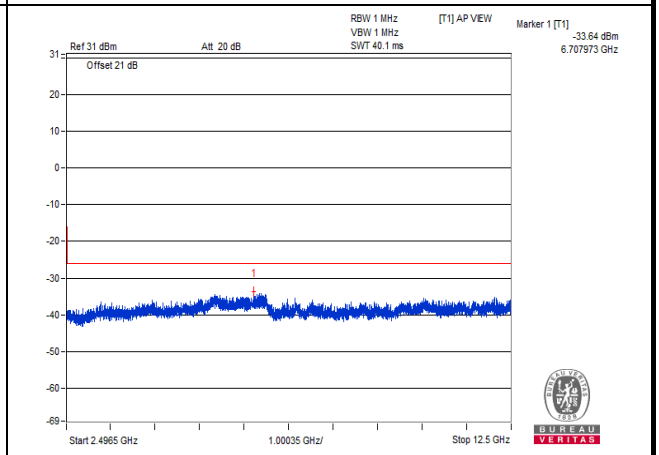






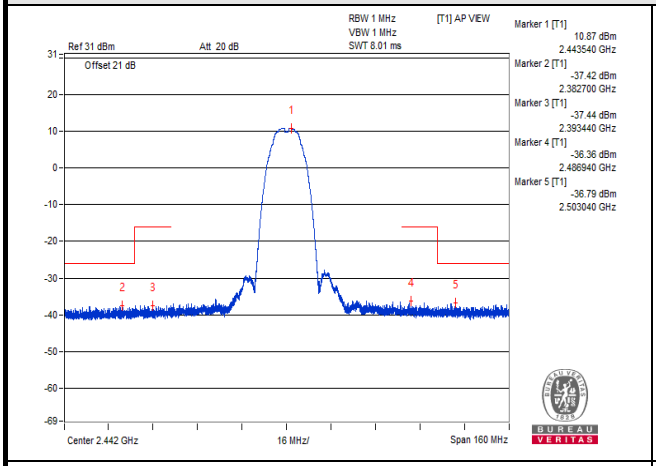


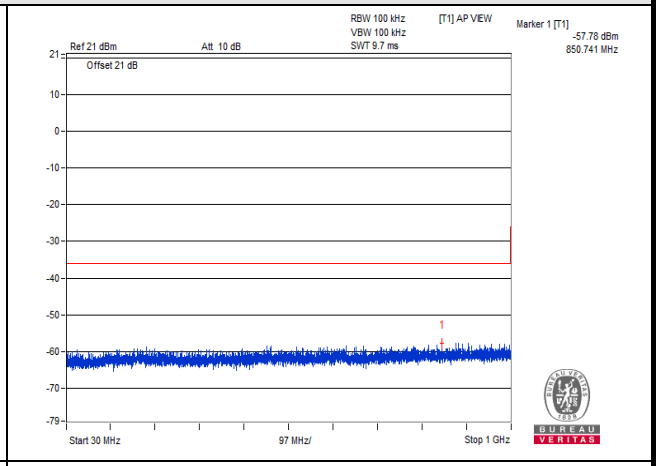


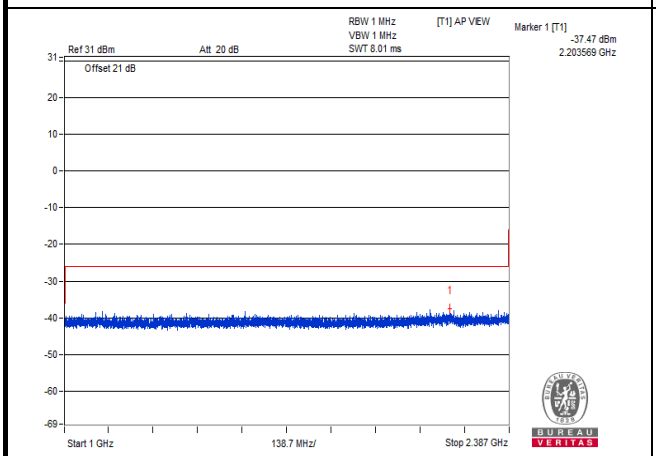


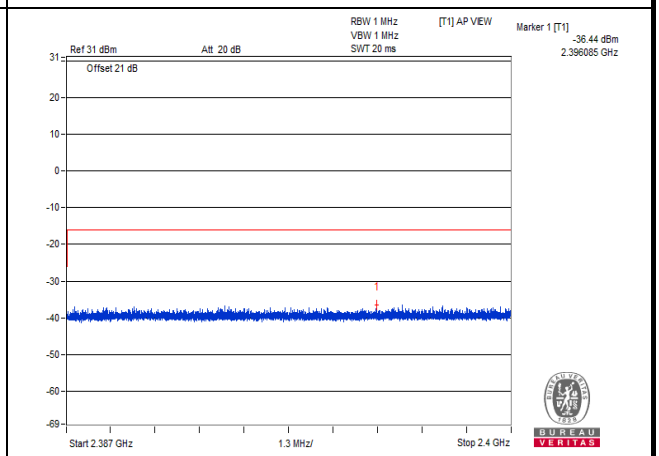
CH 7 (2442MHz)

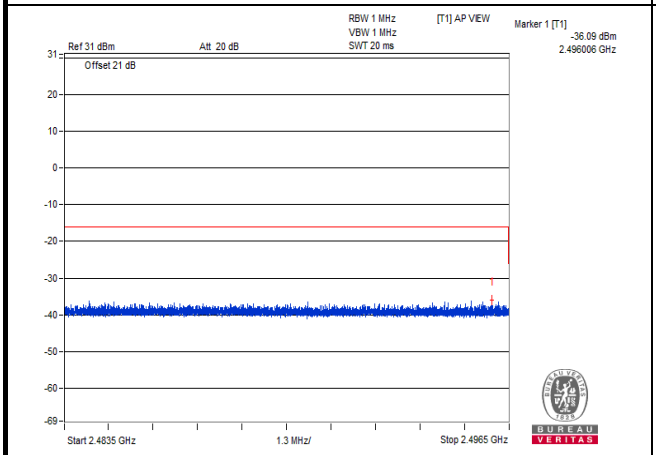
Vmin.

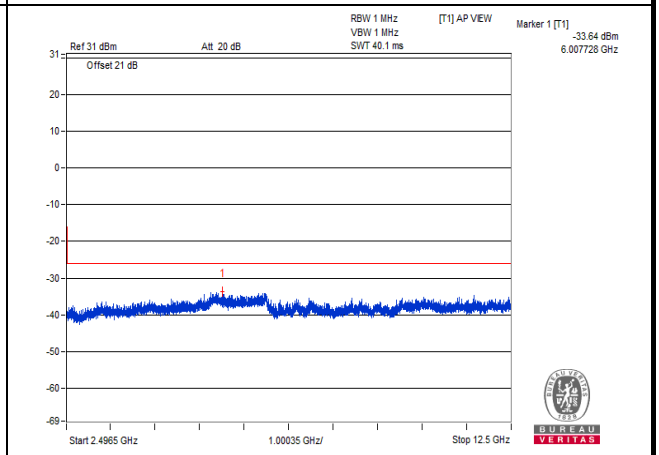






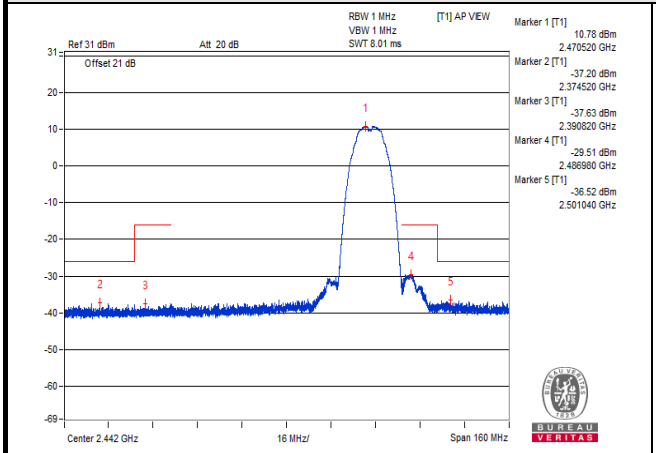


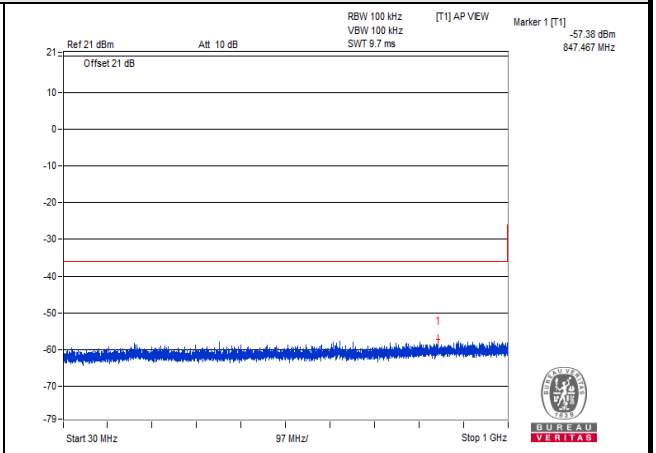


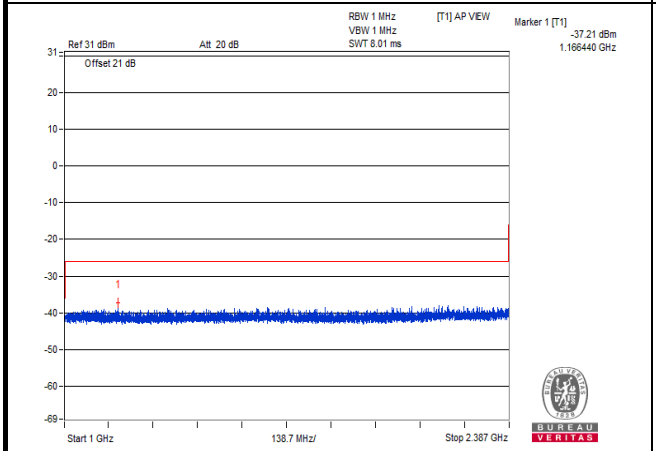


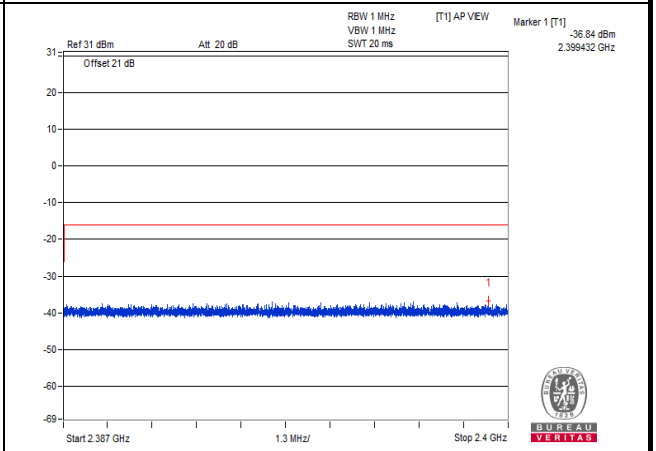
CH 7 (2442MHz)

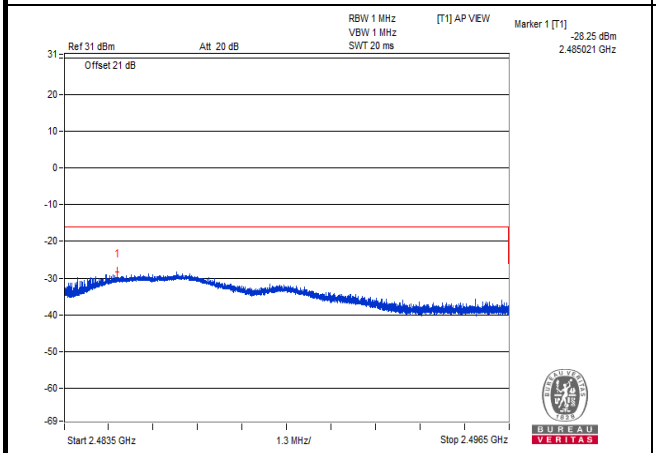
Vnormal

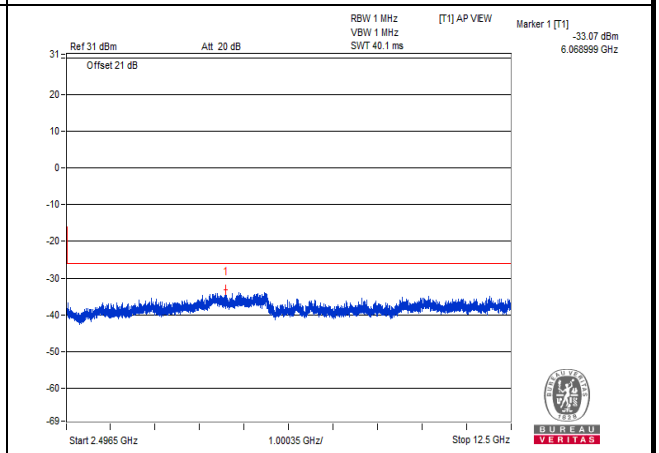






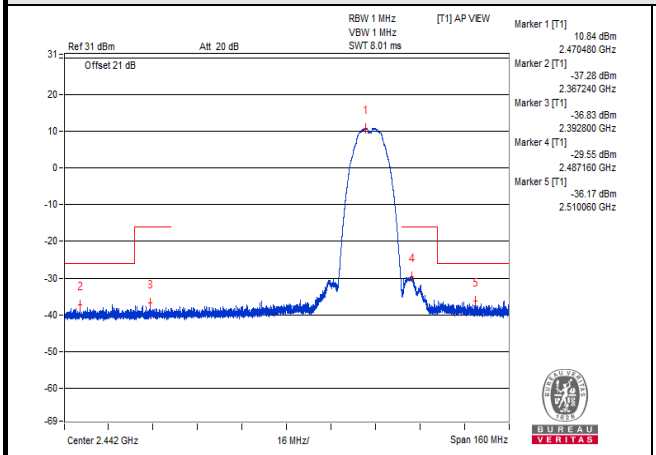


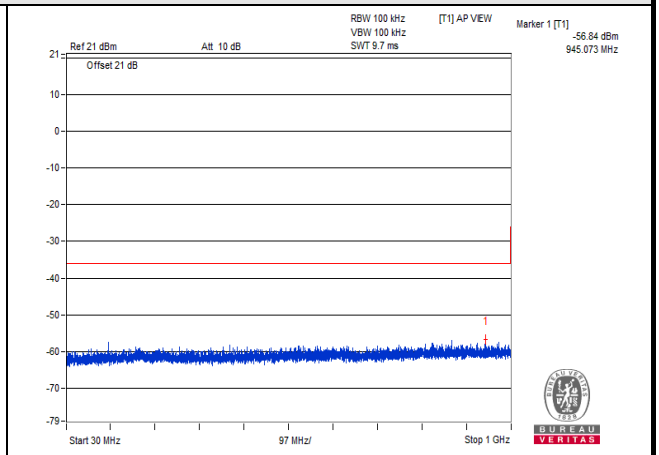


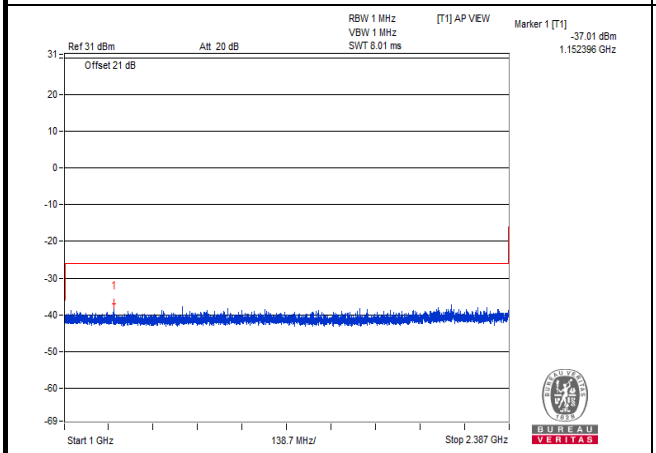


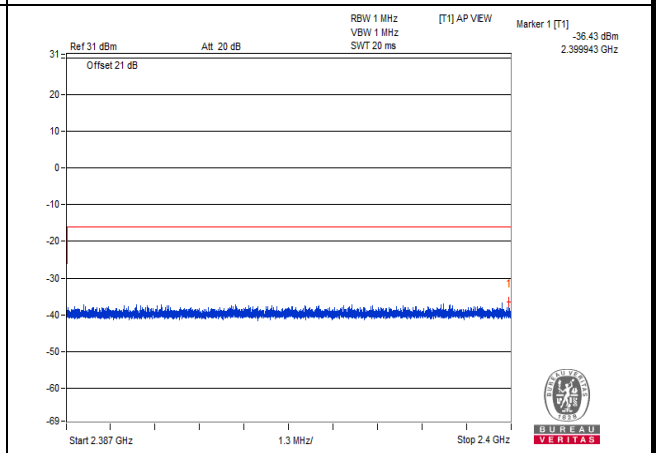
CH 13 (2472MHz)

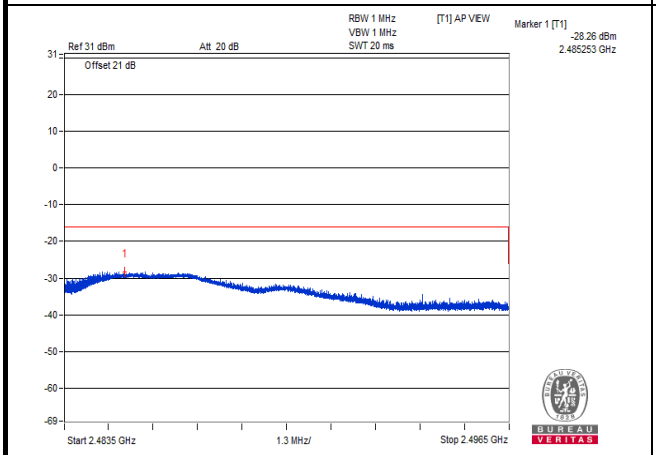
Vmax.

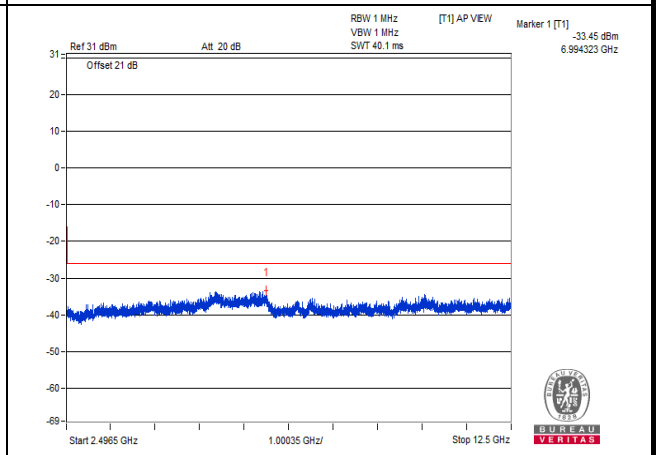






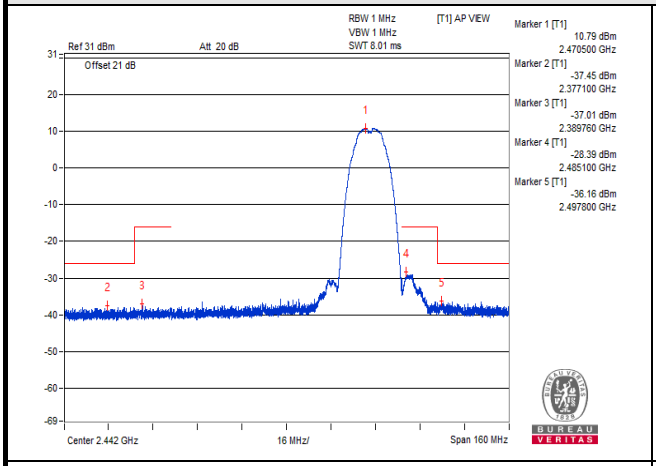


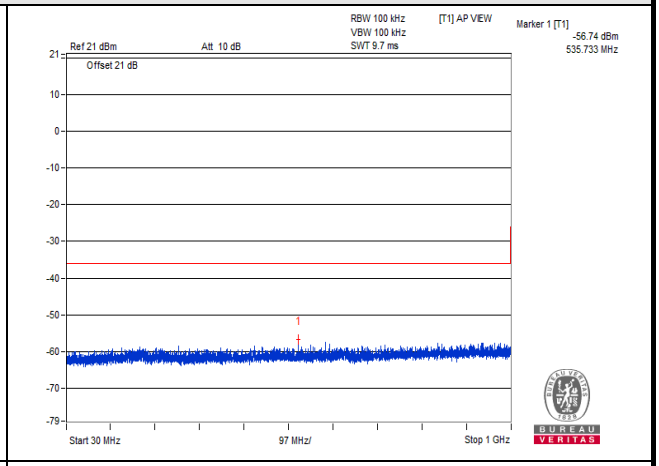


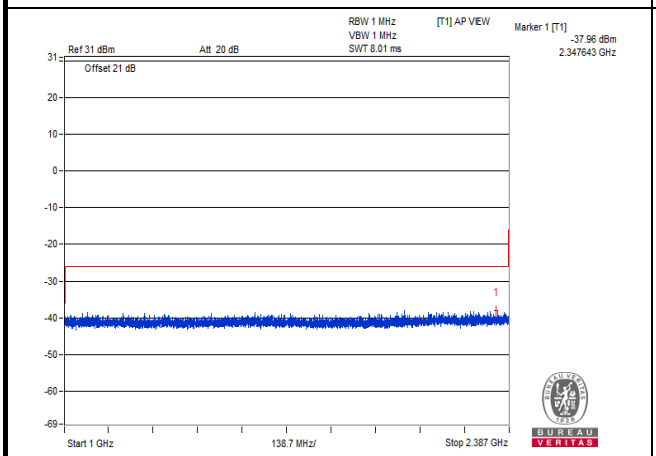


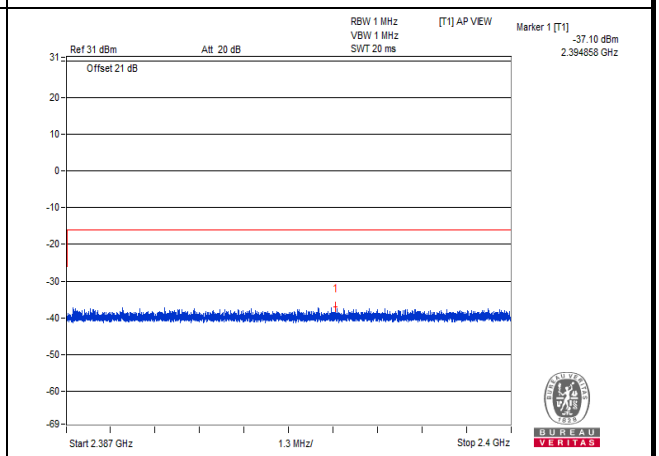
CH 13 (2472MHz)

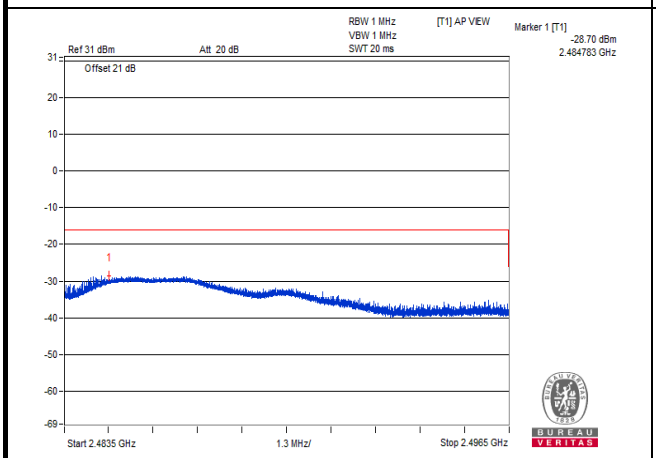
Vmin.

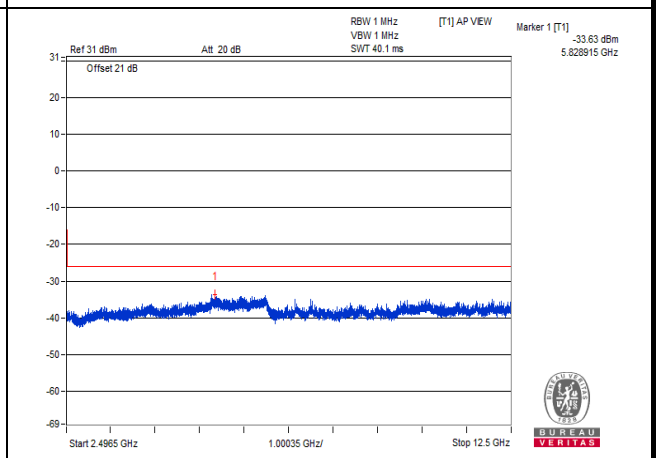






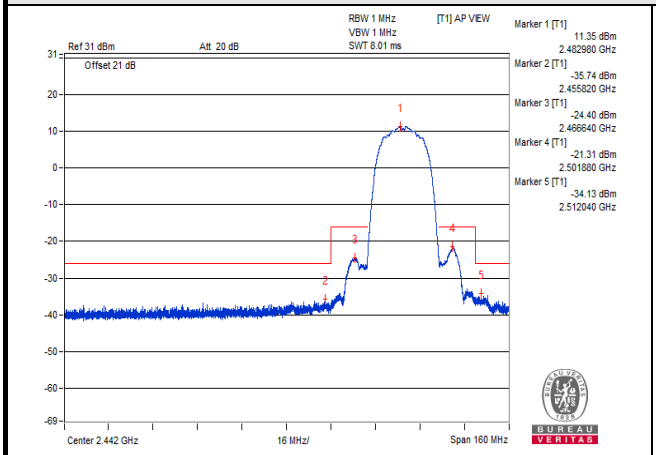


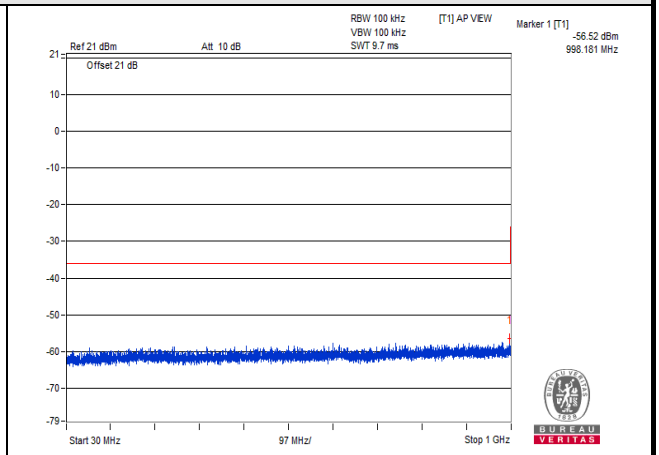


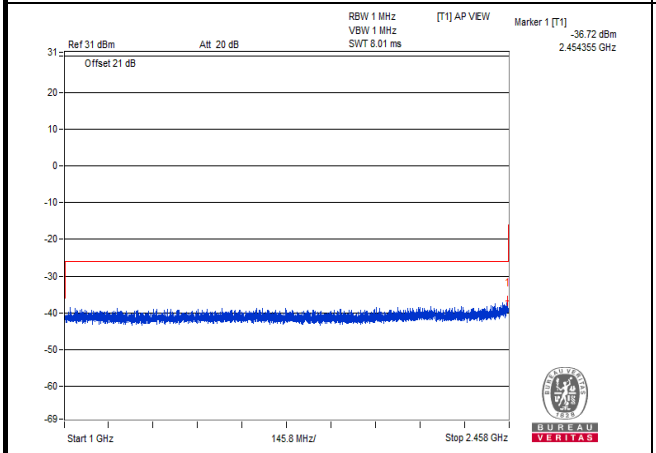


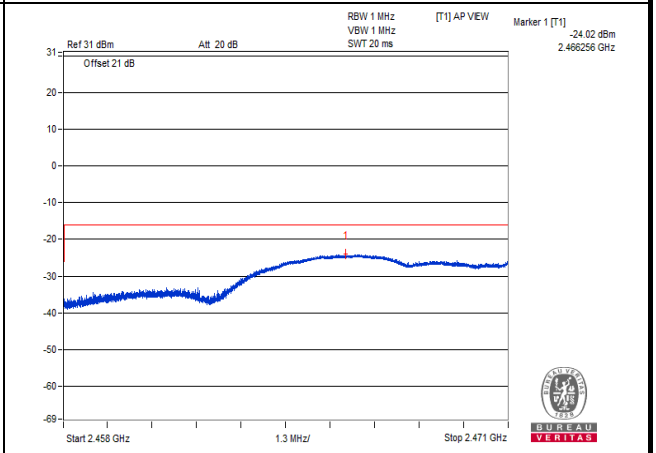
CH 13 (2472MHz)

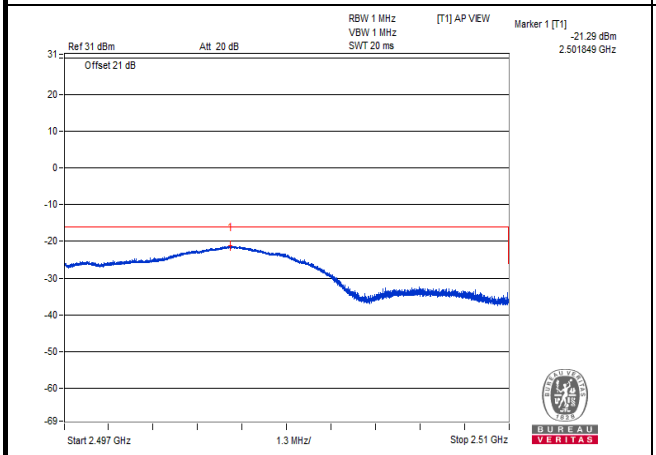
Vnormal

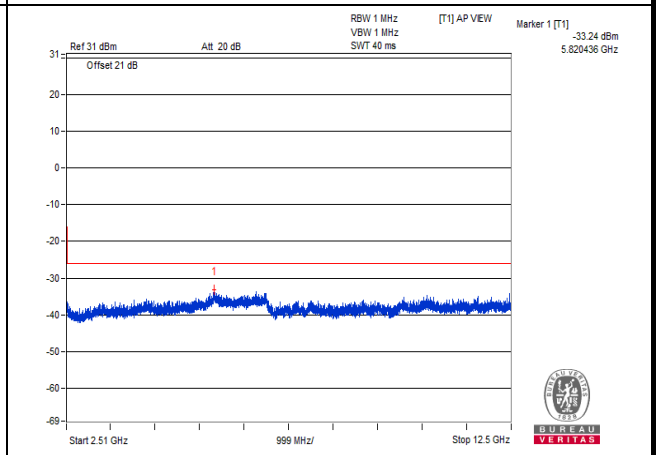






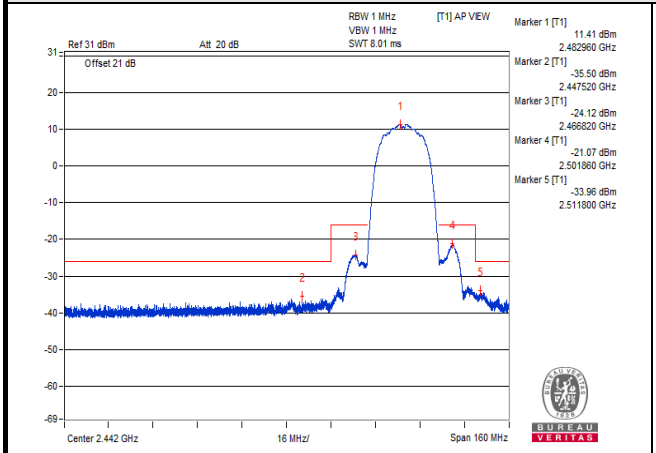


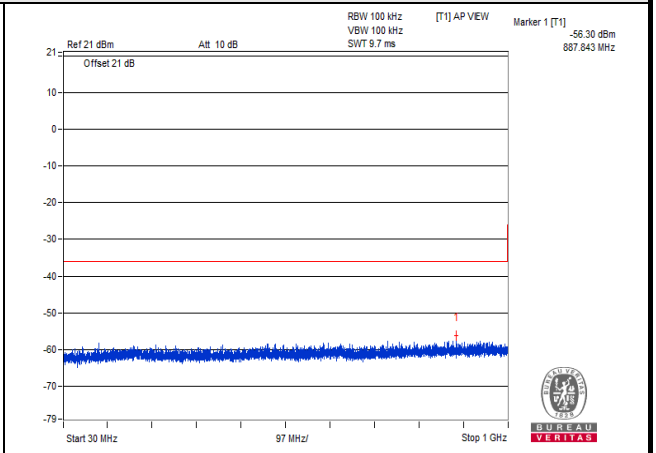


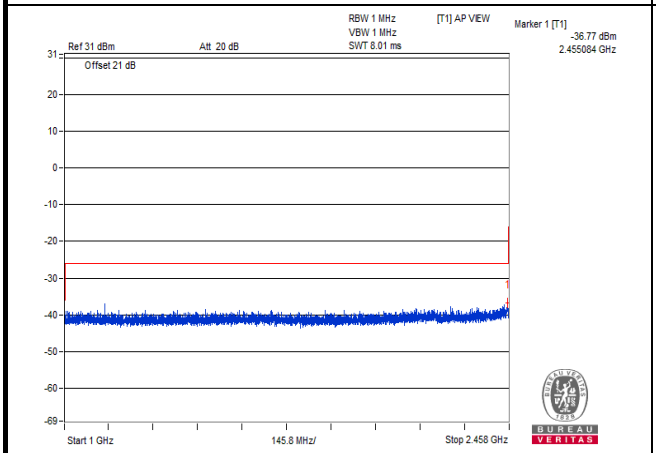


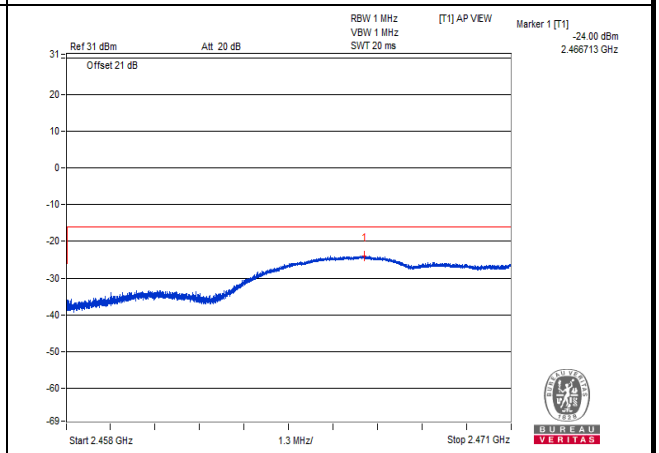
CH 14 (2484MHz)

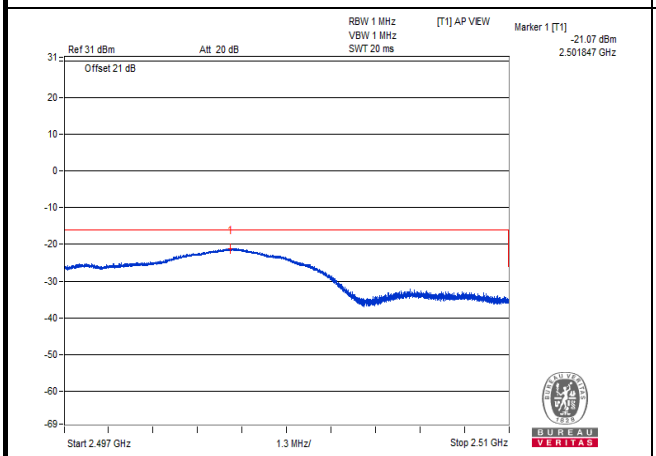
Vmax.

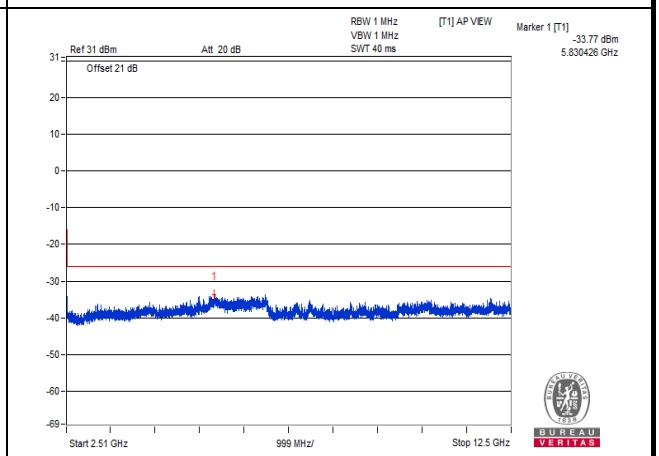






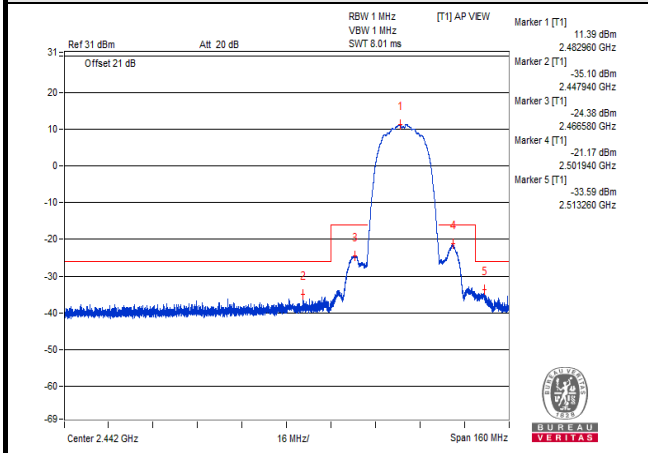


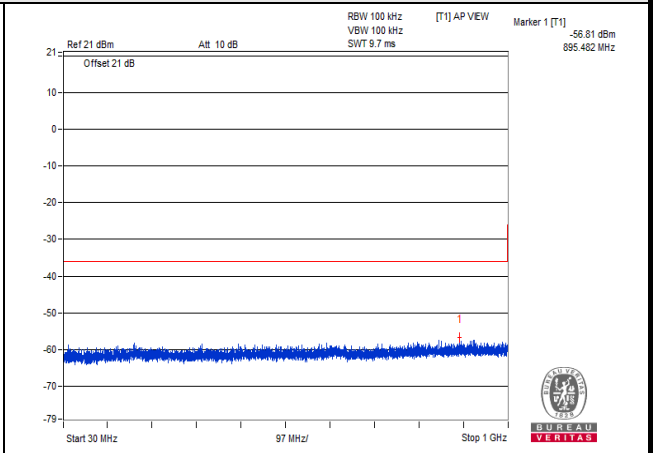


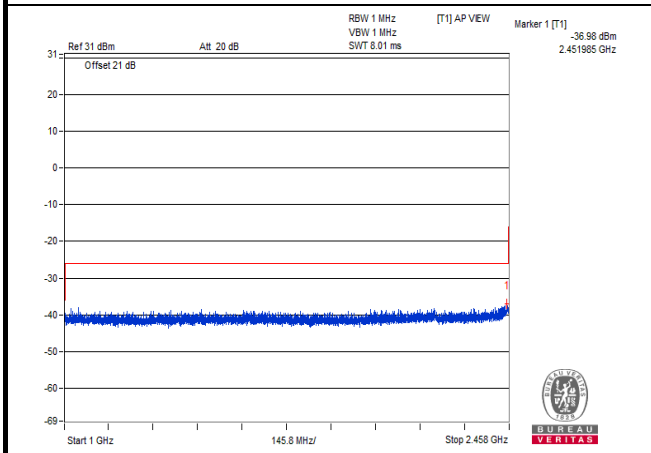


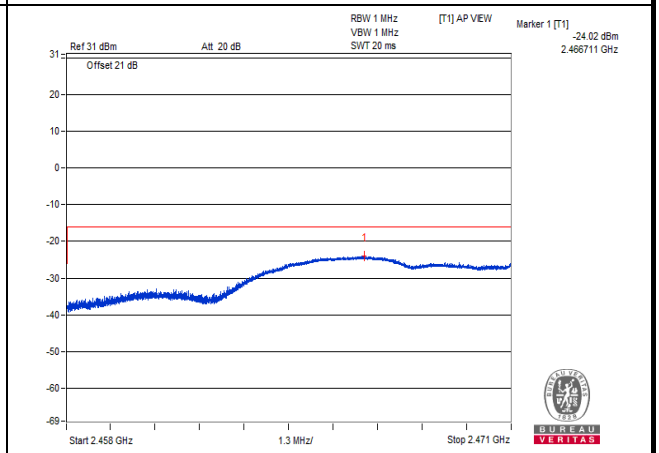
CH 14 (2484MHz)

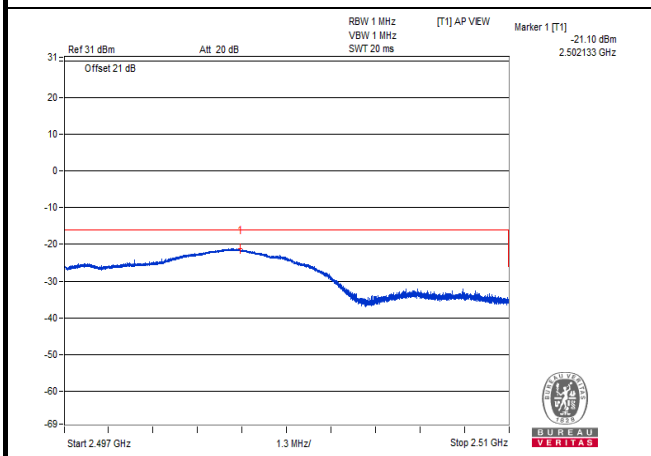
Vmin.

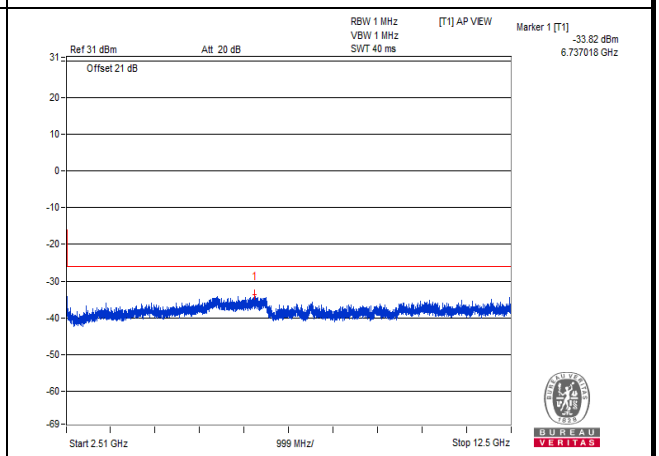












CH 14 (2484MHz)

802.11g

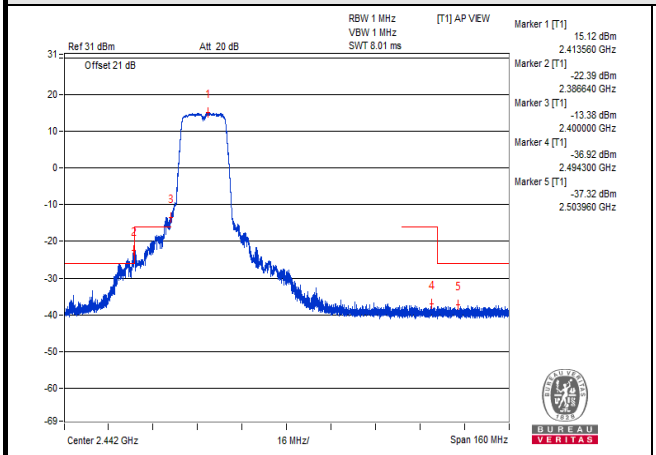
TEST CHANNEL		CH 1 (2412MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	933.676	0.001849	0.25	PASS
	1000.0 to 2387.0	2387.000	0.078540	2.5	PASS(1)
	2387.0 to 2400.0	2399.987	1.258753	25	PASS(2)
	2483.5 to 2496.5	2494.615	0.240436	25	PASS
	2496.5 to 12500.0	6894.288	0.508159	2.5	PASS
$V_{max.}$	30.0 to 1000.0	878.386	0.001875	0.25	PASS
	1000.0 to 2387.0	2386.479	0.075242	2.5	PASS(3)
	2387.0 to 2400.0	2399.969	1.375734	25	PASS(4)
	2483.5 to 2496.5	2483.631	0.233884	25	PASS
	2496.5 to 12500.0	5902.691	0.425598	2.5	PASS
$V_{min.}$	30.0 to 1000.0	952.712	0.002004	0.25	PASS
	1000.0 to 2387.0	2387.000	0.085363	2.5	PASS(5)
	2387.0 to 2400.0	2399.972	1.345843	25	PASS(6)
	2483.5 to 2496.5	2487.461	0.228560	25	PASS
	2496.5 to 12500.0	5753.889	0.409261	2.5	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	956.713	0.001778	0.25	PASS
	1000.0 to 2387.0	2294.417	0.166725	2.5	PASS
	2387.0 to 2400.0	2397.063	0.439542	25	PASS
	2483.5 to 2496.5	2484.193	0.281190	25	PASS
	2496.5 to 12500.0	6451.633	0.435512	2.5	PASS
$V_{max.}$	30.0 to 1000.0	750.710	0.001897	0.25	PASS
	1000.0 to 2387.0	2294.591	0.180717	2.5	PASS
	2387.0 to 2400.0	2399.886	0.406443	25	PASS
	2483.5 to 2496.5	2486.067	0.351560	25	PASS
	2496.5 to 12500.0	6981.819	0.447713	2.5	PASS
$V_{min.}$	30.0 to 1000.0	980.357	0.002244	0.25	PASS
	1000.0 to 2387.0	2174.789	0.161436	2.5	PASS
	2387.0 to 2400.0	2397.235	0.424620	25	PASS
	2483.5 to 2496.5	2485.471	0.346737	25	PASS
	2496.5 to 12500.0	5860.176	0.442588	2.5	PASS

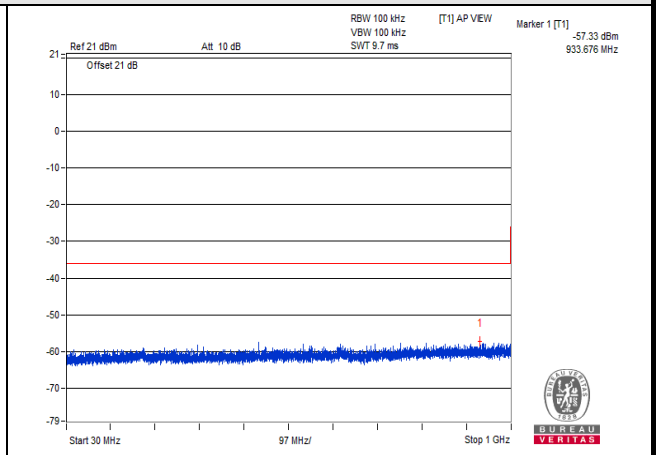
TEST CHANNEL		CH 13 (2472MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	908.092	0.001892	0.25	PASS
	1000.0 to 2387.0	2375.730	0.167494	2.5	PASS
	2387.0 to 2400.0	2390.500	0.228034	25	PASS
	2483.5 to 2496.5	2486.972	0.608509	25	PASS(7)
	2496.5 to 12500.0	2497.750	0.120481	2.5	PASS(8)
$V_{max.}$	30.0 to 1000.0	880.083	0.001807	0.25	PASS
	1000.0 to 2387.0	2242.578	0.175388	2.5	PASS
	2387.0 to 2400.0	2390.383	0.212324	25	PASS
	2483.5 to 2496.5	2487.024	0.557913	25	PASS(9)
	2496.5 to 12500.0	2496.500	0.145563	2.5	PASS(10)
$V_{min.}$	30.0 to 1000.0	589.932	0.001742	0.25	PASS
	1000.0 to 2387.0	2368.275	0.167494	2.5	PASS
	2387.0 to 2400.0	2394.713	0.207491	25	PASS
	2483.5 to 2496.5	2486.714	0.628150	25	PASS(11)
	2496.5 to 12500.0	2496.500	0.130728	2.5	PASS(12)

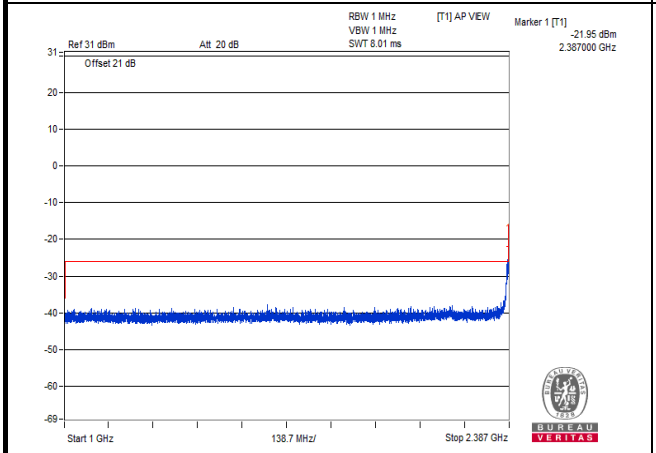
NOTE: 1. The spectrum plots are attached on the following pages.

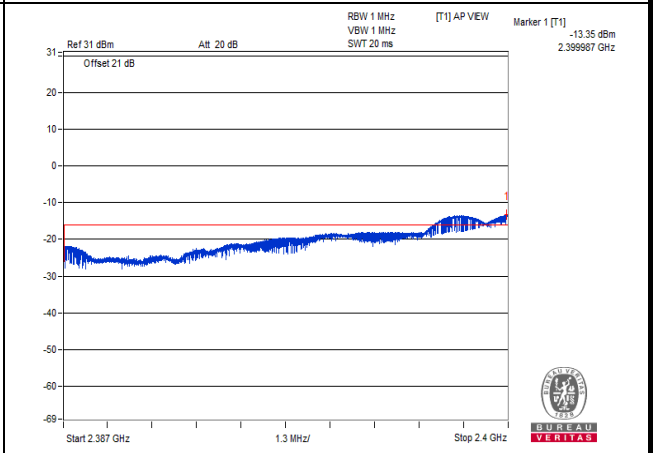
2. (No.): The value was tested under Measuring Mode *Zero Span.

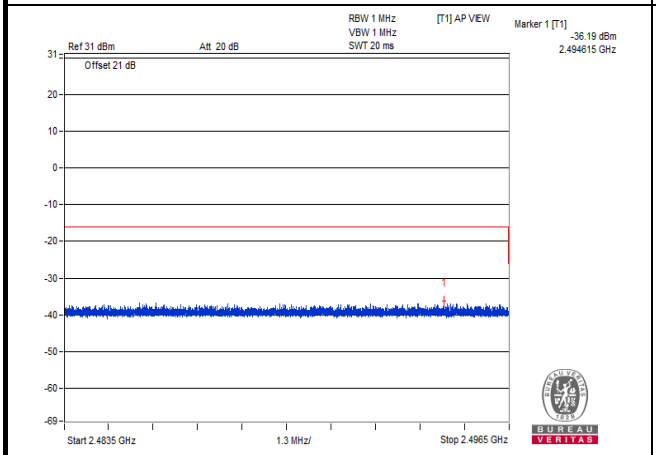
Vnormal

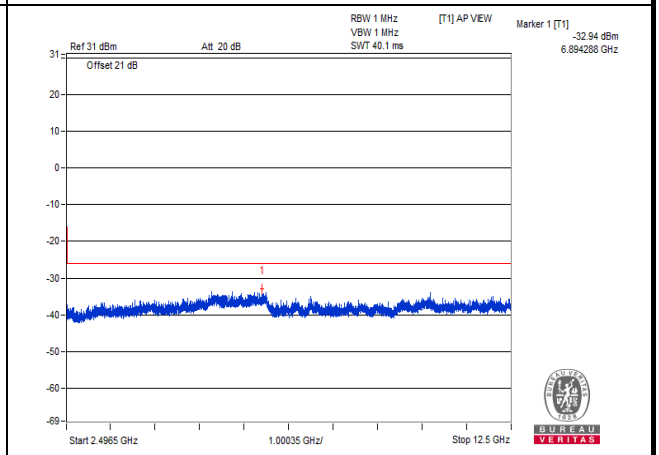






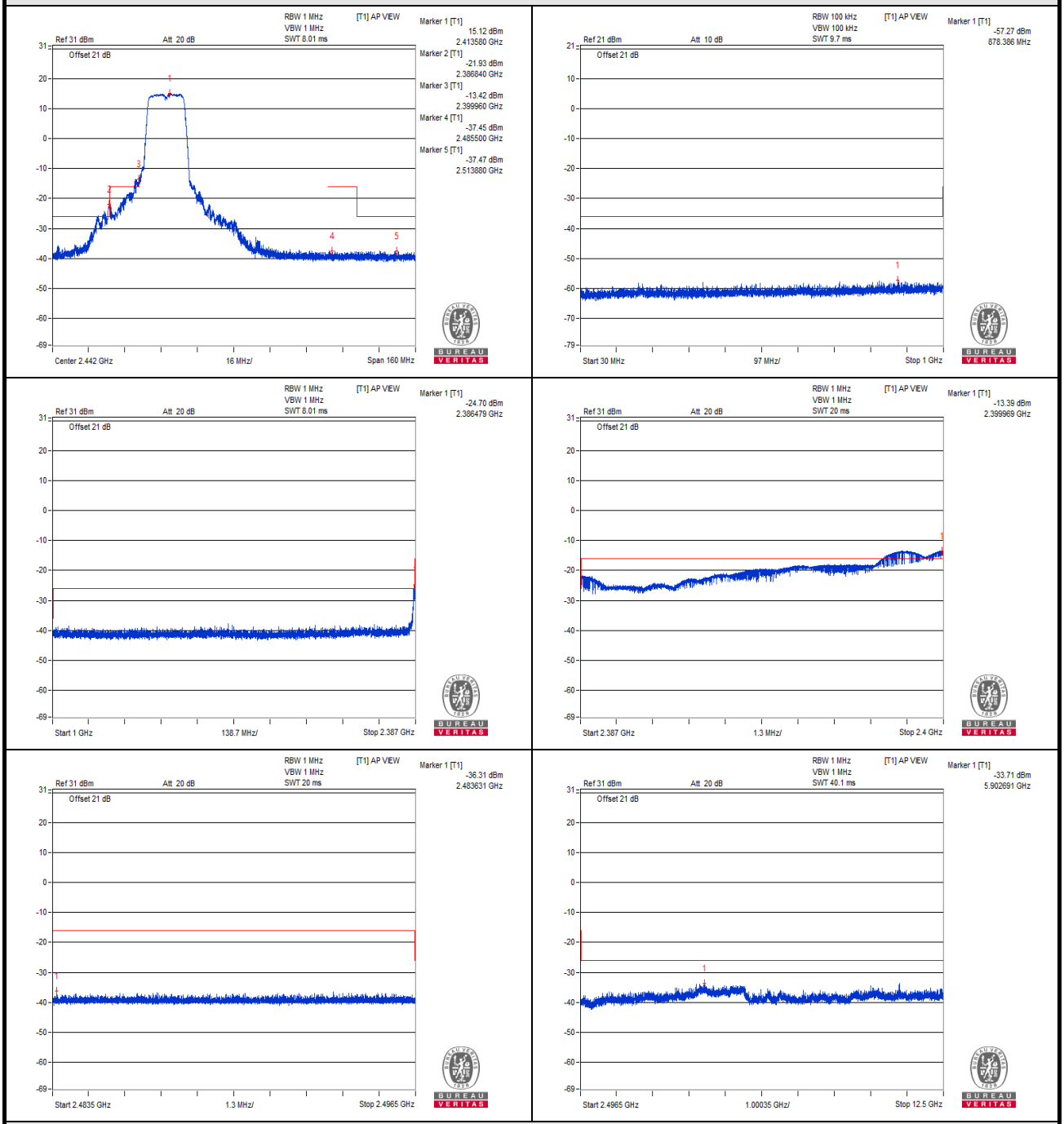






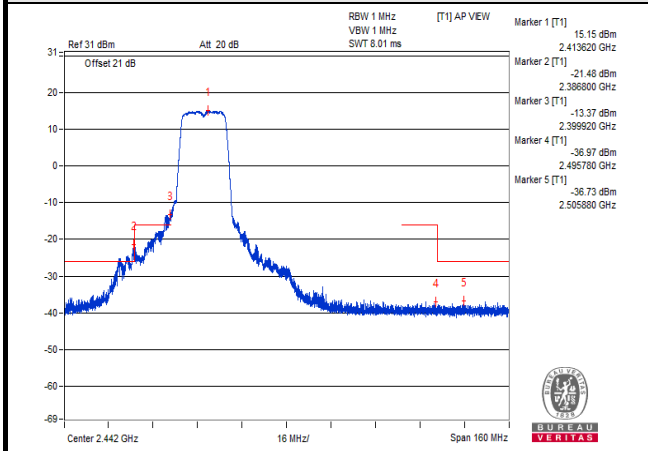
CH 1 (2412MHz)

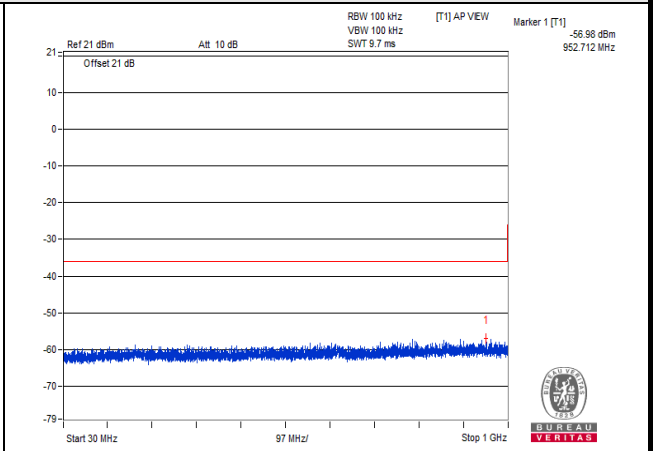
Vmax.

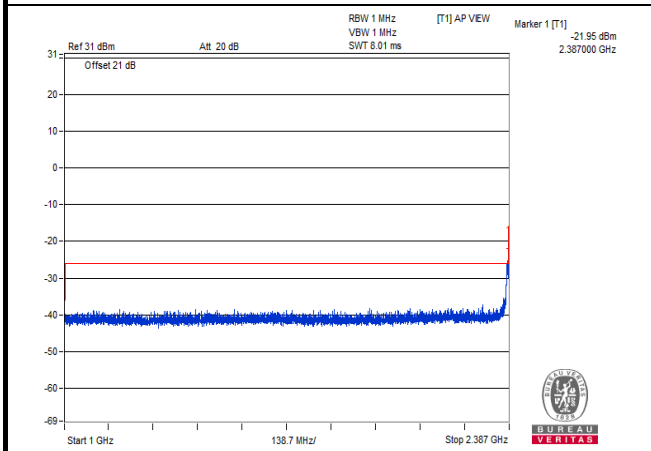


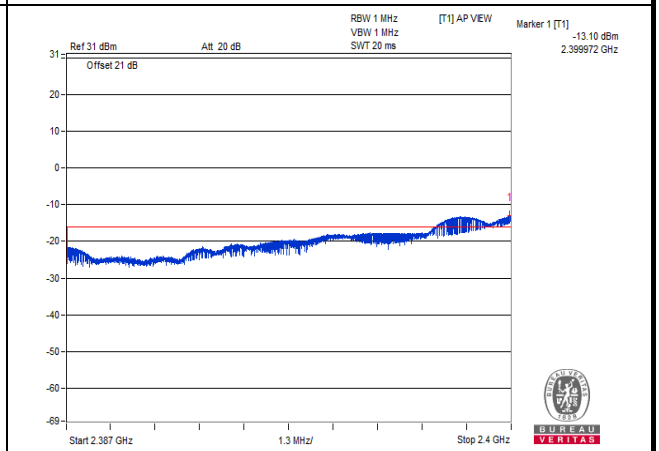
CH 1 (2412MHz)

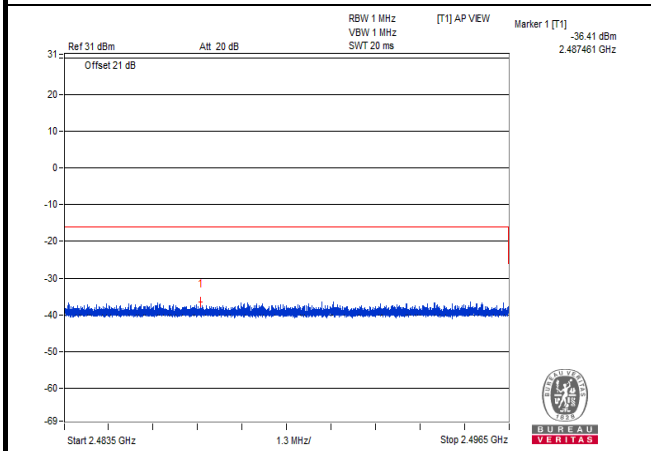
Vmin.

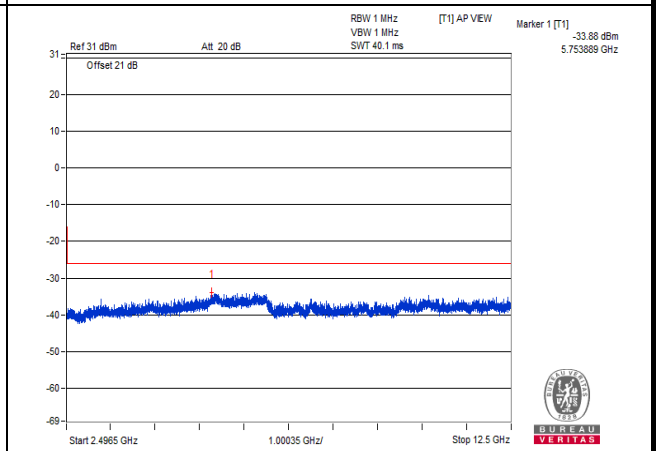






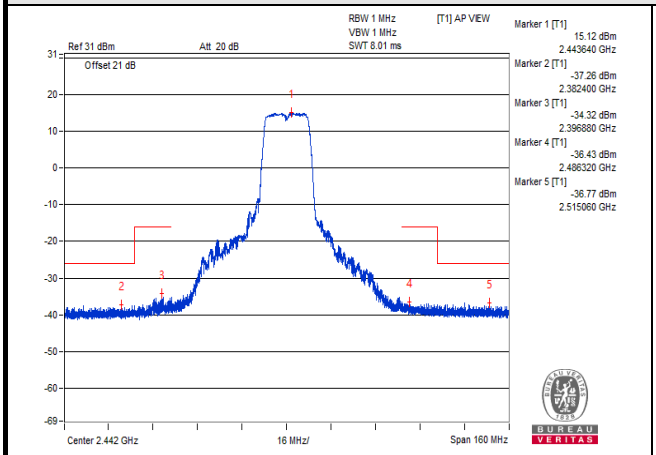


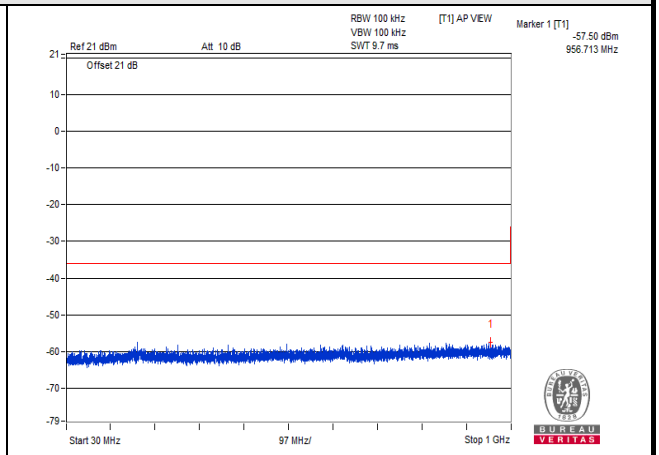


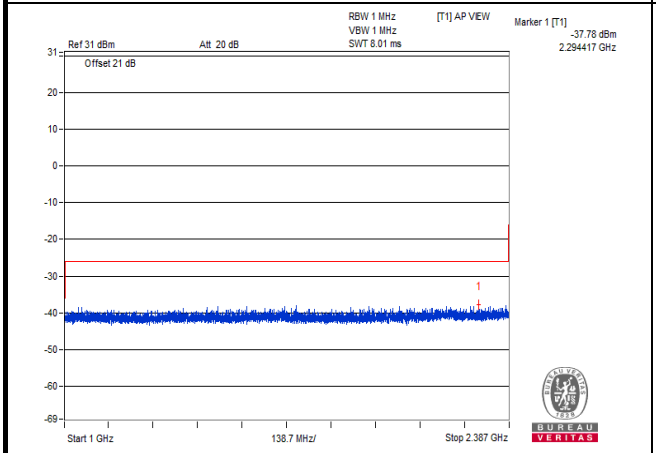


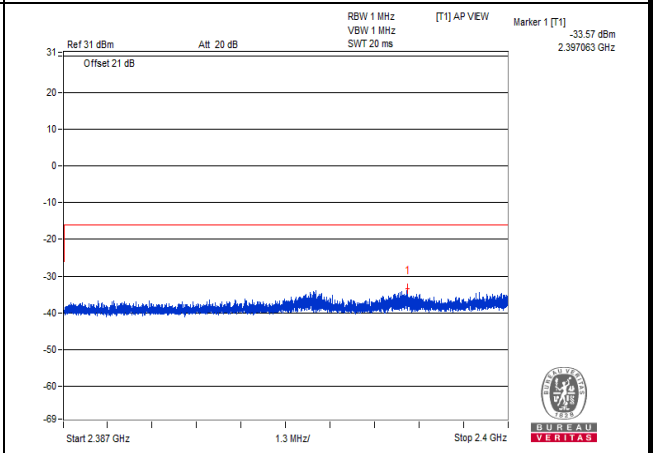
CH 1 (2412MHz)

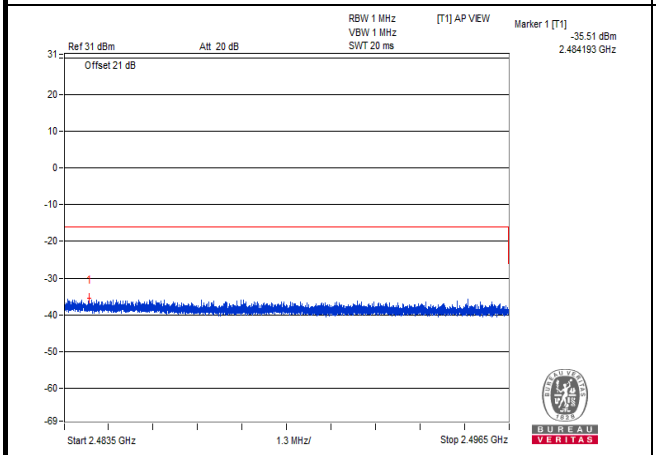
Vnormal

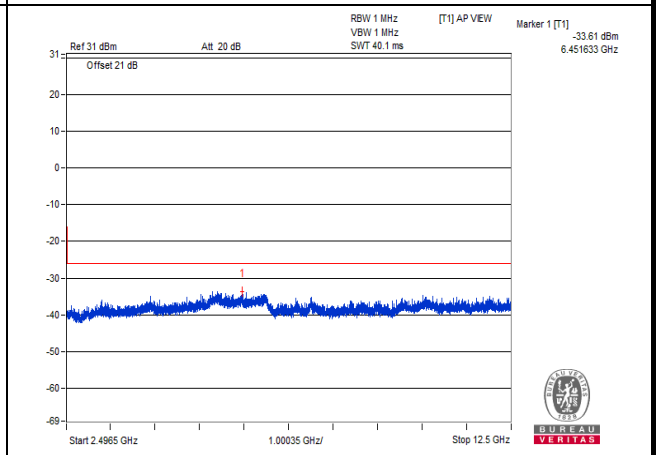






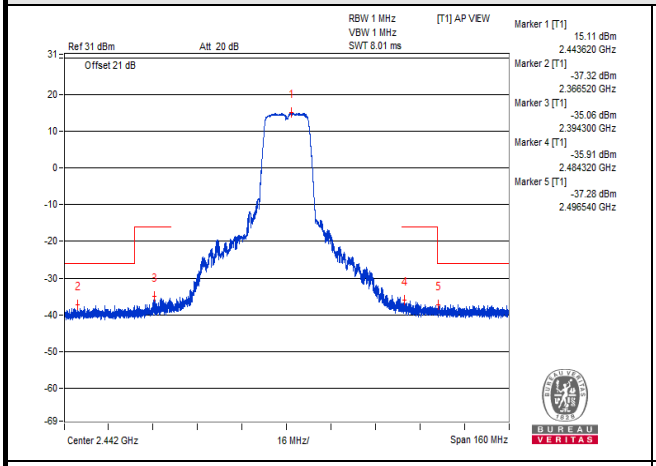


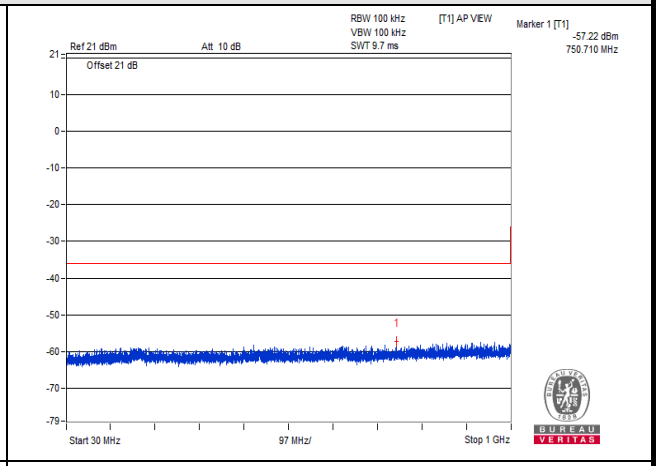


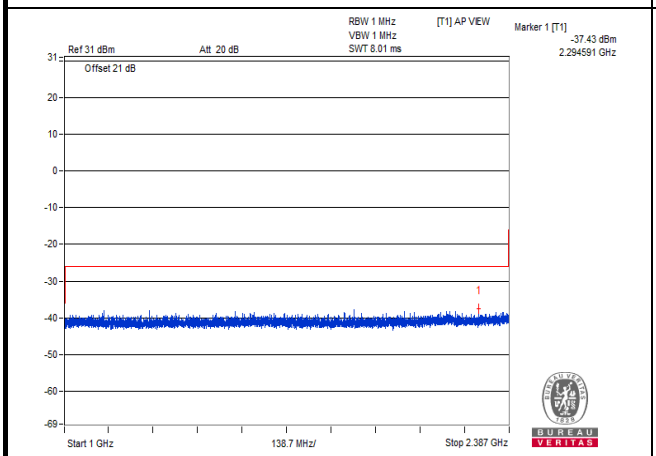


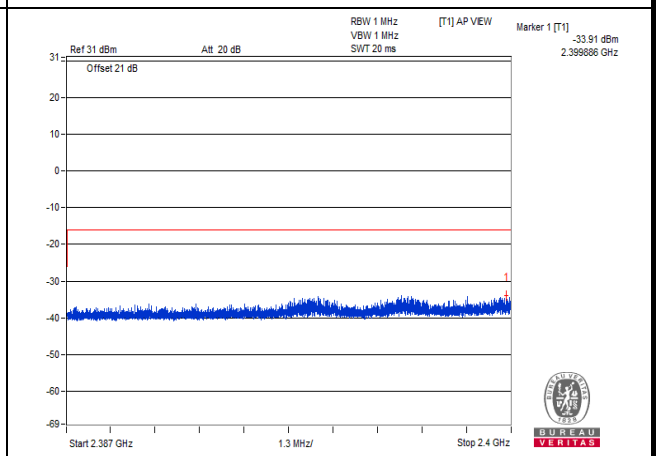
CH 7 (2442MHz)

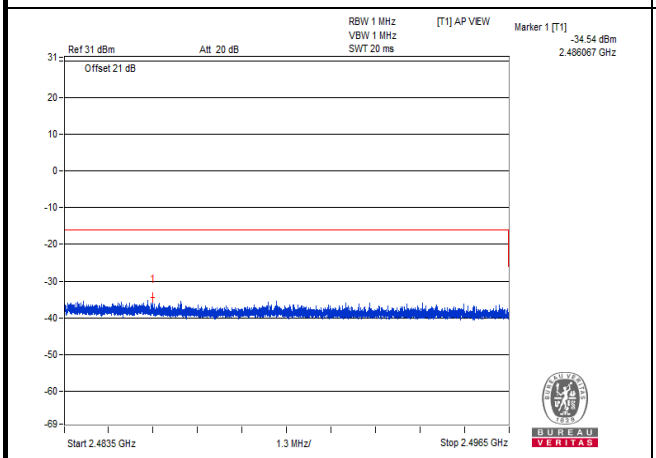
Vmax.

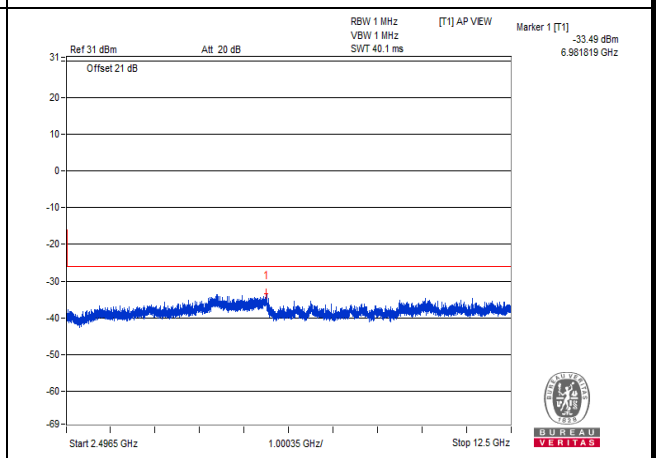






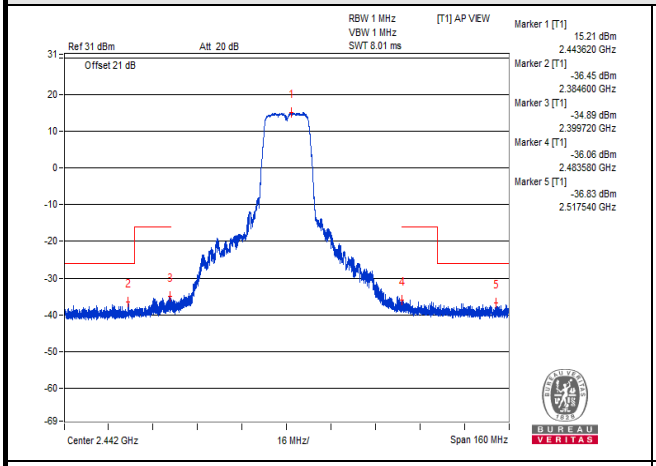


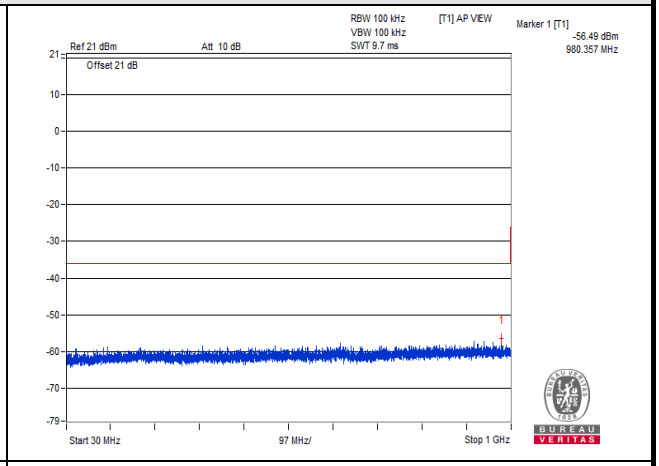


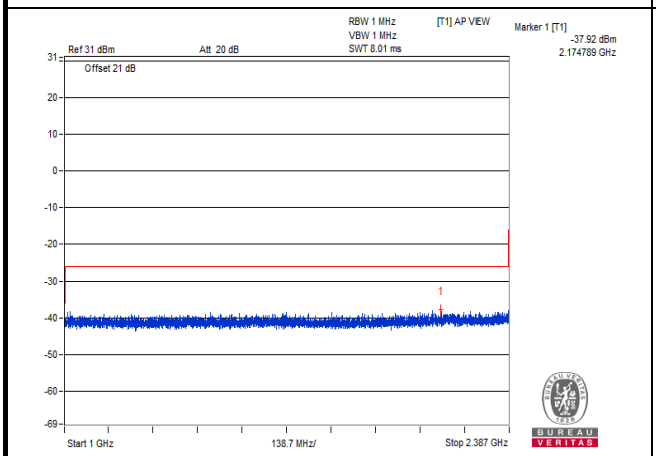


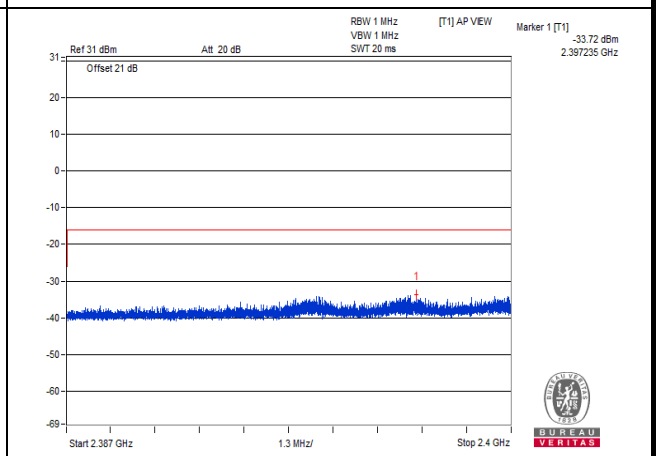
CH 7 (2442MHz)

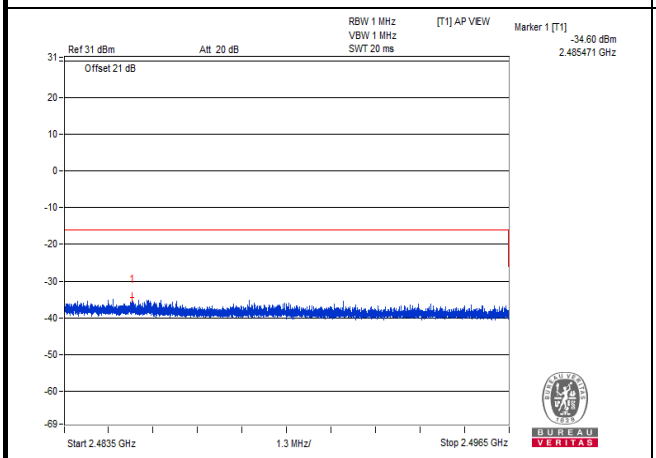
Vmin.

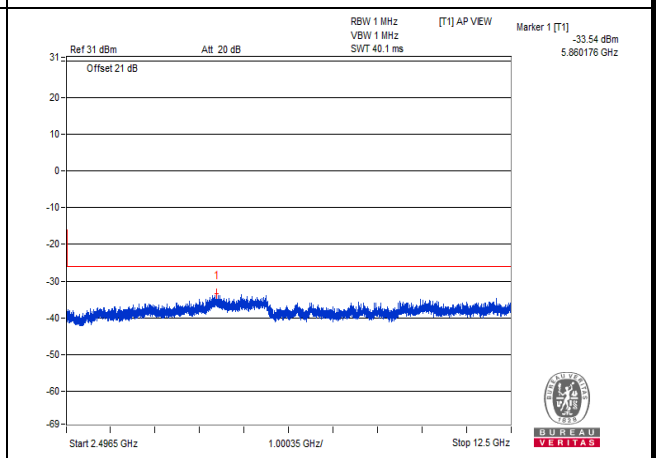






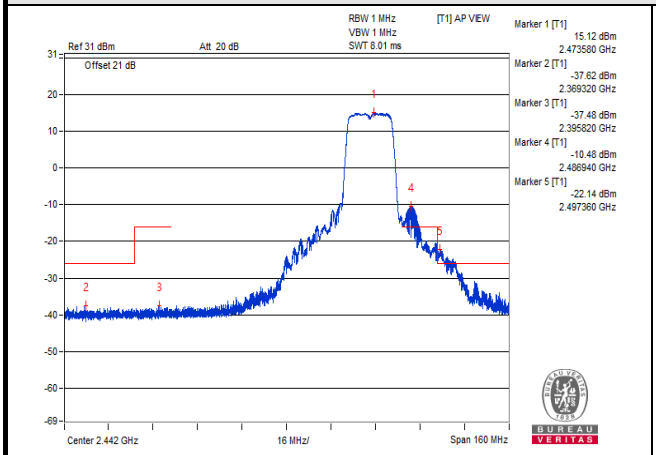


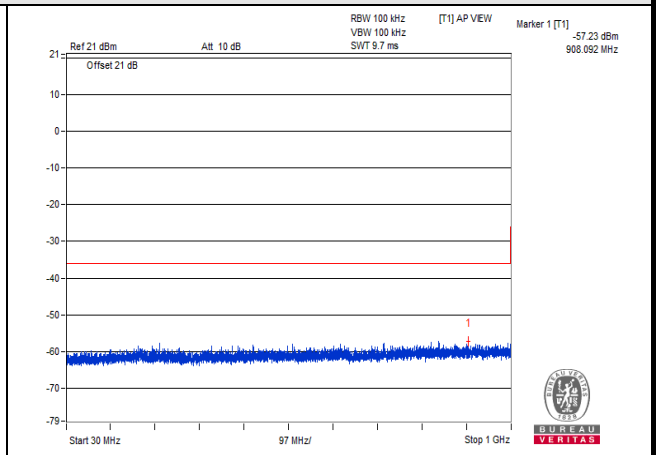


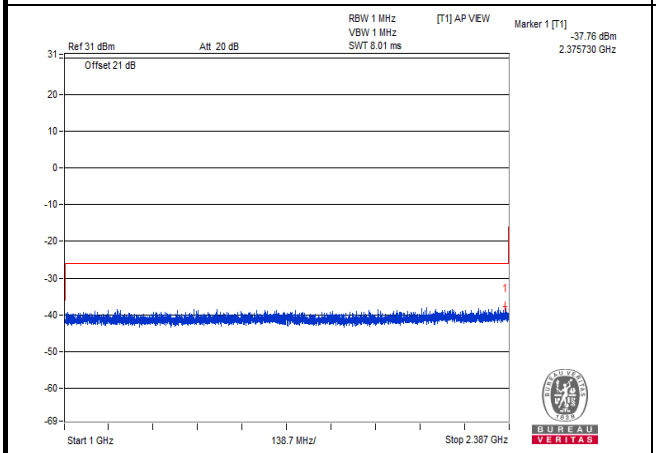


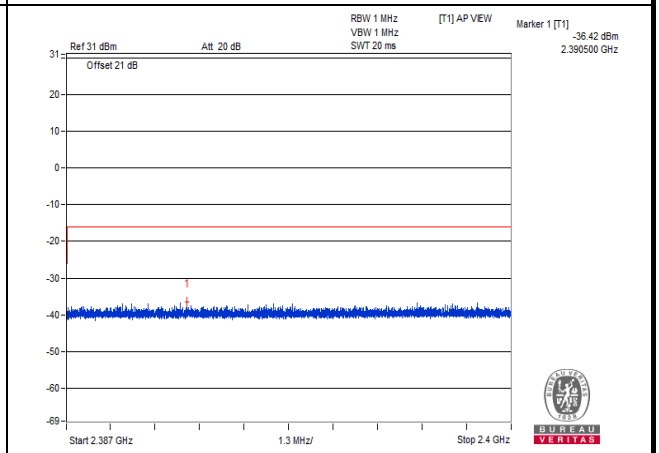
CH 7 (2442MHz)

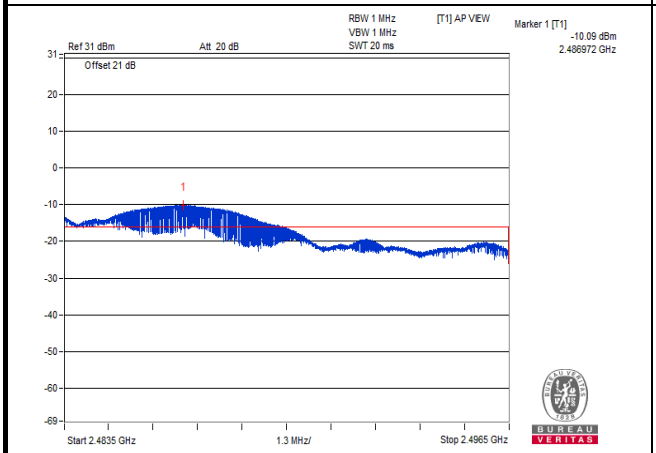
Vnormal

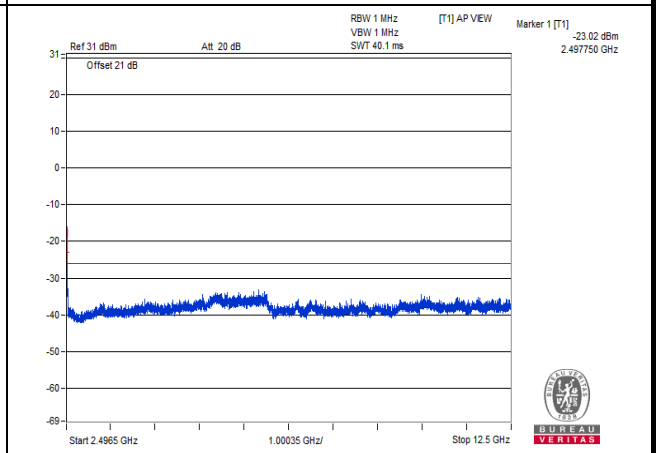






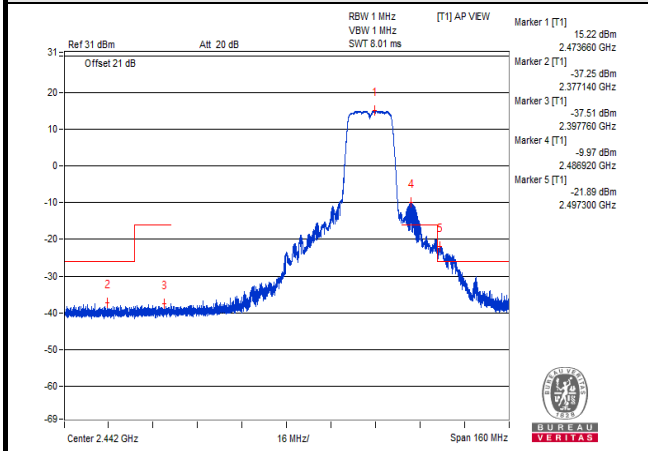


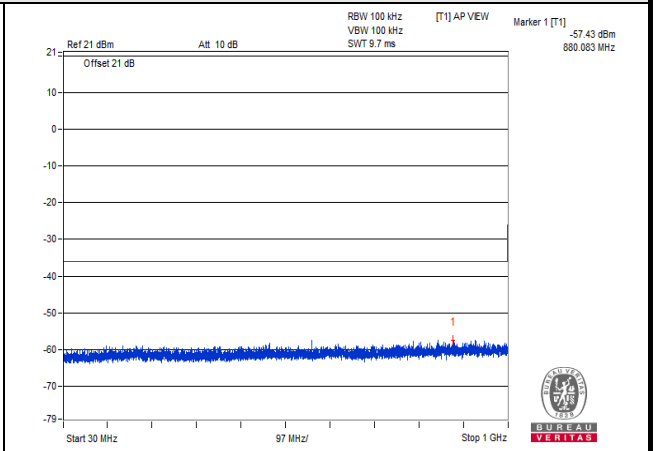


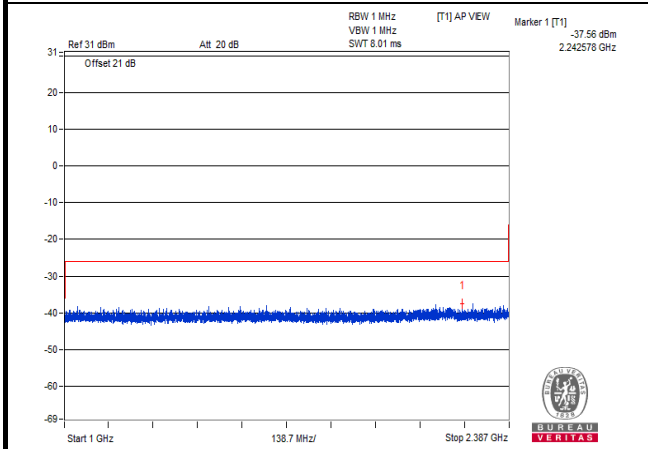


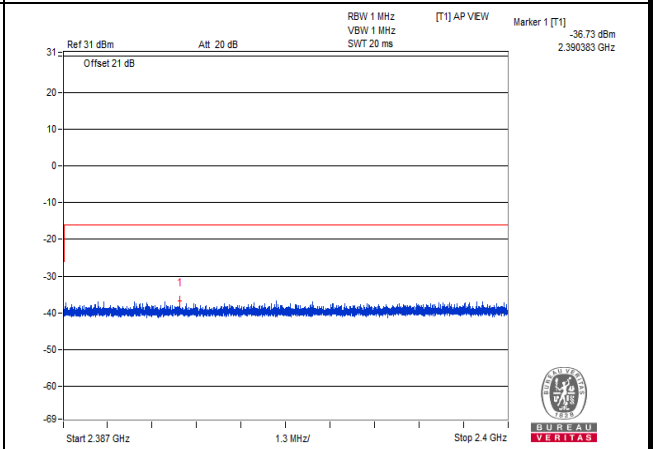
CH 13 (2472MHz)

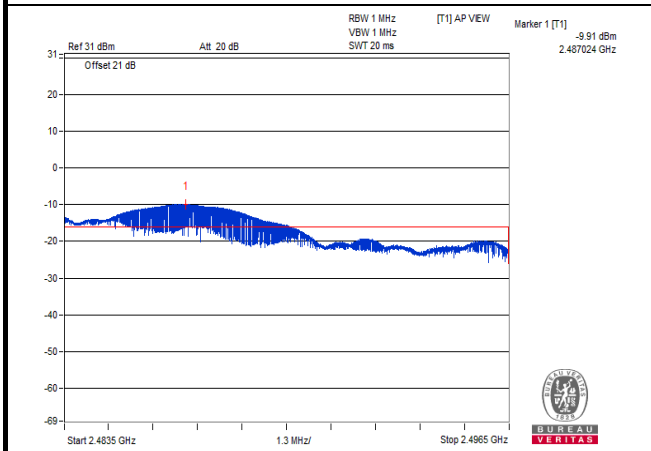
Vmax.

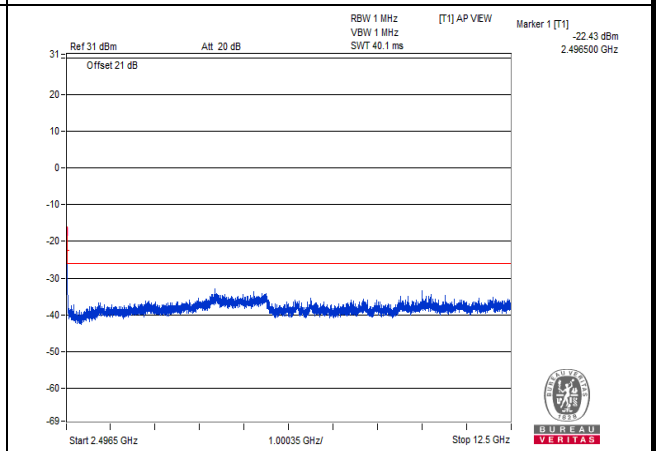






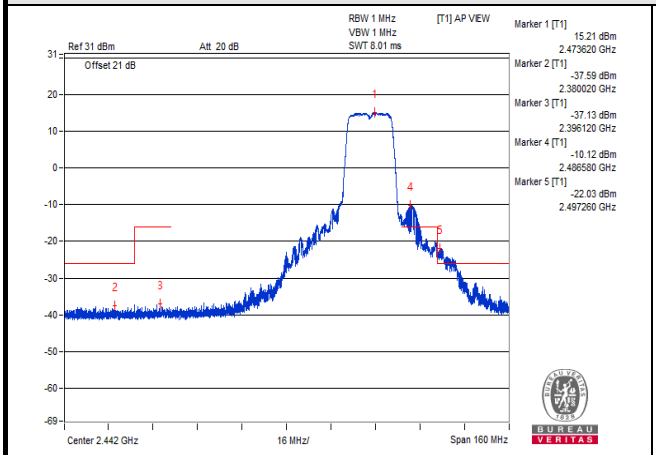


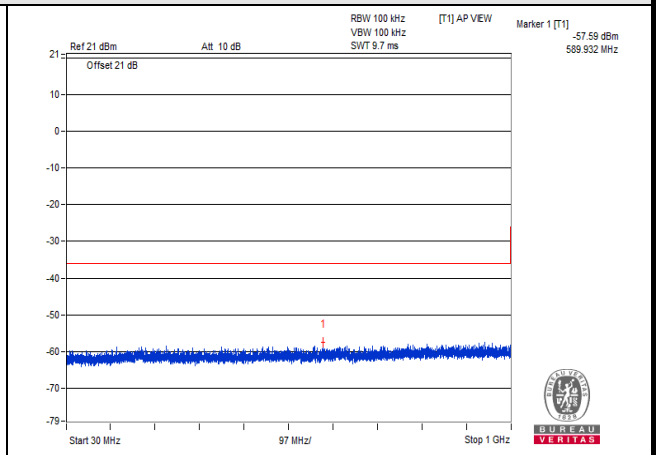


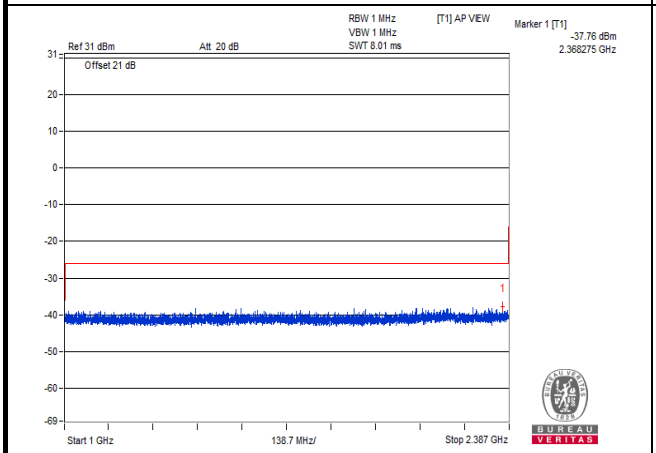


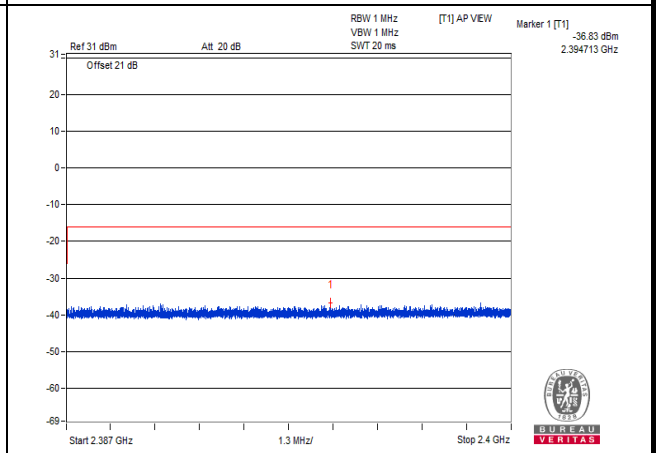
CH 13 (2472MHz)

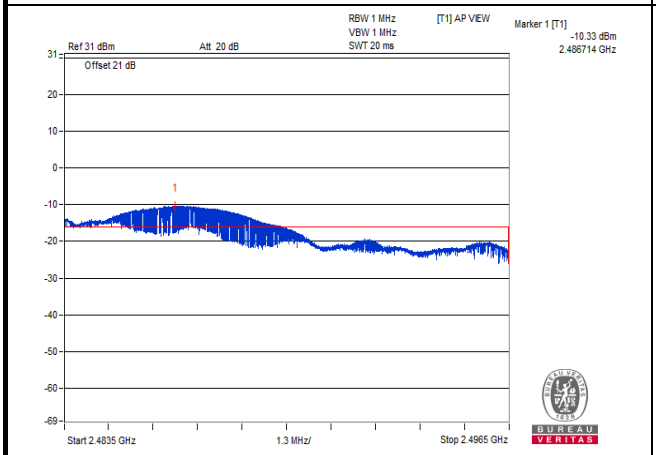
Vmin.

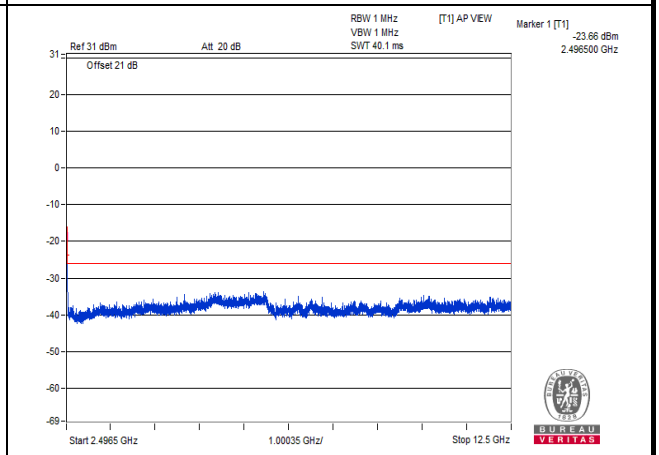








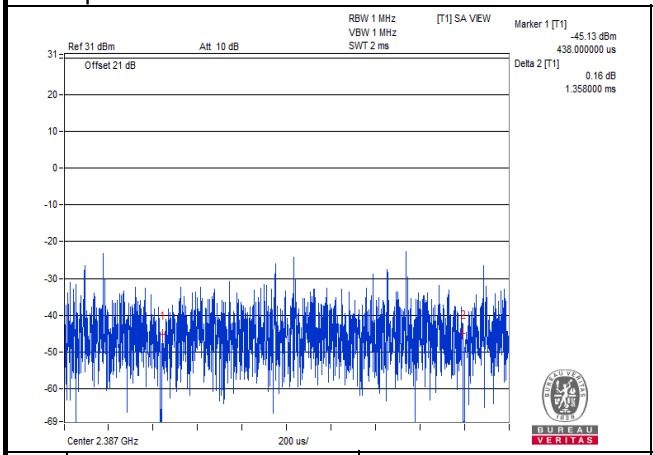




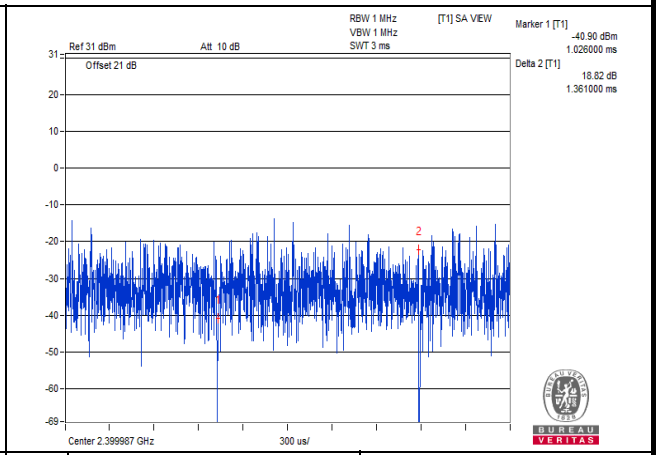
CH 13 (2472MHz)

Measuring Mode *Zero Span

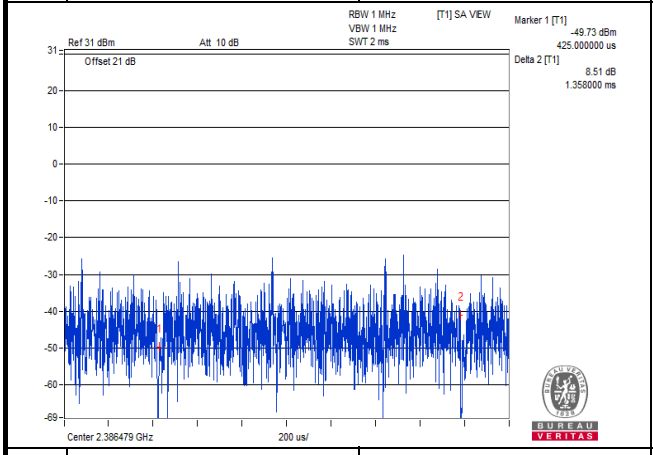
1. Set the spectrum analyzer as below and it takes in a value of all data point.
2. Regarding the all data value, it transforms the “dBm” value into “uW” value.
3. It adds the all values and calculates a grand total. Define a grand total as “P”.
4. It divides “P” by sample data point (ex.501) and calculates the mean value.
5. It reports the mean value.



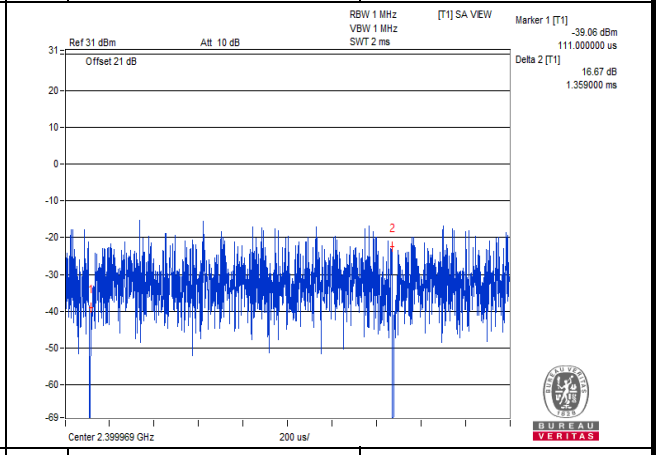
1	2387.000MHz	P = 0.07854uW



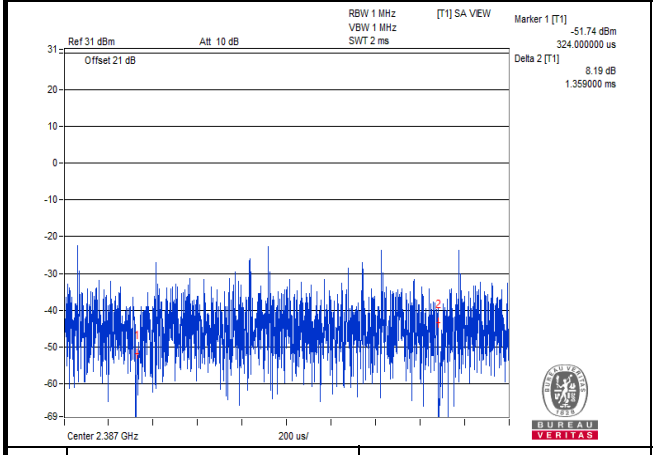
2	2399.987MHz	P = 1.258753uW



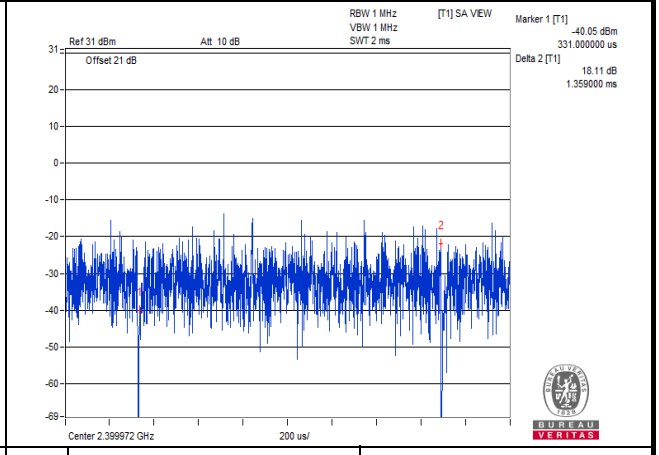
3	2386.479MHz	P = 0.075242uW



4	2399.969MHz	P = 1.375734uW



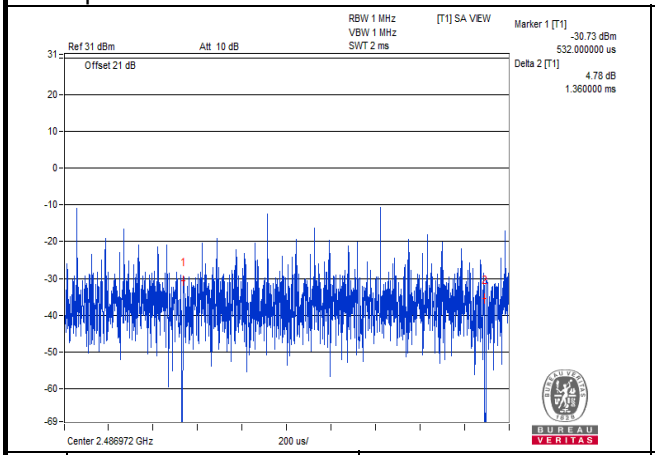
5	2387.000MHz	P = 0.085363uW



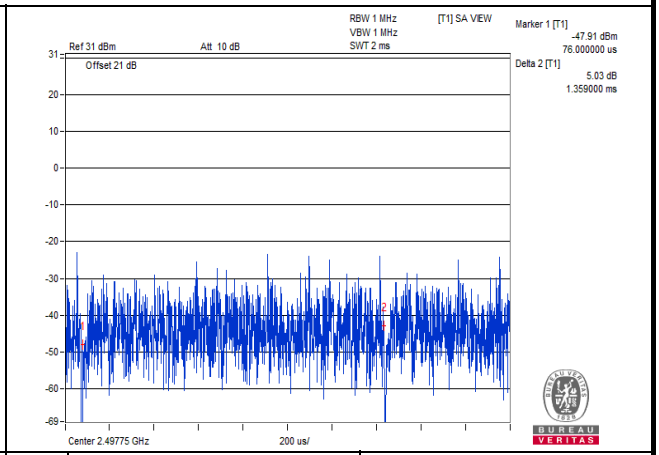
6	2399.972MHz	P = 1.345843uW

Measuring Mode *Zero Span

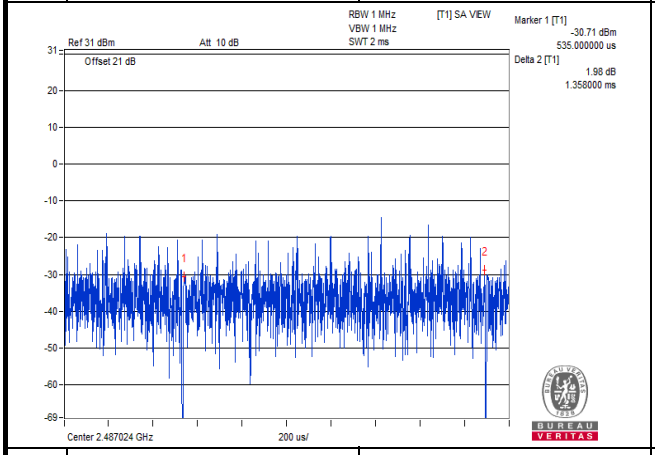
1. Set the spectrum analyzer as below and it takes in a value of all data point.
2. Regarding the all data value, it transforms the “dBm” value into “uW” value.
3. It adds the all values and calculates a grand total. Define a grand total as “P”.
4. It divides “P” by sample data point (ex.501) and calculates the mean value.
5. It reports the mean value.



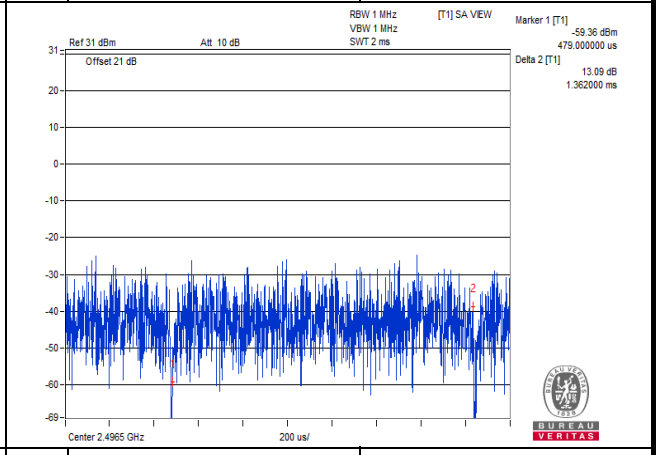
7	2486.972MHz	P = 0.608509uW



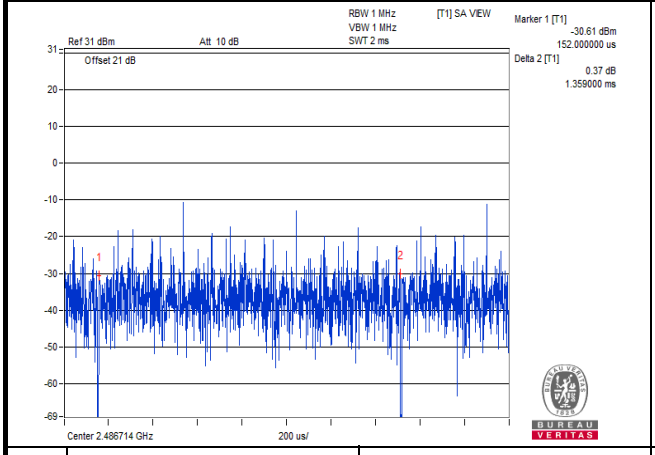
8	2497.750MHz	P = 0.120481uW



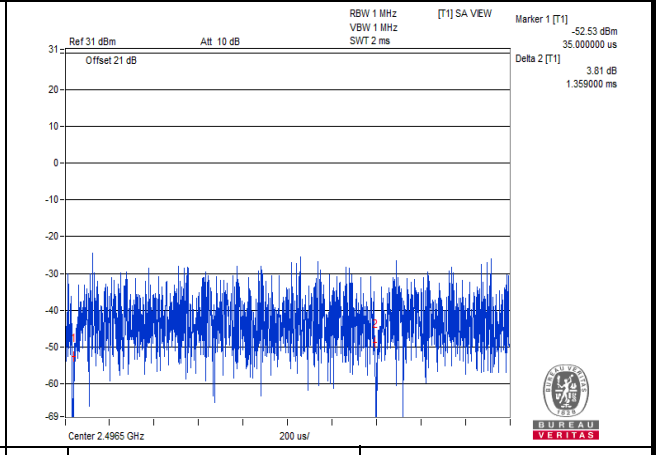
9	2487.024MHz	P = 0.557913uW



10	2496.500MHz	P = 0.145563uW



11	2486.714MHz	P = 0.62815uW



12	2496.500MHz	P = 0.130728uW

VHT20

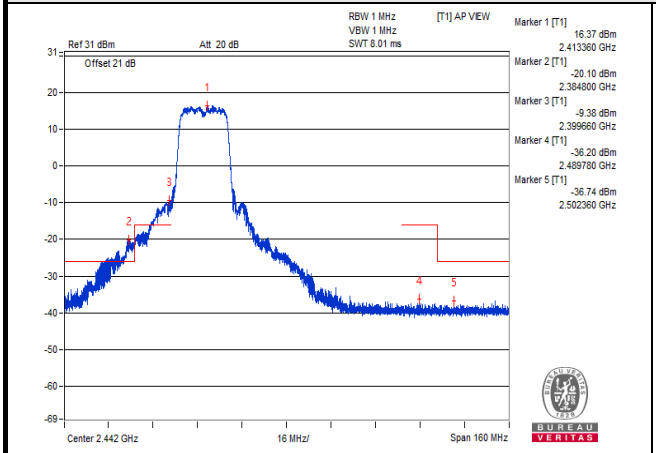
TEST CHANNEL		CH 1 (2412MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	794.966	0.001667	0.25	PASS
	1000.0 to 2387.0	2384.919	0.125086	2.5	PASS(1)
	2387.0 to 2400.0	2399.767	2.148931	25	PASS(2)
	2483.5 to 2496.5	2486.462	0.260016	25	PASS
	2496.5 to 12500.0	6782.999	0.418794	2.5	PASS
$V_{max.}$	30.0 to 1000.0	974.780	0.001816	0.25	PASS
	1000.0 to 2387.0	2385.092	0.129660	2.5	PASS(3)
	2387.0 to 2400.0	2399.772	2.081815	25	PASS(4)
	2483.5 to 2496.5	2488.334	0.262422	25	PASS
	2496.5 to 12500.0	5842.670	0.461318	2.5	PASS
$V_{min.}$	30.0 to 1000.0	789.146	0.001892	0.25	PASS
	1000.0 to 2387.0	2385.092	0.127338	2.5	PASS(5)
	2387.0 to 2400.0	2399.806	2.095958	25	PASS(6)
	2483.5 to 2496.5	2491.946	0.258821	25	PASS
	2496.5 to 12500.0	5826.415	0.598412	2.5	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	729.127	0.001945	0.25	PASS
	1000.0 to 2387.0	2364.634	0.180302	2.5	PASS
	2387.0 to 2400.0	2399.949	0.988553	25	PASS
	2483.5 to 2496.5	2486.153	0.933254	25	PASS
	2496.5 to 12500.0	5853.924	0.524807	2.5	PASS
$V_{max.}$	30.0 to 1000.0	983.873	0.001754	0.25	PASS
	1000.0 to 2387.0	2385.786	0.216770	2.5	PASS
	2387.0 to 2400.0	2399.470	1.061696	25	PASS
	2483.5 to 2496.5	2487.133	1.000000	25	PASS
	2496.5 to 12500.0	6969.314	0.470977	2.5	PASS
$V_{min.}$	30.0 to 1000.0	809.516	0.001778	0.25	PASS
	1000.0 to 2387.0	1720.026	0.170608	2.5	PASS
	2387.0 to 2400.0	2399.879	1.025652	25	PASS
	2483.5 to 2496.5	2486.095	0.939723	25	PASS
	2496.5 to 12500.0	6964.313	0.635331	2.5	PASS

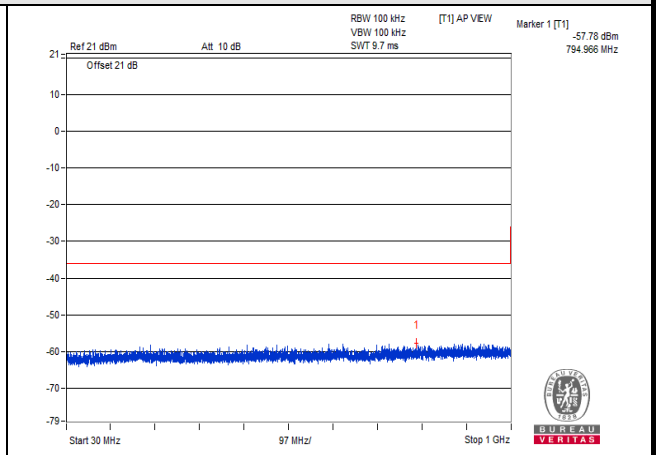
TEST CHANNEL		CH 13 (2472MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	987.996	0.002153	0.25	PASS
	1000.0 to 2387.0	1135.579	0.165196	2.5	PASS
	2387.0 to 2400.0	2391.889	0.254683	25	PASS
	2483.5 to 2496.5	2485.958	1.252142	25	PASS(7)
	2496.5 to 12500.0	2496.500	0.162018	2.5	PASS(8)
$V_{max.}$	30.0 to 1000.0	852.438	0.001884	0.25	PASS
	1000.0 to 2387.0	2209.637	0.173780	2.5	PASS
	2387.0 to 2400.0	2393.296	0.231739	25	PASS
	2483.5 to 2496.5	2485.770	1.143767	25	PASS(9)
	2496.5 to 12500.0	2496.500	0.171929	2.5	PASS(10)
$V_{min.}$	30.0 to 1000.0	890.753	0.001945	0.25	PASS
	1000.0 to 2387.0	1617.041	0.203236	2.5	PASS
	2387.0 to 2400.0	2396.977	0.207014	25	PASS
	2483.5 to 2496.5	2485.833	1.342308	25	PASS(11)
	2496.5 to 12500.0	2496.500	0.176630	2.5	PASS(12)

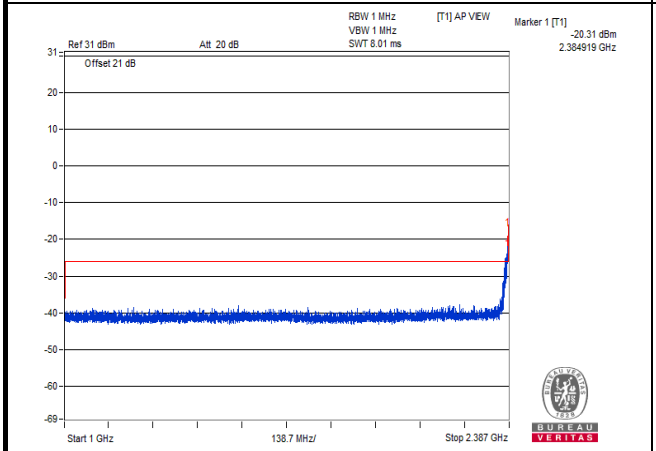
NOTE: 1. The spectrum plots are attached on the following pages.

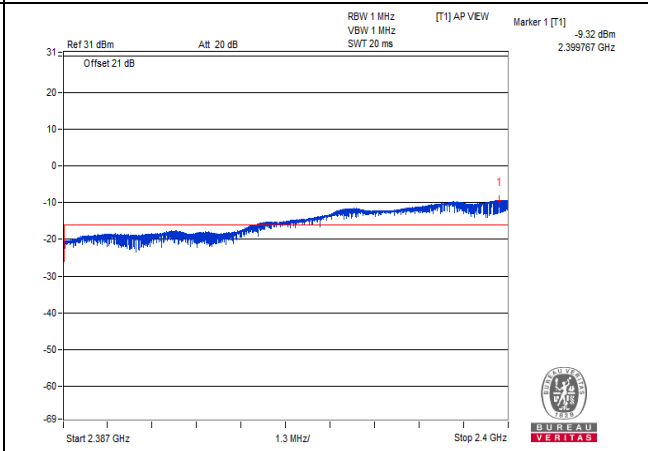
2. (No.): The value was tested under Measuring Mode *Zero Span.

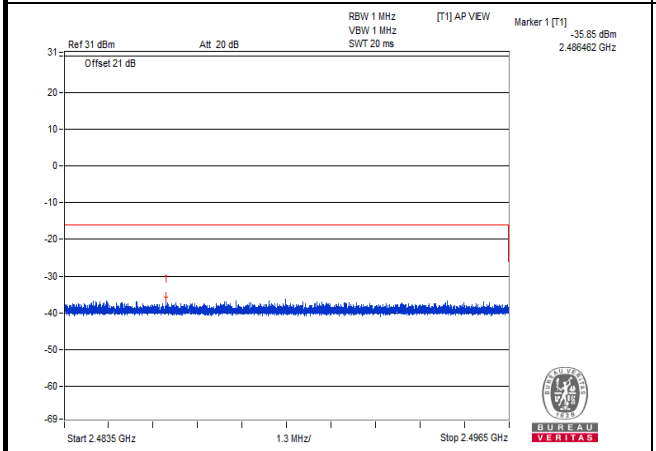
Vnormal

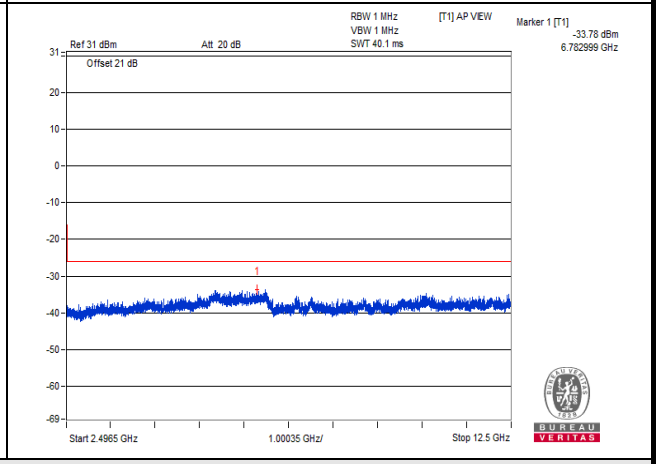






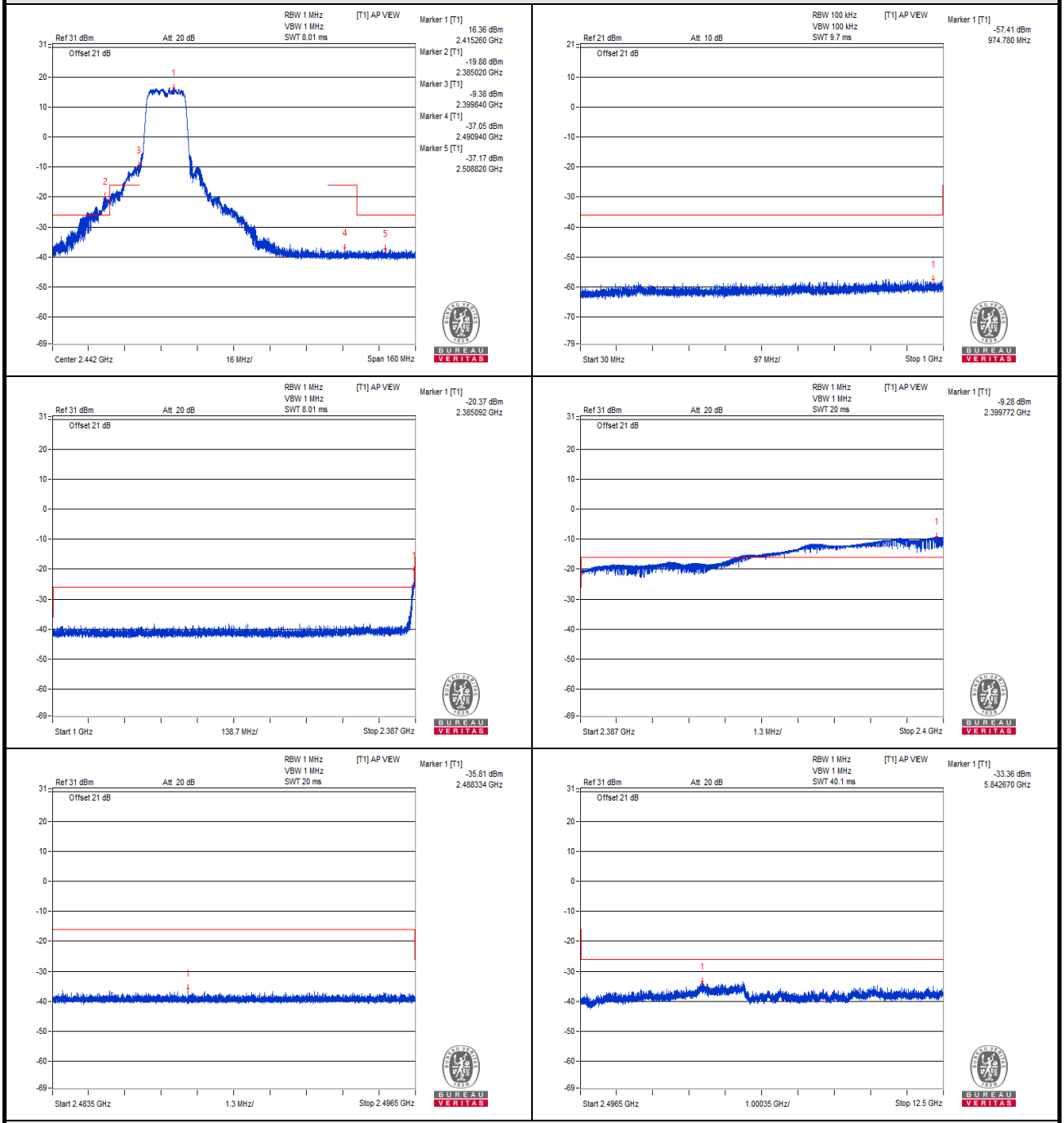






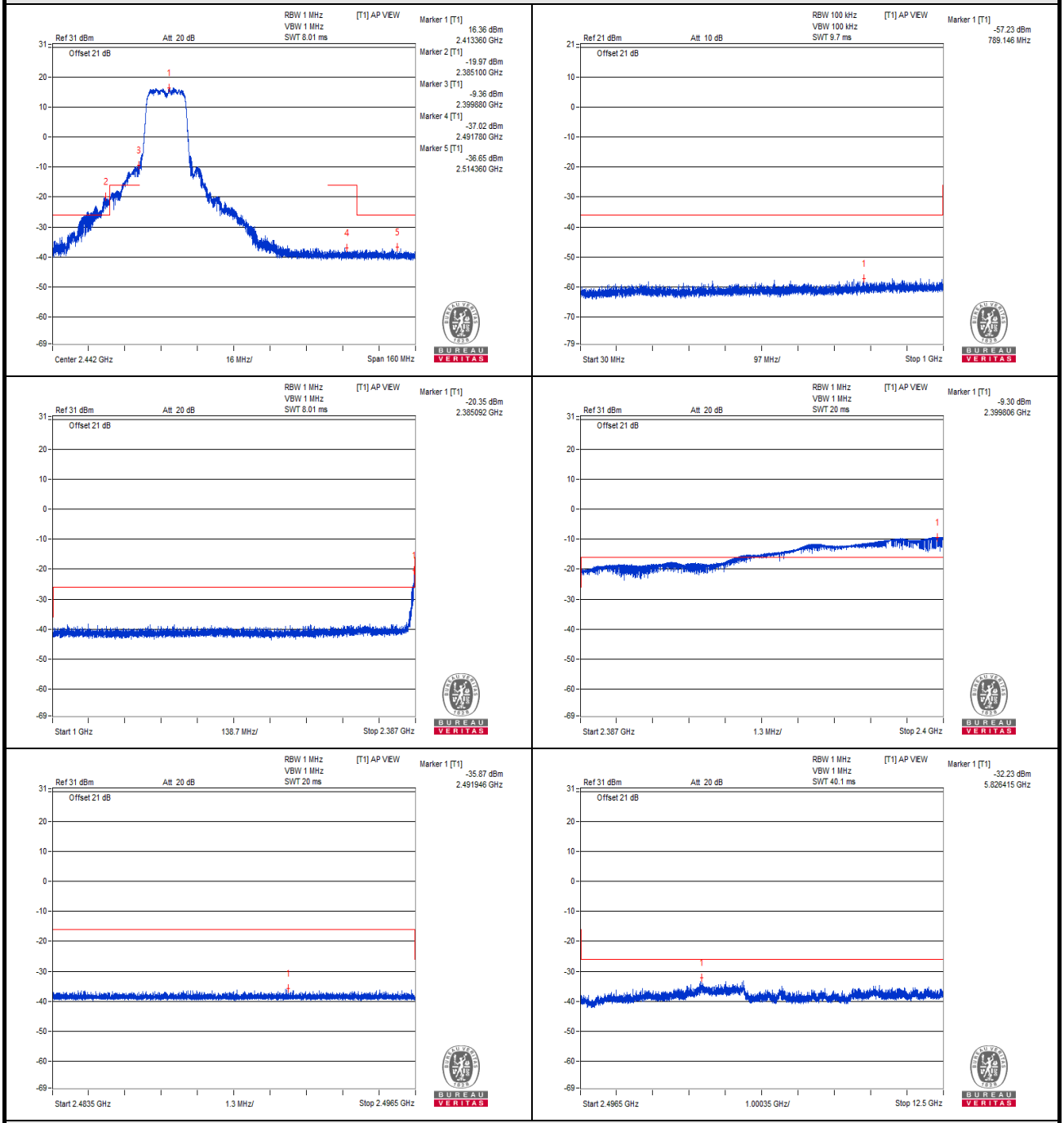
CH 1 (2412MHz)

Vmax.



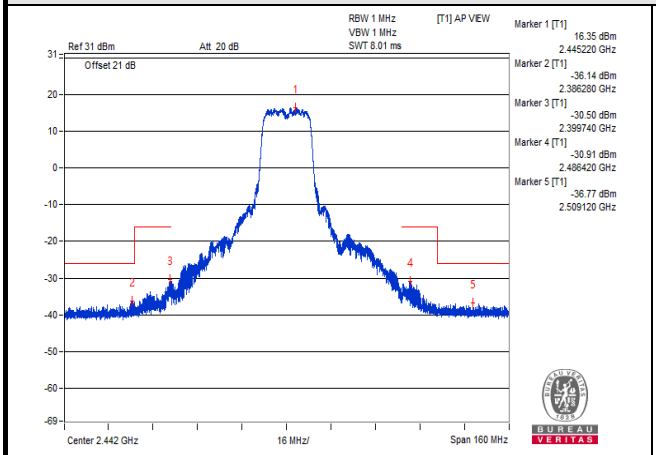
CH 1 (2412MHz)

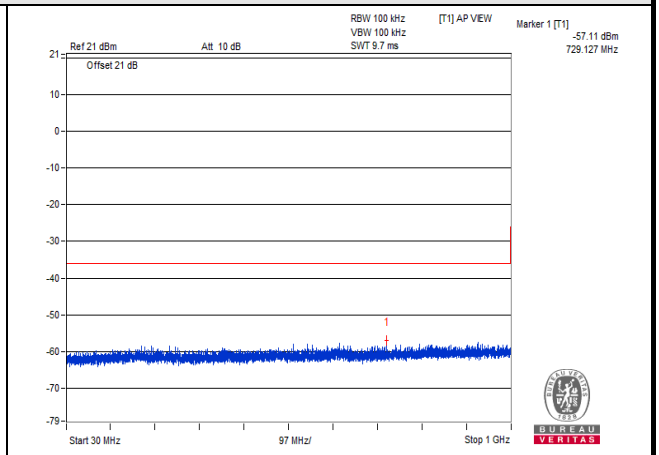
Vmin.

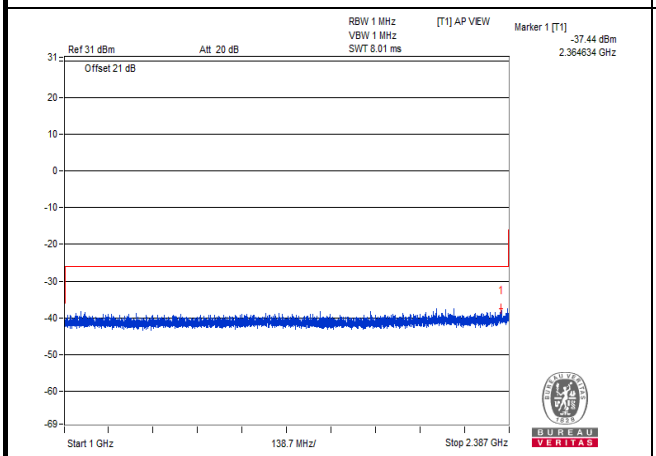


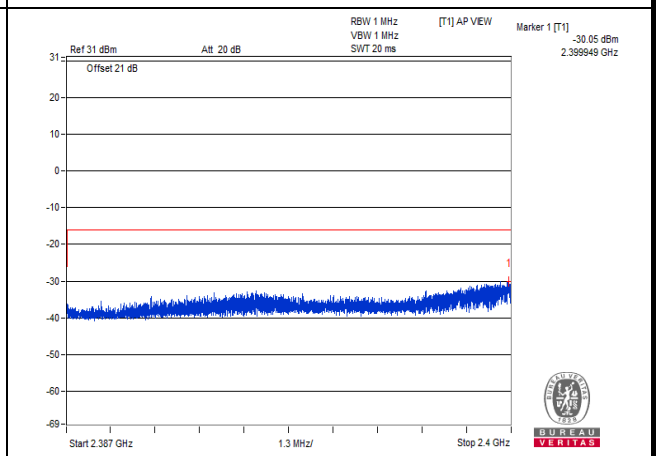
CH 1 (2412MHz)

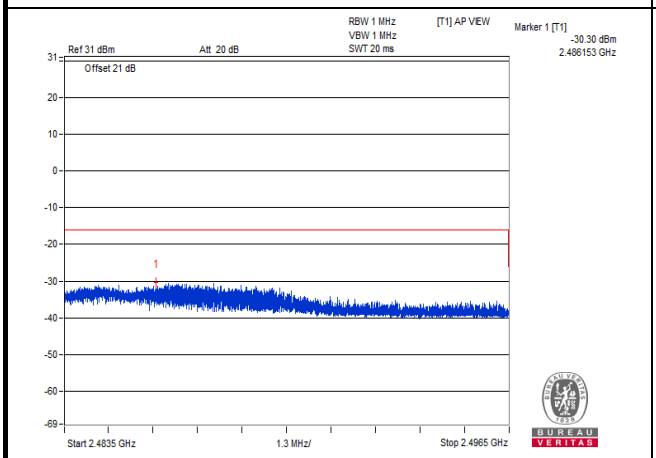
Vnormal

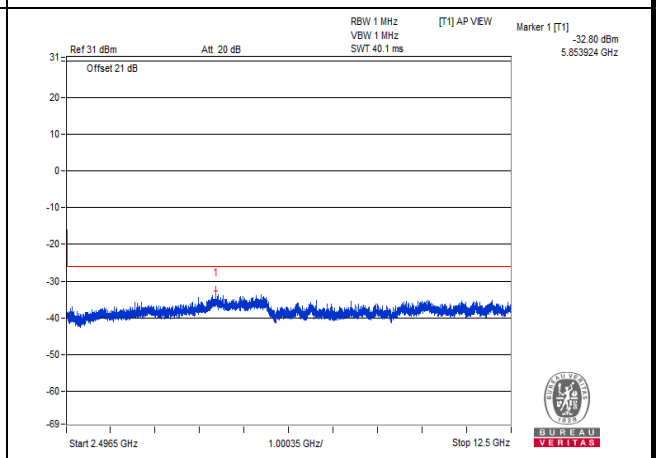






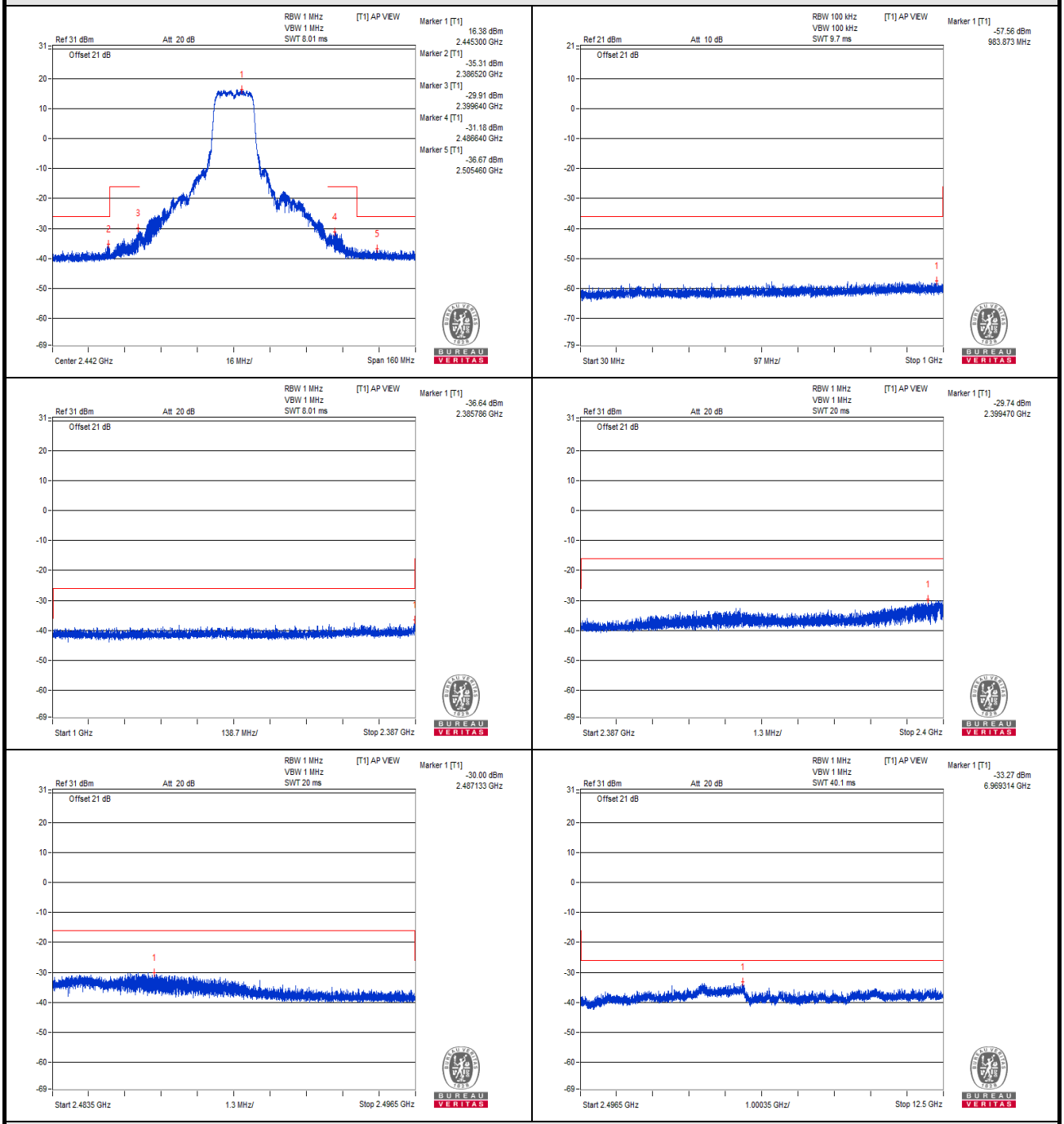






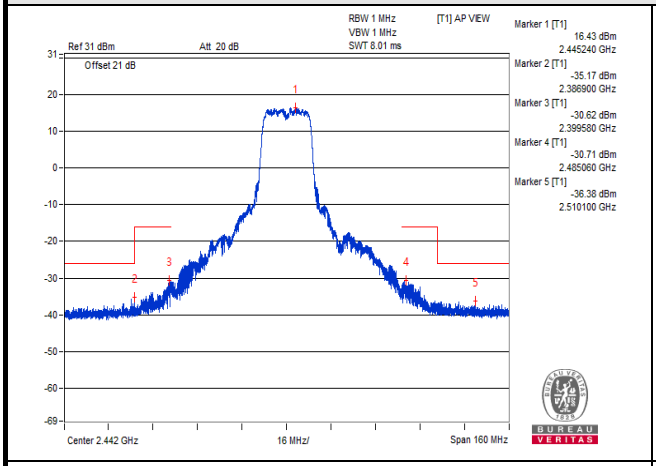
CH 7 (2442MHz)

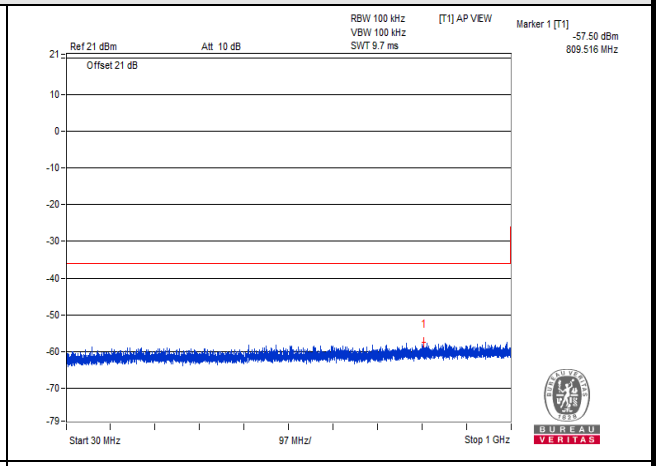
Vmax.

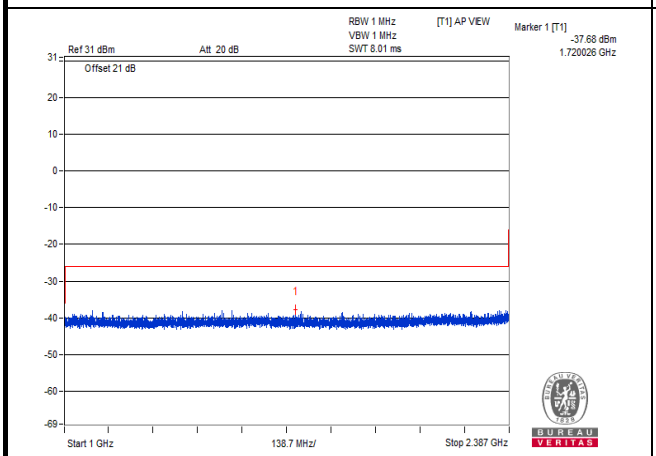


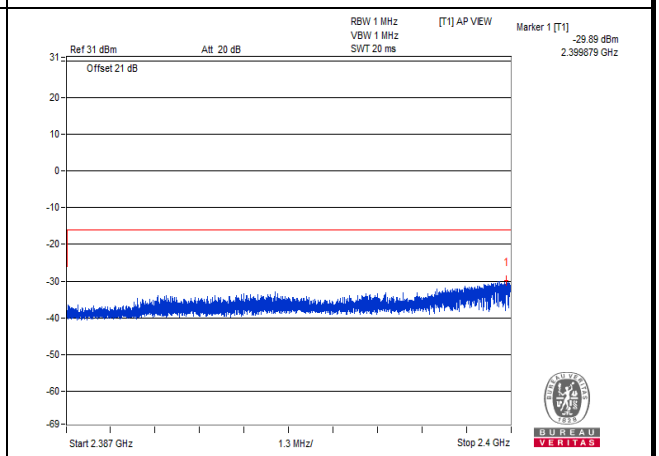
CH 7 (2442MHz)

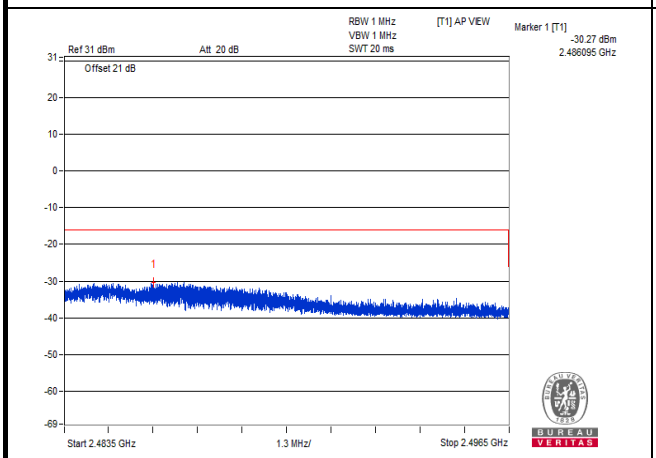
Vmin.

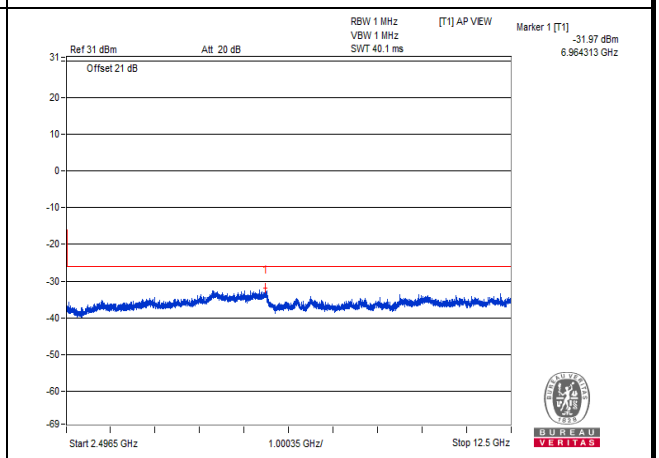






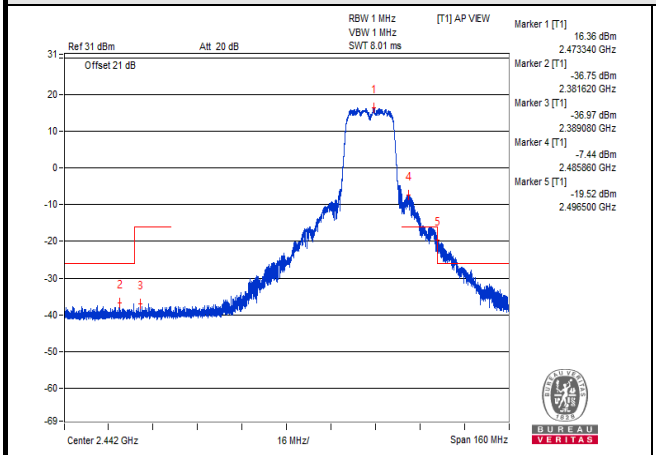


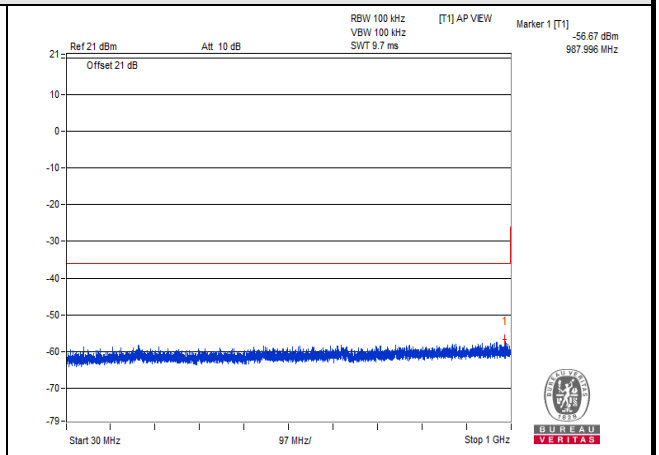


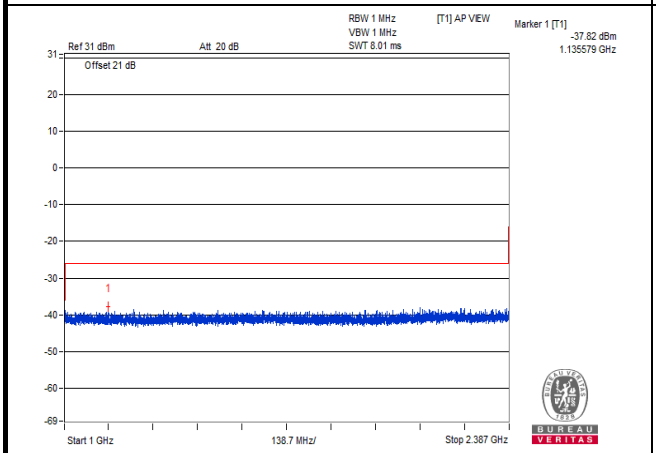


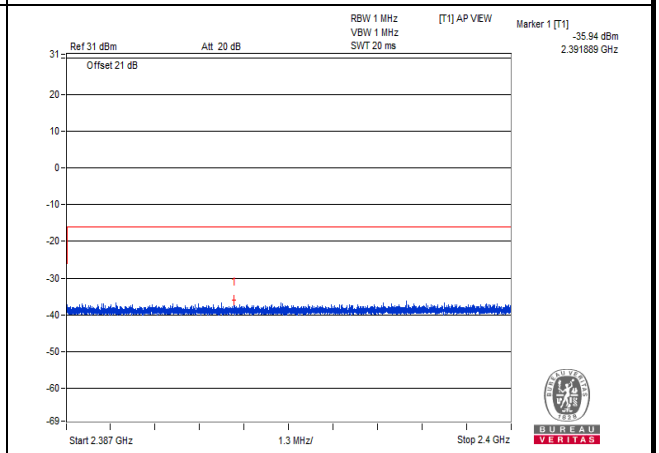
CH 7 (2442MHz)

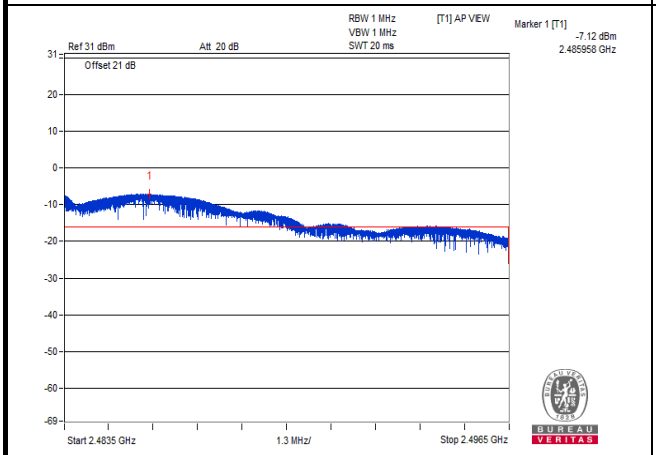
Vnormal

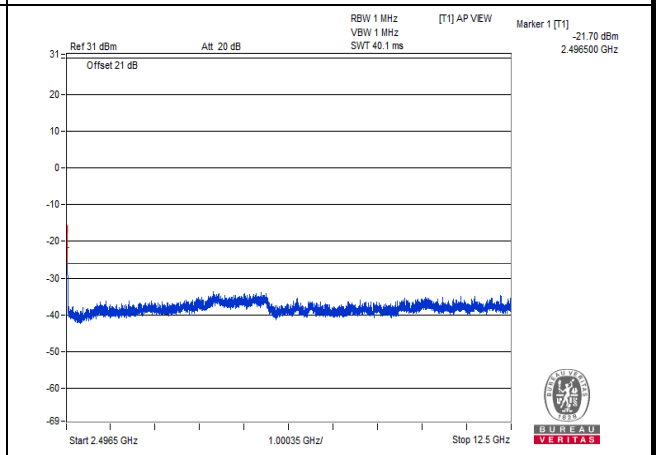






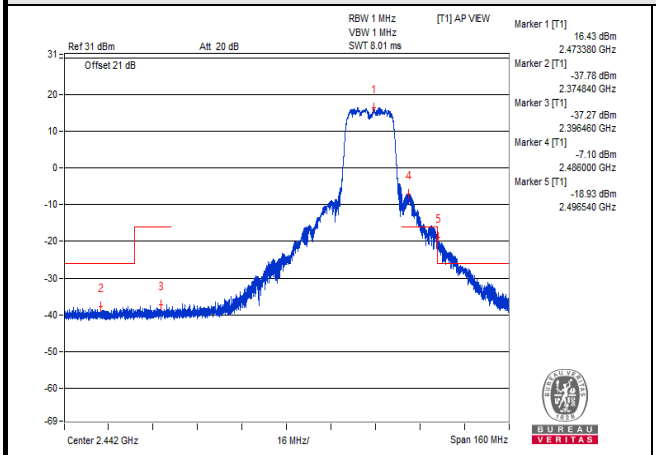


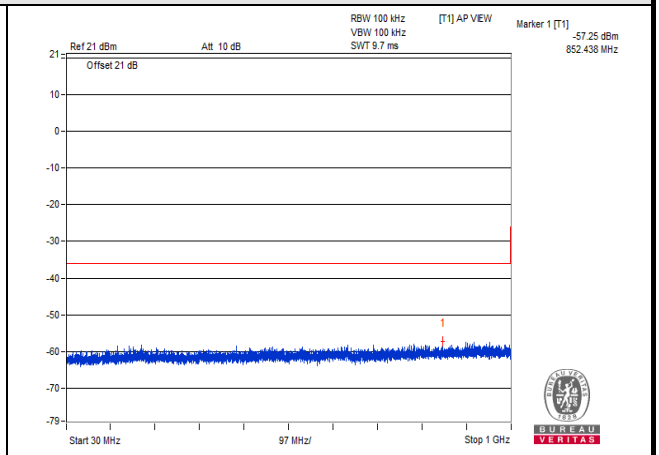


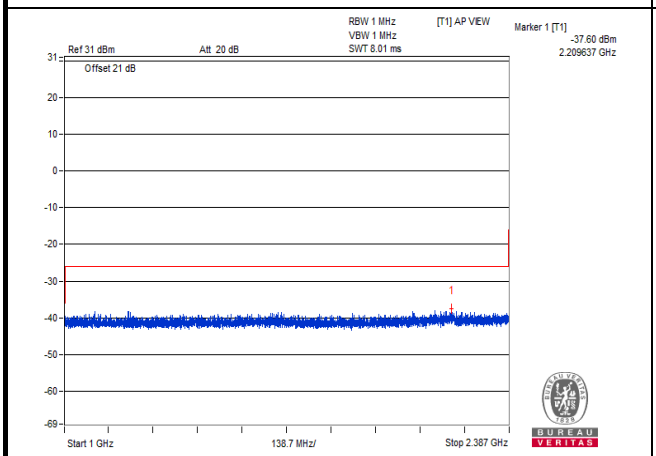


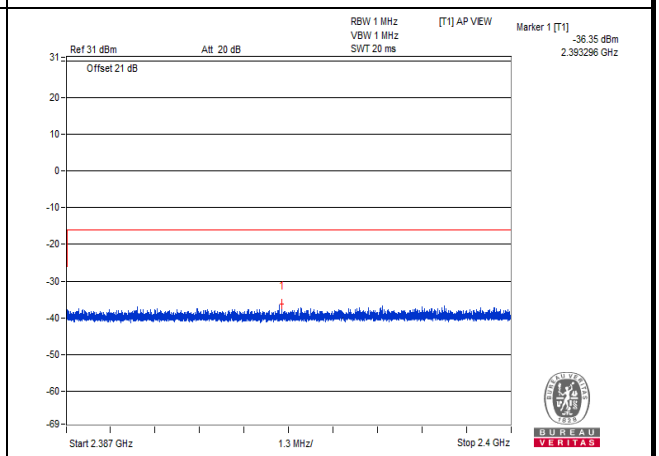
CH 13 (2472MHz)

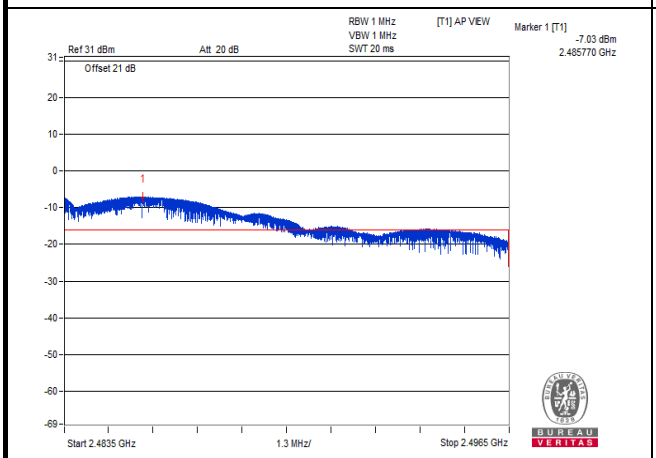
Vmax.

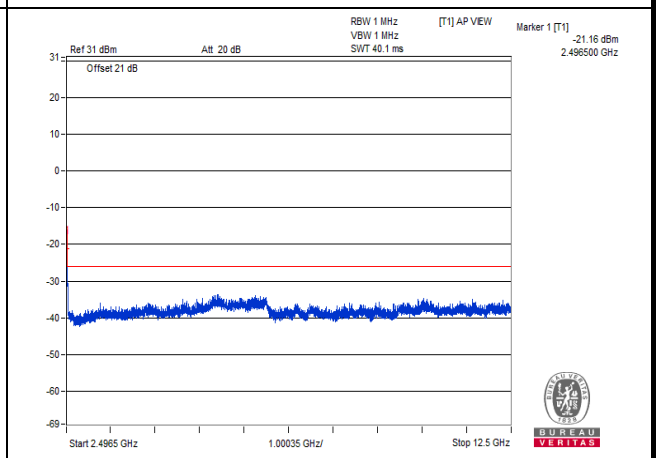






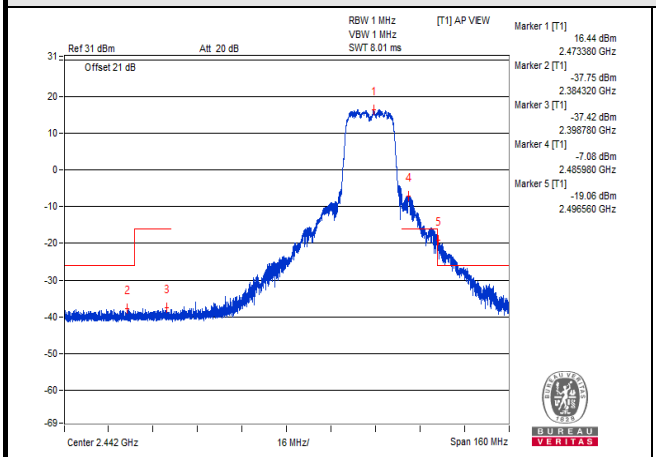


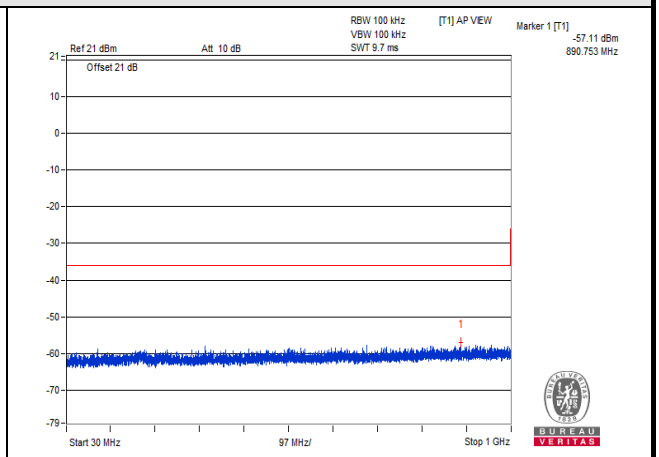


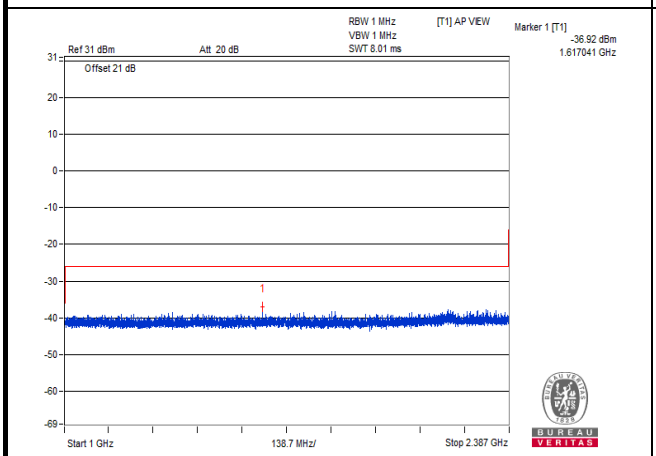


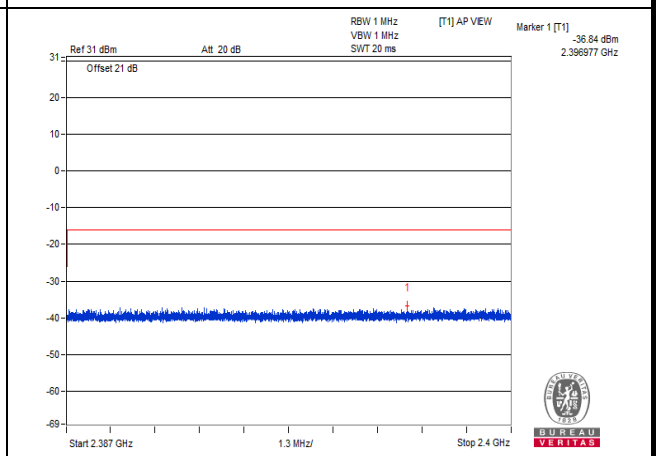
CH 13 (2472MHz)

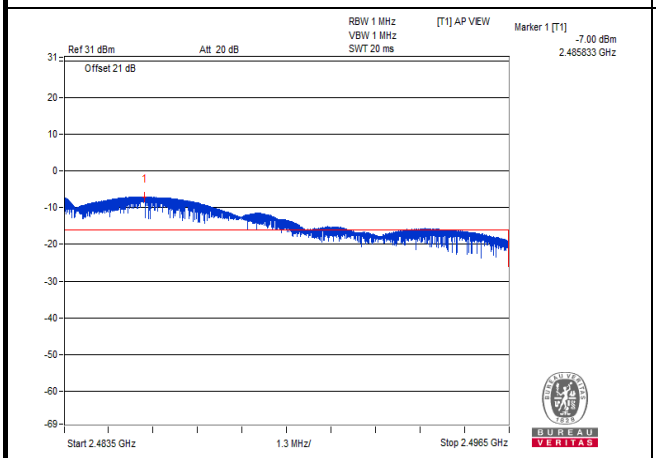
Vmin.

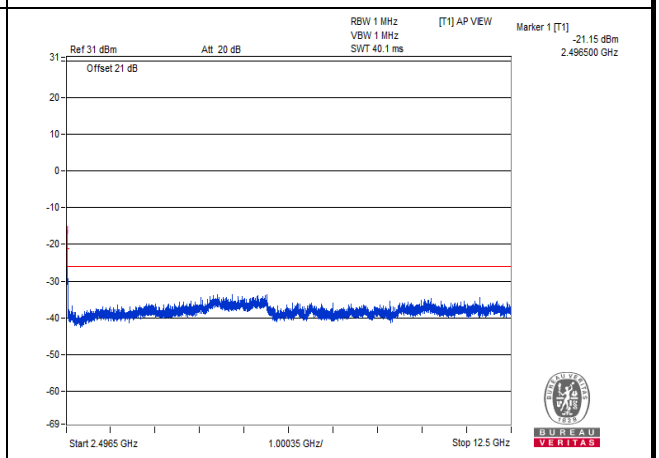








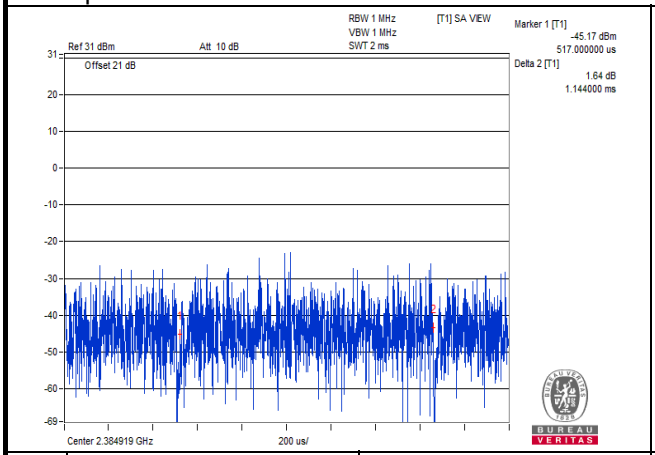




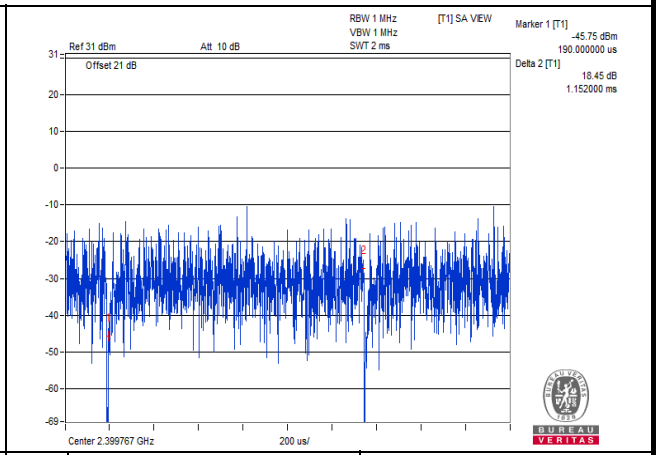
CH 13 (2472MHz)

Measuring Mode *Zero Span

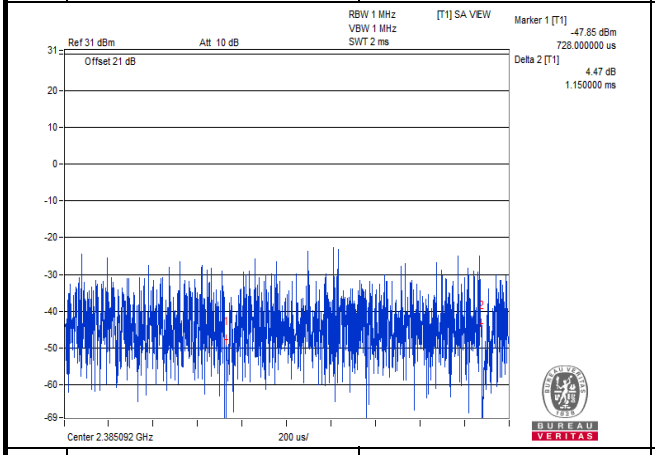
1. Set the spectrum analyzer as below and it takes in a value of all data point.
2. Regarding the all data value, it transforms the “dBm” value into “uW” value.
3. It adds the all values and calculates a grand total. Define a grand total as “P”.
4. It divides “P” by sample data point (ex.501) and calculates the mean value.
5. It reports the mean value.



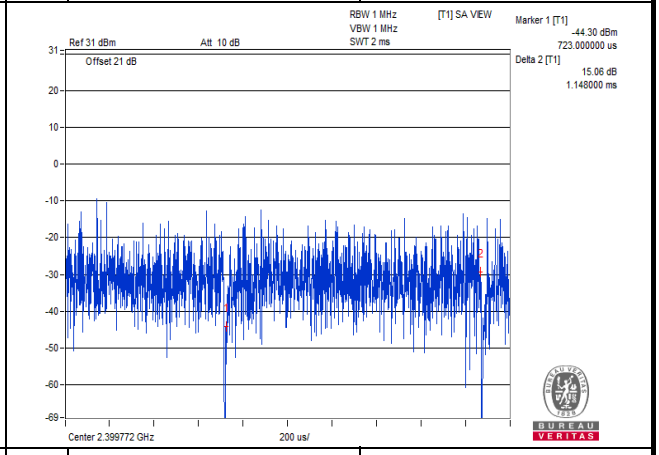
1	2384.919MHz	P = 0.125086uW



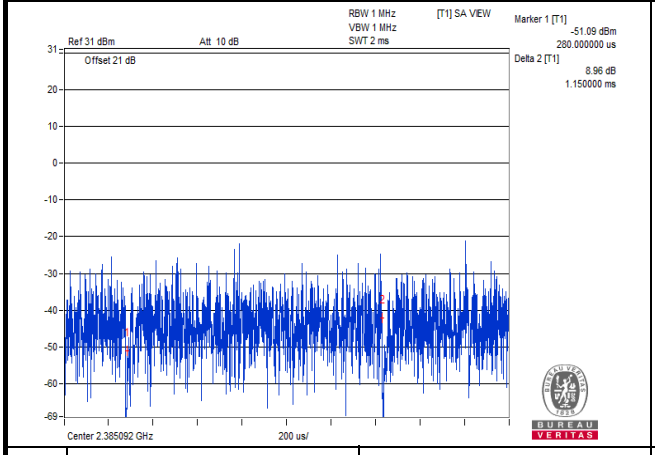
2	2399.767MHz	P = 2.148931uW



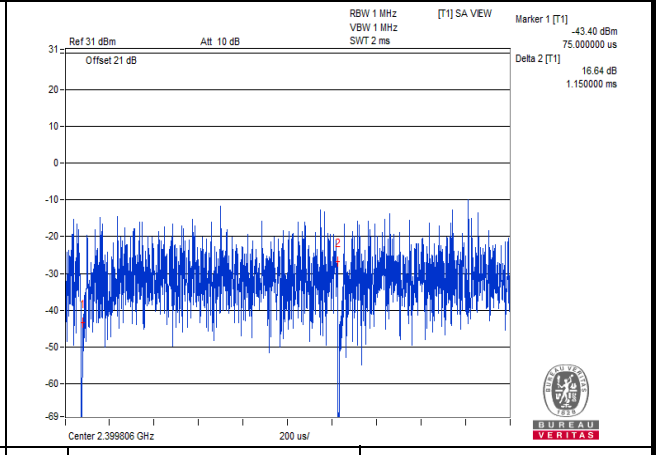
3	2385.092MHz	P = 0.12966uW



4	2399.772MHz	P = 2.081815uW



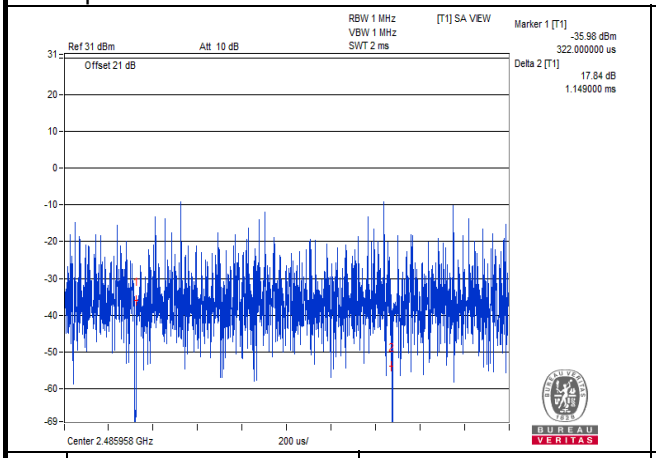
5	2385.092MHz	P = 0.127338uW



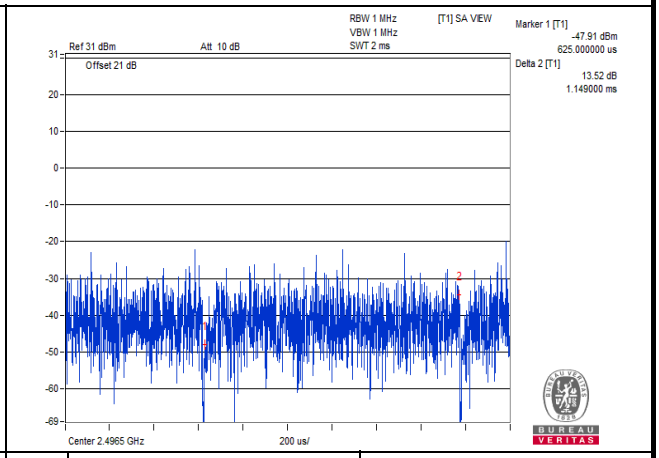
6	2399.806MHz	P = 2.095958uW

Measuring Mode *Zero Span

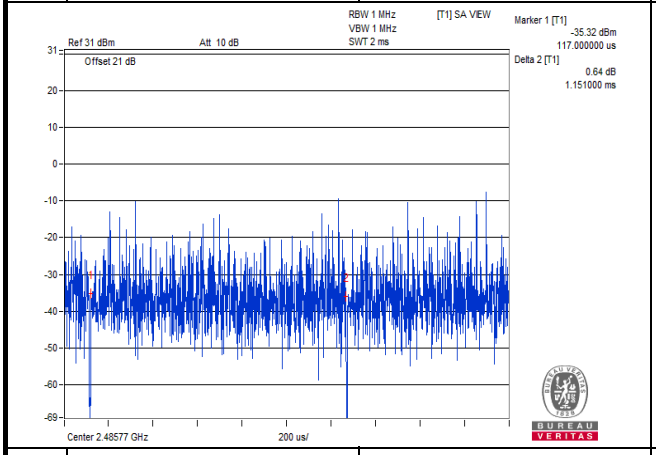
1. Set the spectrum analyzer as below and it takes in a value of all data point.
2. Regarding the all data value, it transforms the “dBm” value into “uW” value.
3. It adds the all values and calculates a grand total. Define a grand total as “P”.
4. It divides “P” by sample data point (ex.501) and calculates the mean value.
5. It reports the mean value.



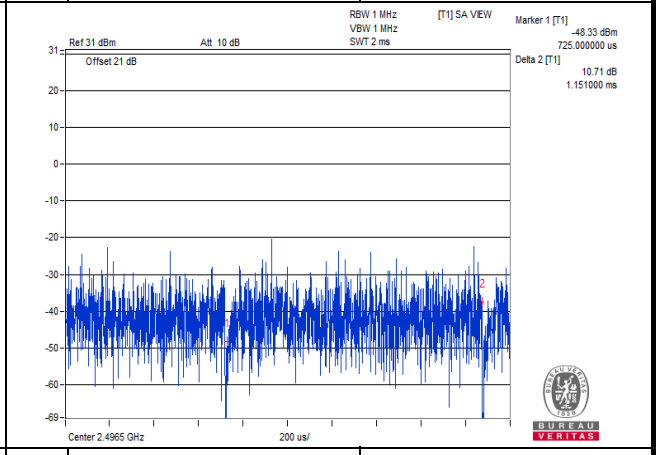
7	2485.958MHz	P = 1.252142uW



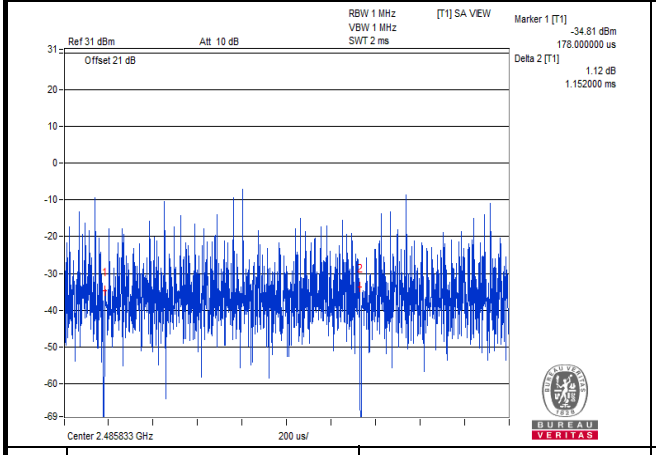
8	2496.500MHz	P = 0.162018uW



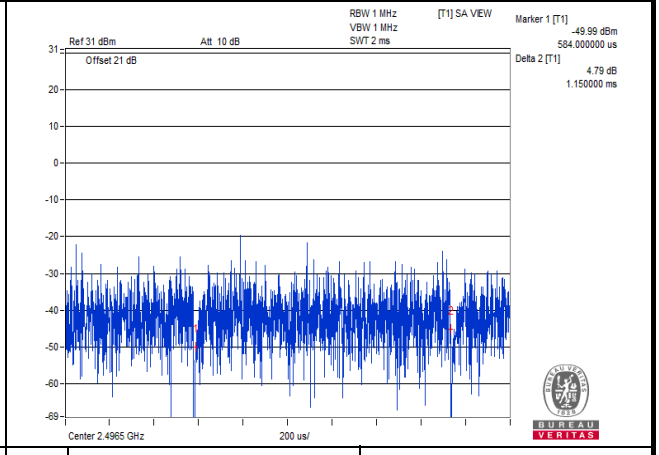
9	2485.770MHz	P = 1.143767uW



10	2496.500MHz	P = 0.171929uW



11	2485.833MHz	P = 1.342308uW



12	2496.500MHz	P = 0.17663uW

VHT40

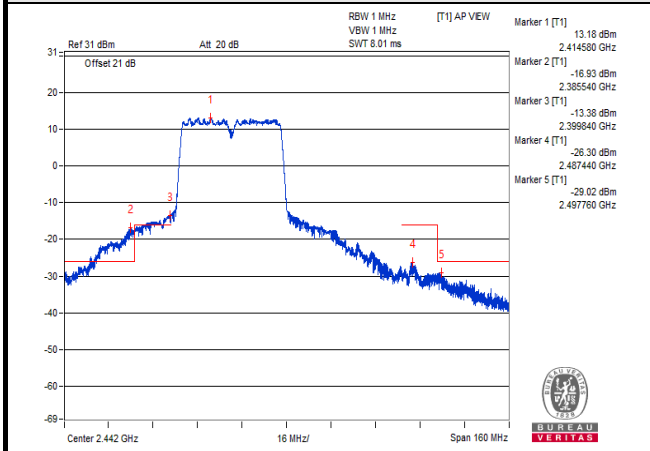
TEST CHANNEL		CH 3 (2422MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	782.113	0.001841	0.25	PASS
	1000.0 to 2387.0	2385.786	0.606126	2.5	PASS(1)
	2387.0 to 2400.0	2399.740	1.752229	25	PASS(2)
	2483.5 to 2496.5	2487.141	2.654606	25	PASS
	2496.5 to 12500.0	2499.000	0.583445	2.5	PASS
$V_{max.}$	30.0 to 1000.0	933.555	0.001879	0.25	PASS
	1000.0 to 2387.0	2385.613	0.606170	2.5	PASS(3)
	2387.0 to 2400.0	2399.793	1.738490	25	PASS(4)
	2483.5 to 2496.5	2487.140	2.703958	25	PASS
	2496.5 to 12500.0	2496.500	0.952796	2.5	PASS
$V_{min.}$	30.0 to 1000.0	784.538	0.001854	0.25	PASS
	1000.0 to 2387.0	2386.653	0.776646	2.5	PASS(5)
	2387.0 to 2400.0	2399.876	1.909125	25	PASS(6)
	2483.5 to 2496.5	2487.169	2.722701	25	PASS
	2496.5 to 12500.0	2496.500	0.657658	2.5	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	861.653	0.002223	0.25	PASS
	1000.0 to 2387.0	2386.653	1.721869	2.5	PASS
	2387.0 to 2400.0	2399.647	12.274392	25	PASS
	2483.5 to 2496.5	2487.661	20.464446	25	PASS
	2496.5 to 12500.0	2499.000	1.386756	2.5	PASS
$V_{max.}$	30.0 to 1000.0	830.613	0.001928	0.25	PASS
	1000.0 to 2387.0	2386.306	1.725838	2.5	PASS
	2387.0 to 2400.0	2399.480	12.022644	25	PASS
	2483.5 to 2496.5	2487.629	20.323570	25	PASS
	2496.5 to 12500.0	2502.752	1.297179	2.5	PASS
$V_{min.}$	30.0 to 1000.0	992.846	0.002259	0.25	PASS
	1000.0 to 2387.0	2385.613	1.717908	2.5	PASS
	2387.0 to 2400.0	2399.610	12.531412	25	PASS
	2483.5 to 2496.5	2487.492	20.558906	25	PASS
	2496.5 to 12500.0	2496.500	1.472313	2.5	PASS

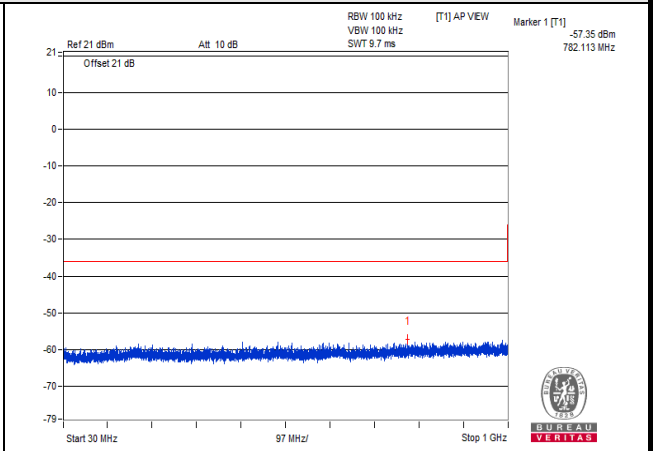
TEST CHANNEL		CH 11 (2462MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	884.327	0.001910	0.25	PASS
	1000.0 to 2387.0	2386.306	0.580764	2.5	PASS
	2387.0 to 2400.0	2398.470	2.089296	25	PASS
	2483.5 to 2496.5	2483.795	1.316788	25	PASS(7)
	2496.5 to 12500.0	2497.750	0.560850	2.5	PASS(8)
$V_{max.}$	30.0 to 1000.0	909.547	0.001995	0.25	PASS
	1000.0 to 2387.0	2385.959	0.794328	2.5	PASS
	2387.0 to 2400.0	2398.501	2.032357	25	PASS
	2483.5 to 2496.5	2483.745	1.314302	25	PASS(9)
	2496.5 to 12500.0	2496.500	0.614249	2.5	PASS(10)
$V_{min.}$	30.0 to 1000.0	808.788	0.001774	0.25	PASS
	1000.0 to 2387.0	2385.266	0.605341	2.5	PASS
	2387.0 to 2400.0	2398.709	1.870682	25	PASS
	2483.5 to 2496.5	2483.672	1.348163	25	PASS(11)
	2496.5 to 12500.0	2496.500	0.625630	2.5	PASS(12)

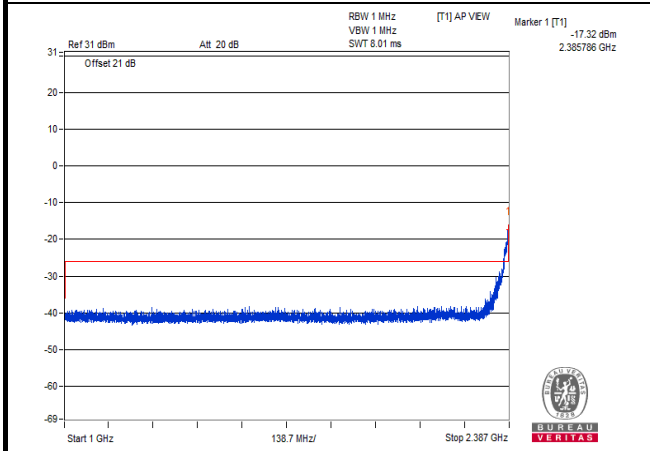
NOTE: 1. The spectrum plots are attached on the following pages.

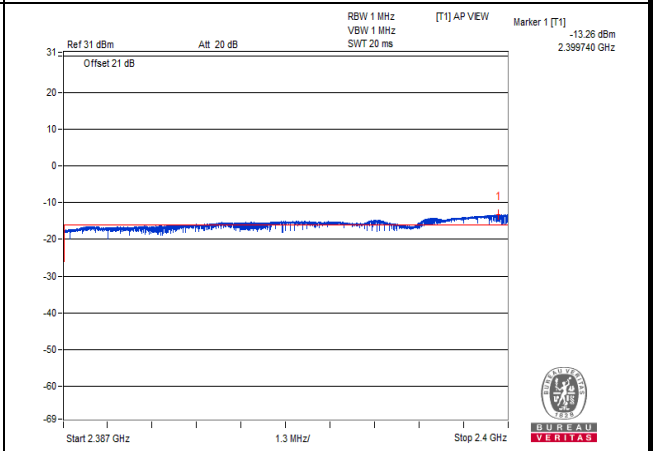
2. (No.): The value was tested under Measuring Mode *Zero Span.

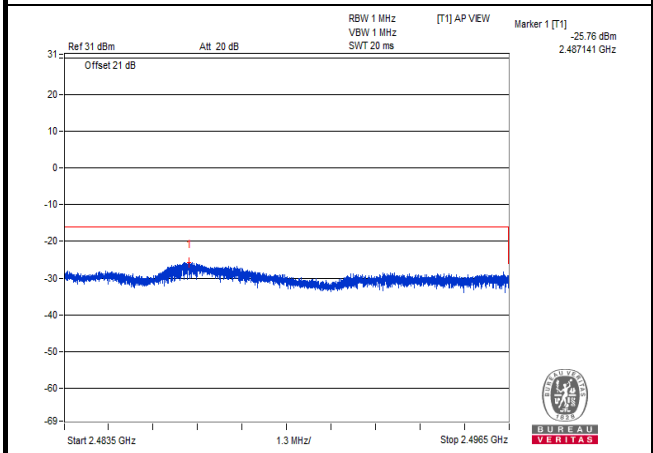
Vnormal

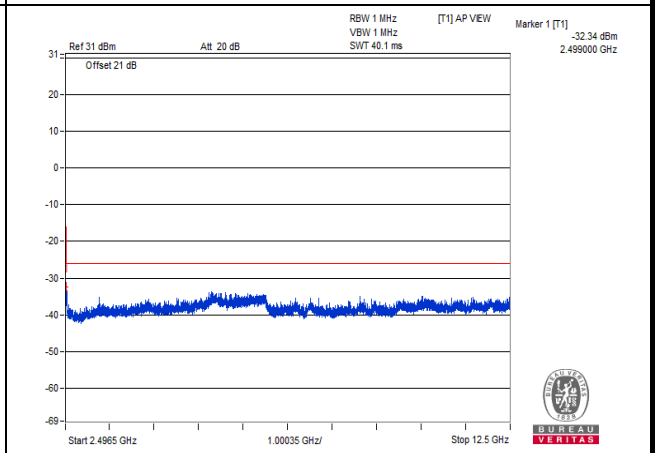






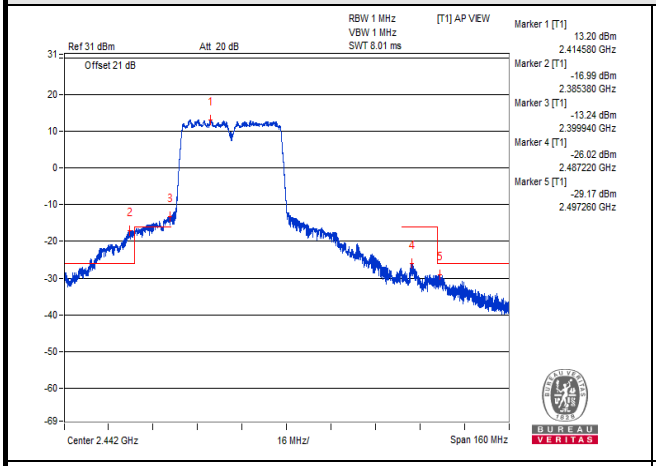


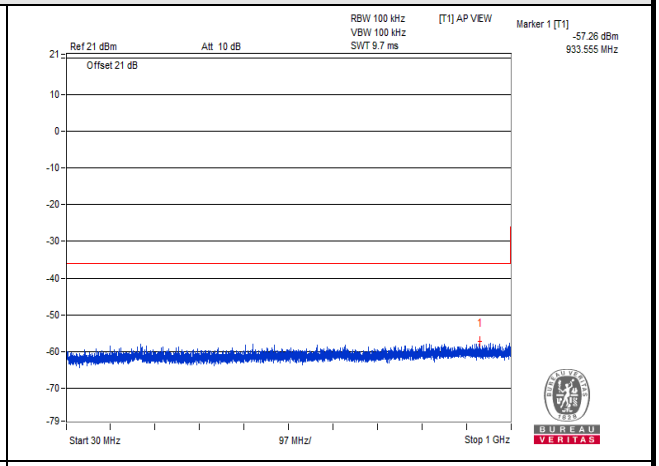


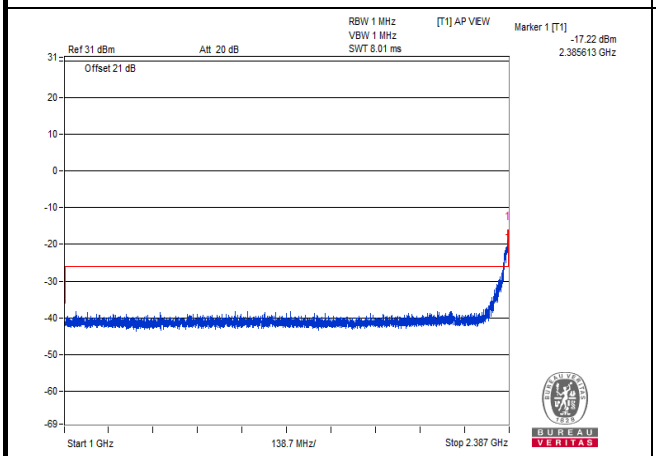


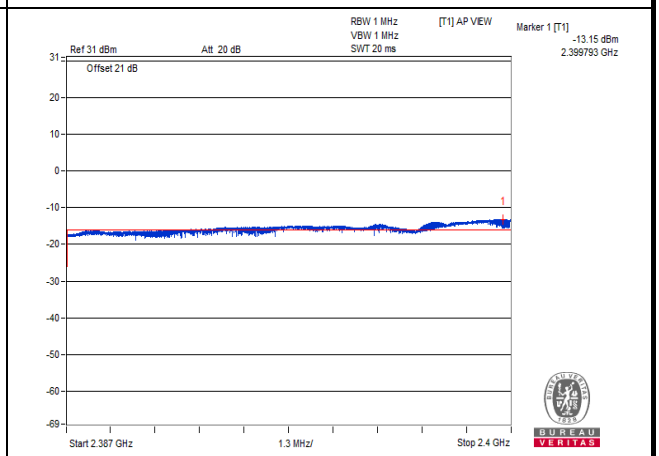
CH 3 (2422MHz)

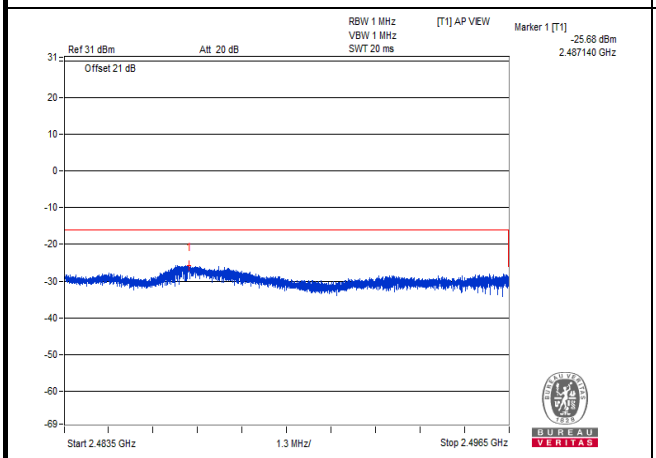
Vmax.

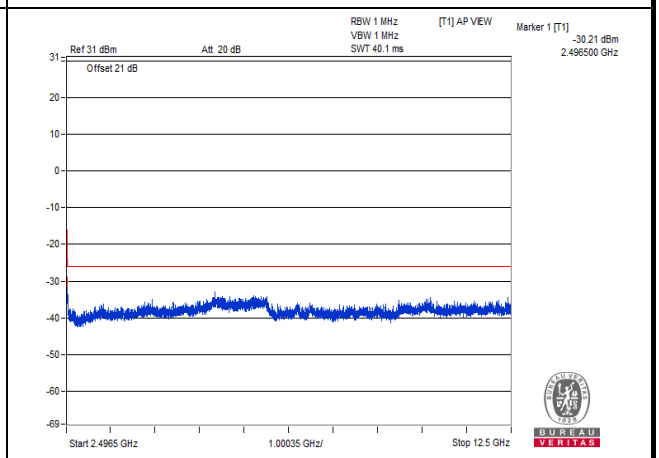






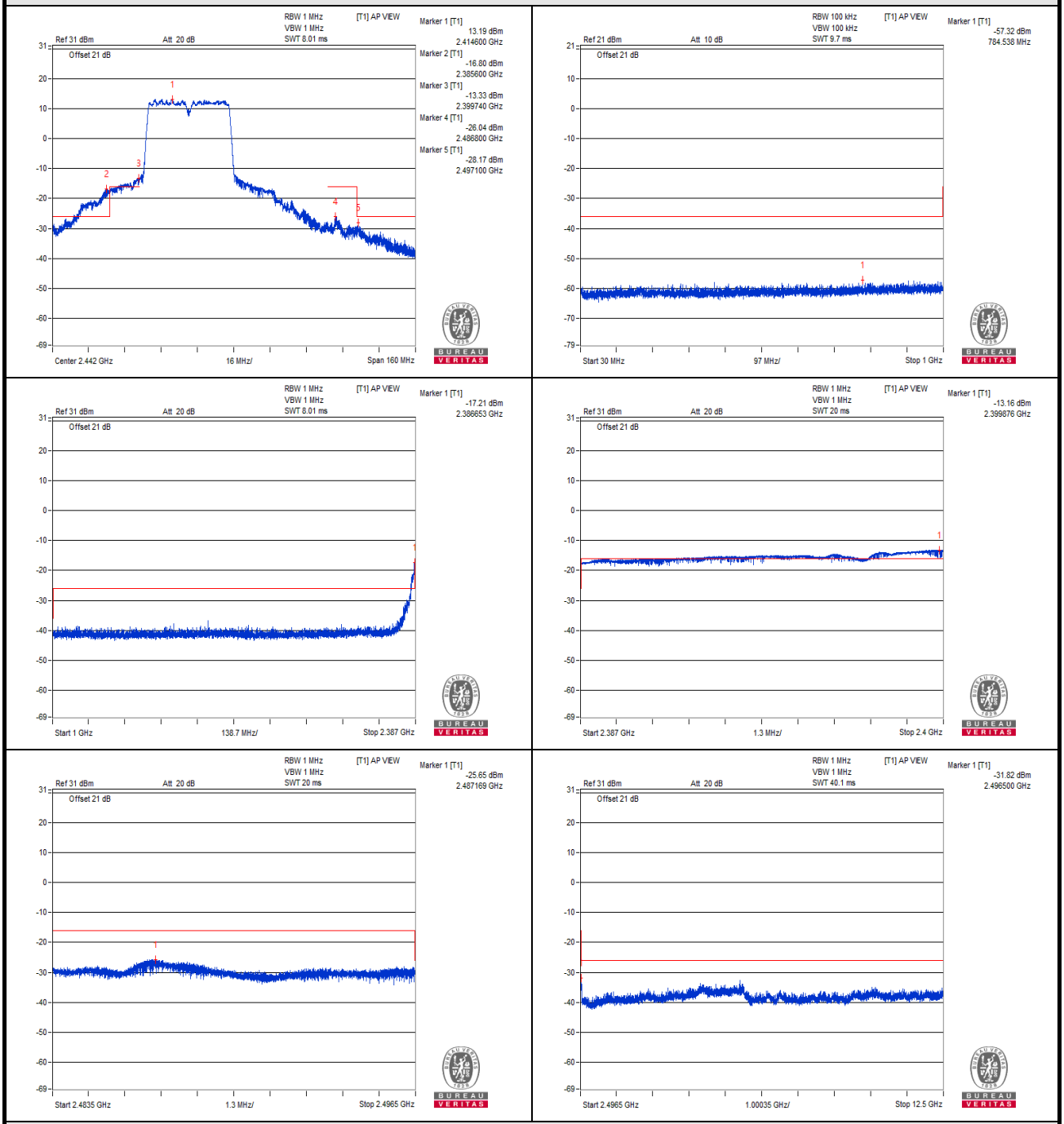






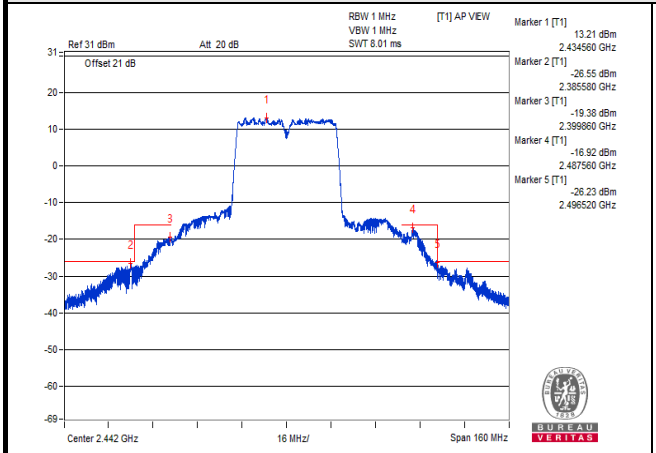
CH 3 (2422MHz)

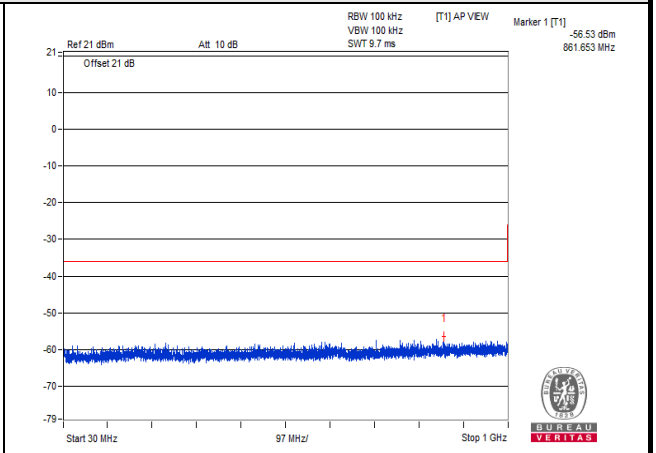
Vmin.

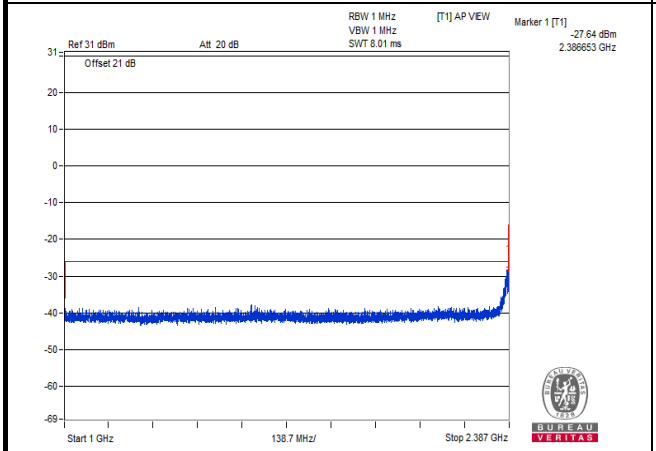


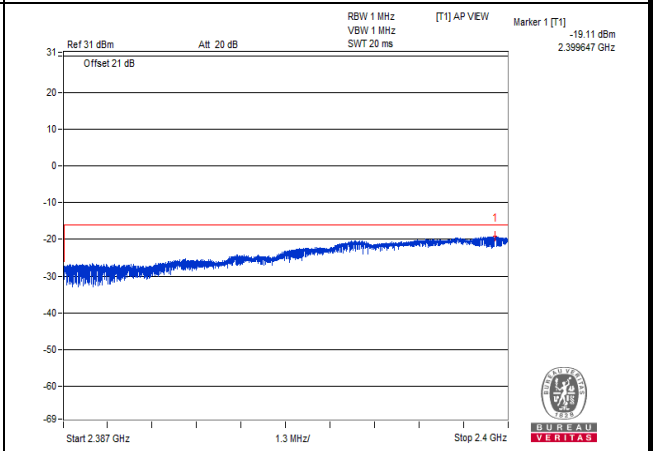
CH 3 (2422MHz)

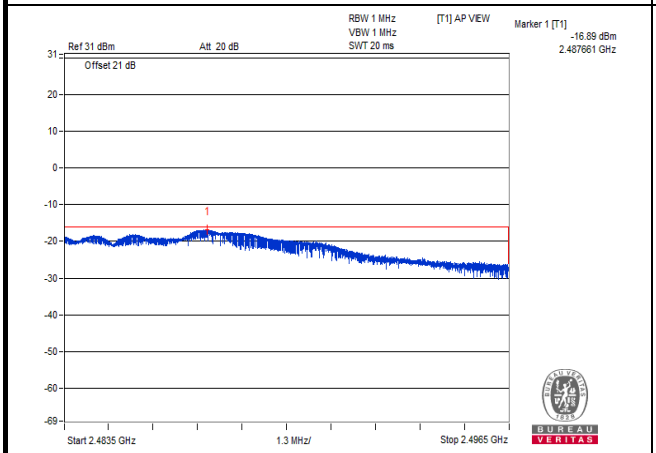
Vnormal

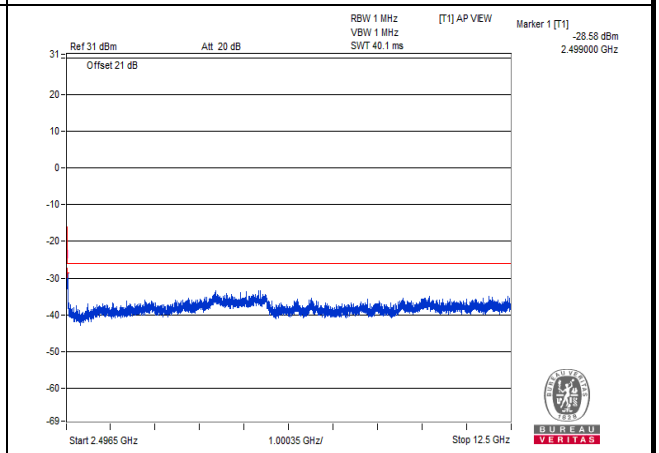






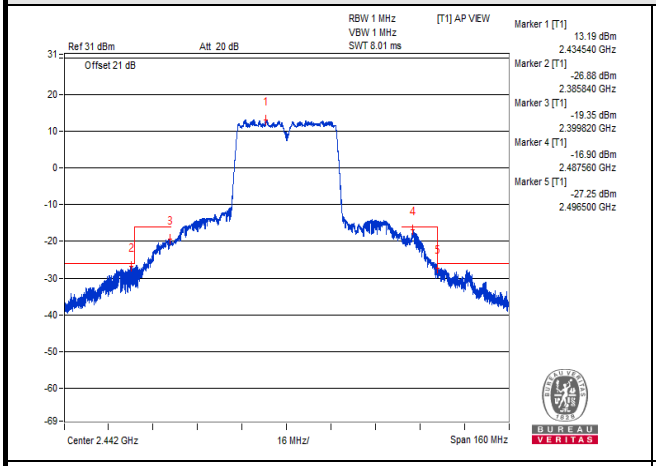


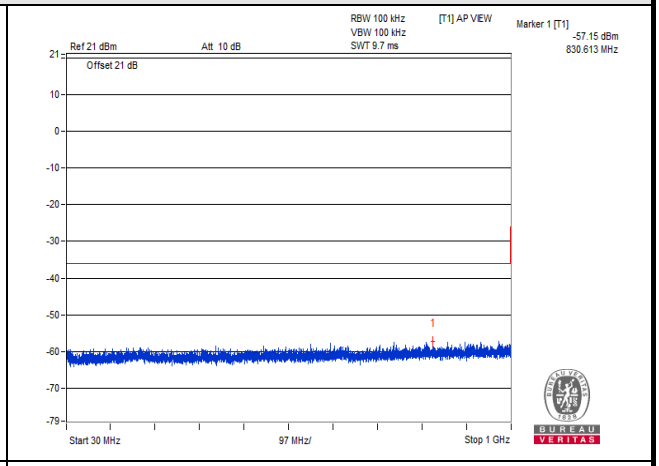


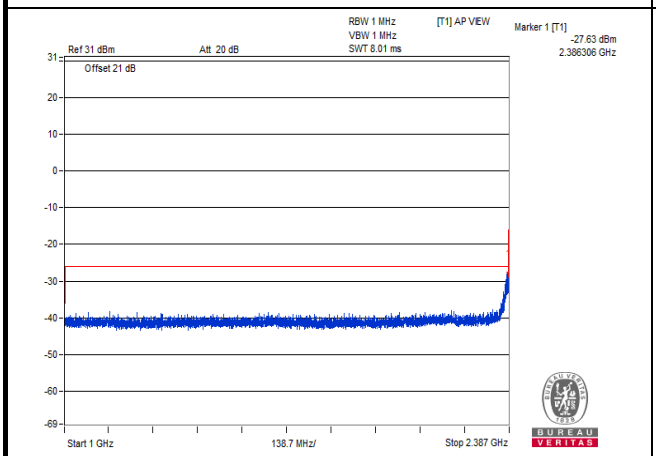


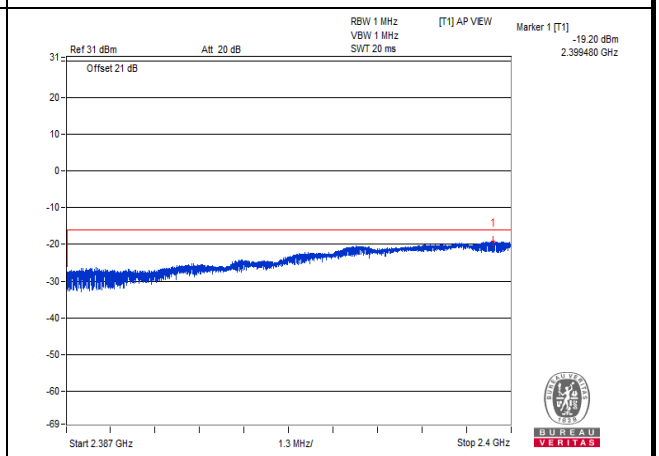
CH 7 (2442MHz)

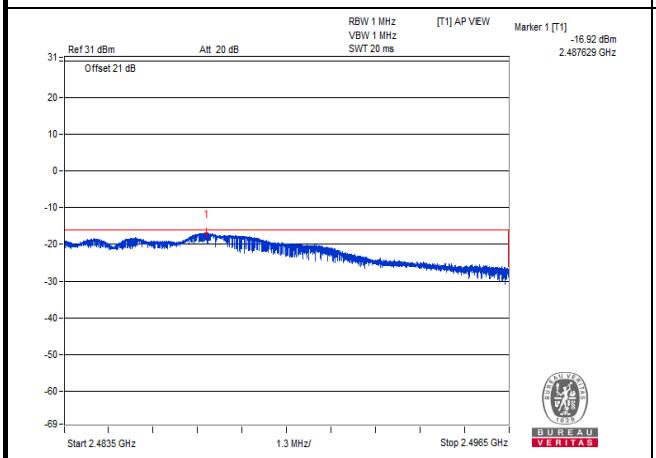
Vmax.

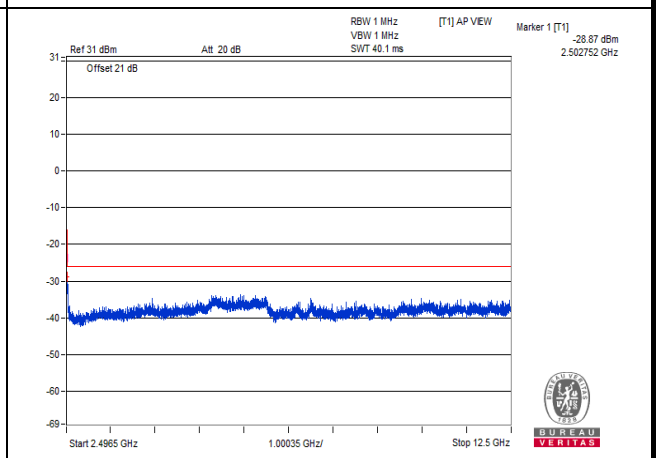






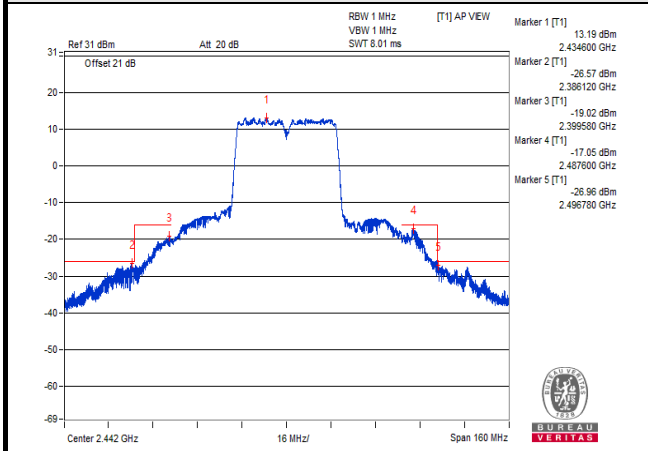


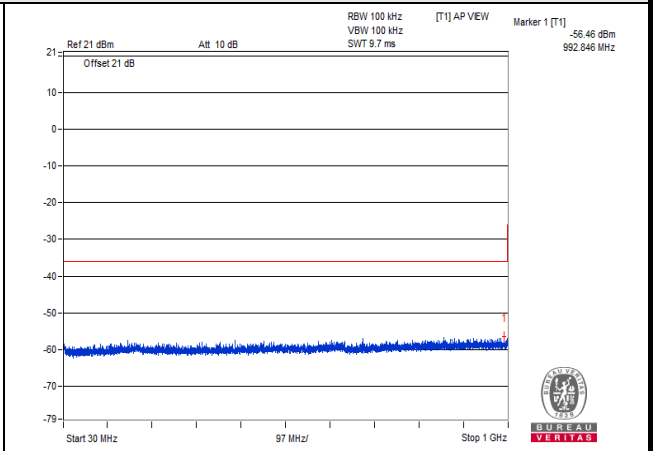


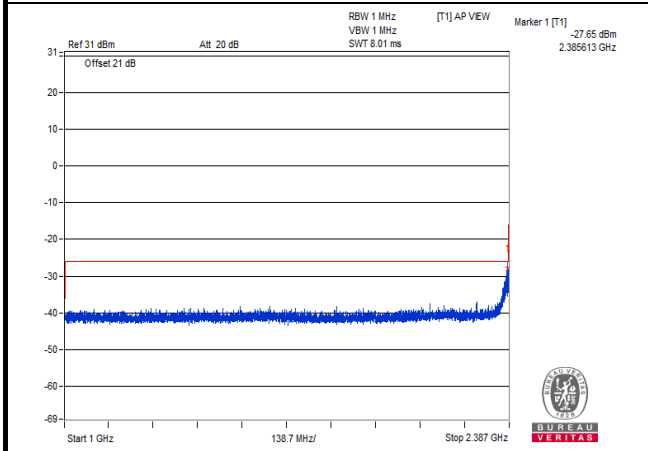


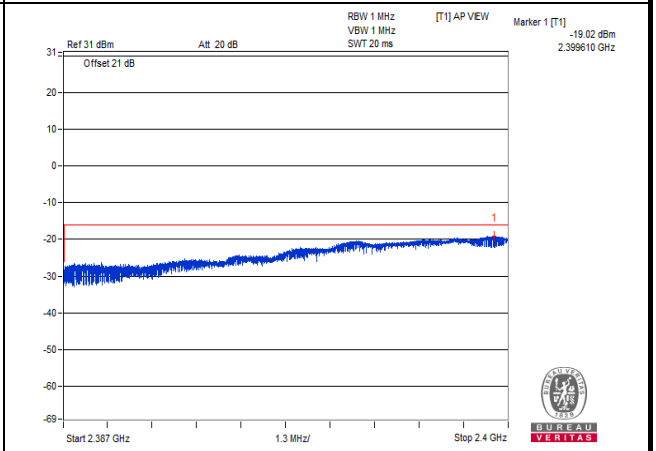
CH 7 (2442MHz)

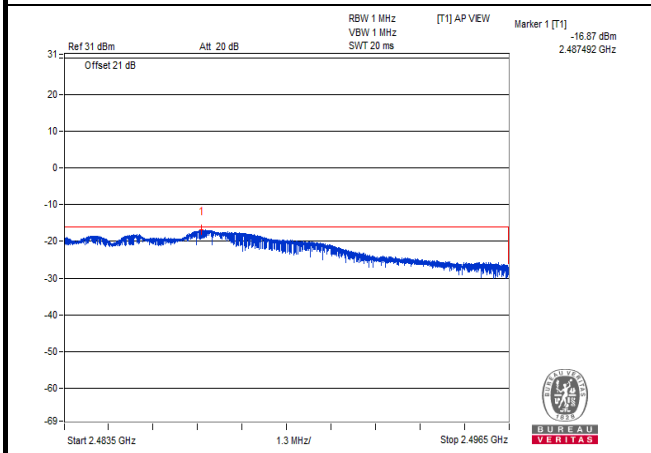
Vmin.

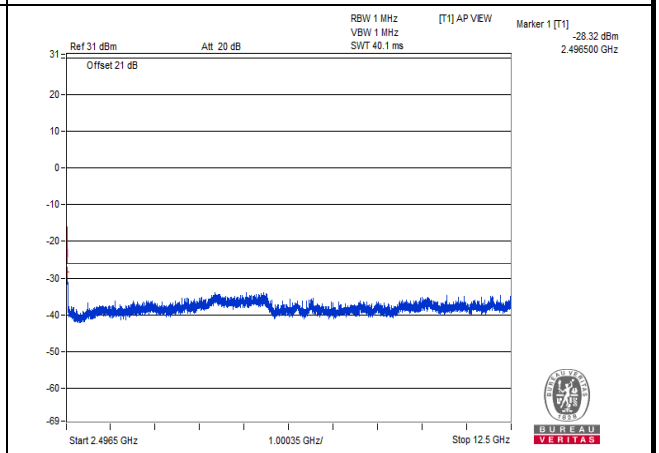






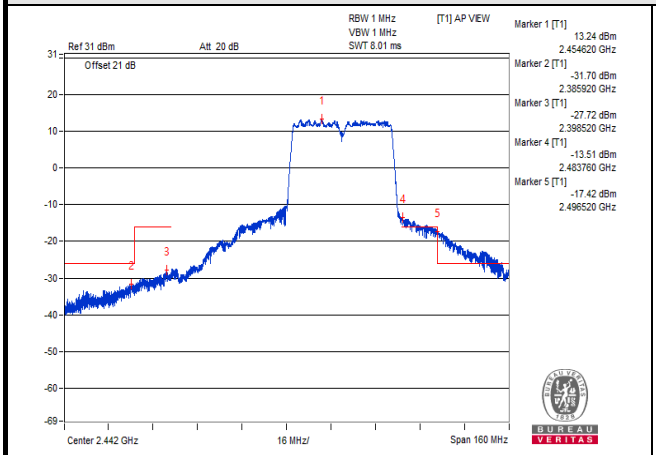


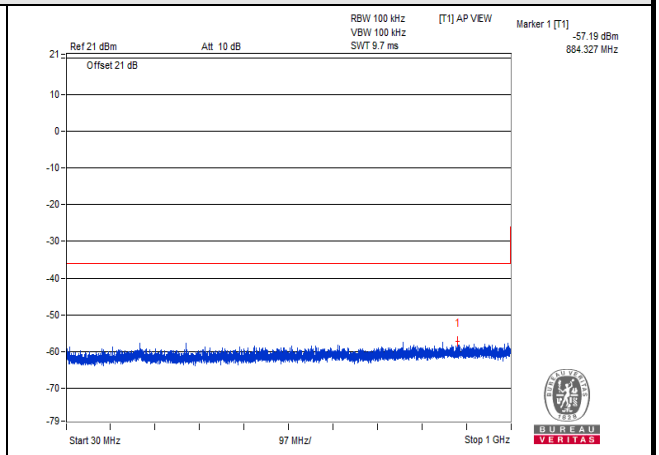


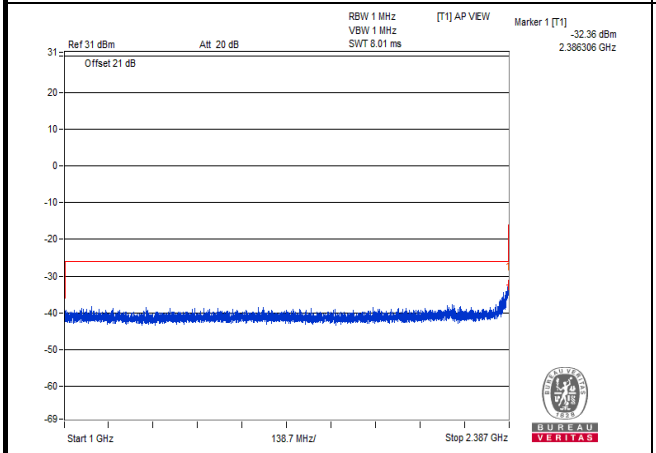


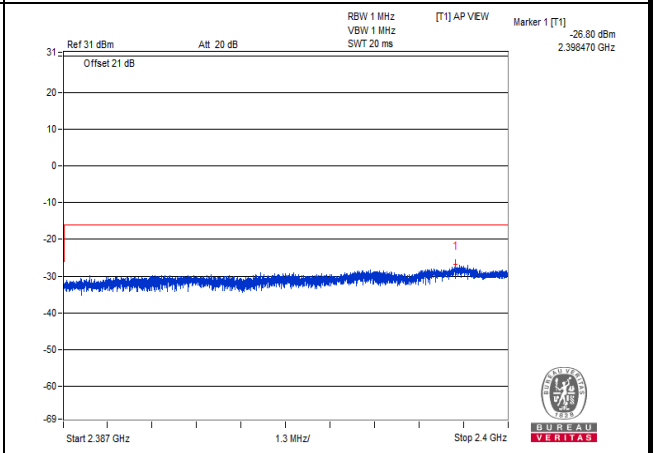
CH 7 (2442MHz)

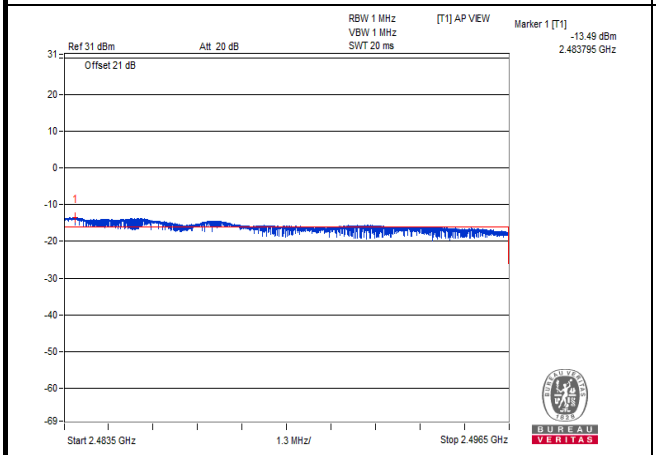
Vnormal

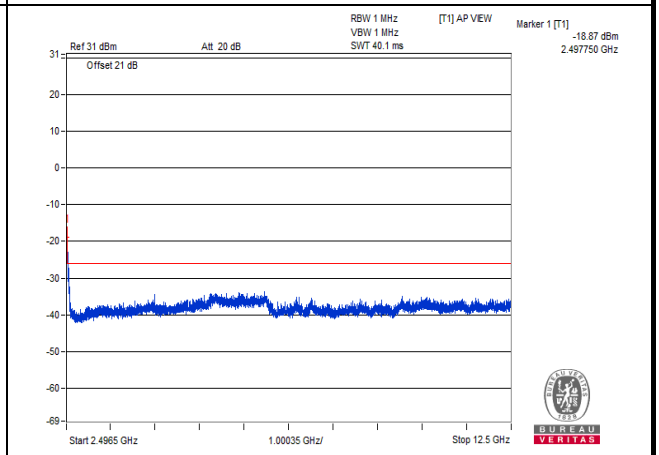






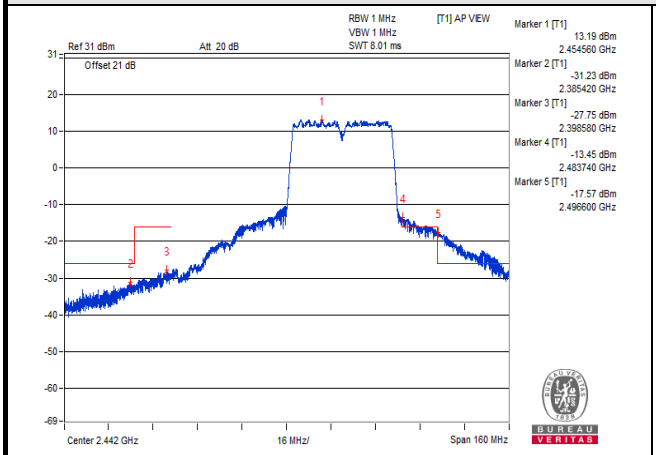


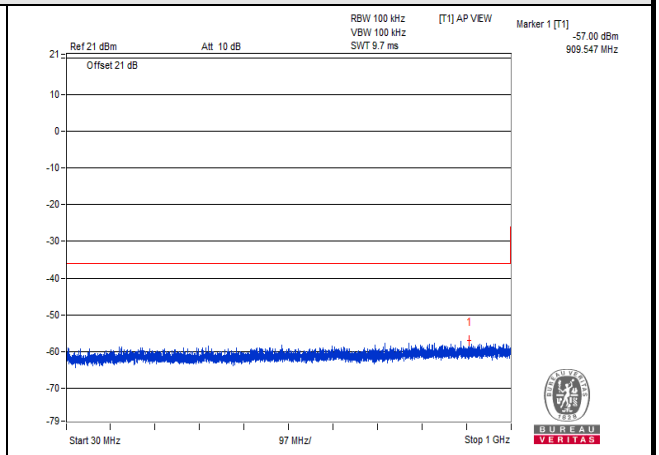


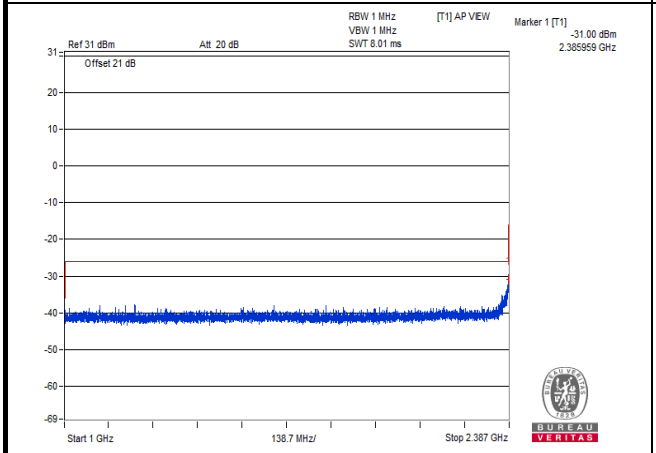


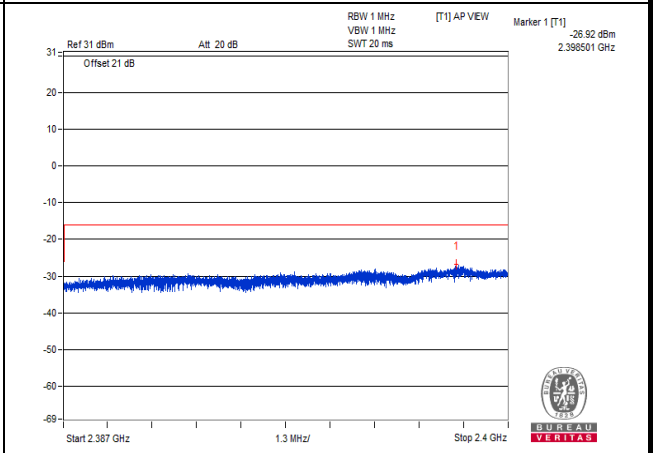
CH 11 (2462MHz)

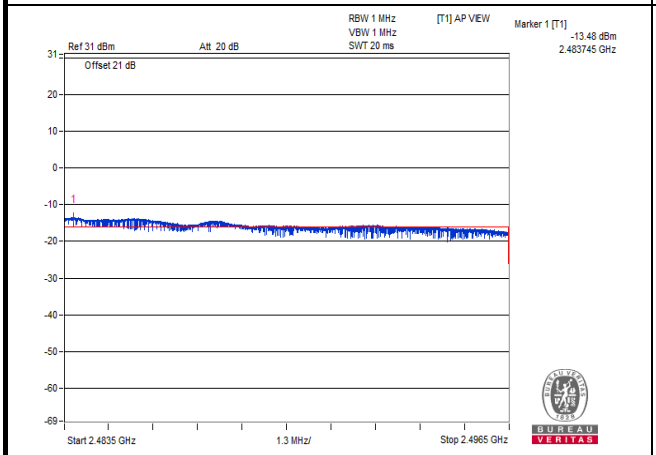
Vmax.

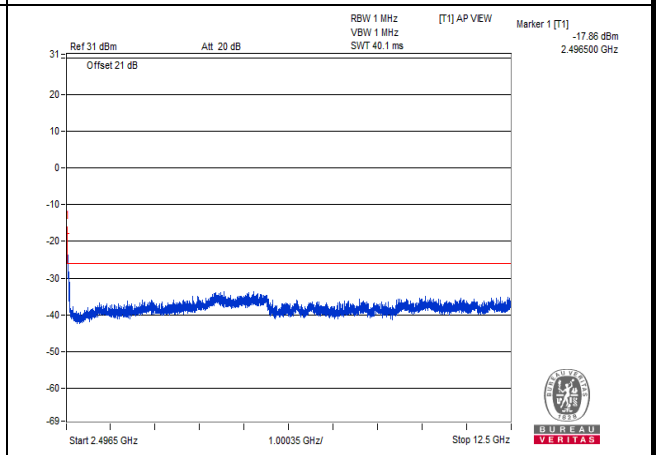






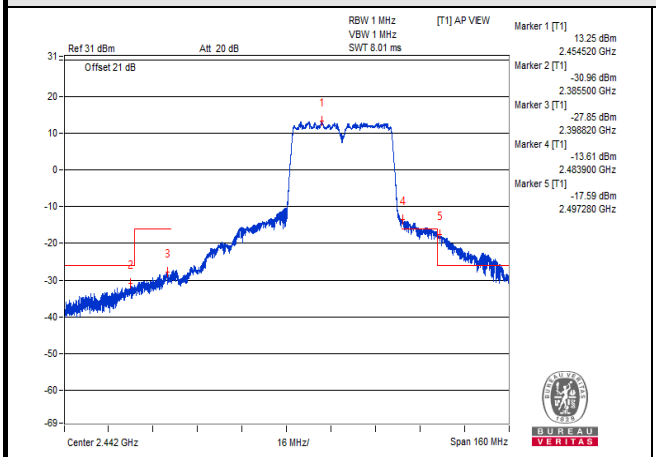


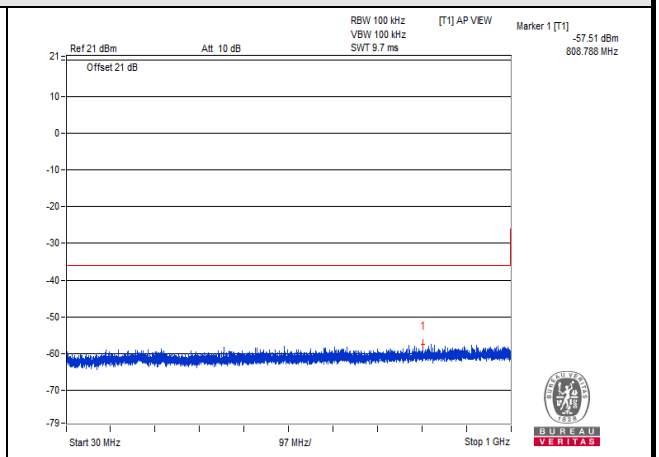


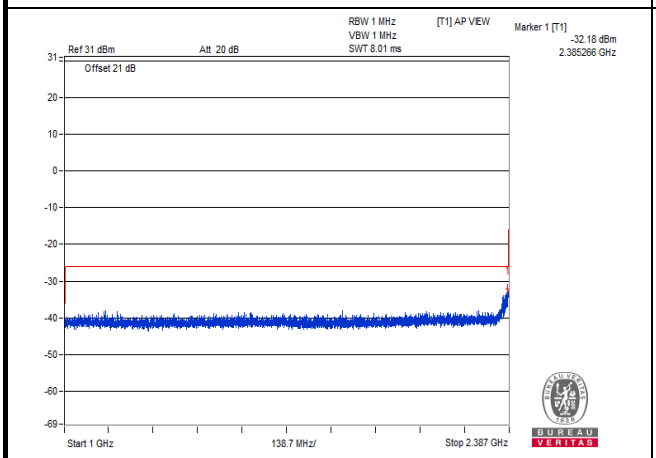


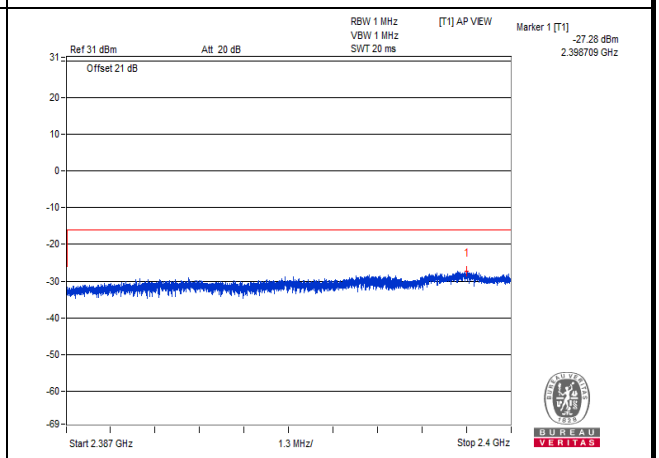
CH 11 (2462MHz)

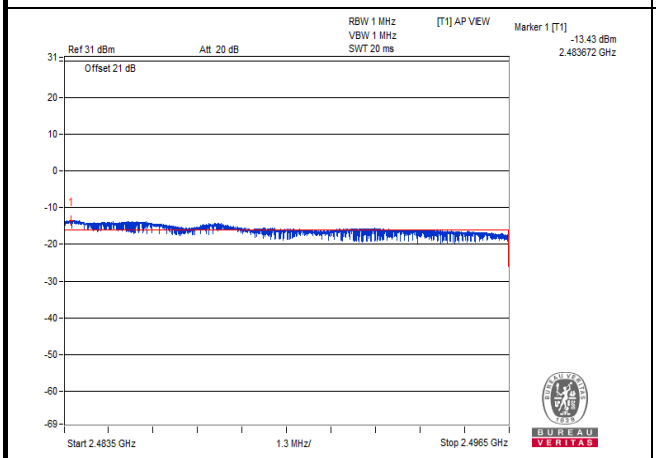
Vmin.

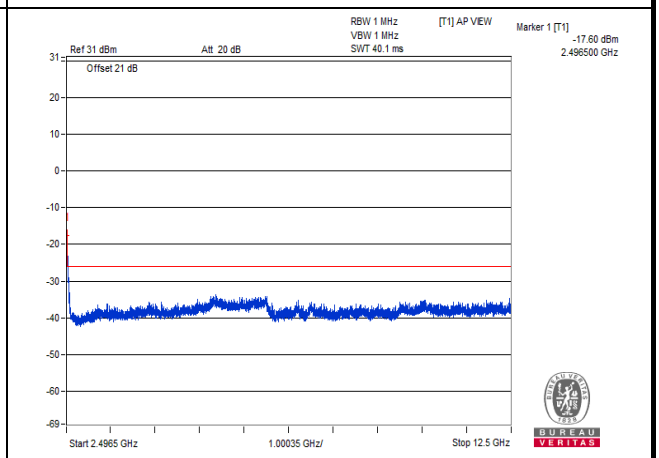








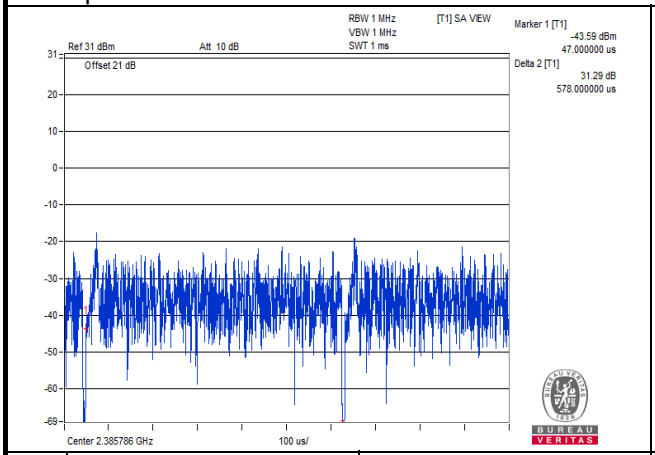




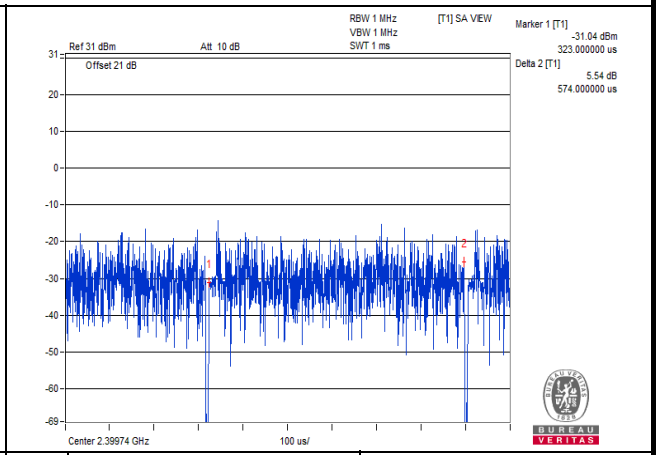
CH 11 (2462MHz)

Measuring Mode *Zero Span

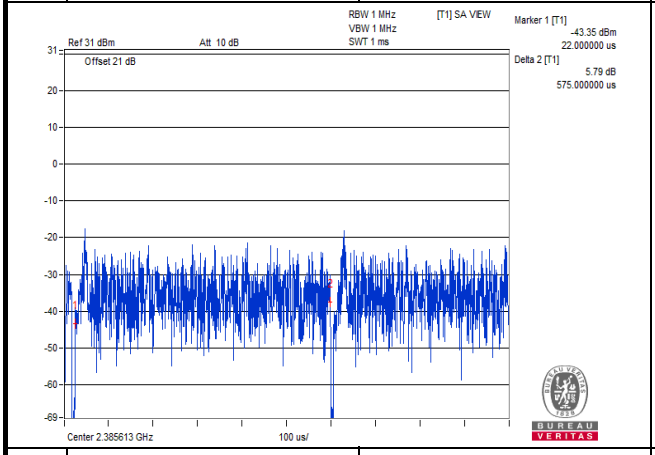
1. Set the spectrum analyzer as below and it takes in a value of all data point.
2. Regarding the all data value, it transforms the “dBm” value into “uW” value.
3. It adds the all values and calculates a grand total. Define a grand total as “P”.
4. It divides “P” by sample data point (ex.501) and calculates the mean value.
5. It reports the mean value.



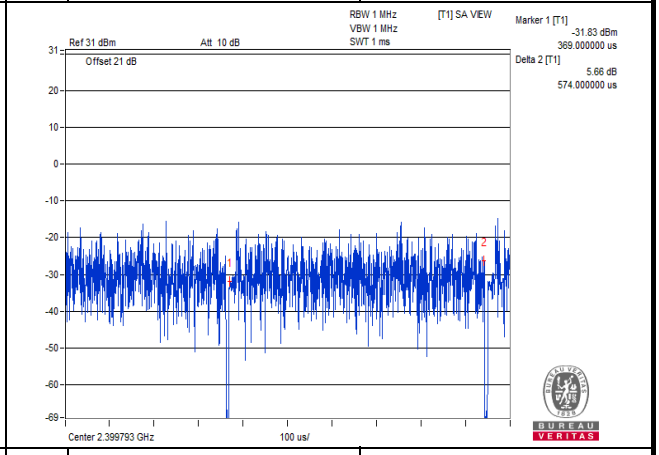
1	2385.786MHz	P = 0.606126uW



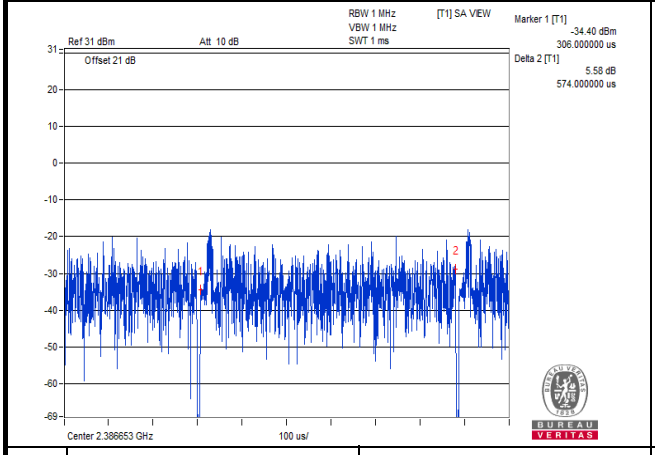
2	2399.740MHz	P = 1.752229uW



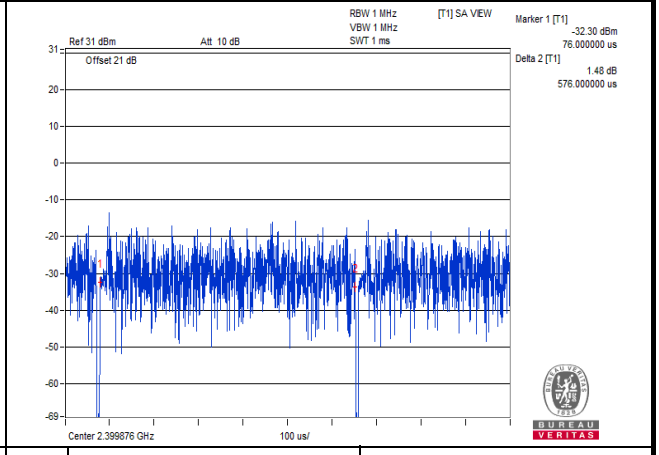
3	2385.613MHz	P = 0.60617uW



4	2399.793MHz	P = 1.73849uW



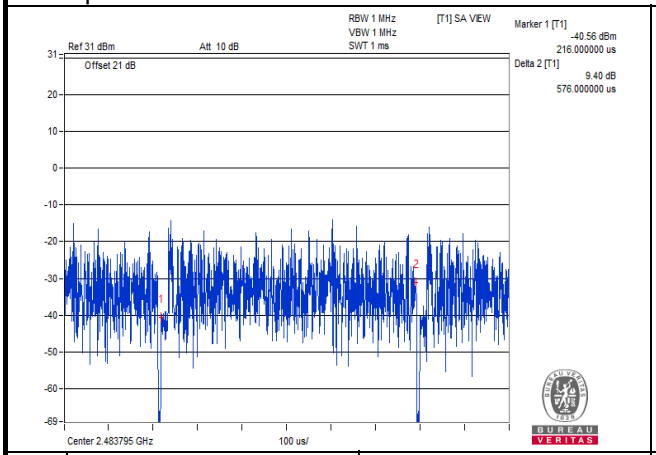
5	2386.653MHz	P = 0.776646uW



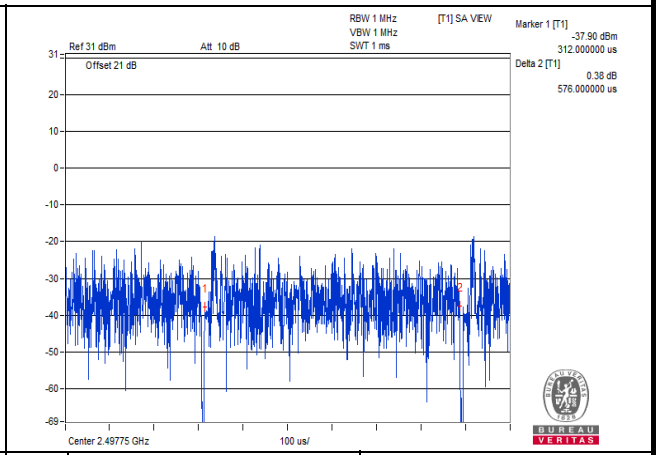
6	2399.876MHz	P = 1.909125uW

Measuring Mode *Zero Span

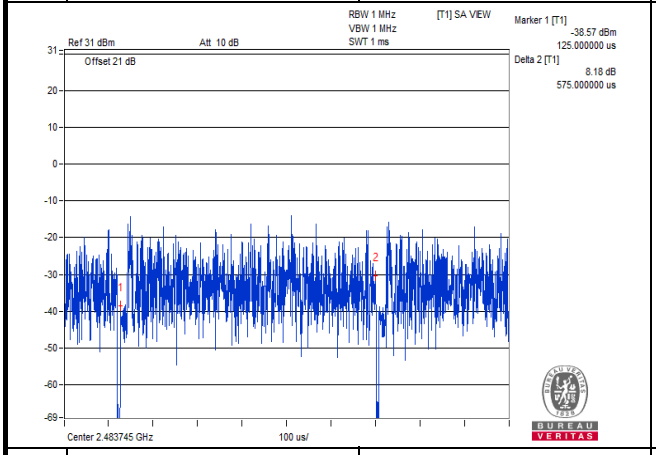
1. Set the spectrum analyzer as below and it takes in a value of all data point.
2. Regarding the all data value, it transforms the “dBm” value into “uW” value.
3. It adds the all values and calculates a grand total. Define a grand total as “P”.
4. It divides “P” by sample data point (ex.501) and calculates the mean value.
5. It reports the mean value.



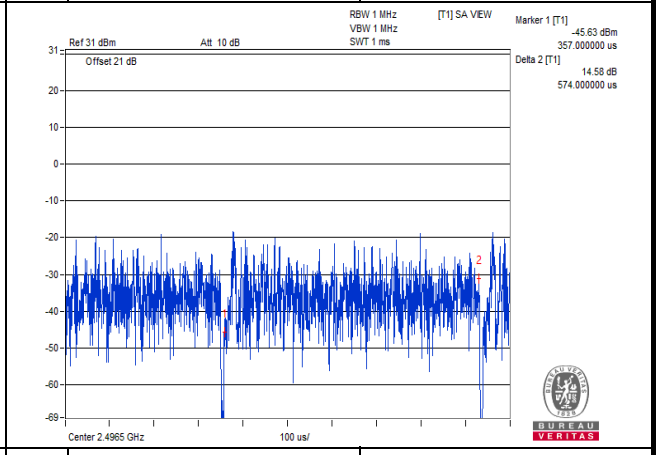
7	2483.795MHz	P = 1.316788uW



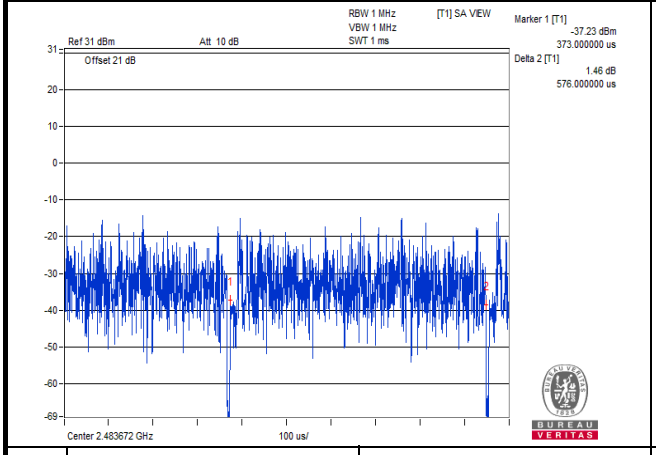
8	2497.750MHz	P = 0.56085uW



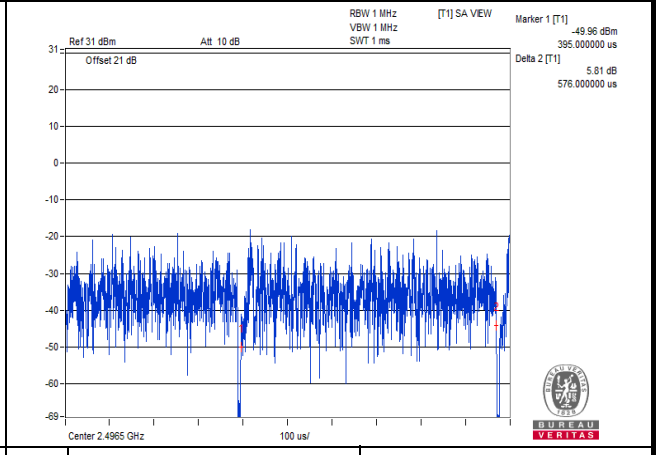
9	2483.745MHz	P = 1.314302uW



10	2496.500MHz	P = 0.614249uW



11	2483.672MHz	P = 1.348163uW



12	2496.500MHz	P = 0.62563uW

802.11ax (HE20)

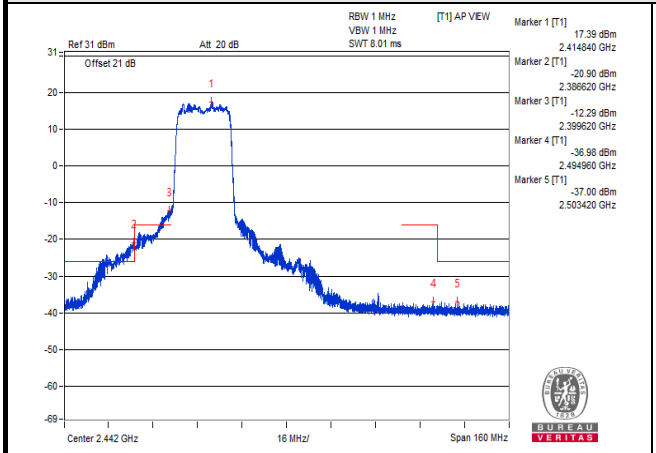
TEST CHANNEL		CH 1 (2412MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	882.751	0.001694	0.25	PASS
	1000.0 to 2387.0	2385.959	0.229829	2.5	PASS(1)
	2387.0 to 2400.0	2399.512	2.086367	25	PASS(2)
	2483.5 to 2496.5	2491.686	0.238232	25	PASS
	2496.5 to 12500.0	6377.858	0.464515	2.5	PASS
$V_{max.}$	30.0 to 1000.0	989.572	0.002163	0.25	PASS
	1000.0 to 2387.0	2385.613	0.228634	2.5	PASS(3)
	2387.0 to 2400.0	2399.535	2.183700	25	PASS(4)
	2483.5 to 2496.5	2487.346	0.240436	25	PASS
	2496.5 to 12500.0	5873.931	0.457088	2.5	PASS
$V_{min.}$	30.0 to 1000.0	964.231	0.001923	0.25	PASS
	1000.0 to 2387.0	2386.133	0.246168	2.5	PASS(5)
	2387.0 to 2400.0	2399.496	2.137093	25	PASS(6)
	2483.5 to 2496.5	2486.899	0.289734	25	PASS
	2496.5 to 12500.0	6986.821	0.594292	2.5	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	991.512	0.001945	0.25	PASS
	1000.0 to 2387.0	2206.169	0.184502	2.5	PASS
	2387.0 to 2400.0	2399.952	0.603949	25	PASS
	2483.5 to 2496.5	2483.722	1.047129	25	PASS
	2496.5 to 12500.0	5888.936	0.544503	2.5	PASS
$V_{max.}$	30.0 to 1000.0	862.745	0.002113	0.25	PASS
	1000.0 to 2387.0	2382.318	0.162555	2.5	PASS
	2387.0 to 2400.0	2399.740	0.545758	25	PASS
	2483.5 to 2496.5	2483.868	1.023293	25	PASS
	2496.5 to 12500.0	6998.075	0.496592	2.5	PASS
$V_{min.}$	30.0 to 1000.0	821.641	0.002046	0.25	PASS
	1000.0 to 2387.0	2209.984	0.174582	2.5	PASS
	2387.0 to 2400.0	2399.892	0.572796	25	PASS
	2483.5 to 2496.5	2483.542	1.066596	25	PASS
	2496.5 to 12500.0	6879.283	0.485289	2.5	PASS

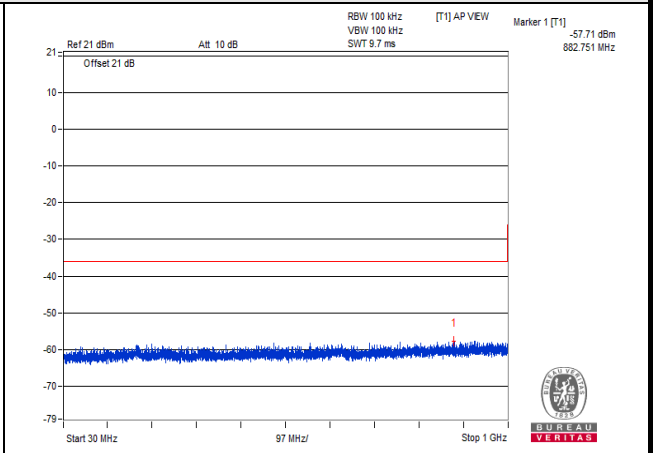
TEST CHANNEL		CH 13 (2472MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	175.257	0.001738	0.25	PASS
	1000.0 to 2387.0	2243.272	0.171396	2.5	PASS
	2387.0 to 2400.0	2398.648	0.214783	25	PASS
	2483.5 to 2496.5	2483.623	1.297573	25	PASS(7)
	2496.5 to 12500.0	2497.750	0.169704	2.5	PASS(8)
$V_{max.}$	30.0 to 1000.0	930.766	0.001845	0.25	PASS
	1000.0 to 2387.0	2347.297	0.159221	2.5	PASS
	2387.0 to 2400.0	2397.486	0.235505	25	PASS
	2483.5 to 2496.5	2483.500	1.399784	25	PASS(9)
	2496.5 to 12500.0	2497.750	0.182590	2.5	PASS(10)
$V_{min.}$	30.0 to 1000.0	898.028	0.001841	0.25	PASS
	1000.0 to 2387.0	2211.024	0.182810	2.5	PASS
	2387.0 to 2400.0	2398.890	0.254097	25	PASS
	2483.5 to 2496.5	2483.574	1.341358	25	PASS(11)
	2496.5 to 12500.0	2505.253	0.061591	2.5	PASS(12)

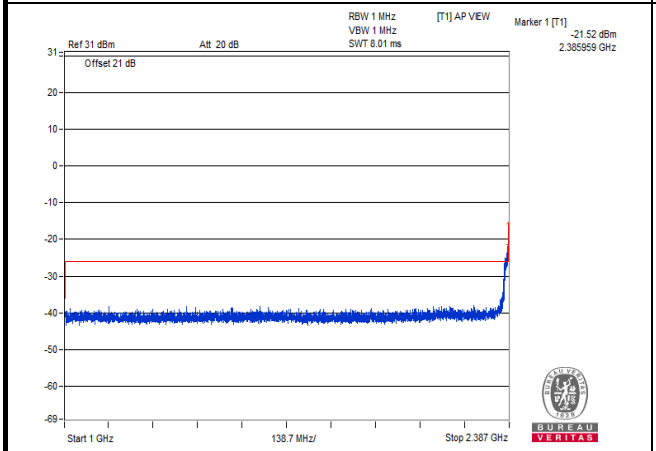
NOTE: 1. The spectrum plots are attached on the following pages.

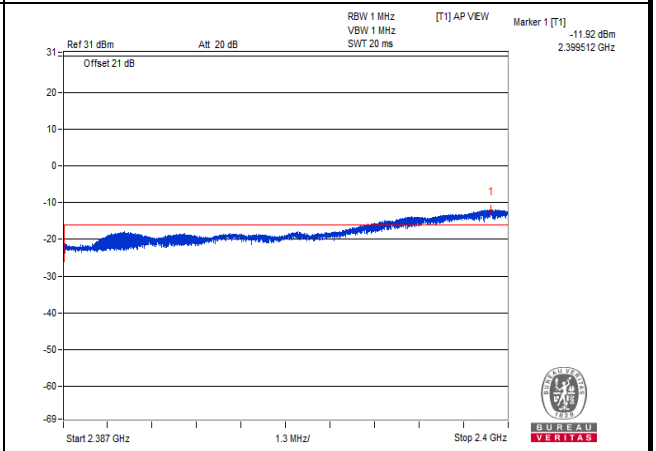
2. (No.): The value was tested under Measuring Mode *Zero Span.

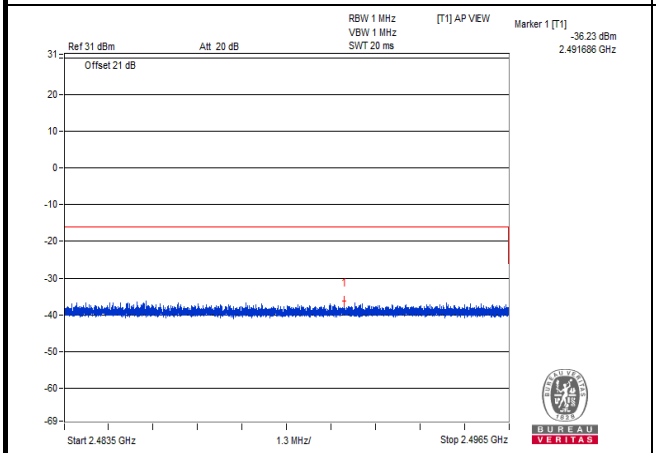
Vnormal

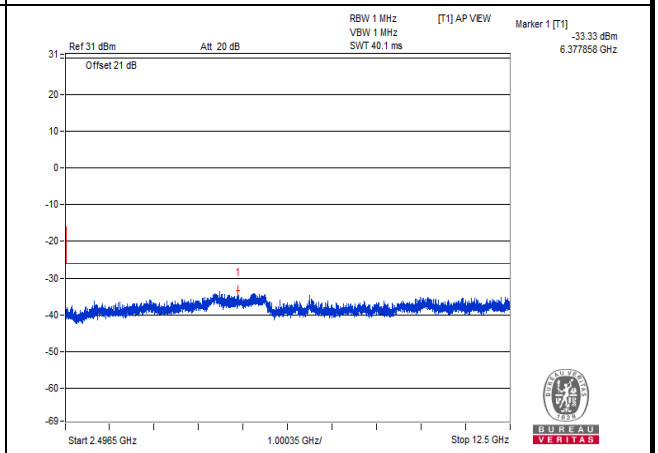






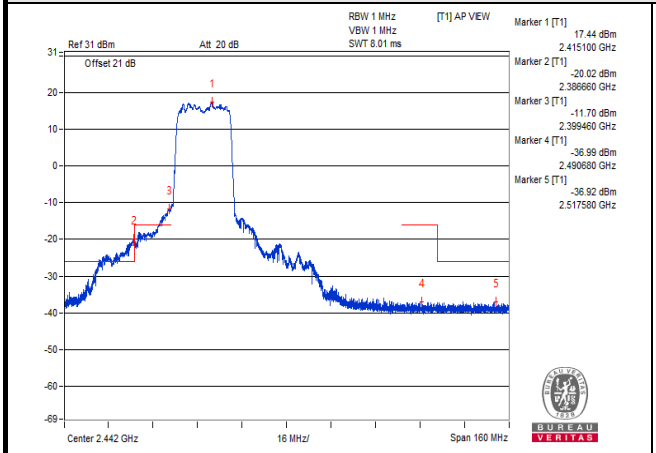


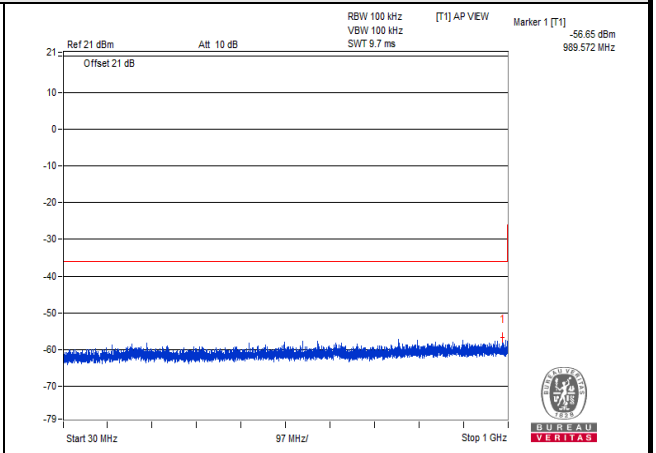


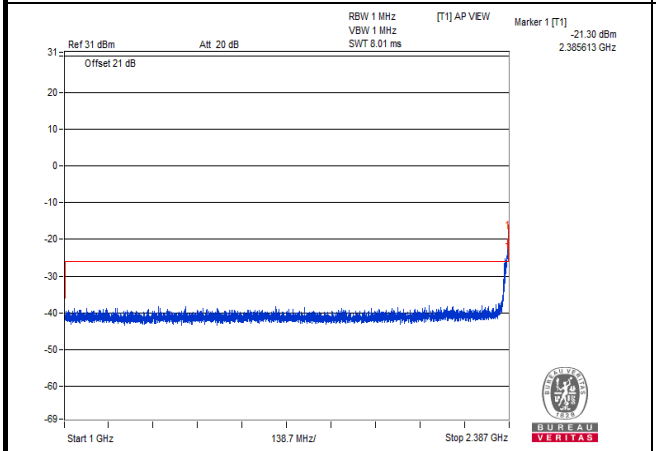


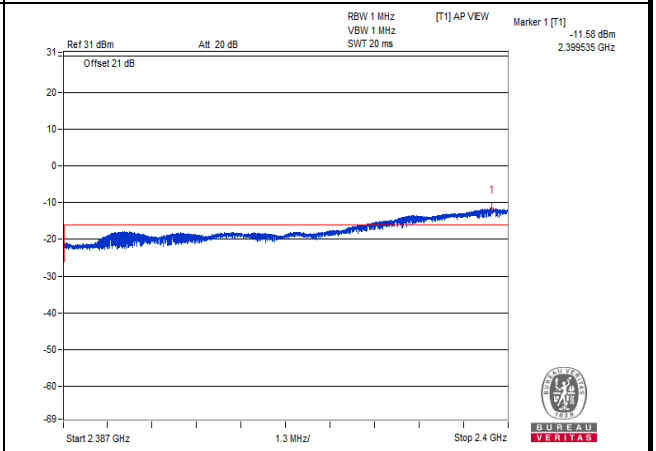
CH 1 (2412MHz)

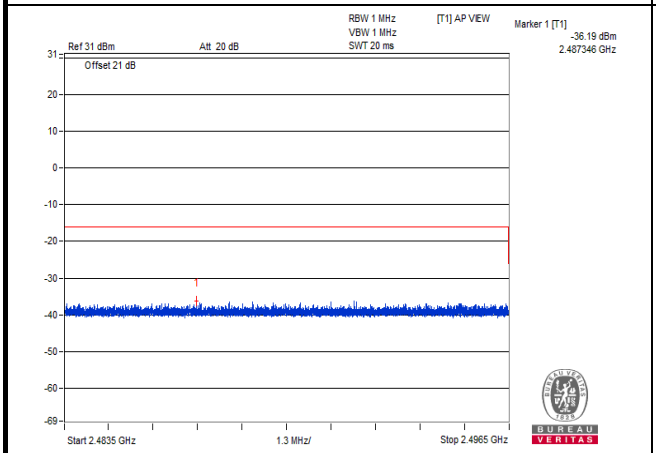
Vmax.

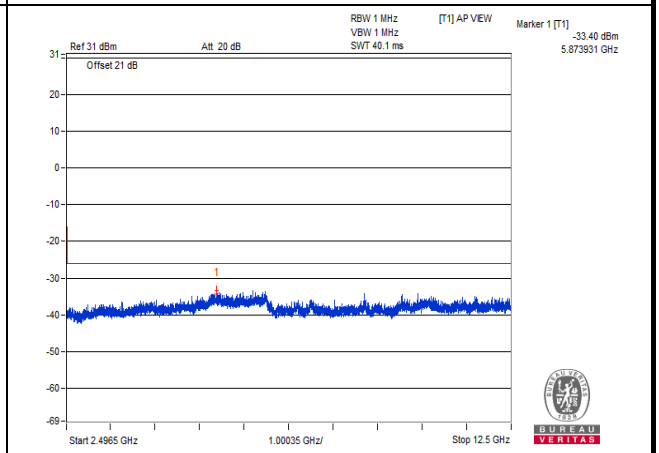






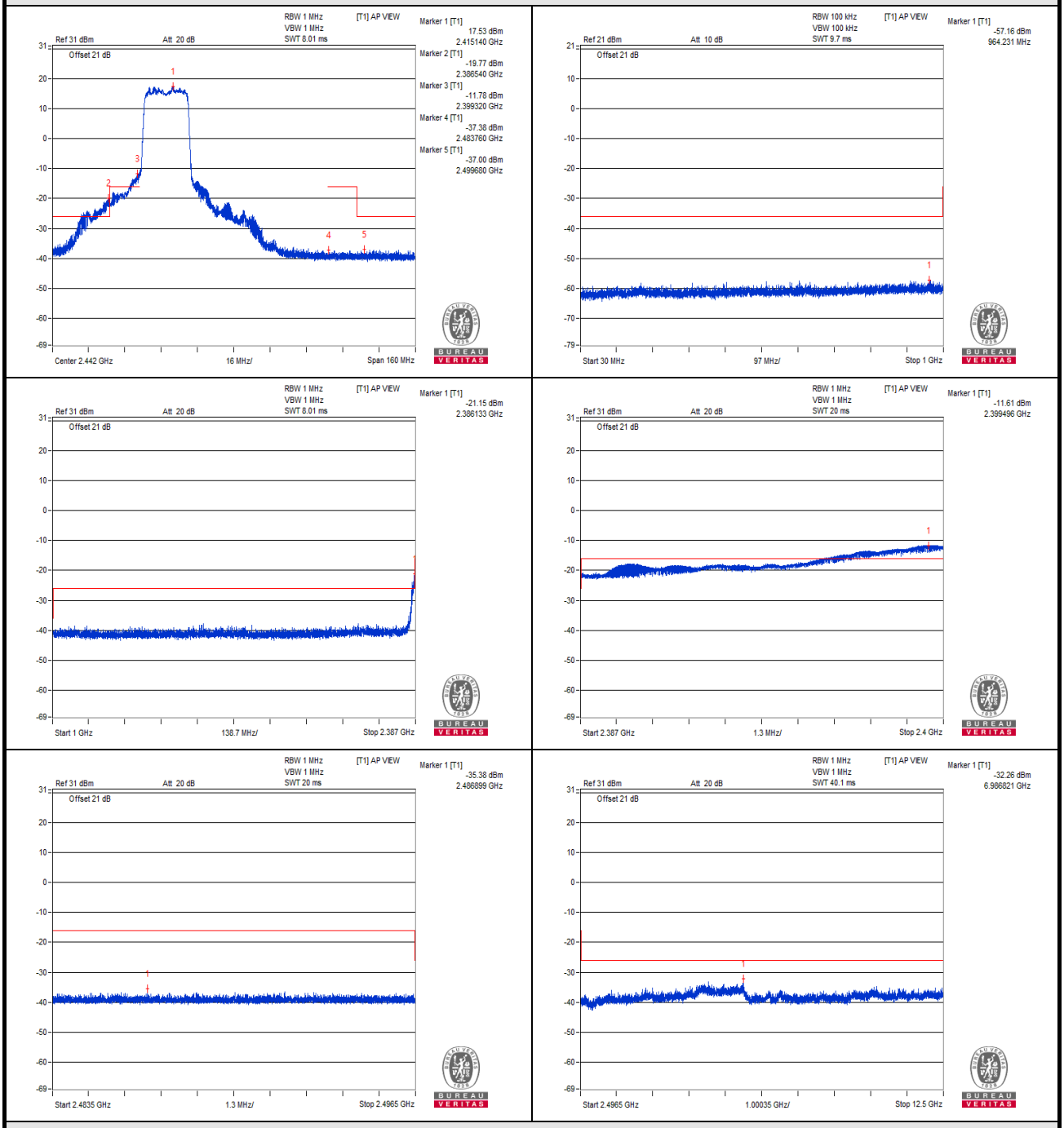






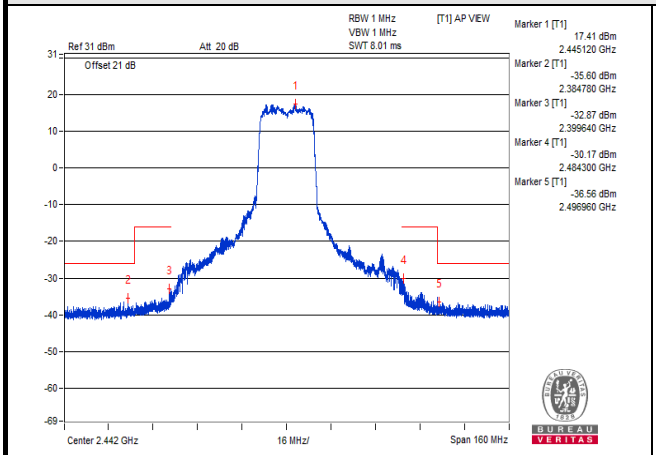
CH 1 (2412MHz)

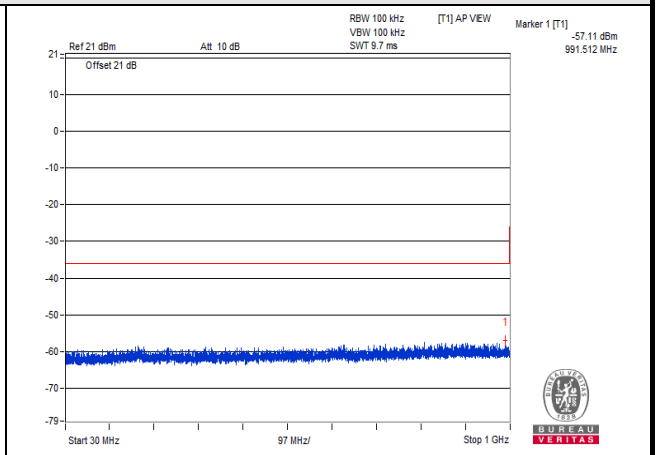
Vmin.

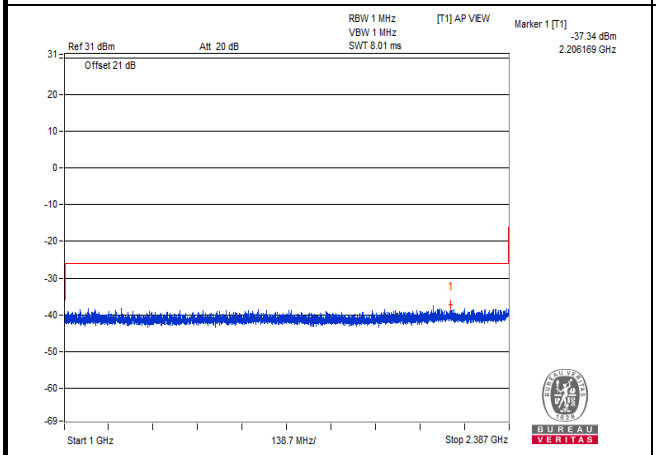


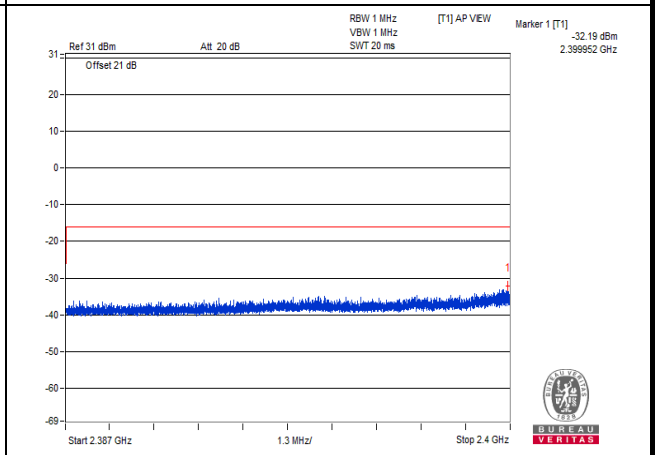
CH 1 (2412MHz)

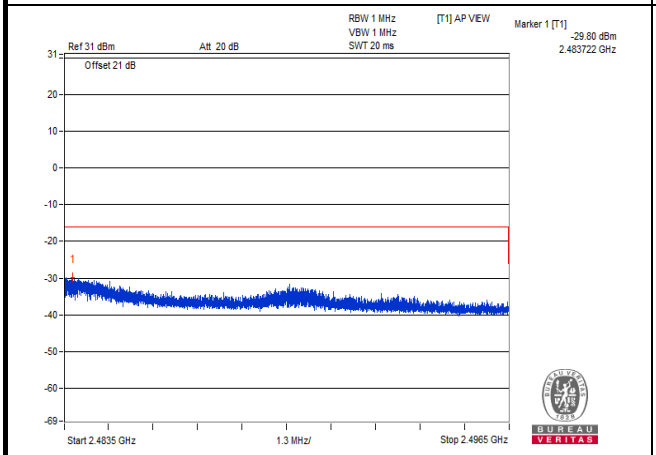
Vnormal

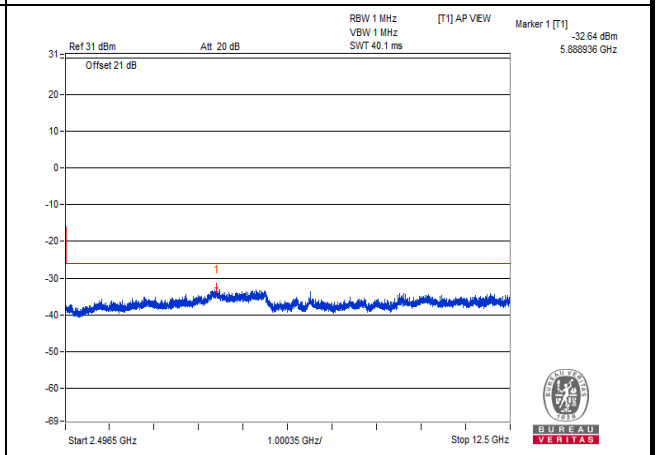






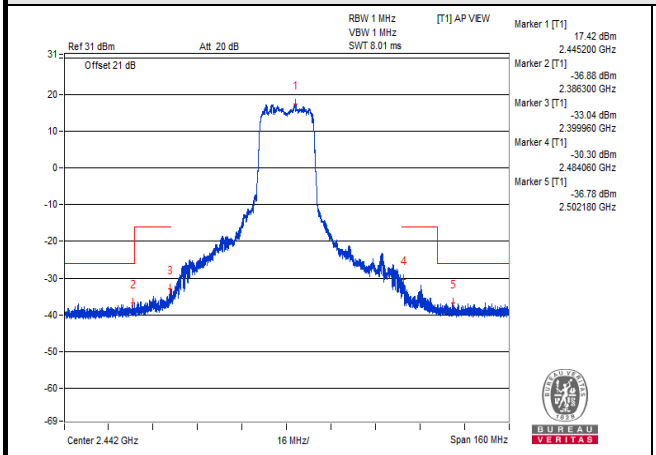


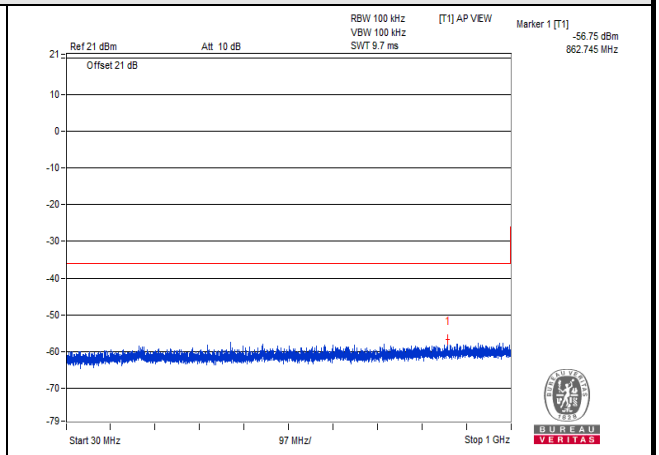


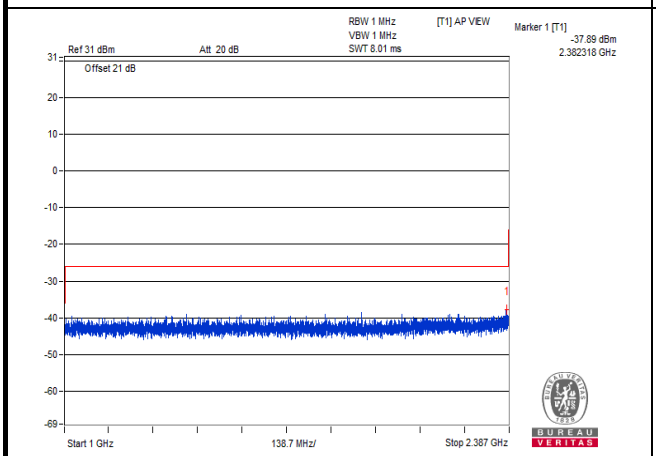


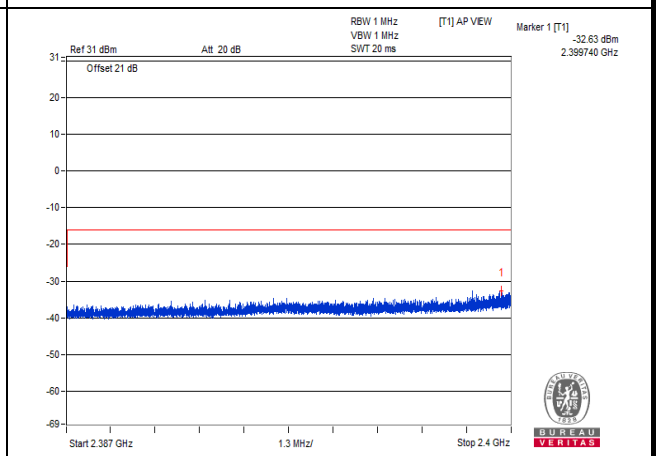
CH 7 (2442MHz)

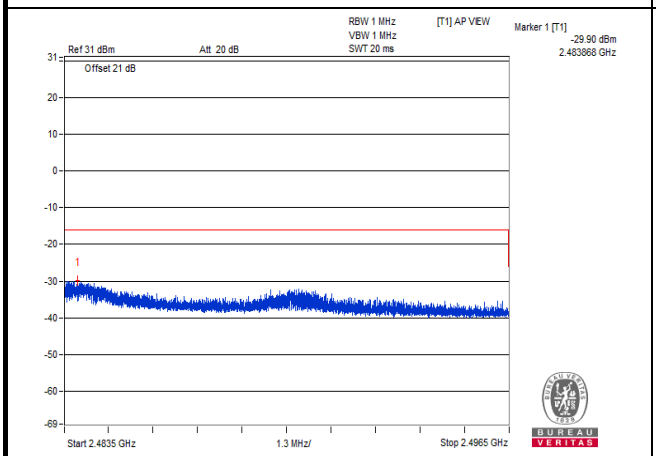
Vmax.

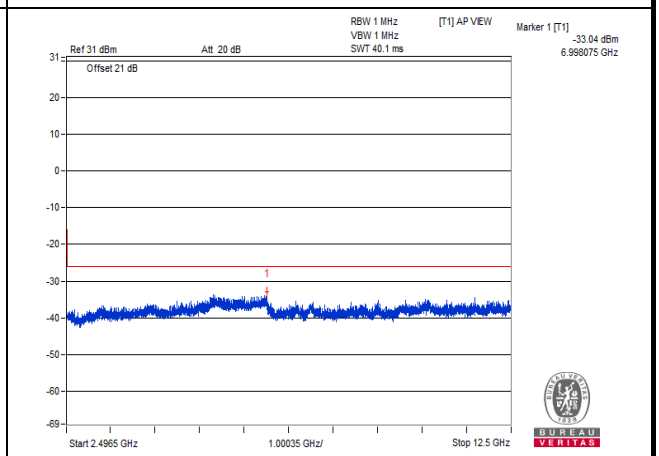






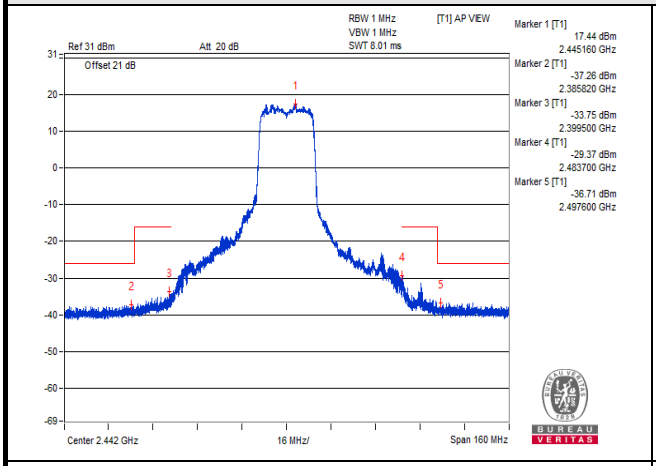


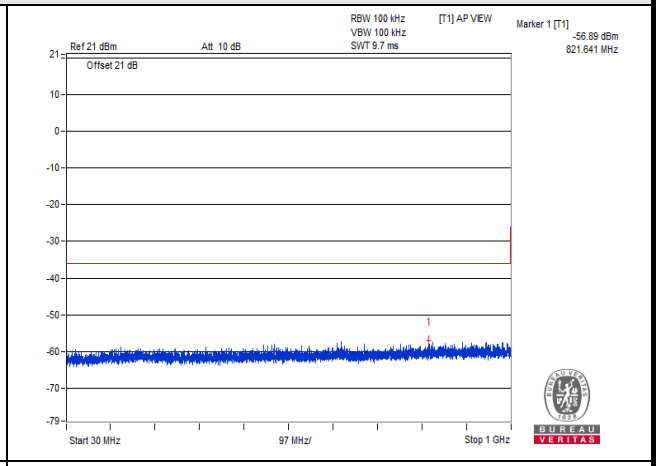


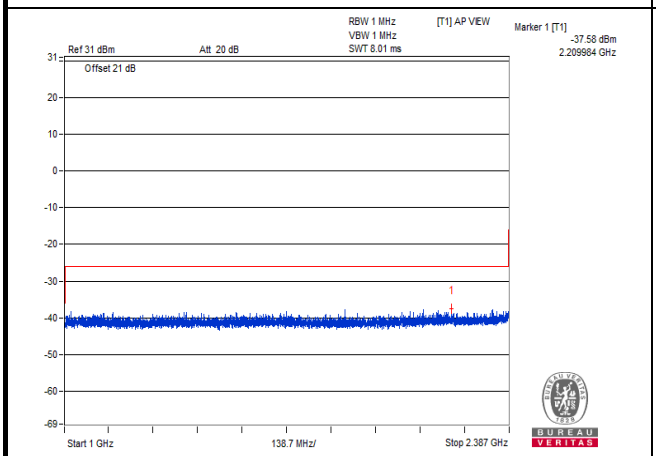


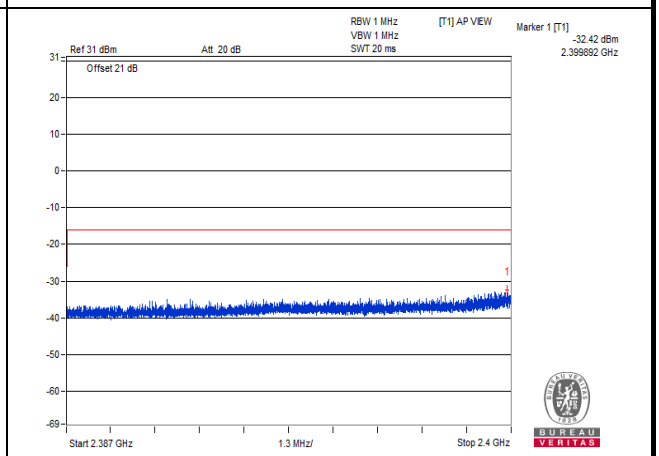
CH 7 (2442MHz)

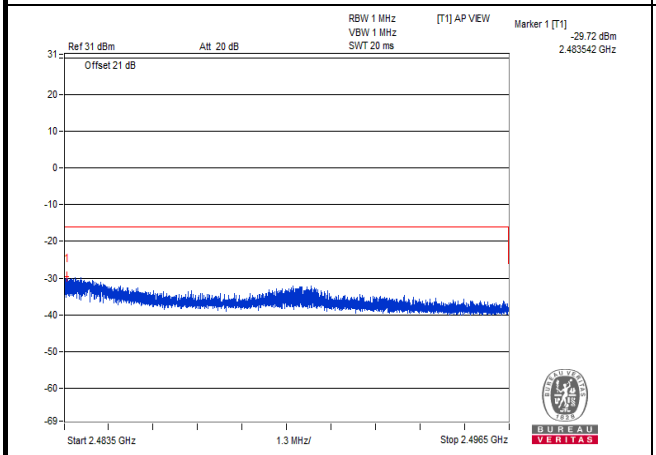
Vmin.

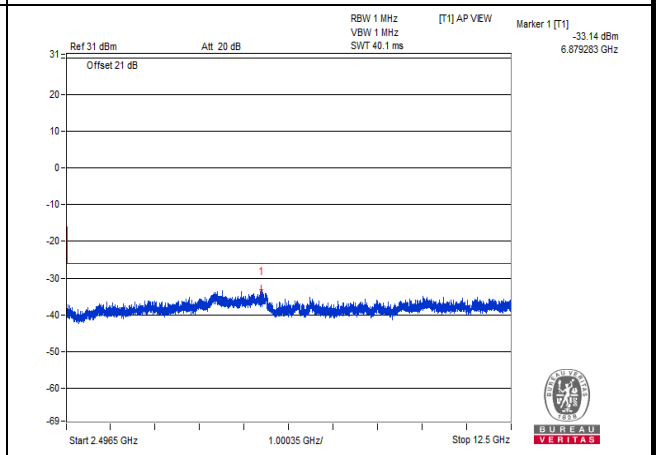






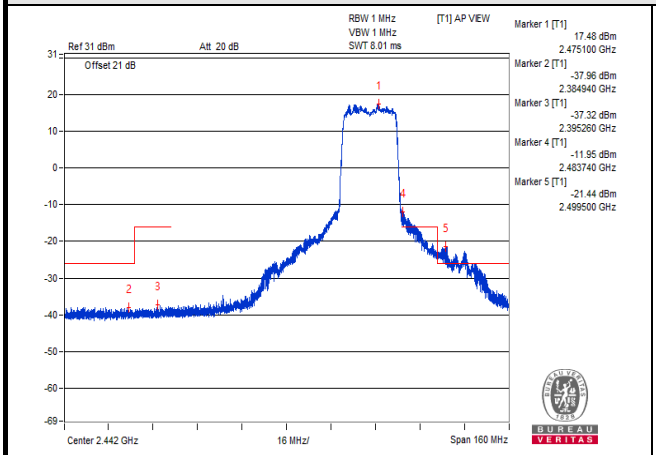


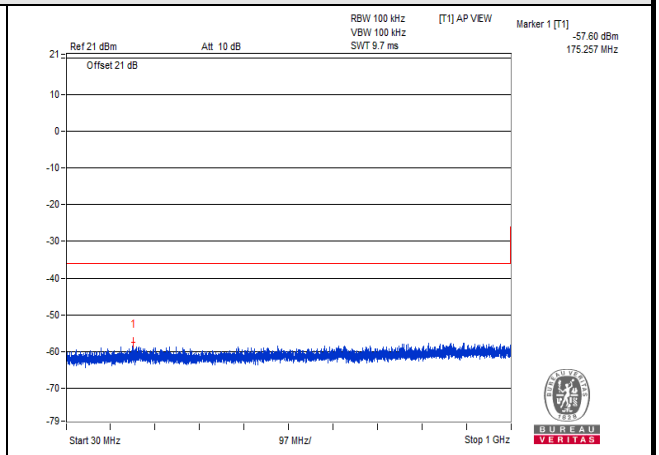


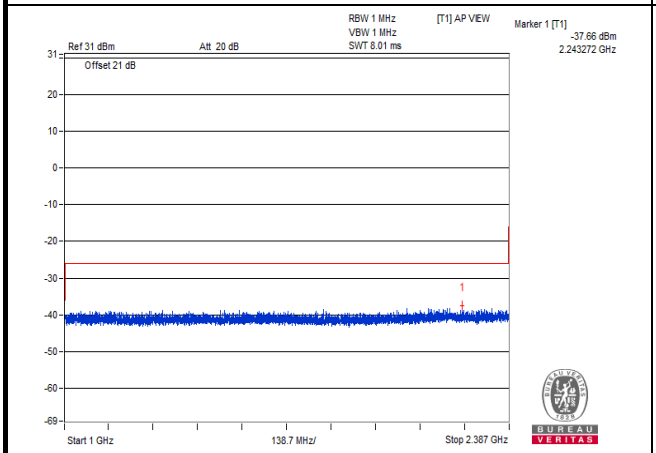


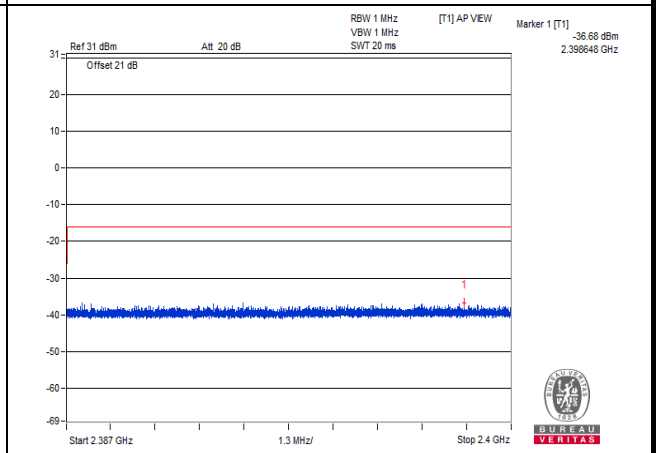
CH 7 (2442MHz)

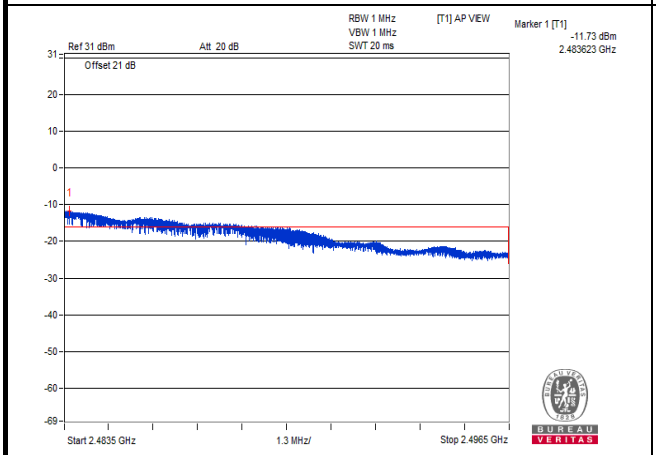
Vnormal

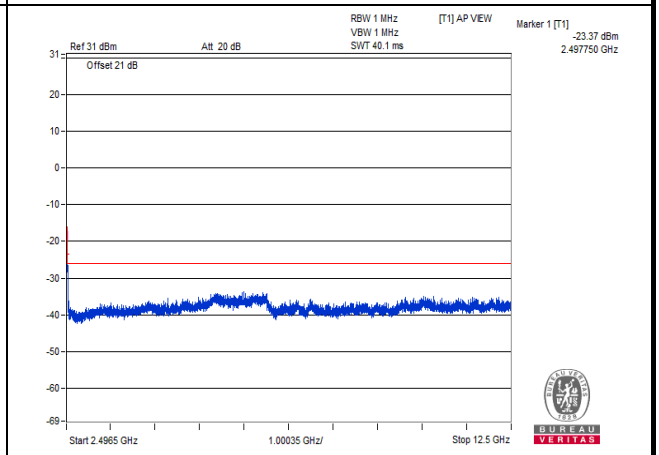






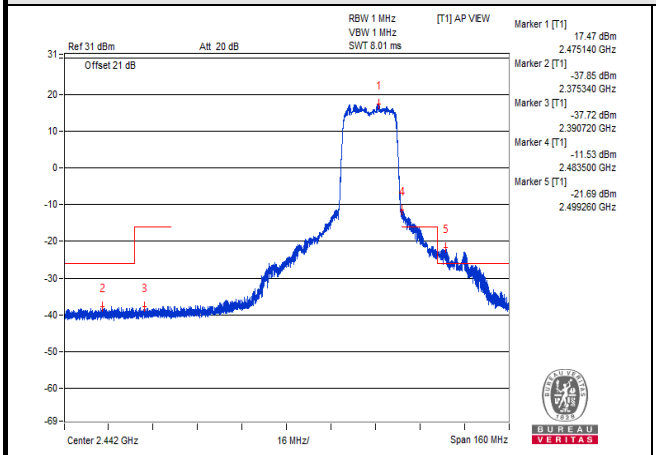


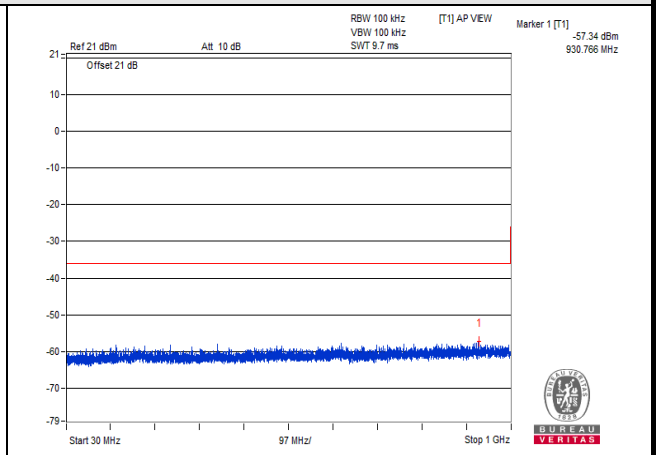


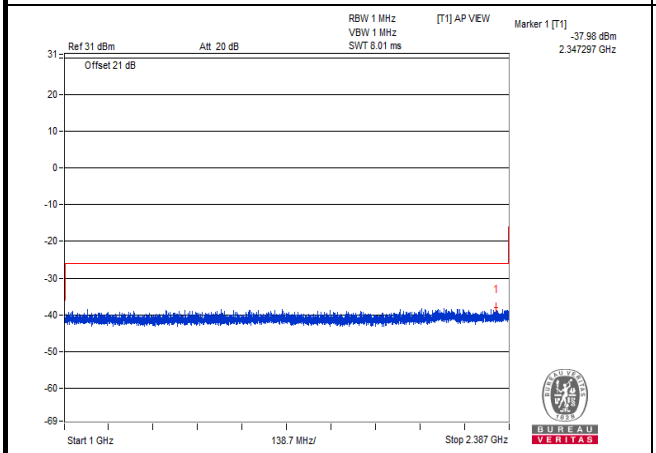


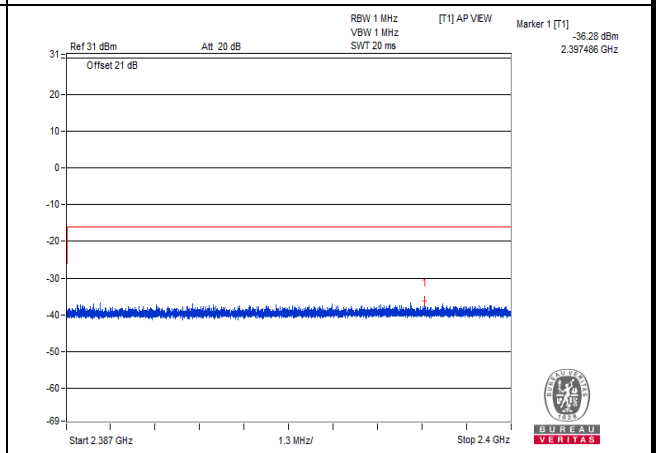
CH 13 (2472MHz)

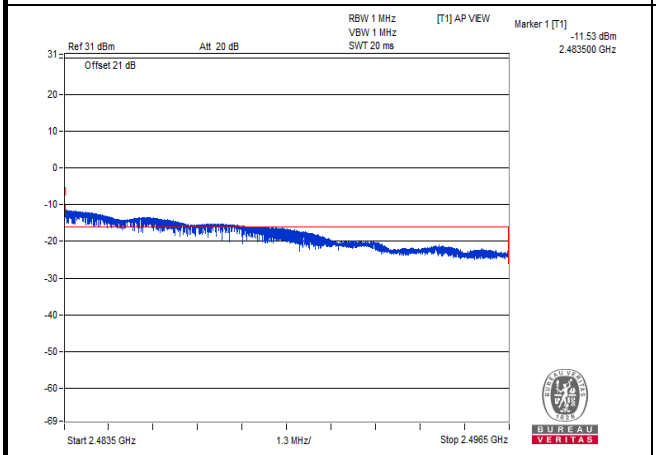
Vmax.

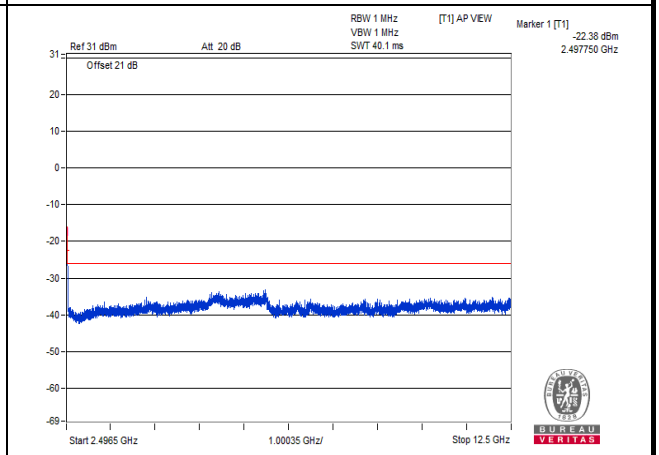






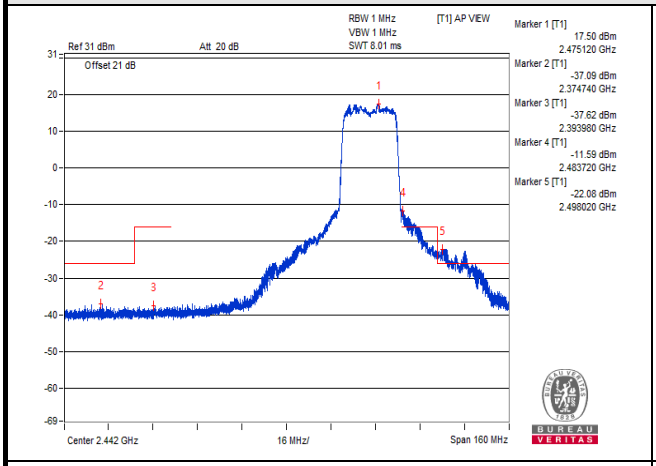


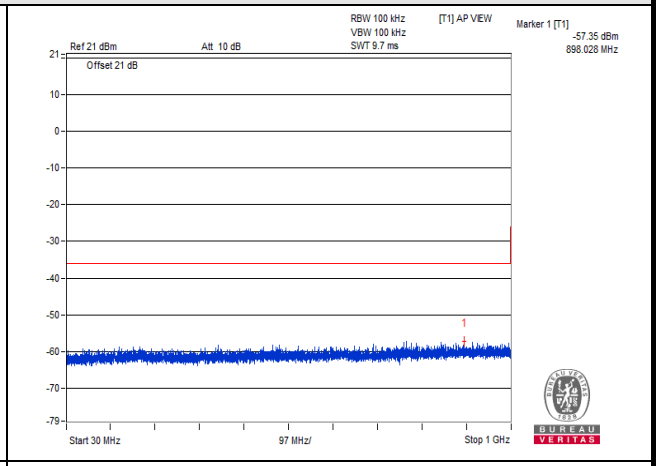


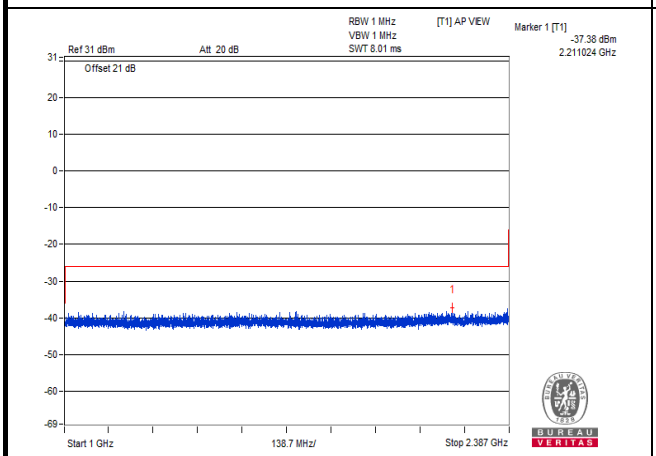


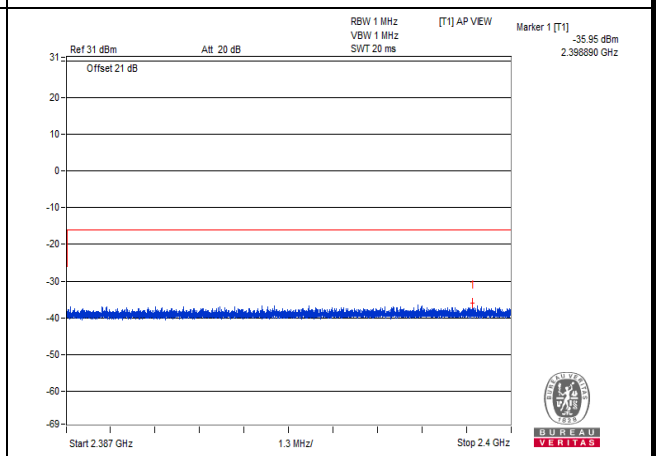
CH 13 (2472MHz)

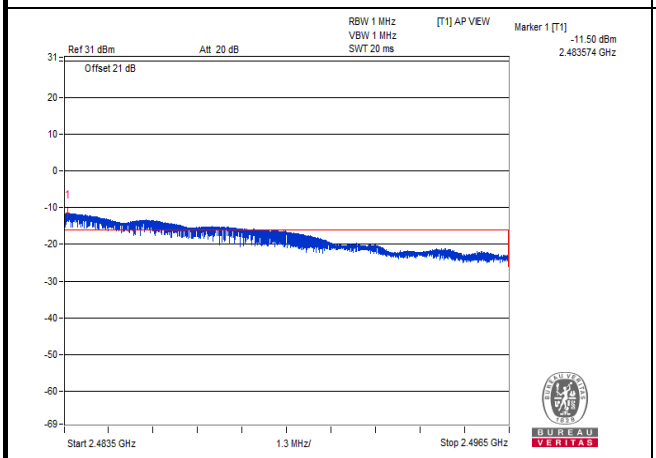
Vmin.

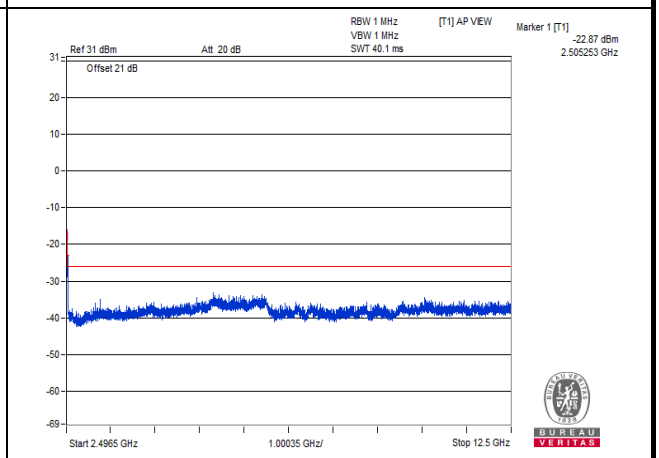








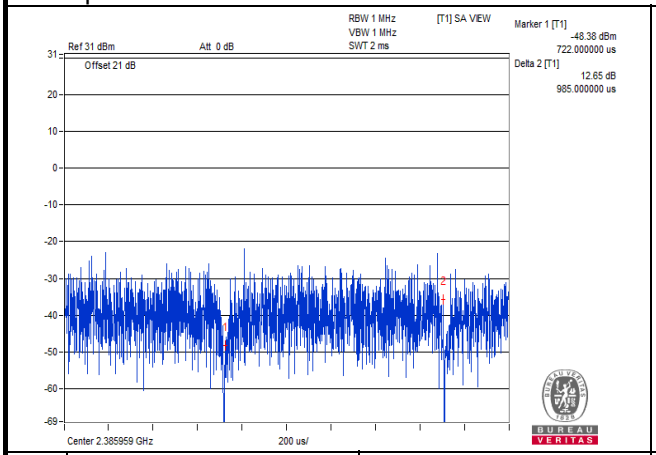




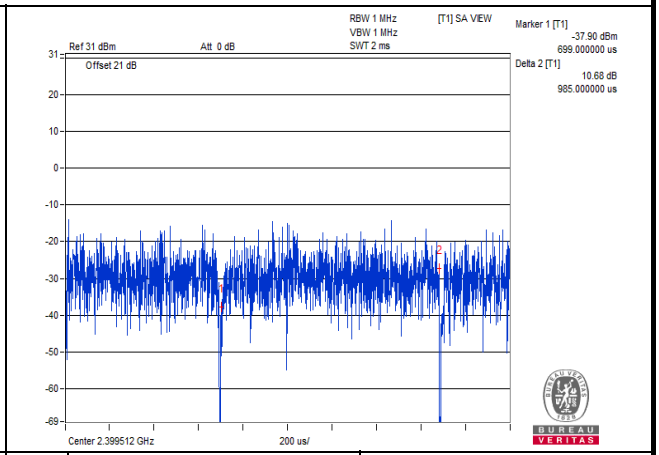
CH 13 (2472MHz)

Measuring Mode *Zero Span

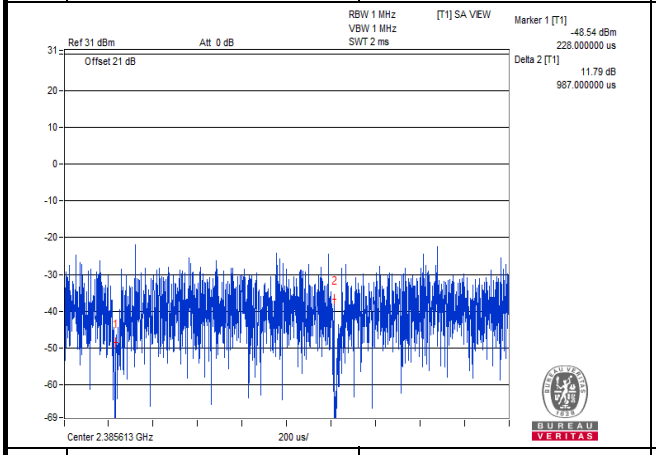
1. Set the spectrum analyzer as below and it takes in a value of all data point.
2. Regarding the all data value, it transforms the “dBm” value into “uW” value.
3. It adds the all values and calculates a grand total. Define a grand total as “P”.
4. It divides “P” by sample data point (ex.501) and calculates the mean value.
5. It reports the mean value.



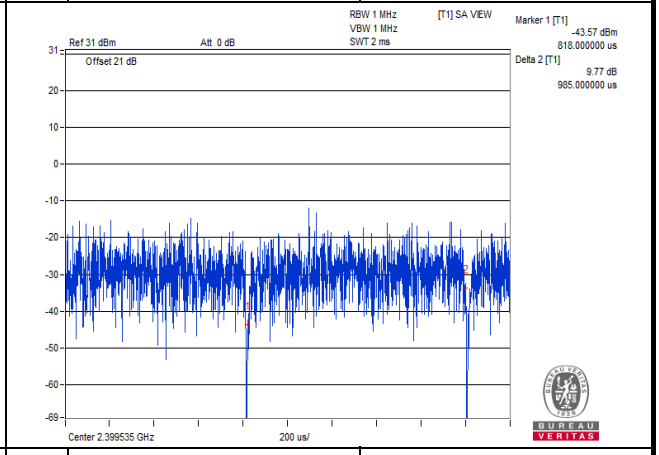
1	2385.959MHz	P = 0.229829uW



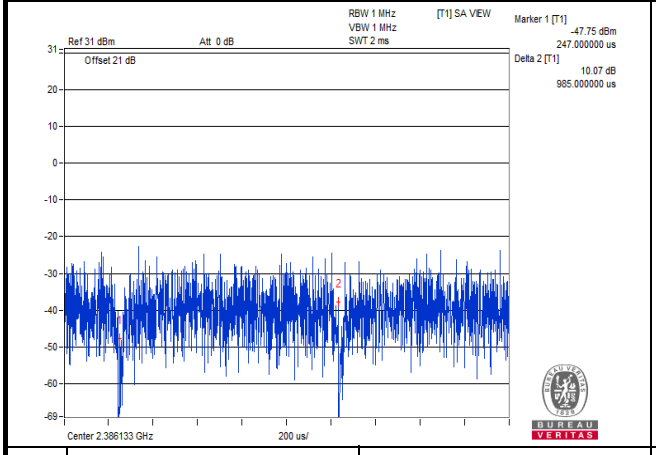
2	2399.512MHz	P = 2.086367uW



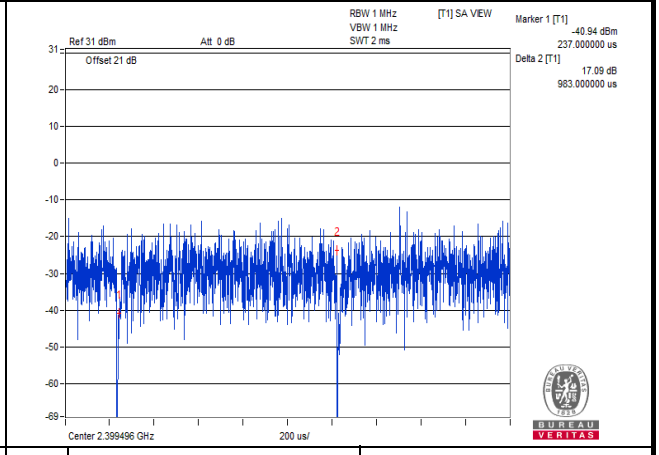
3	2385.613MHz	P = 0.228634uW



4	2399.535MHz	P = 2.1837uW



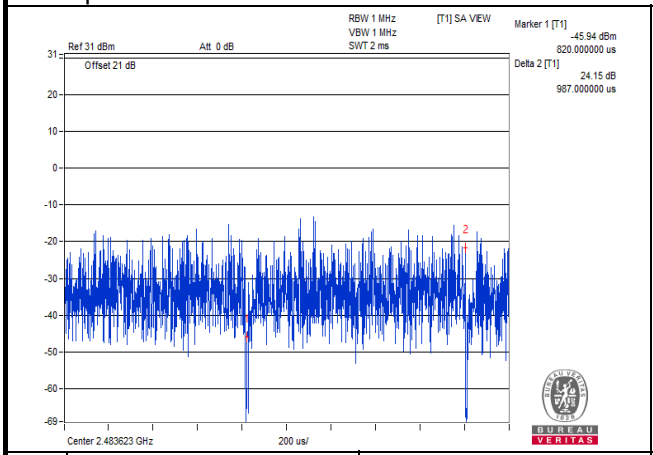
5	2386.133MHz	P = 0.246168uW



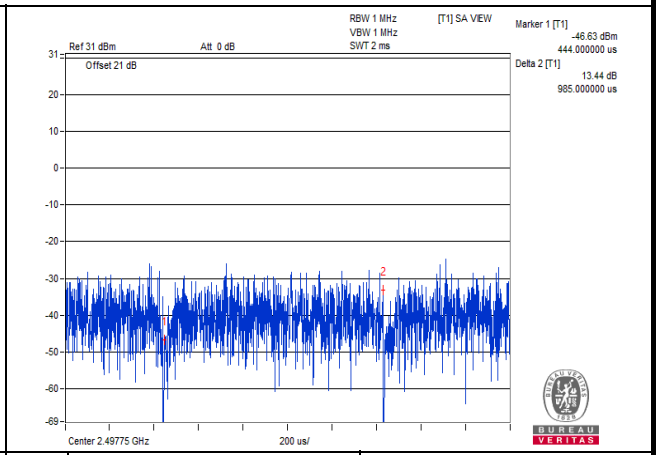
6	2399.496MHz	P = 2.137093uW

Measuring Mode *Zero Span

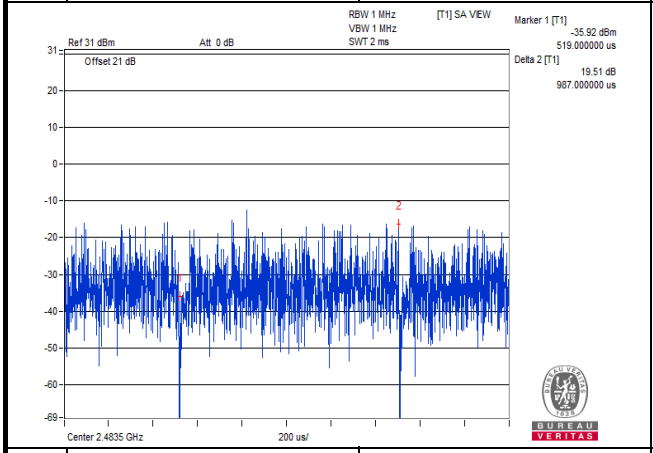
1. Set the spectrum analyzer as below and it takes in a value of all data point.
2. Regarding the all data value, it transforms the “dBm” value into “uW” value.
3. It adds the all values and calculates a grand total. Define a grand total as “P”.
4. It divides “P” by sample data point (ex.501) and calculates the mean value.
5. It reports the mean value.



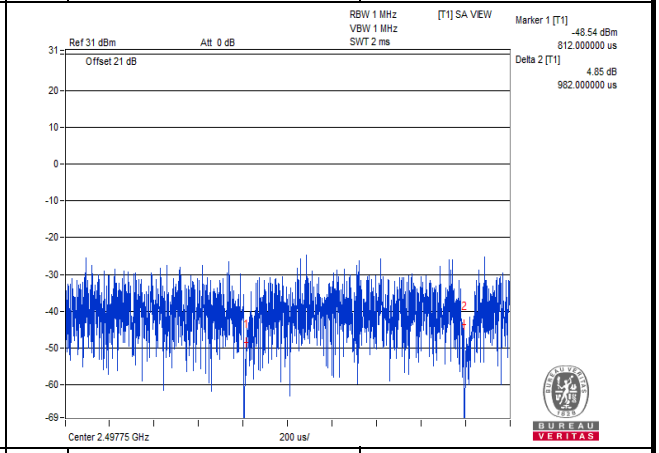
7	2483.623MHz	P = 1.297573uW



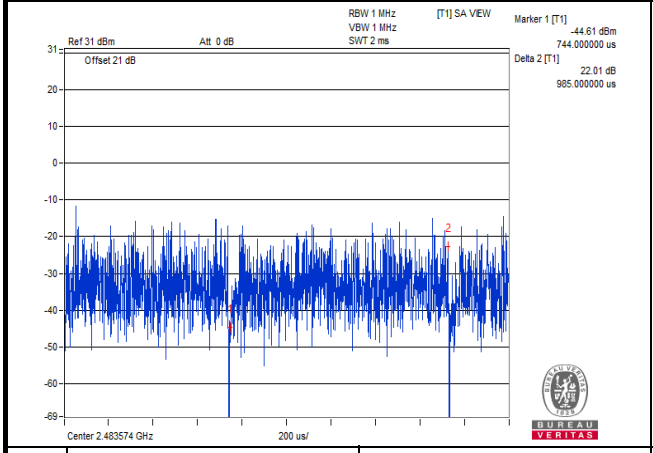
8	2497.750MHz	P = 0.169704uW



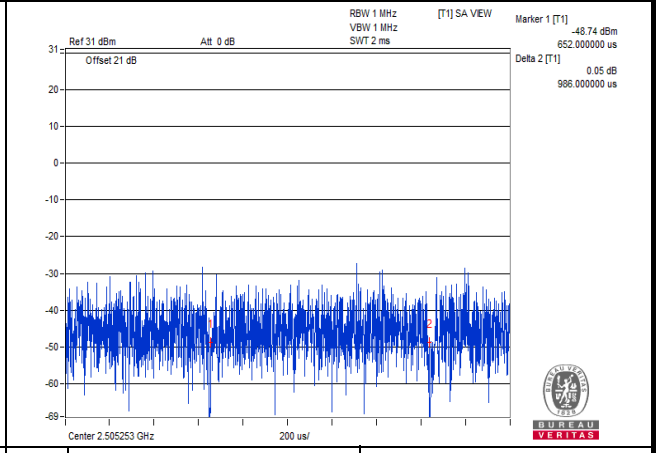
9	2483.500MHz	P = 1.399784uW



10	2497.750MHz	P = 0.18259uW



11	2483.574MHz	P = 1.341358uW



12	2505.253MHz	P = 0.061591uW

802.11ax (HE40)

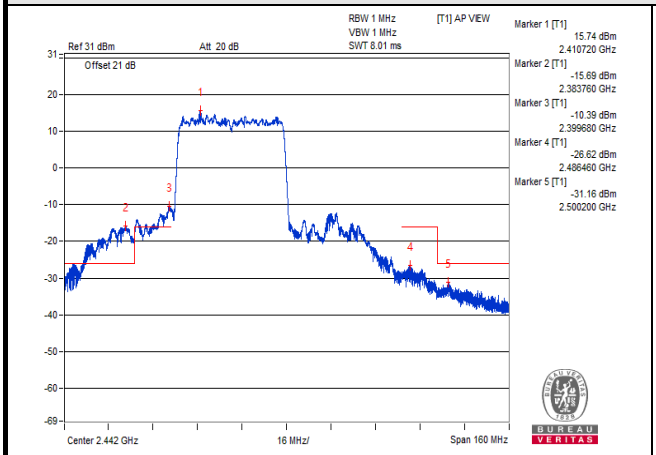
TEST CHANNEL		CH 3 (2422MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	755.802	0.001968	0.25	PASS
	1000.0 to 2387.0	2383.879	0.717805	2.5	PASS(1)
	2387.0 to 2400.0	2399.714	2.078208	25	PASS(2)
	2483.5 to 2496.5	2486.262	2.382319	25	PASS
	2496.5 to 12500.0	2500.251	0.561048	2.5	PASS
$V_{max.}$	30.0 to 1000.0	947.741	0.002014	0.25	PASS
	1000.0 to 2387.0	2383.879	0.764402	2.5	PASS(3)
	2387.0 to 2400.0	2399.665	2.011760	25	PASS(4)
	2483.5 to 2496.5	2486.475	2.060630	25	PASS
	2496.5 to 12500.0	6990.572	0.478630	2.5	PASS
$V_{min.}$	30.0 to 1000.0	990.542	0.002460	0.25	PASS
	1000.0 to 2387.0	2384.052	0.843707	2.5	PASS(5)
	2387.0 to 2400.0	2399.640	2.213125	25	PASS(6)
	2483.5 to 2496.5	2486.511	1.945360	25	PASS
	2496.5 to 12500.0	6986.821	0.430527	2.5	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	798.725	0.002084	0.25	PASS
	1000.0 to 2387.0	2380.411	0.046693	2.5	PASS(7)
	2387.0 to 2400.0	2399.314	23.388372	25	PASS
	2483.5 to 2496.5	2485.513	0.862653	25	PASS(8)
	2496.5 to 12500.0	2499.000	0.088261	2.5	PASS(9)
$V_{max.}$	30.0 to 1000.0	874.385	0.001991	0.25	PASS
	1000.0 to 2387.0	2379.718	0.051771	2.5	PASS(10)
	2387.0 to 2400.0	2399.567	23.988329	25	PASS
	2483.5 to 2496.5	2485.415	0.856877	25	PASS(11)
	2496.5 to 12500.0	2497.750	0.104995	2.5	PASS(12)
$V_{min.}$	30.0 to 1000.0	972.476	0.001910	0.25	PASS
	1000.0 to 2387.0	2380.758	0.046844	2.5	PASS(13)
	2387.0 to 2400.0	2399.093	23.604782	25	PASS
	2483.5 to 2496.5	2485.550	0.853523	25	PASS(14)
	2496.5 to 12500.0	2499.000	0.086965	2.5	PASS(15)

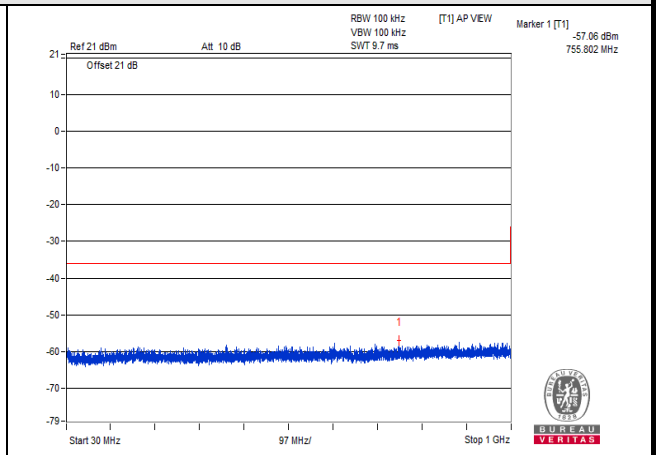
TEST CHANNEL		CH 11 (2462MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	987.026	0.001774	0.25	PASS
	1000.0 to 2387.0	2377.811	0.588844	2.5	PASS
	2387.0 to 2400.0	2399.358	1.949845	25	PASS
	2483.5 to 2496.5	2488.254	0.962831	25	PASS(16)
	2496.5 to 12500.0	2499.000	1.111559	2.5	PASS(17)
$V_{max.}$	30.0 to 1000.0	843.951	0.001816	0.25	PASS
	1000.0 to 2387.0	2375.037	0.456037	2.5	PASS
	2387.0 to 2400.0	2399.679	2.142891	25	PASS
	2483.5 to 2496.5	2488.319	0.953455	25	PASS(18)
	2496.5 to 12500.0	2497.750	1.138209	2.5	PASS(19)
$V_{min.}$	30.0 to 1000.0	861.168	0.002032	0.25	PASS
	1000.0 to 2387.0	2378.678	0.504661	2.5	PASS
	2387.0 to 2400.0	2399.517	1.981527	25	PASS
	2483.5 to 2496.5	2488.204	1.061219	25	PASS(20)
	2496.5 to 12500.0	2496.500	1.017218	2.5	PASS(21)

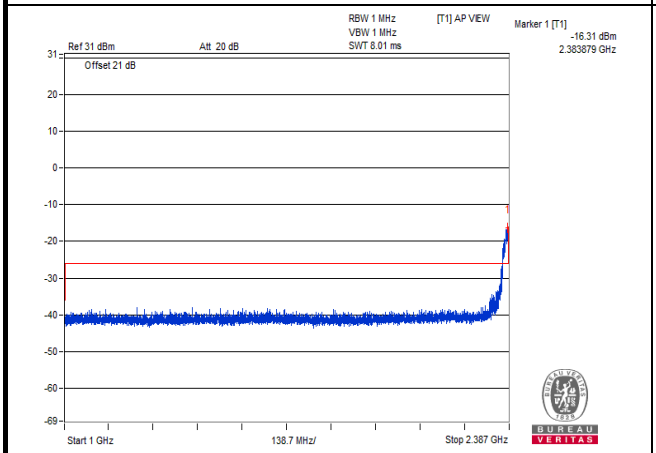
NOTE: 1. The spectrum plots are attached on the following pages.

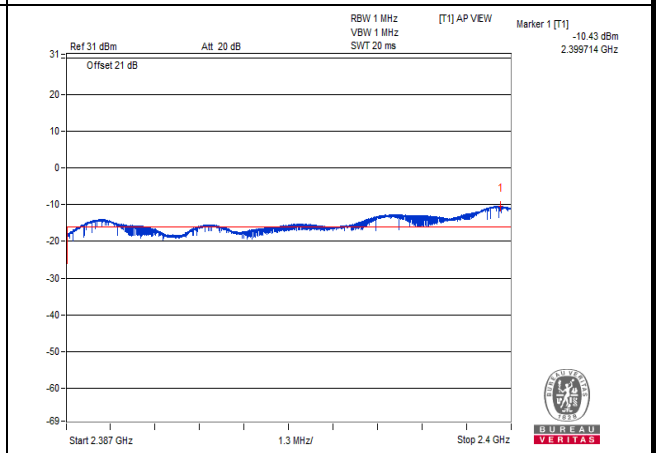
2. (No.): The value was tested under Measuring Mode *Zero Span.

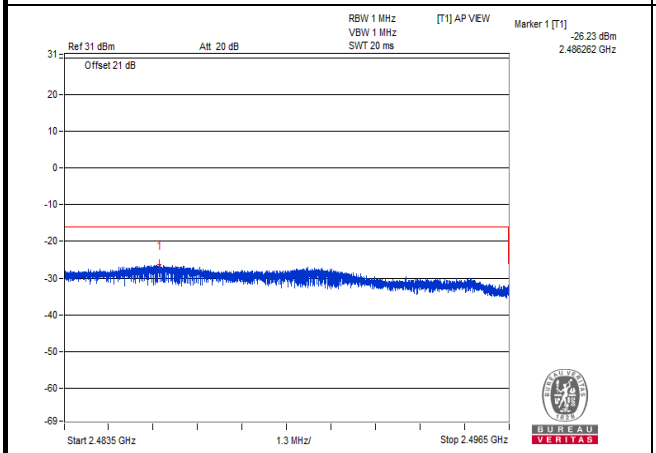
Vnormal

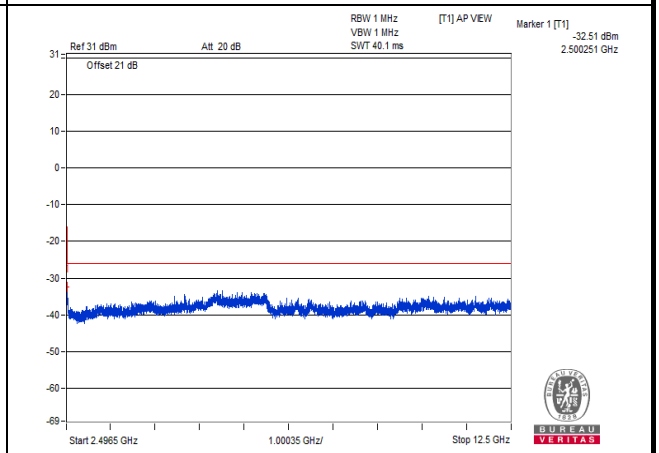






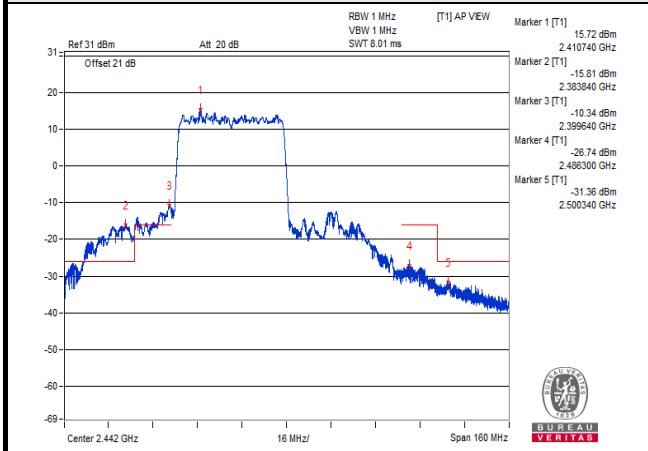


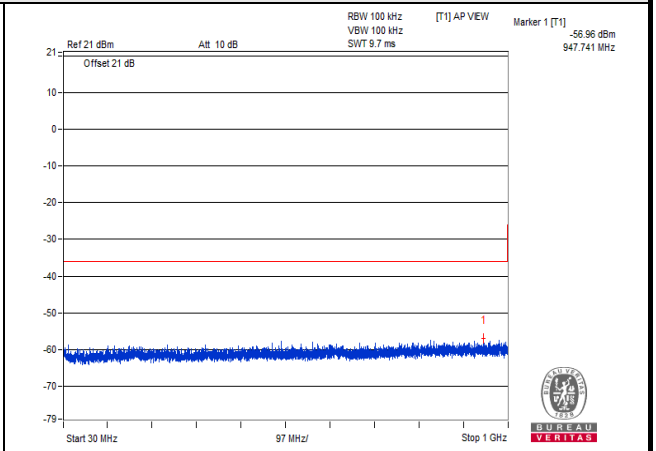


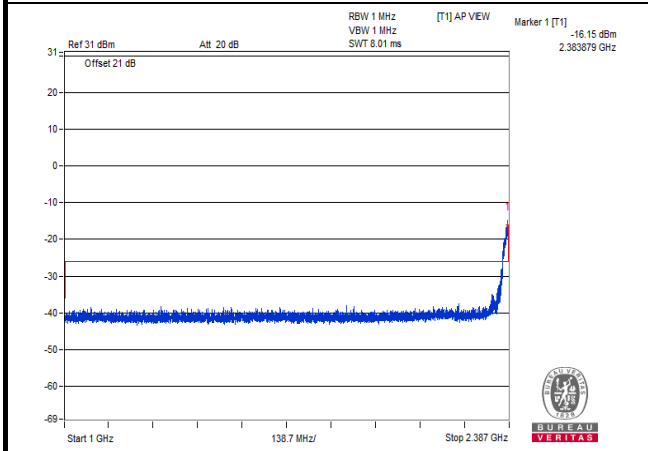


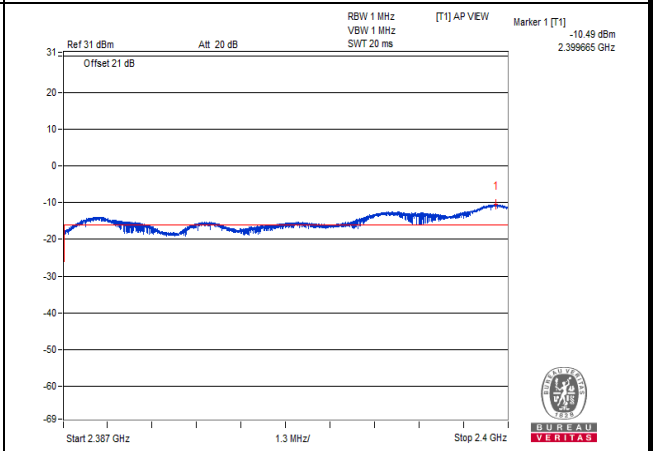
CH 3 (2422MHz)

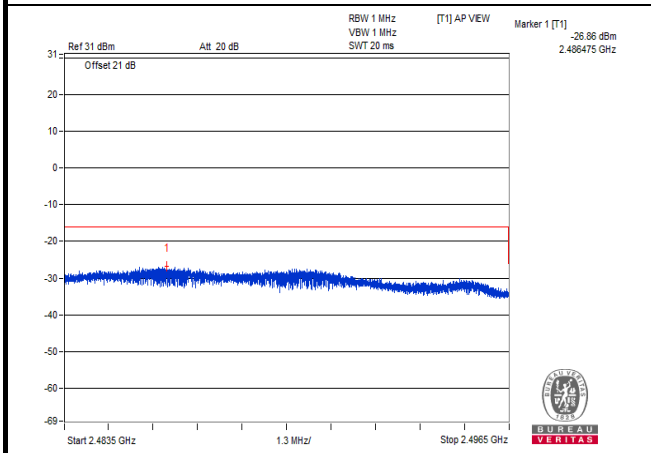
Vmax.

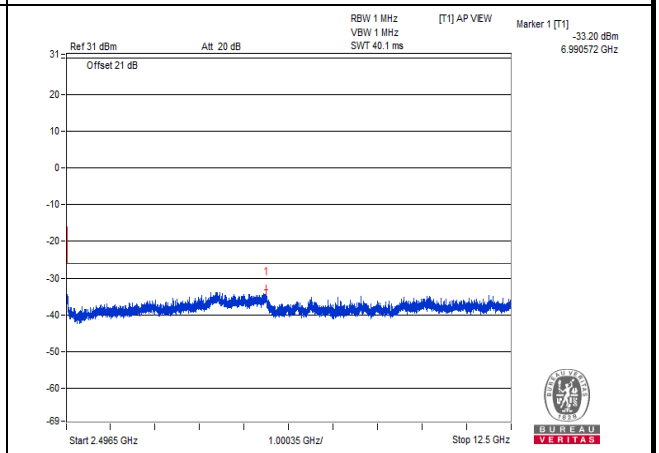






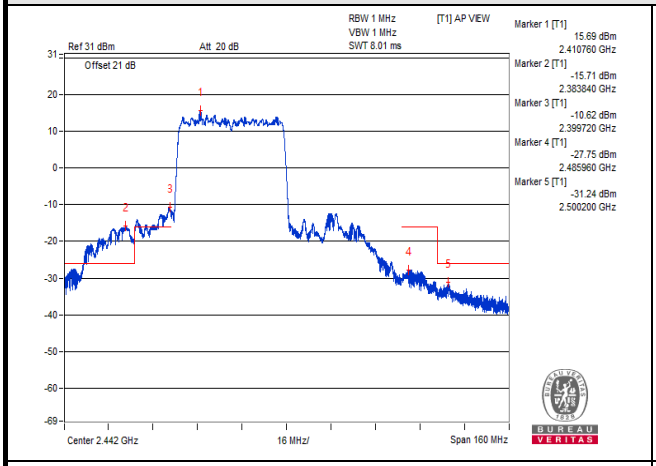


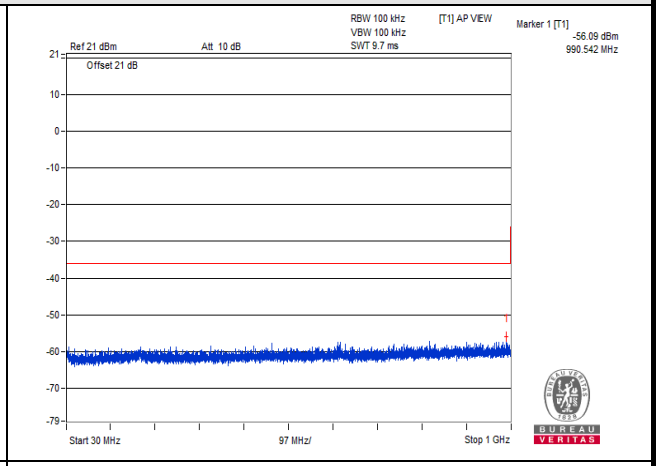


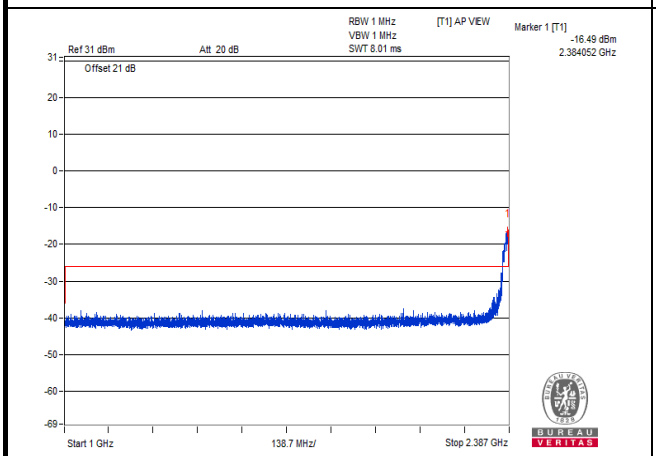


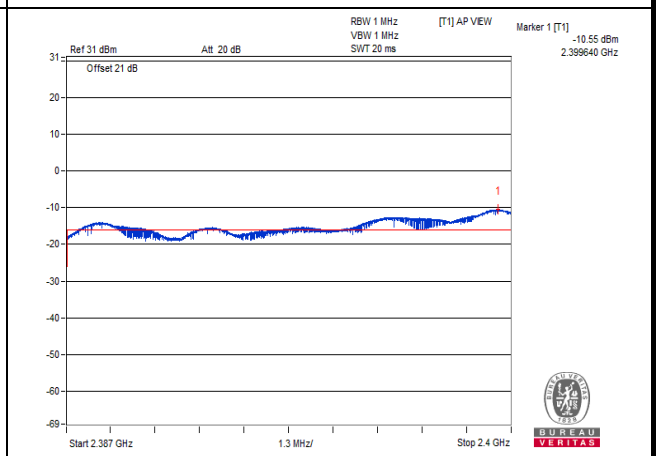
CH 3 (2422MHz)

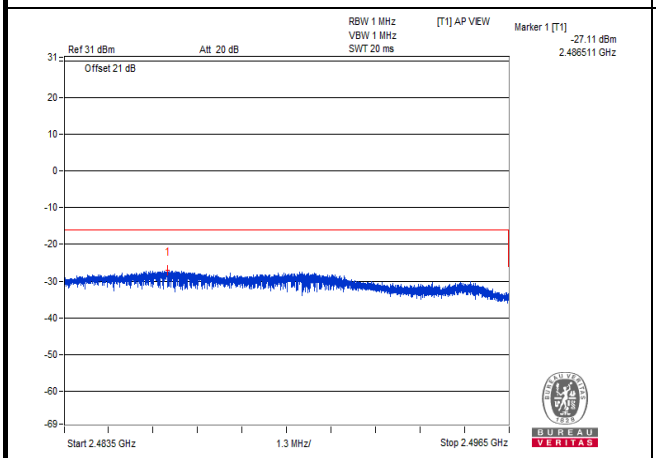
Vmin.

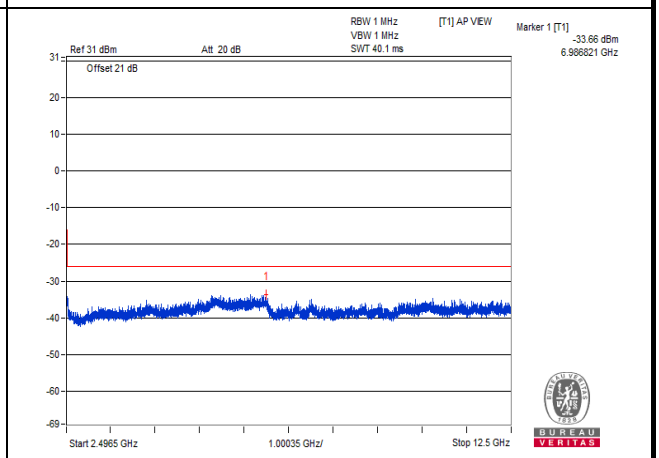






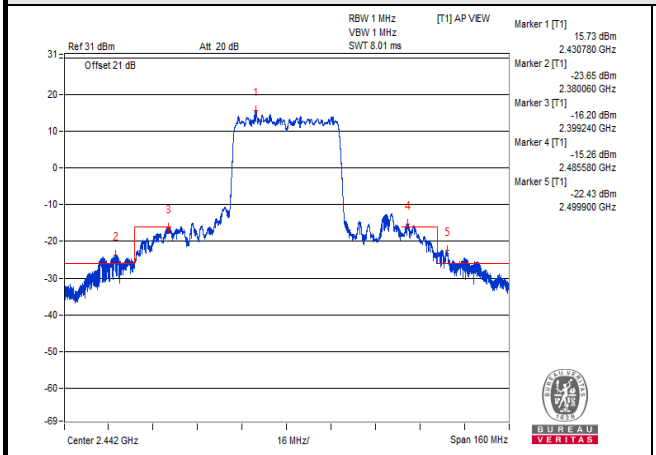


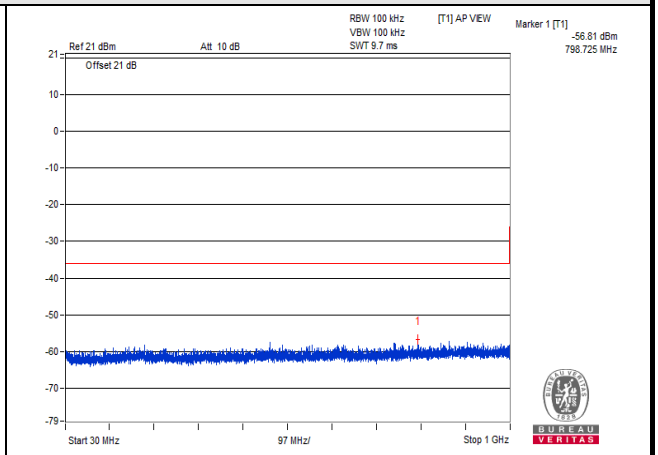


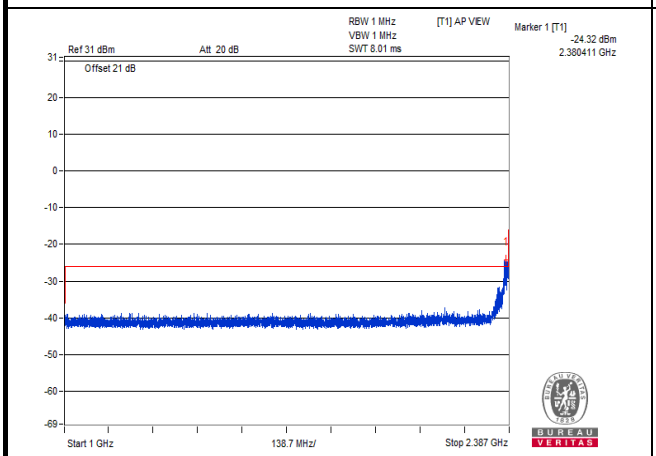


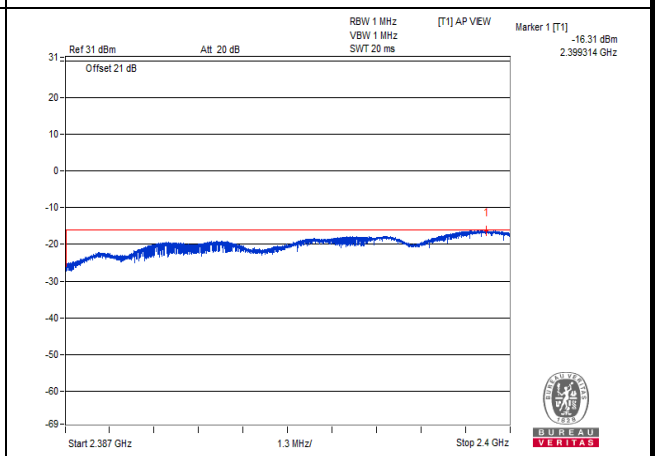
CH 3 (2422MHz)

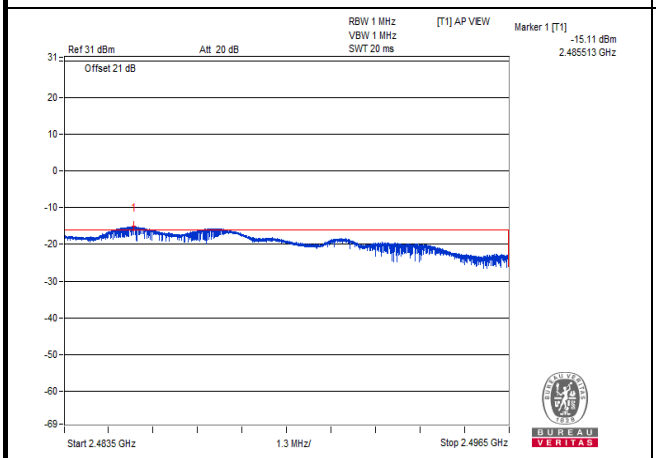
Vnormal

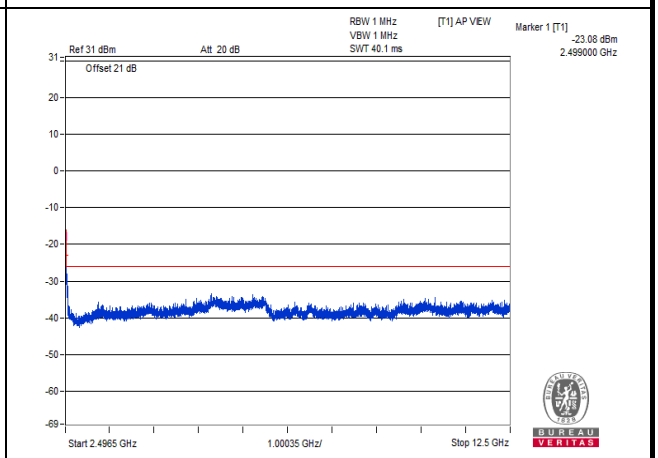






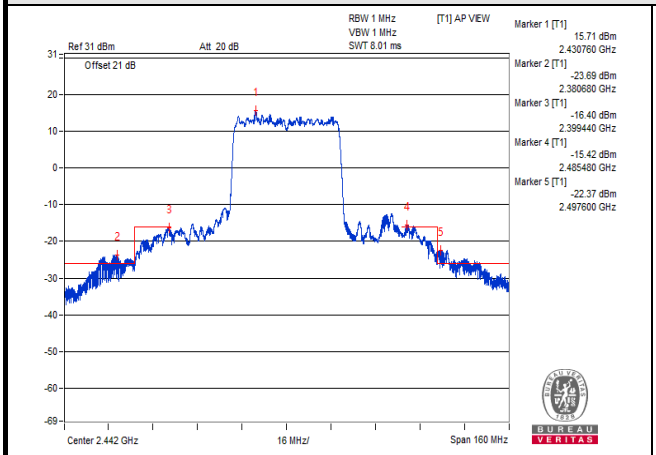


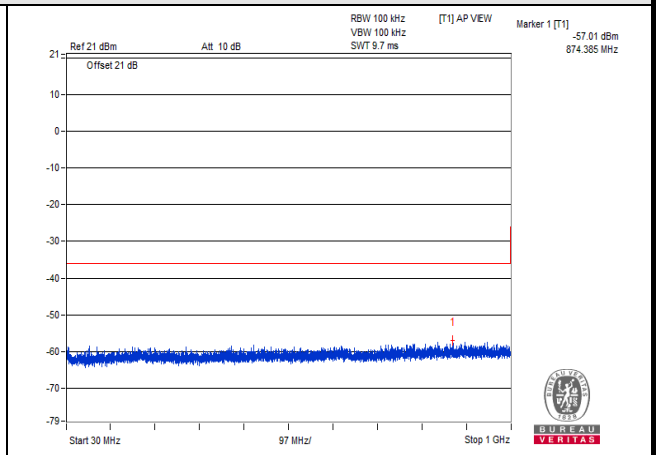


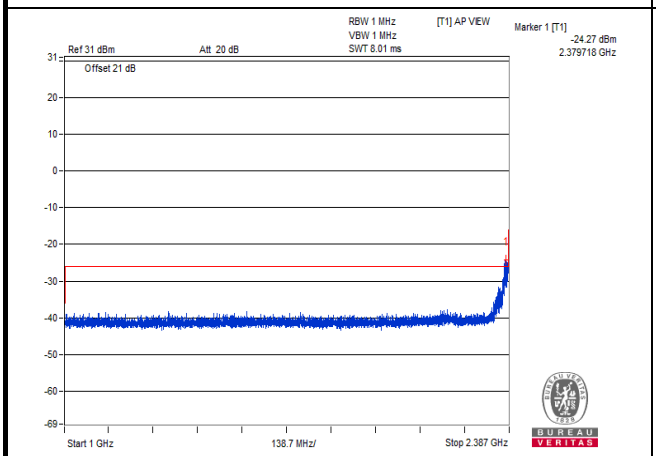


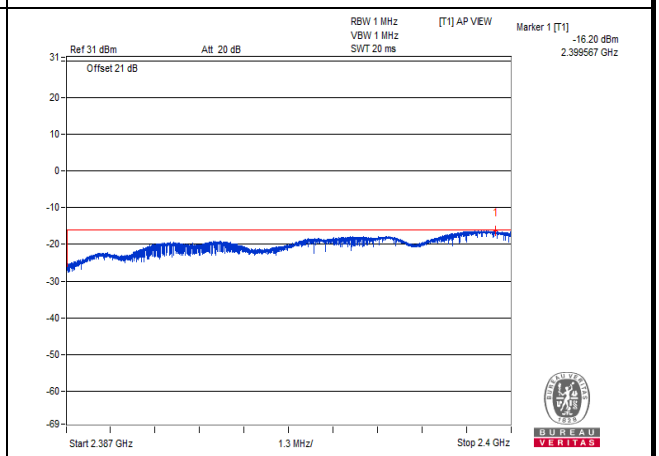
CH 7 (2442MHz)

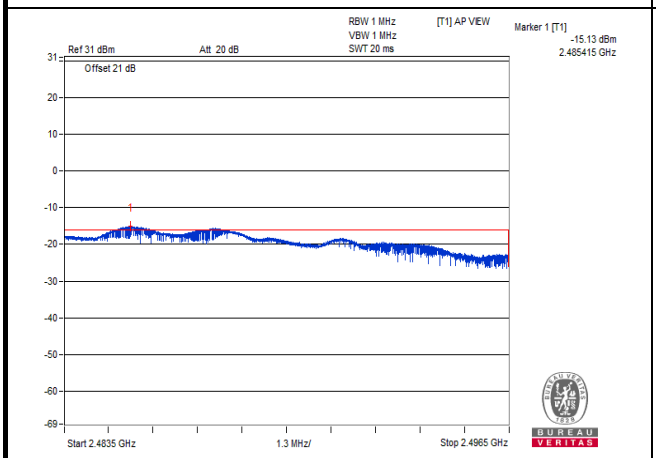
Vmax.

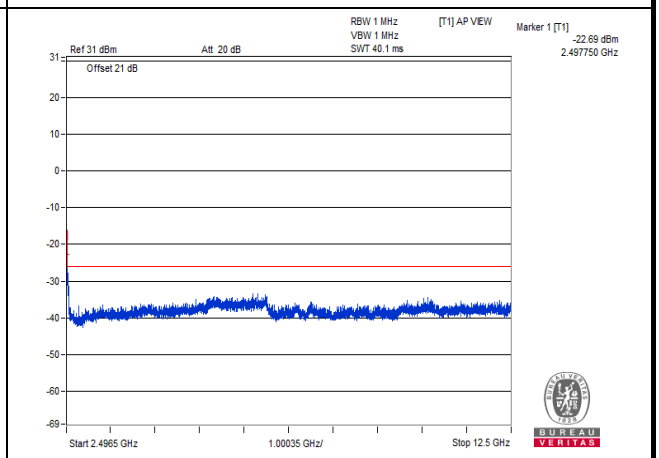






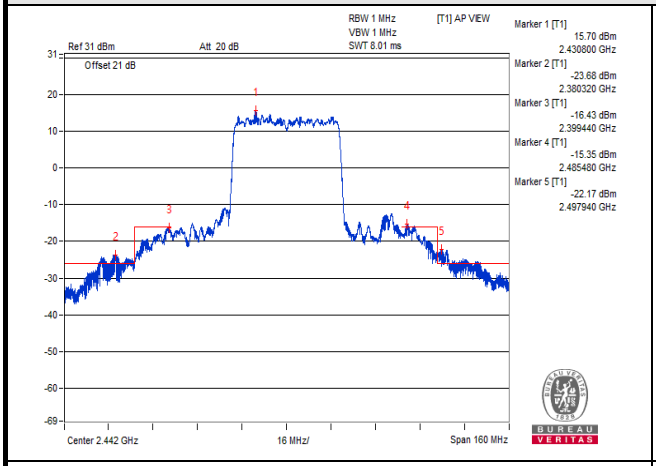


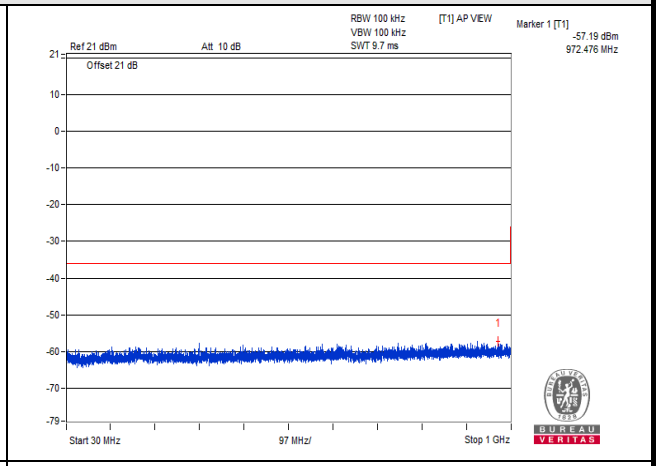


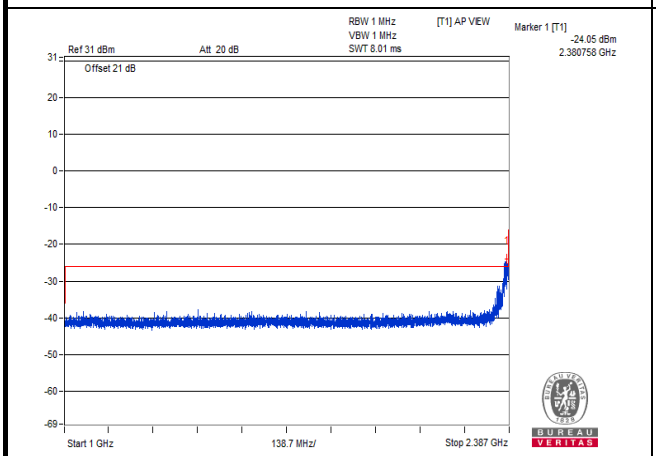


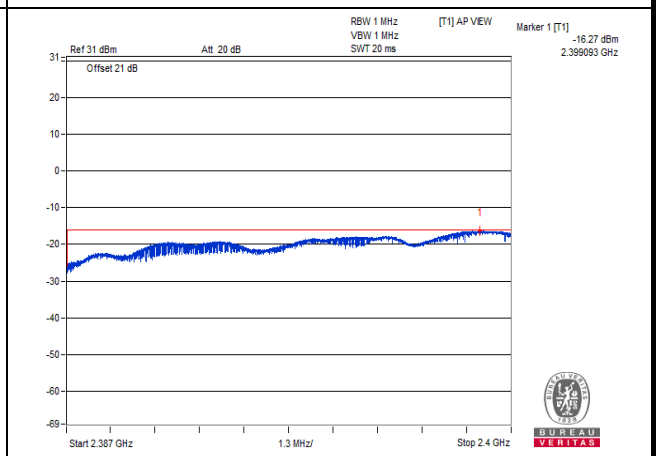
CH 7 (2442MHz)

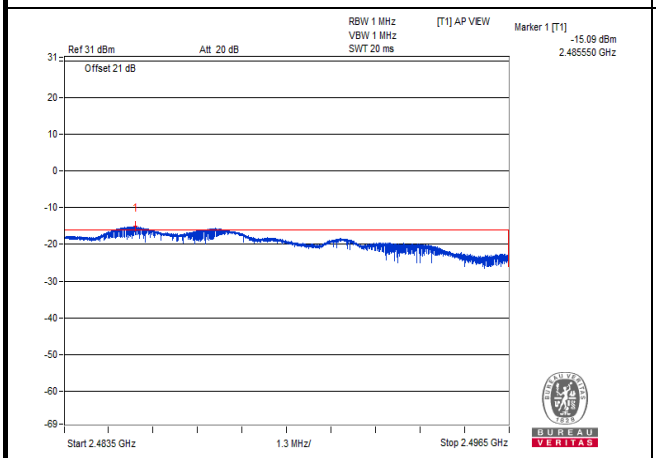
Vmin.

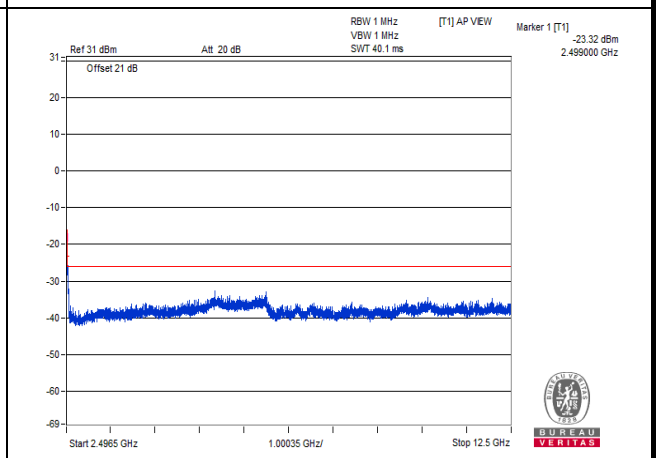






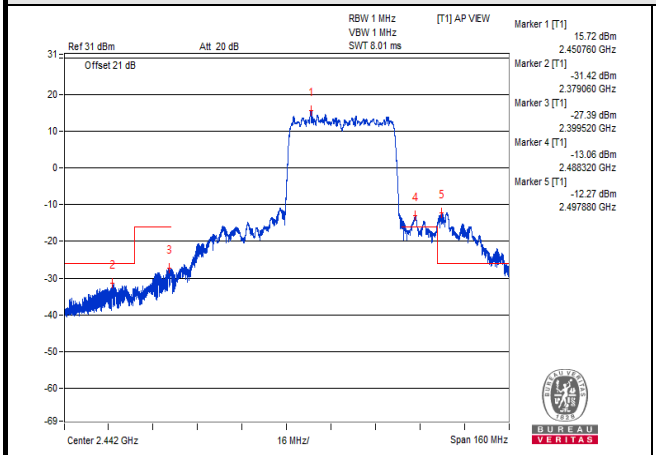


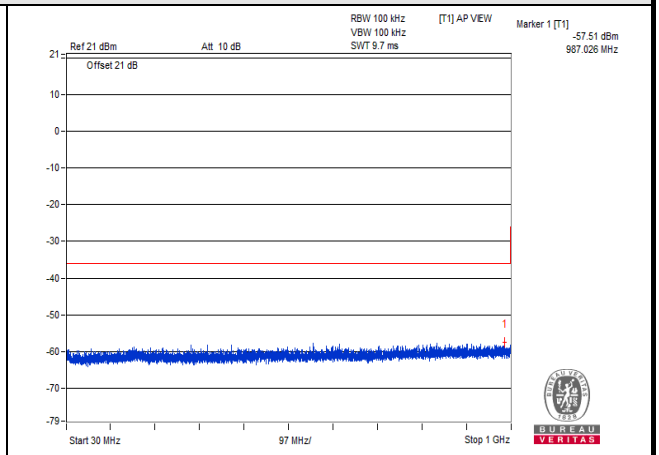


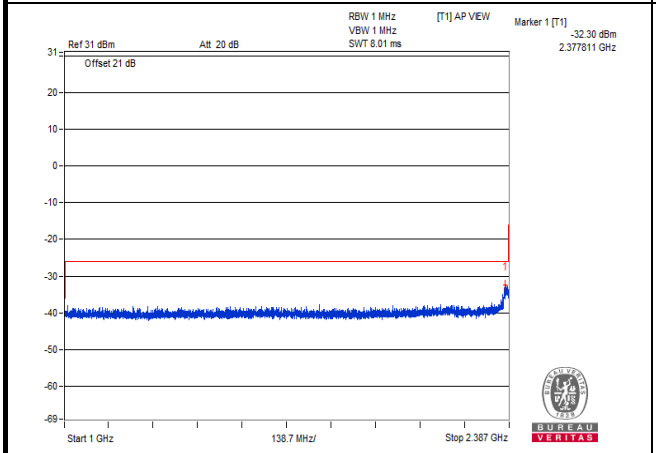


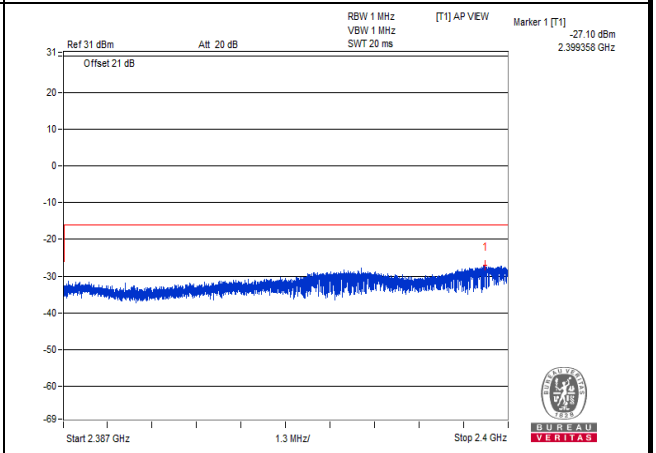
CH 7 (2442MHz)

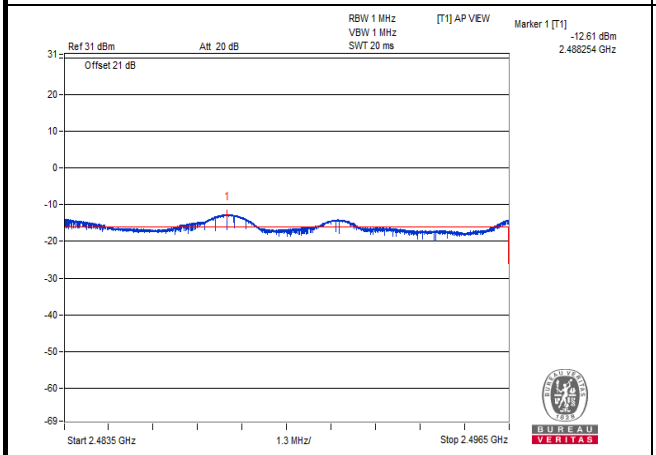
Vnormal

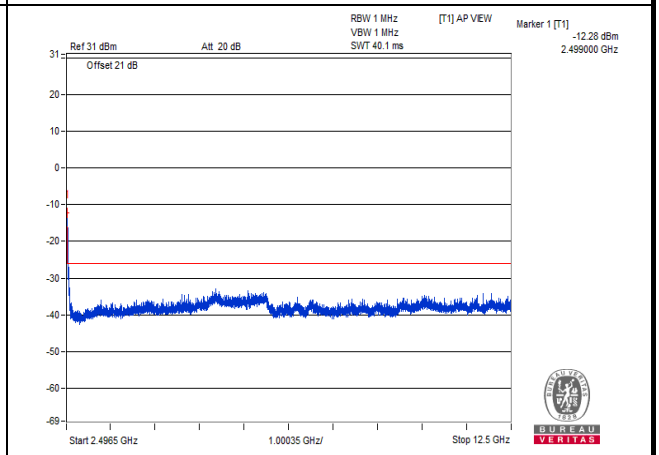






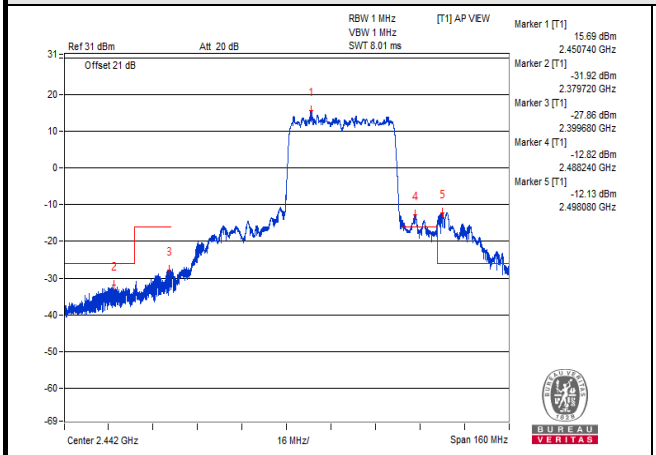


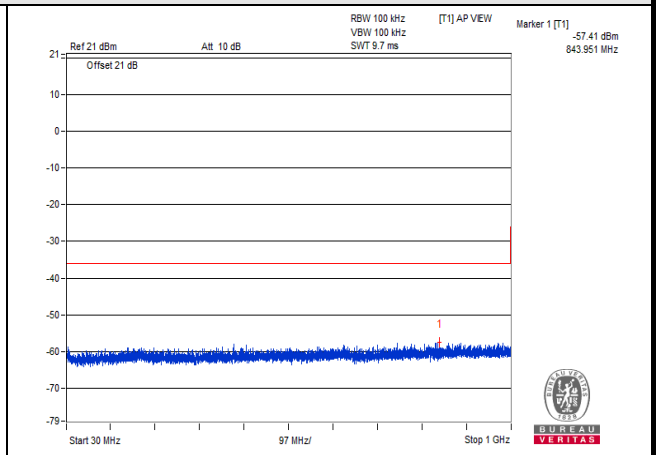


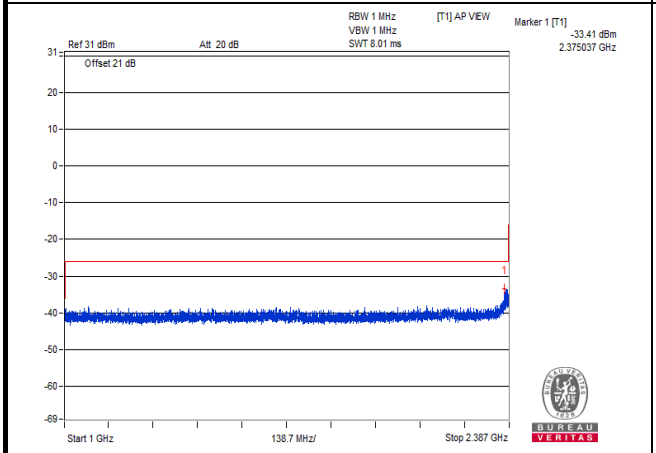


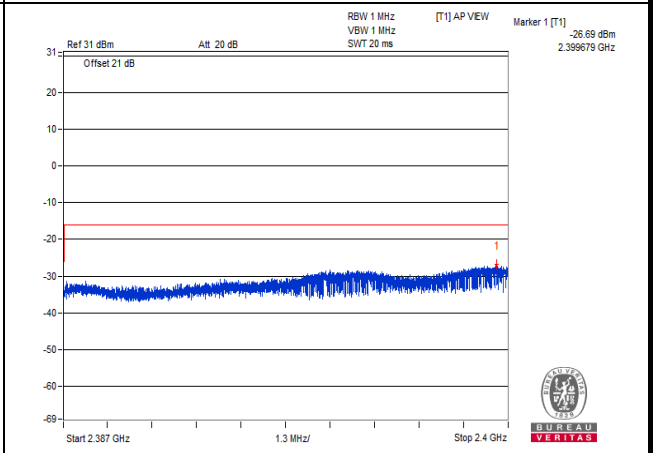
CH 11 (2462MHz)

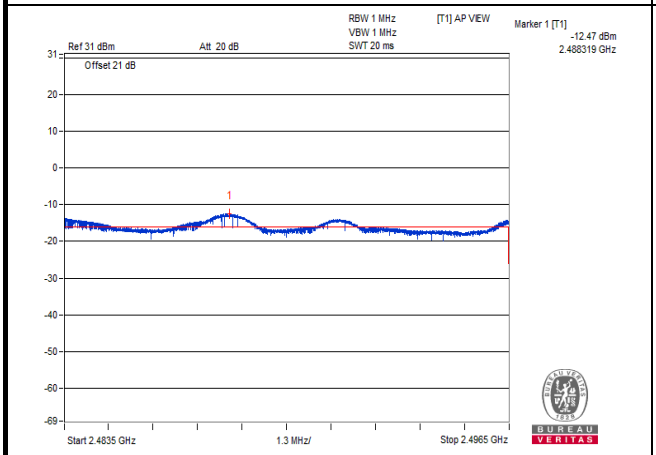
Vmax.

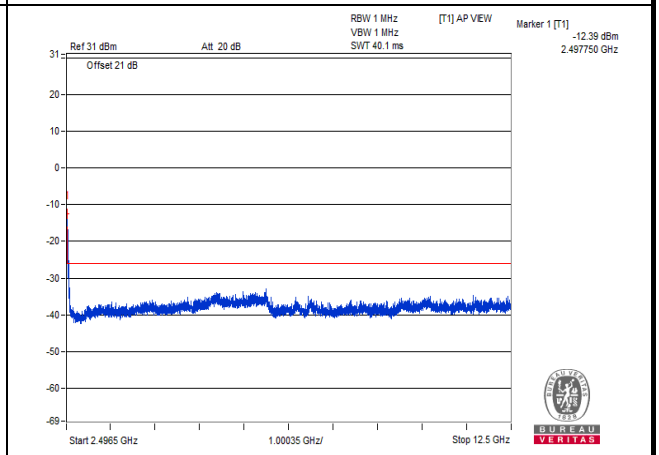






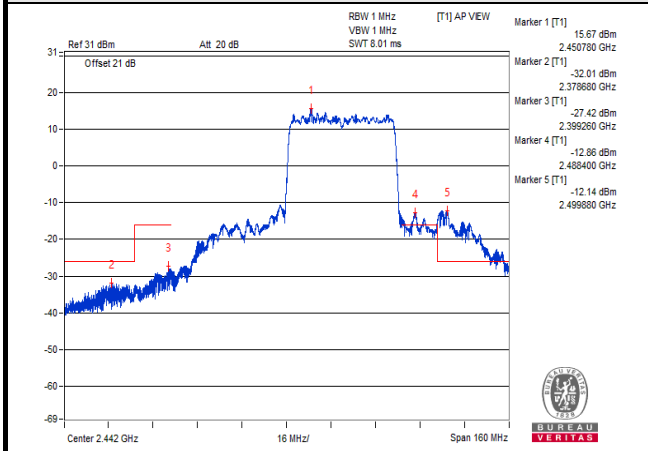


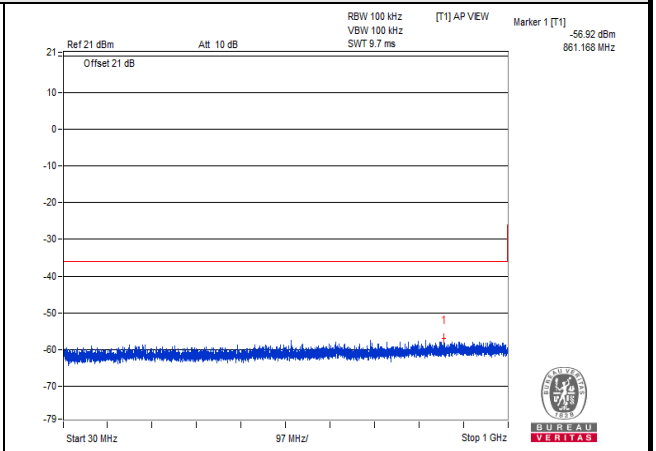


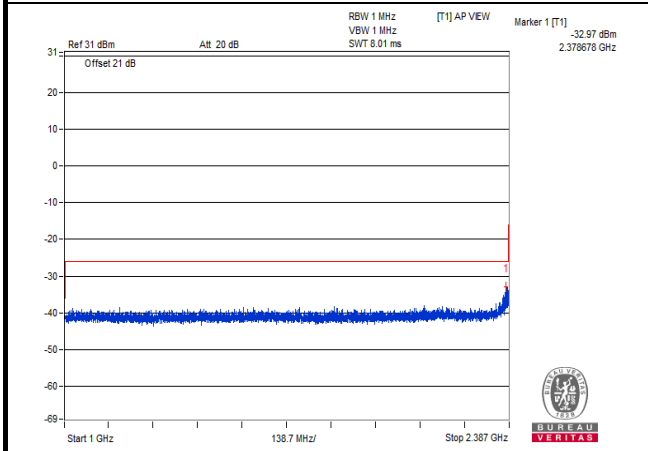


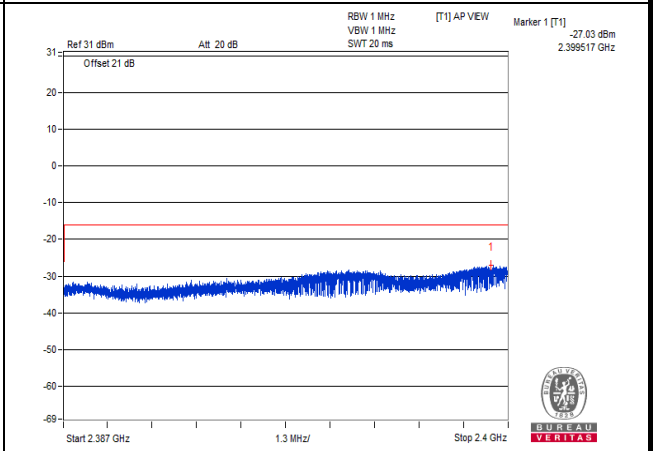
CH 11 (2462MHz)

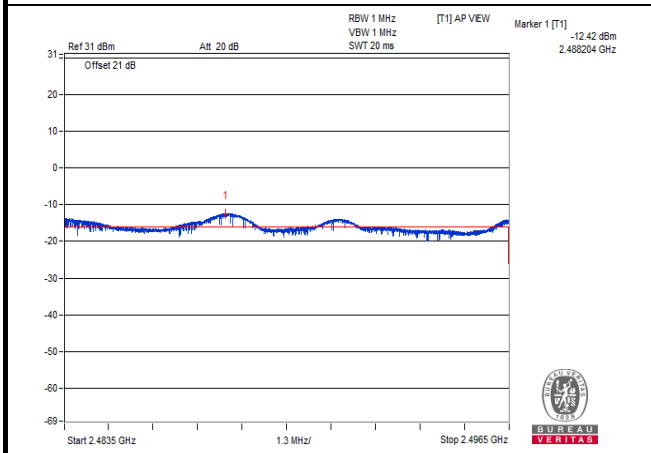
Vmin.

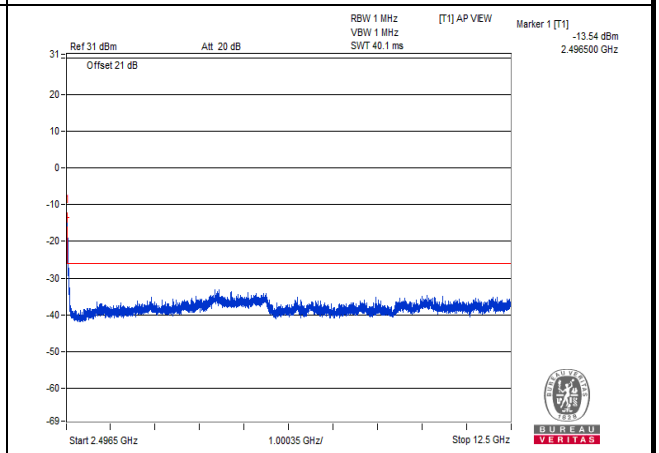








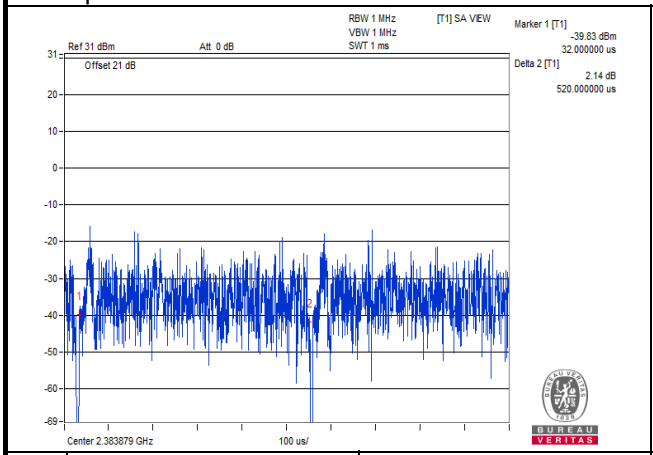




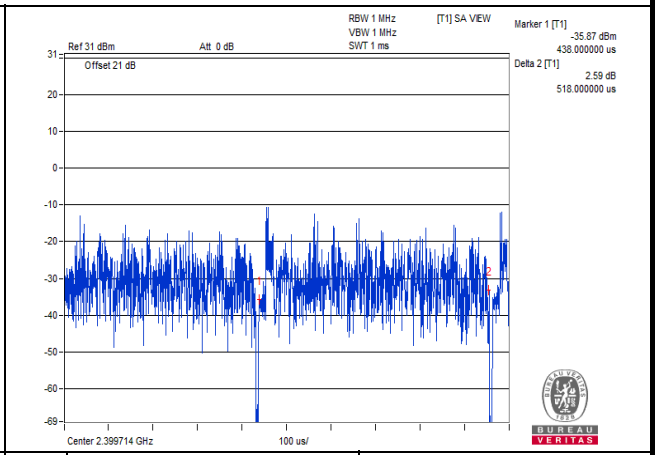
CH 11 (2462MHz)

Measuring Mode *Zero Span

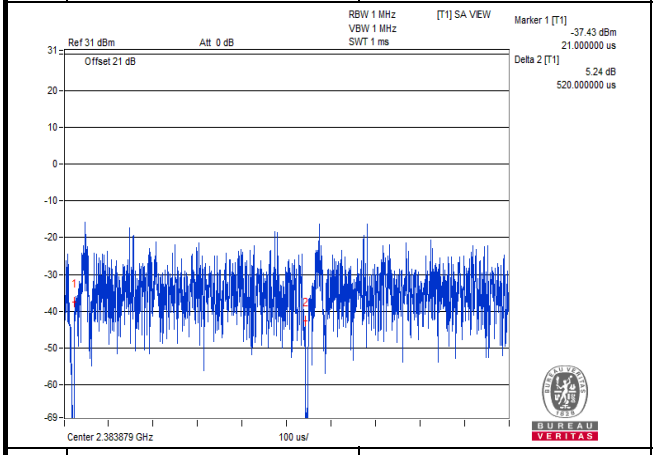
1. Set the spectrum analyzer as below and it takes in a value of all data point.
2. Regarding the all data value, it transforms the “dBm” value into “uW” value.
3. It adds the all values and calculates a grand total. Define a grand total as “P”.
4. It divides “P” by sample data point (ex.501) and calculates the mean value.
5. It reports the mean value.



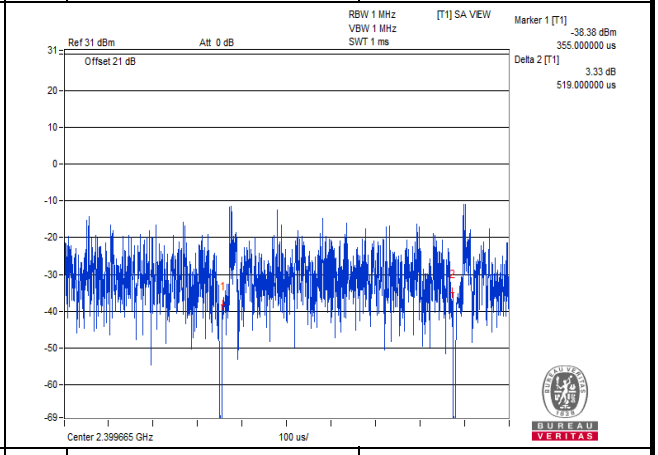
1	2383.879MHz	P = 0.717805uW



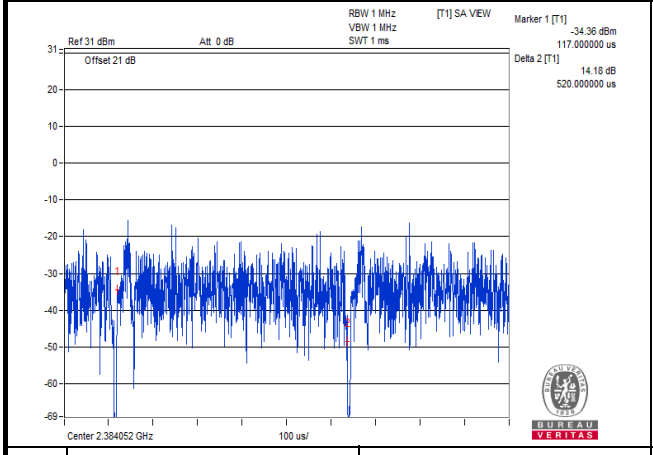
2	2399.714MHz	P = 2.078208uW



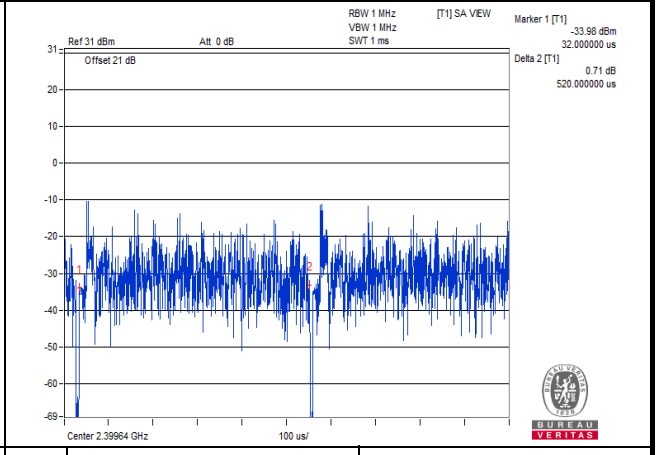
3	2383.879MHz	P = 0.764402uW



4	2399.665MHz	P = 2.01176uW



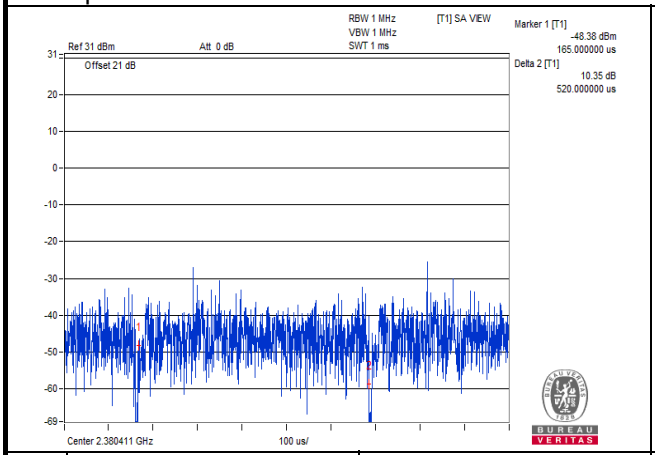
5	2384.052MHz	P = 0.843707uW



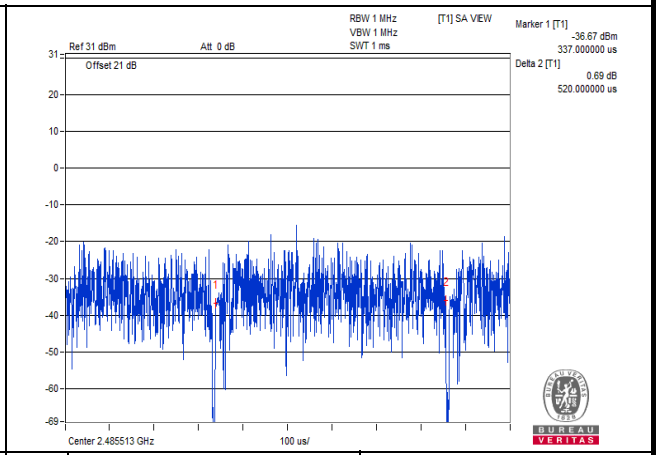
6	2399.640MHz	P = 2.213125uW

Measuring Mode *Zero Span

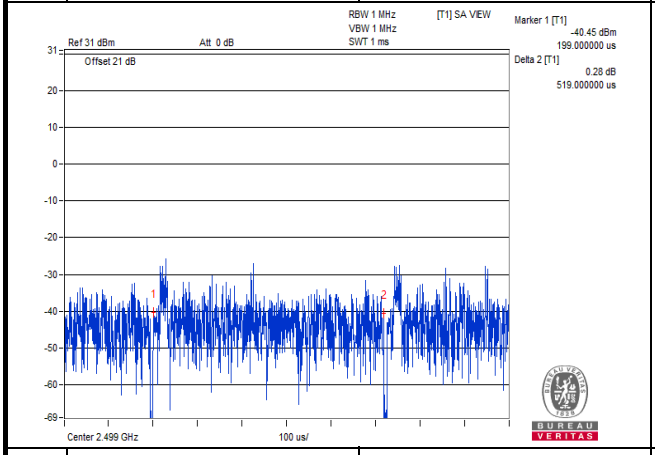
1. Set the spectrum analyzer as below and it takes in a value of all data point.
2. Regarding the all data value, it transforms the “dBm” value into “uW” value.
3. It adds the all values and calculates a grand total. Define a grand total as “P”.
4. It divides “P” by sample data point (ex.501) and calculates the mean value.
5. It reports the mean value.



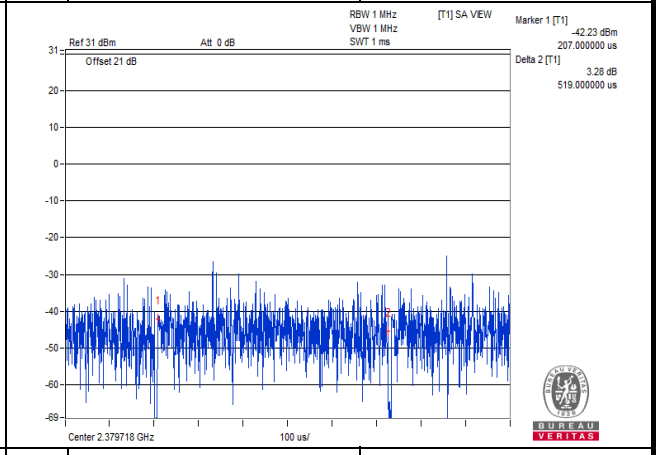
7	2380.411MHz	P = 0.046693uW



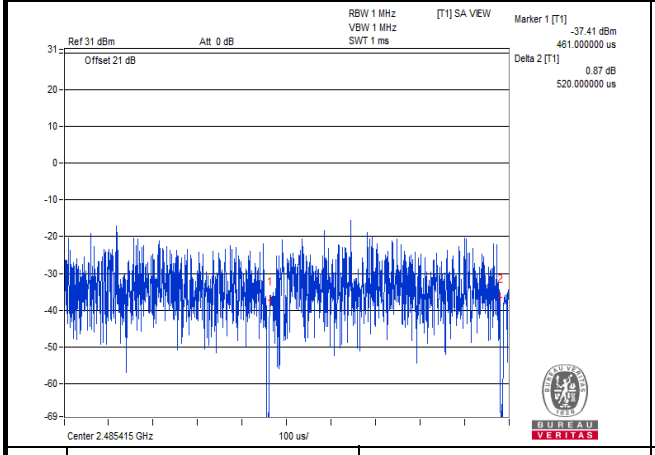
8	2485.513MHz	P = 0.862653uW



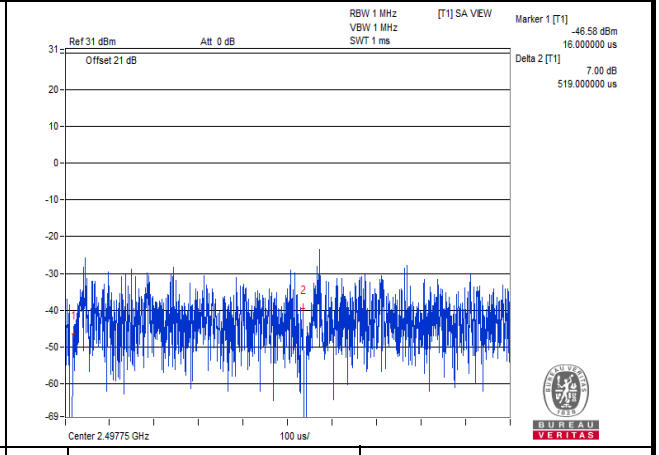
9	2499.000MHz	P = 0.088261uW



10	2379.718MHz	P = 0.051771uW



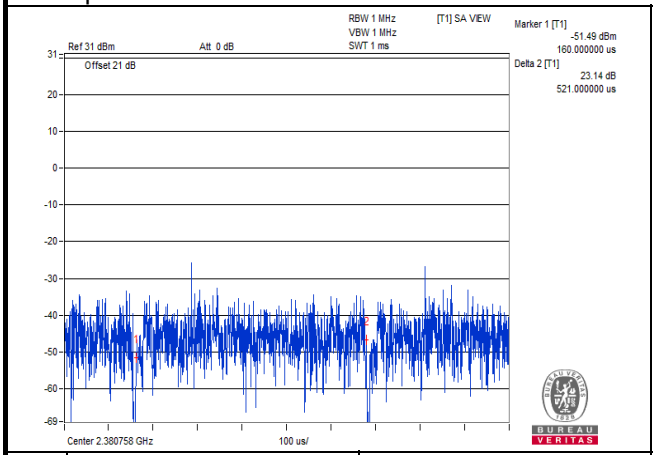
11	2485.415MHz	P = 0.856877uW



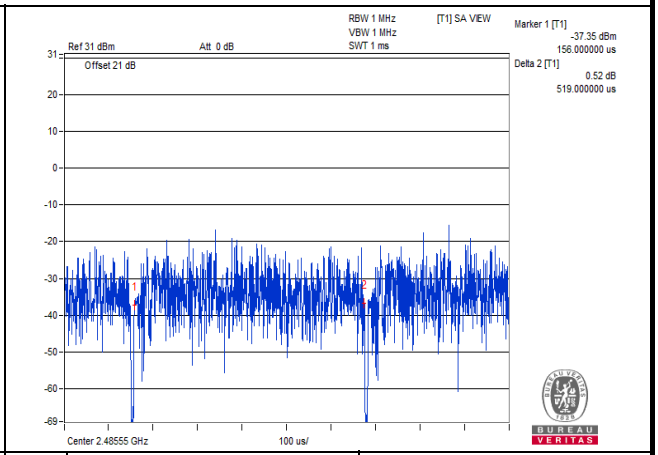
12	2497.750MHz	P = 0.104995uW

Measuring Mode *Zero Span

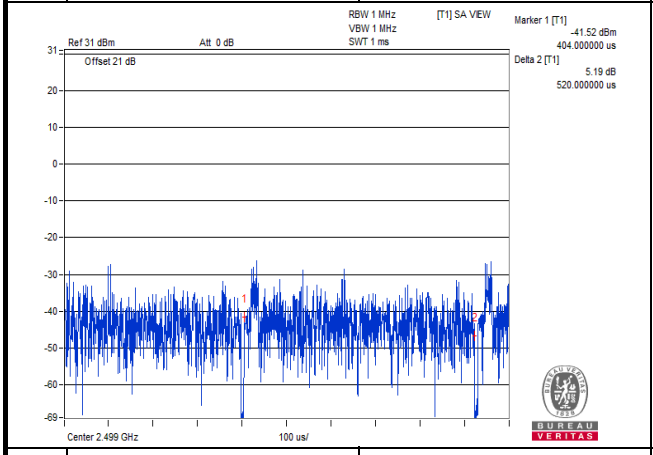
1. Set the spectrum analyzer as below and it takes in a value of all data point.
2. Regarding the all data value, it transforms the “dBm” value into “uW” value.
3. It adds the all values and calculates a grand total. Define a grand total as “P”.
4. It divides “P” by sample data point (ex.501) and calculates the mean value.
5. It reports the mean value.



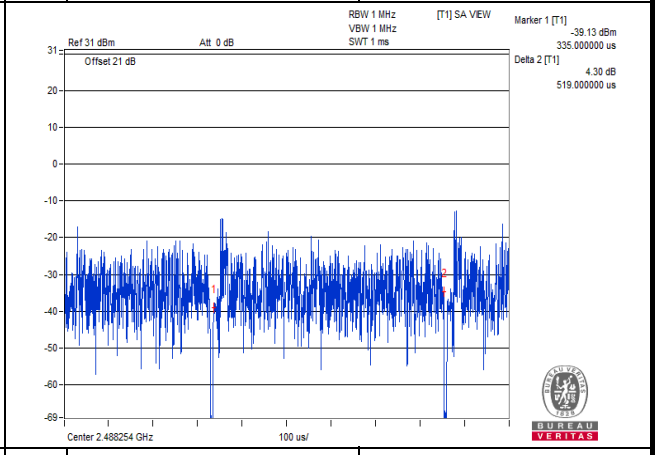
13	2380.758MHz	P = 0.046844uW



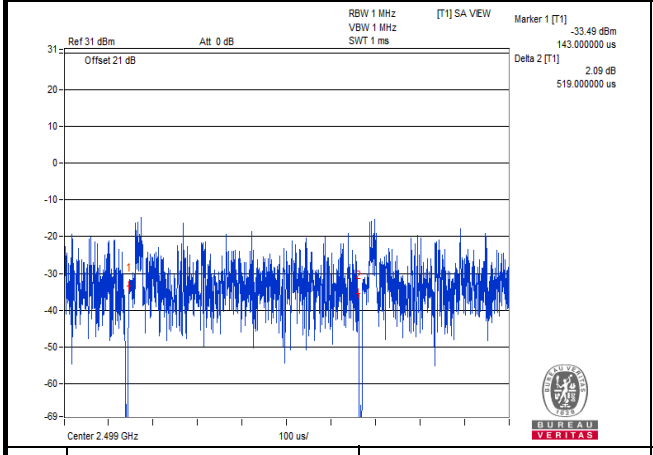
14	2485.550MHz	P = 0.853523uW



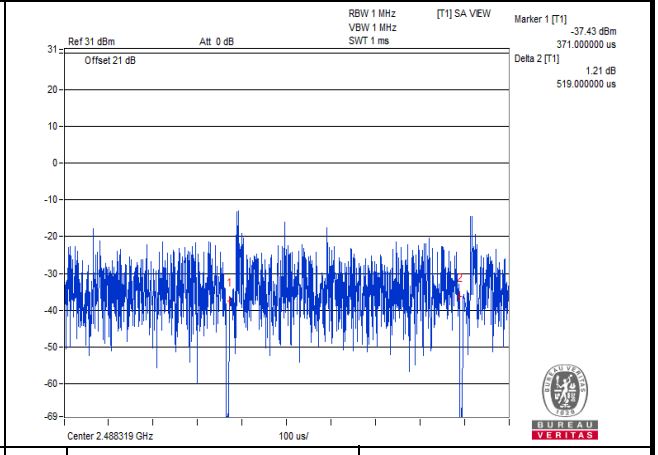
15	2499.000MHz	P = 0.086965uW



16	2488.254MHz	P = 0.962831uW



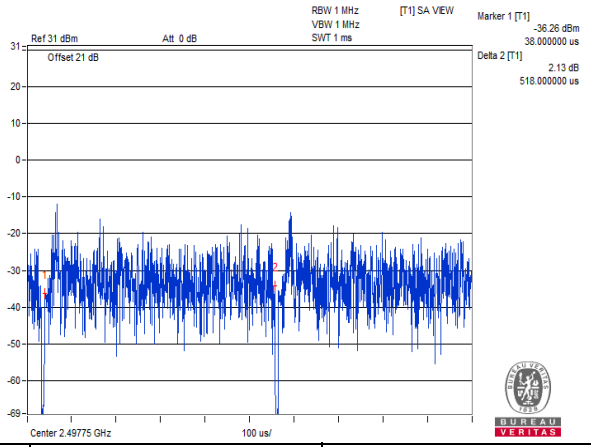
17	2499.000MHz	P = 1.111559uW



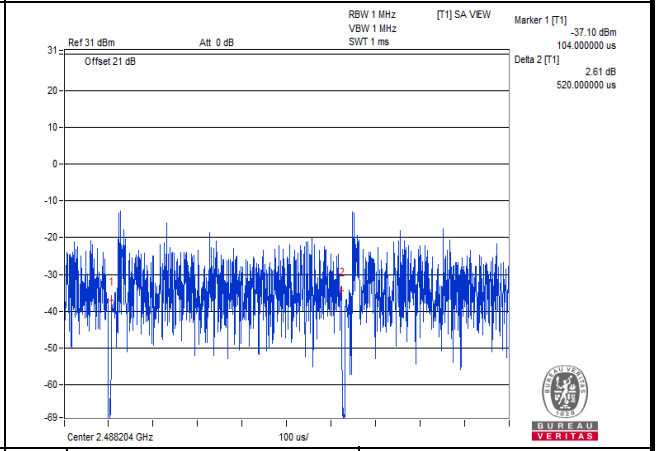
18	2488.319MHz	P = 0.953455uW

Measuring Mode *Zero Span

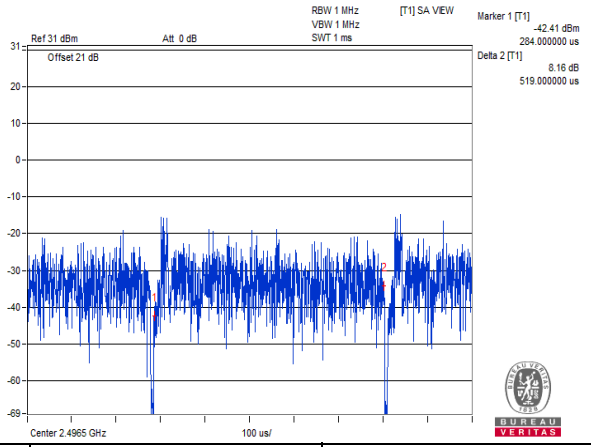
1. Set the spectrum analyzer as below and it takes in a value of all data point.
2. Regarding the all data value, it transforms the “dBm” value into “uW” value.
3. It adds the all values and calculates a grand total. Define a grand total as “P”.
4. It divides “P” by sample data point (ex.501) and calculates the mean value.
5. It reports the mean value.



19	2497.750MHz	P = 1.138209uW



20	2488.204MHz	P = 1.061219uW



21	2496.500MHz	P = 1.017218uW

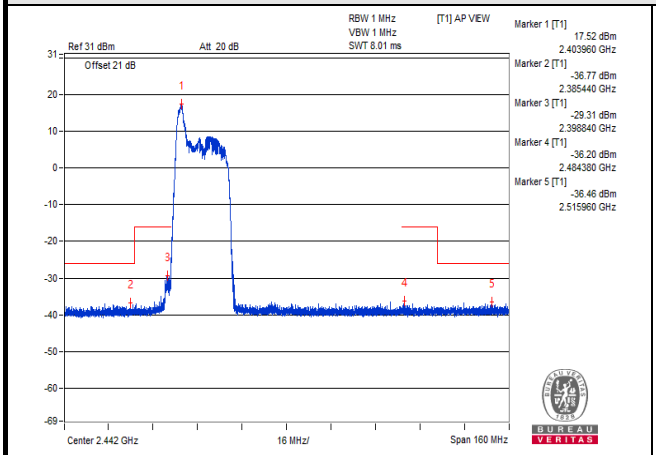
802.11ax (RU26)

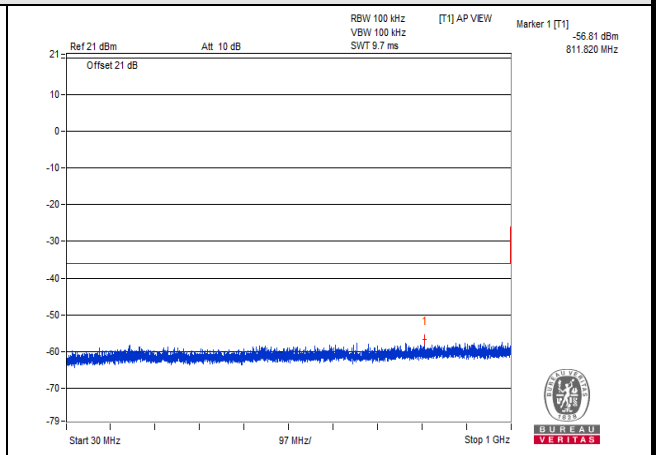
TEST CHANNEL		CH 1 (2412MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	811.820	0.002084	0.25	PASS
	1000.0 to 2387.0	2375.210	0.176198	2.5	PASS
	2387.0 to 2400.0	2398.654	1.306171	25	PASS
	2483.5 to 2496.5	2491.930	0.221309	25	PASS
	2496.5 to 12500.0	6884.285	0.426580	2.5	PASS
$V_{max.}$	30.0 to 1000.0	777.748	0.002673	0.25	PASS
	1000.0 to 2387.0	2311.061	0.155239	2.5	PASS
	2387.0 to 2400.0	2398.872	1.406048	25	PASS
	2483.5 to 2496.5	2495.872	0.238232	25	PASS
	2496.5 to 12500.0	6998.075	0.449780	2.5	PASS
$V_{min.}$	30.0 to 1000.0	971.991	0.001932	0.25	PASS
	1000.0 to 2387.0	1239.604	0.187932	2.5	PASS
	2387.0 to 2400.0	2398.979	1.321296	25	PASS
	2483.5 to 2496.5	2493.295	0.236592	25	PASS
	2496.5 to 12500.0	5833.917	0.571479	2.5	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	871.838	0.001923	0.25	PASS
	1000.0 to 2387.0	2245.872	0.184077	2.5	PASS
	2387.0 to 2400.0	2391.376	0.199526	25	PASS
	2483.5 to 2496.5	2492.567	0.226464	25	PASS
	2496.5 to 12500.0	6686.716	0.466659	2.5	PASS
$V_{max.}$	30.0 to 1000.0	996.726	0.002042	0.25	PASS
	1000.0 to 2387.0	2034.355	0.159221	2.5	PASS
	2387.0 to 2400.0	2388.054	0.216272	25	PASS
	2483.5 to 2496.5	2496.249	0.233884	25	PASS
	2496.5 to 12500.0	6829.265	0.460257	2.5	PASS
$V_{min.}$	30.0 to 1000.0	820.186	0.001959	0.25	PASS
	1000.0 to 2387.0	1787.816	0.169824	2.5	PASS
	2387.0 to 2400.0	2396.863	0.218776	25	PASS
	2483.5 to 2496.5	2484.718	0.205589	25	PASS
	2496.5 to 12500.0	6833.017	0.426580	2.5	PASS

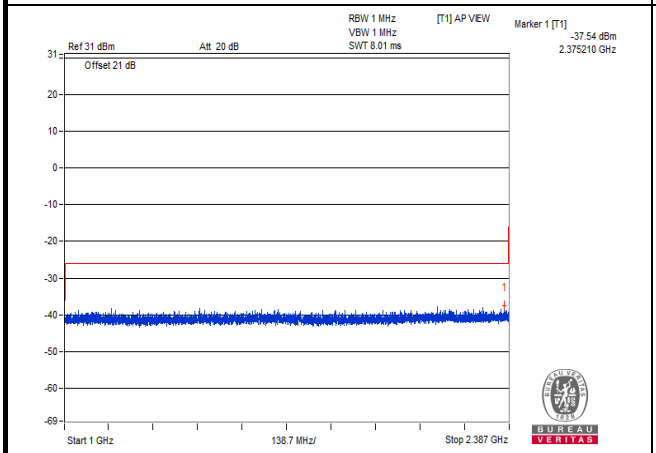
TEST CHANNEL		CH 13 (2472MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	787.448	0.001841	0.25	PASS
	1000.0 to 2387.0	2158.838	0.167494	2.5	PASS
	2387.0 to 2400.0	2399.185	0.218776	25	PASS
	2483.5 to 2496.5	2483.522	17.660378	25	PASS
	2496.5 to 12500.0	5906.443	0.493174	2.5	PASS
$V_{max.}$	30.0 to 1000.0	876.688	0.001910	0.25	PASS
	1000.0 to 2387.0	2137.686	0.164816	2.5	PASS
	2387.0 to 2400.0	2387.485	0.215278	25	PASS
	2483.5 to 2496.5	2483.506	17.179084	25	PASS
	2496.5 to 12500.0	6672.961	0.465586	2.5	PASS
$V_{min.}$	30.0 to 1000.0	858.986	0.001803	0.25	PASS
	1000.0 to 2387.0	1608.026	0.165577	2.5	PASS
	2387.0 to 2400.0	2398.404	0.196789	25	PASS
	2483.5 to 2496.5	2483.535	17.139573	25	PASS
	2496.5 to 12500.0	5926.450	0.439542	2.5	PASS

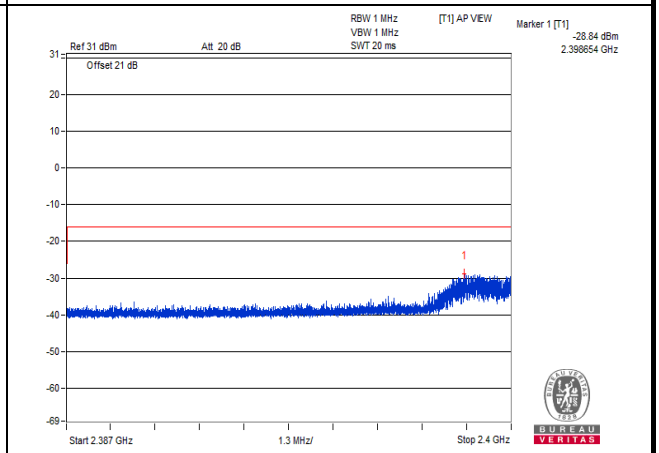
NOTE: 1. The spectrum plots are attached on the following pages.

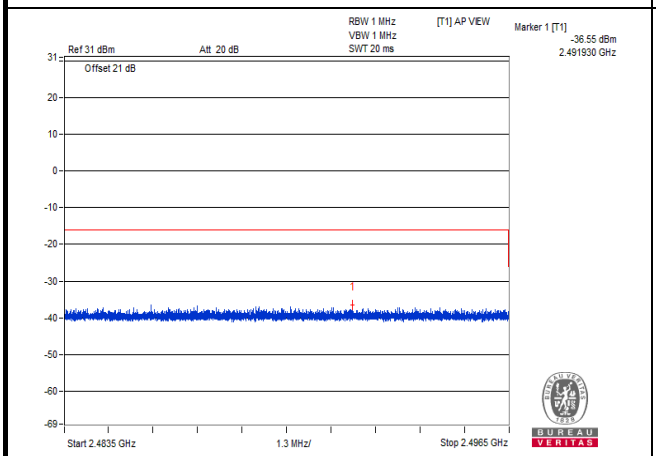
Vnormal

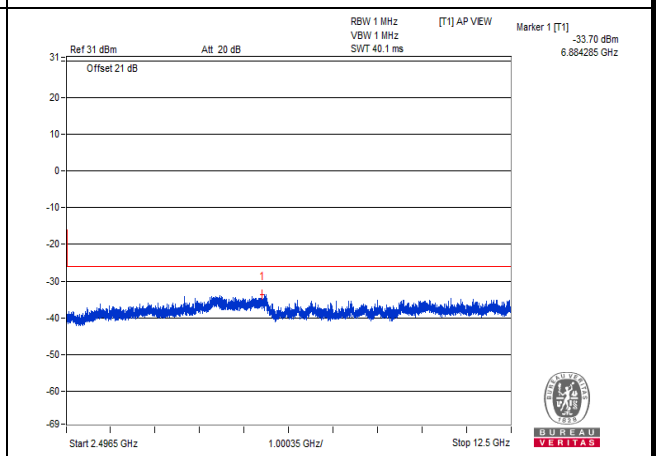






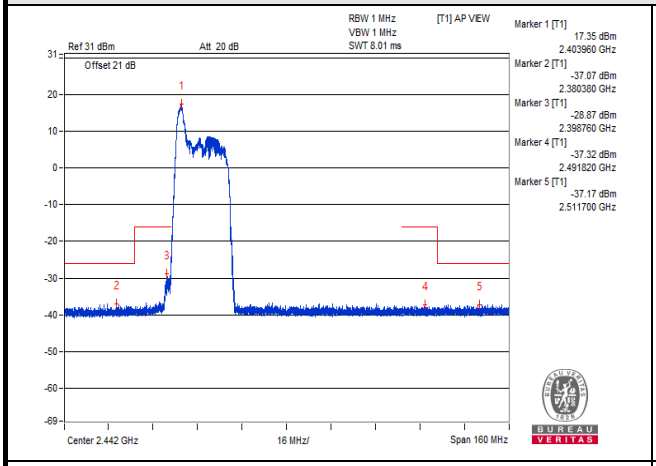


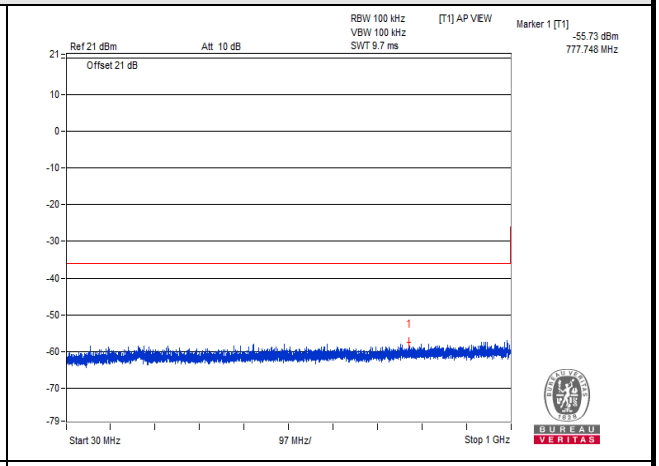


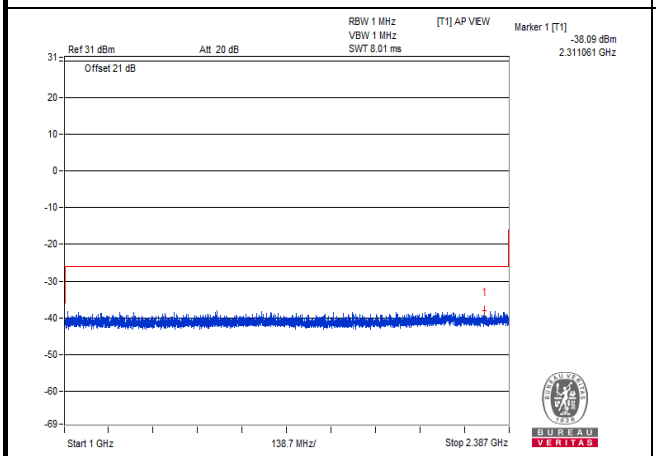


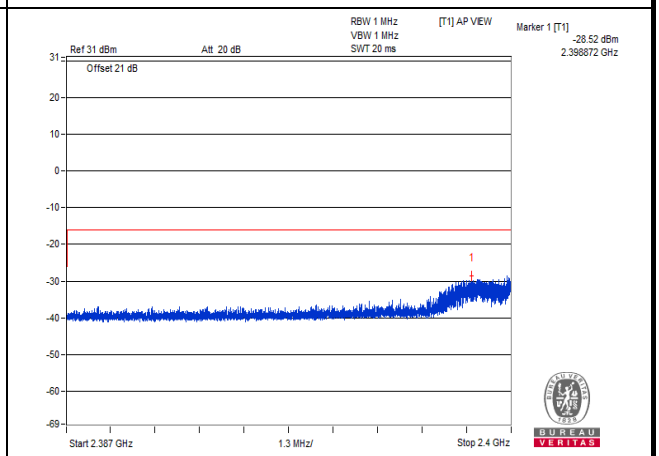
CH 1 (2412MHz)

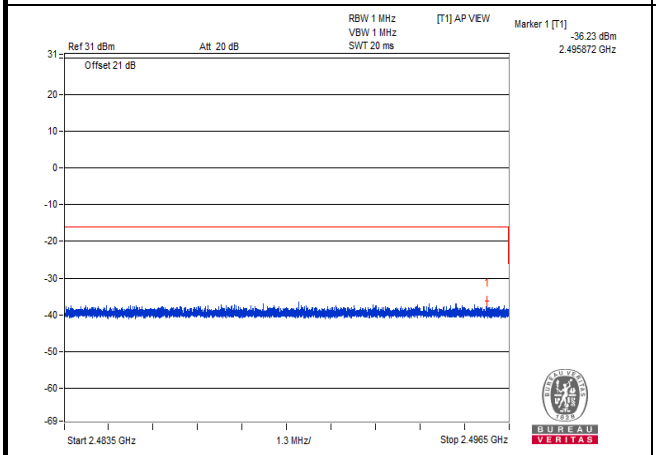
Vmax.

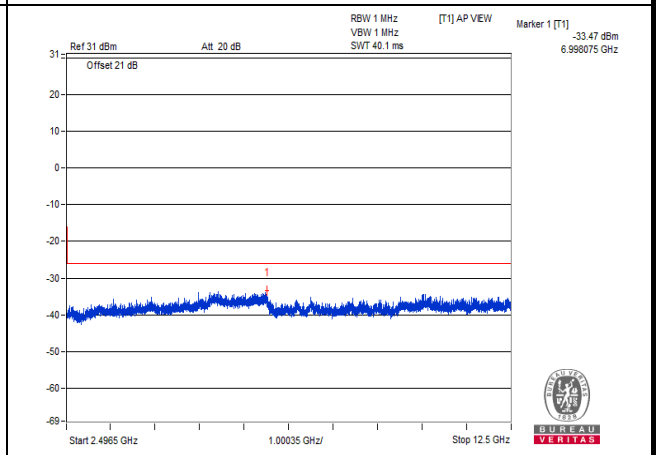






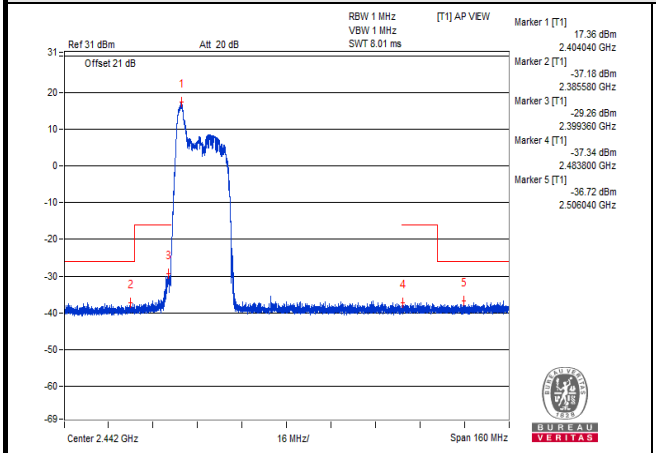


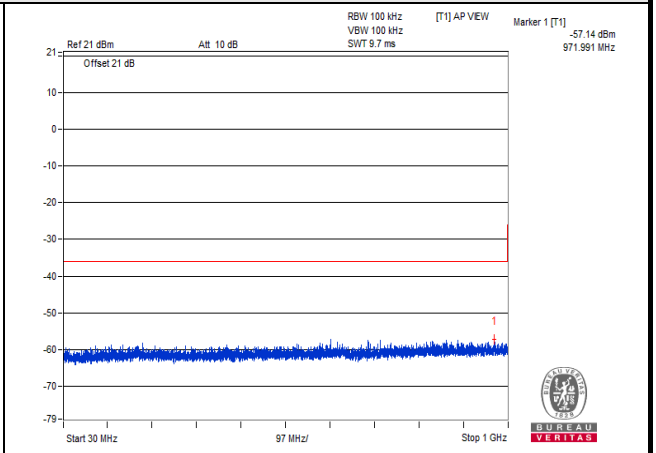


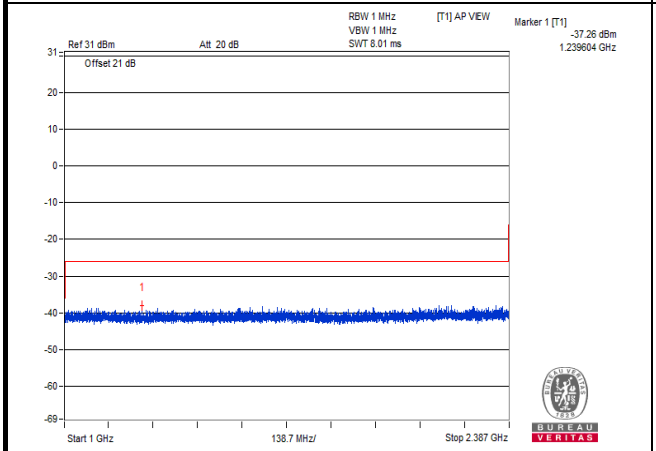


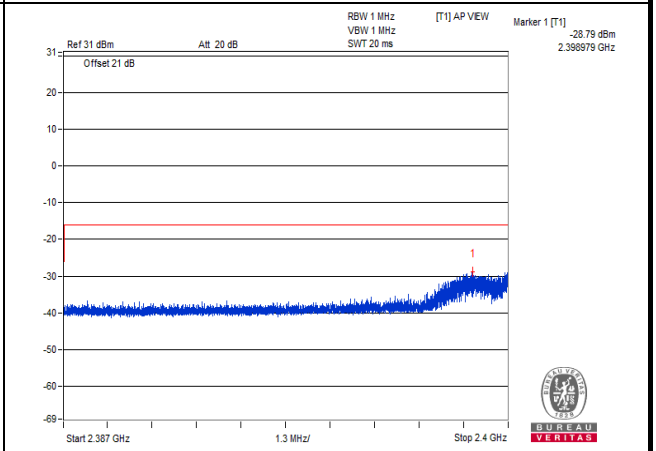
CH 1 (2412MHz)

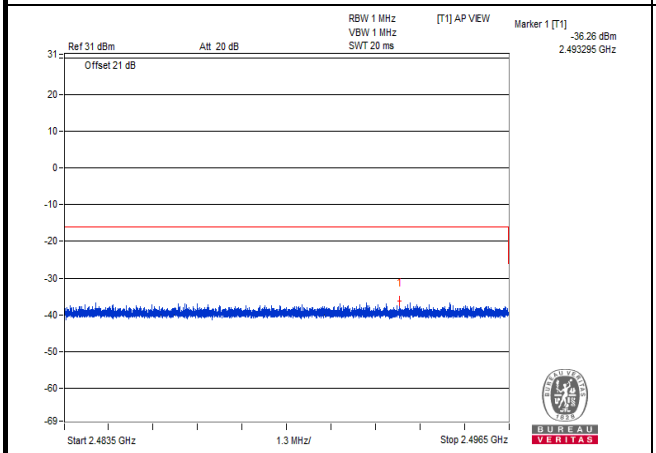
Vmin.

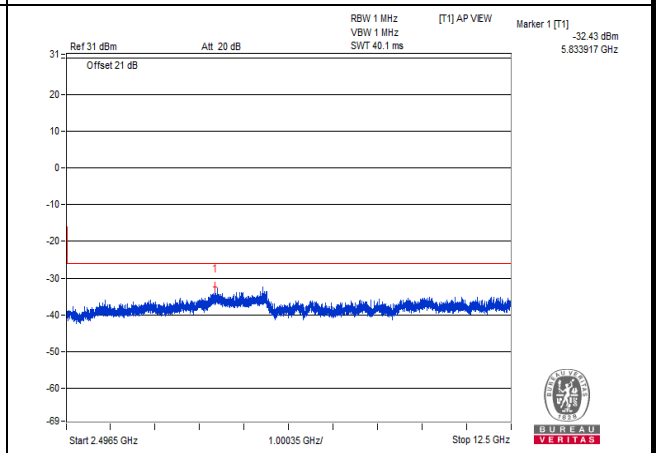






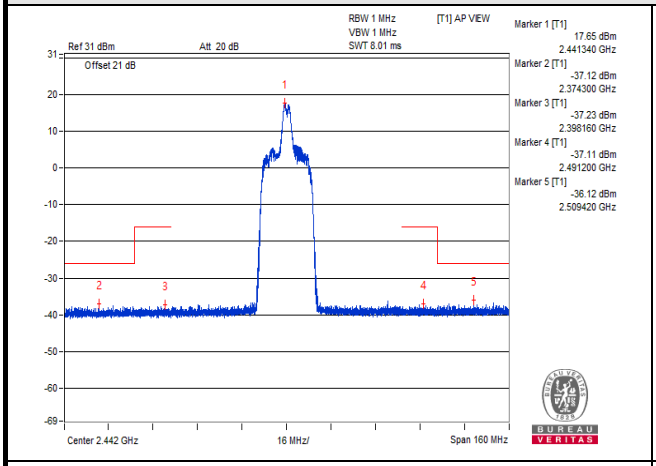


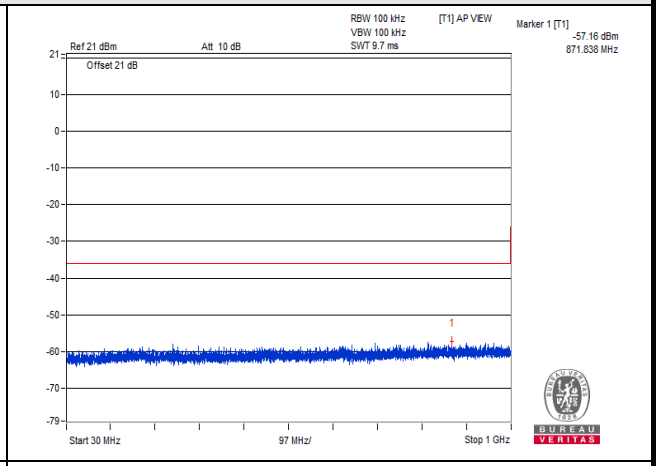


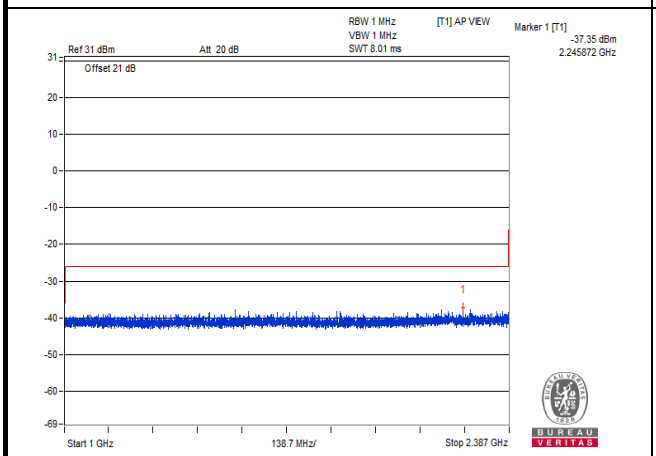


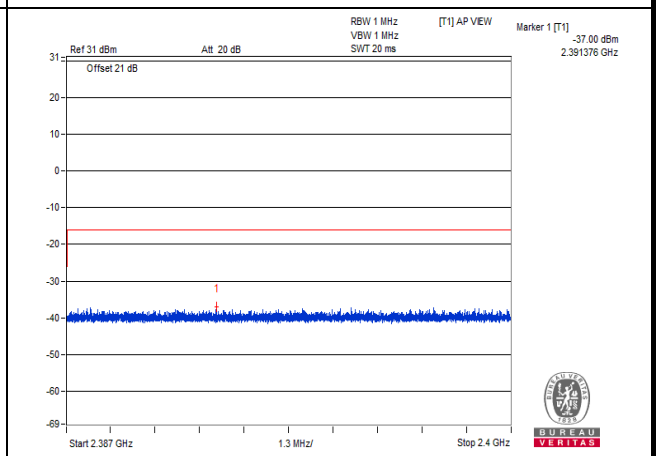
CH 1 (2412MHz)

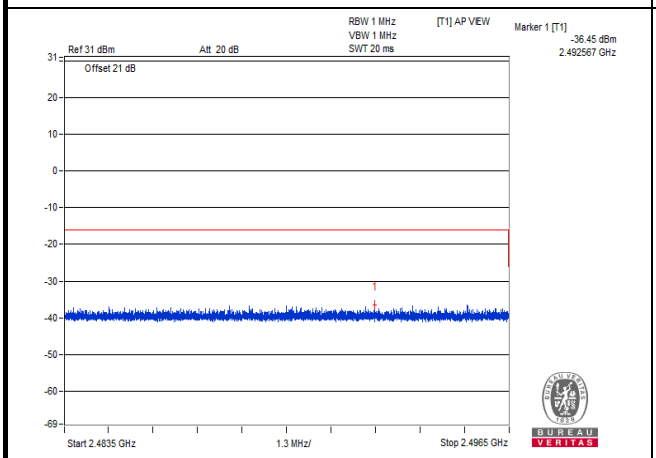
Vnormal

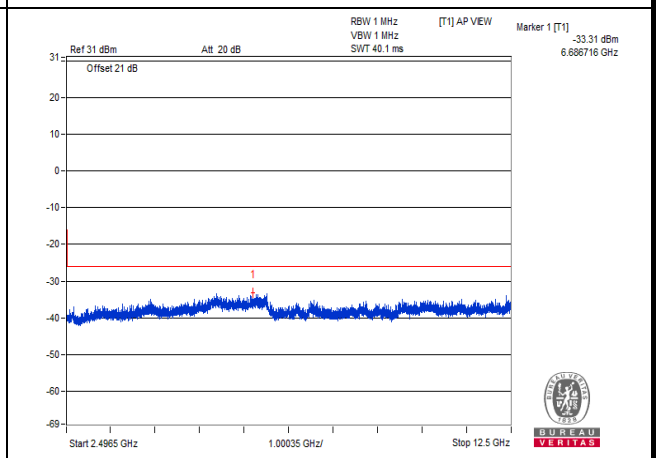






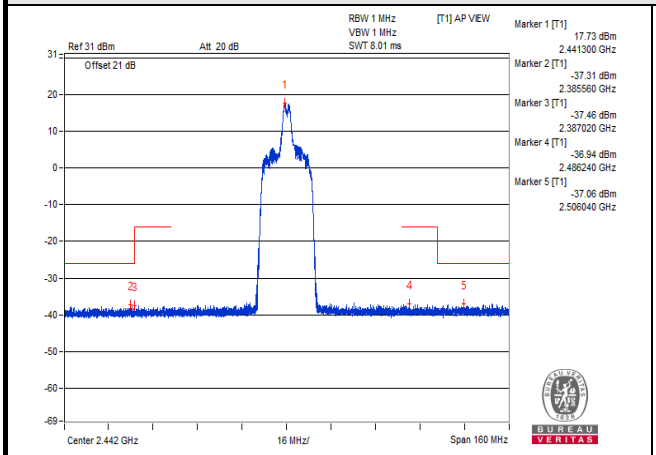


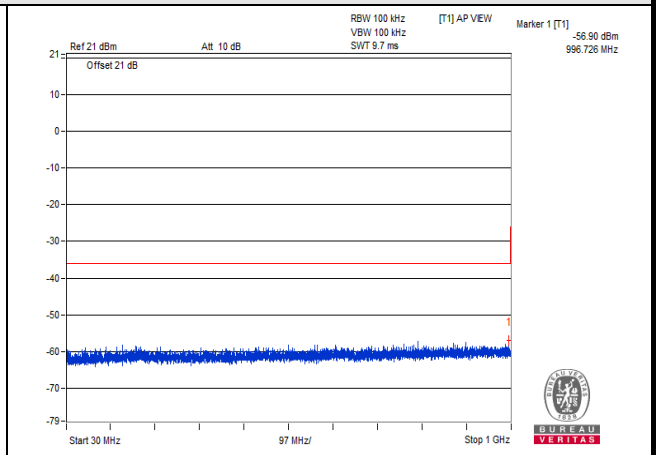


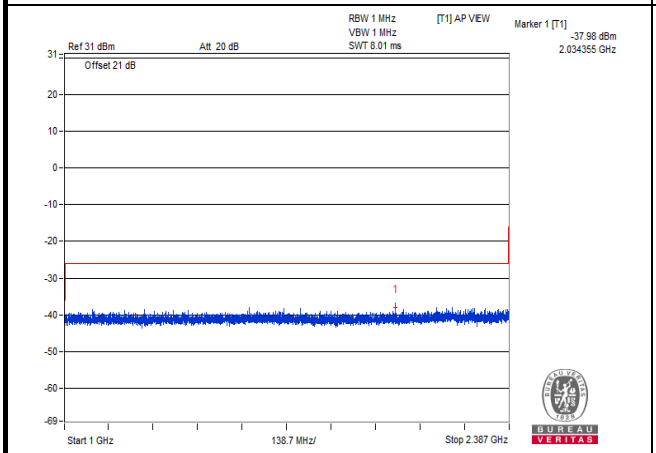


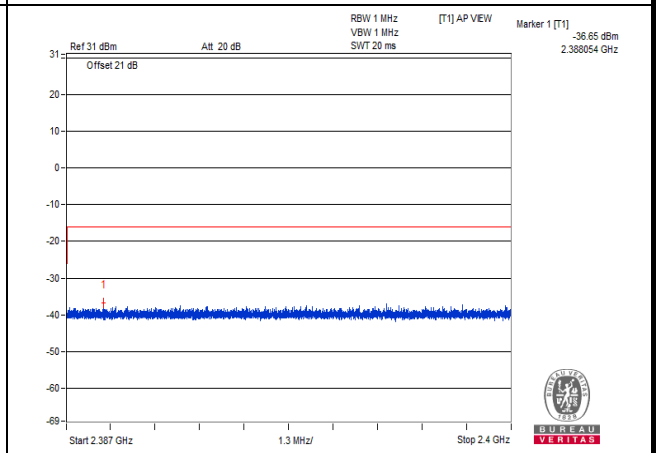
CH 7 (2442MHz)

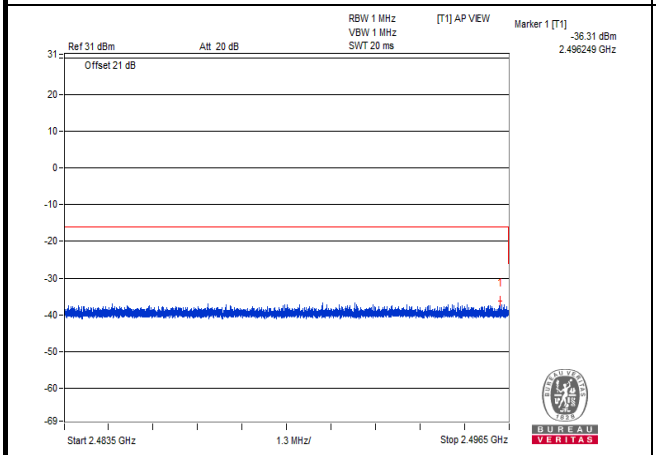
Vmax.

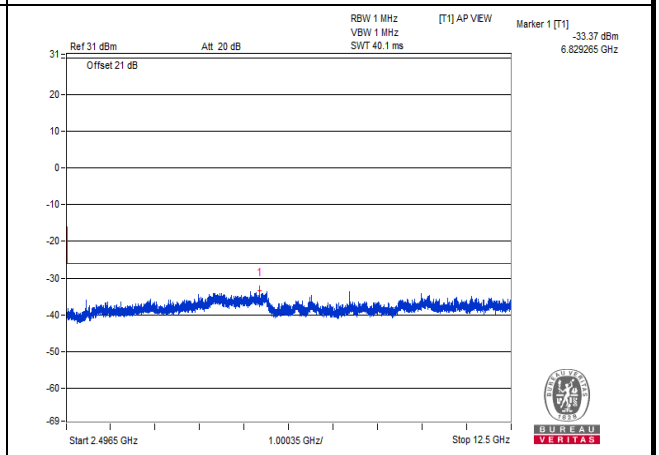






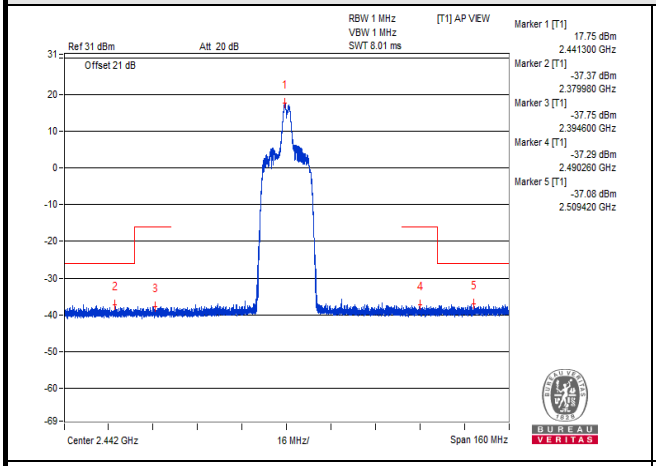


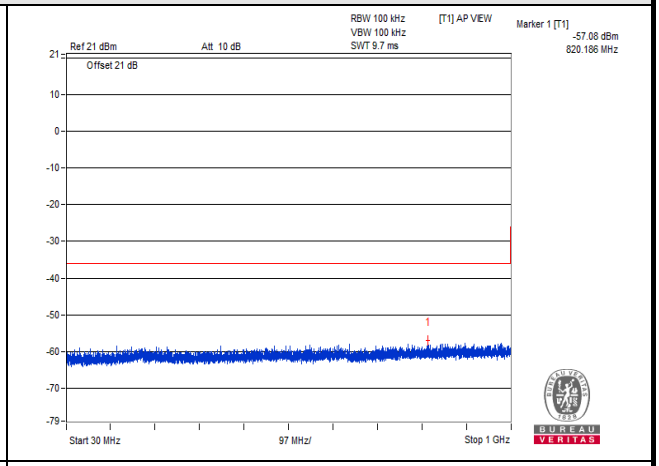


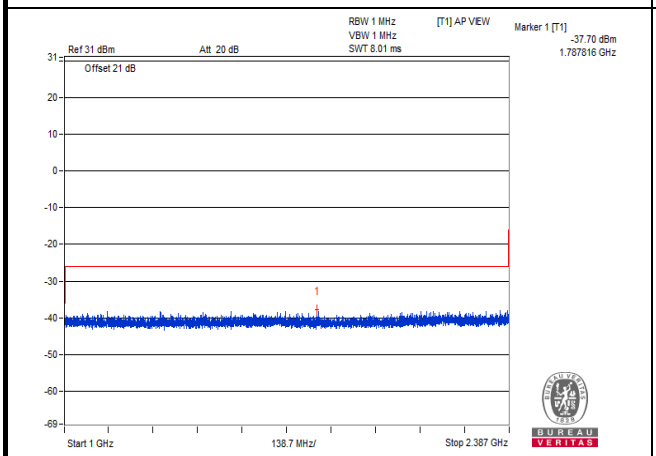


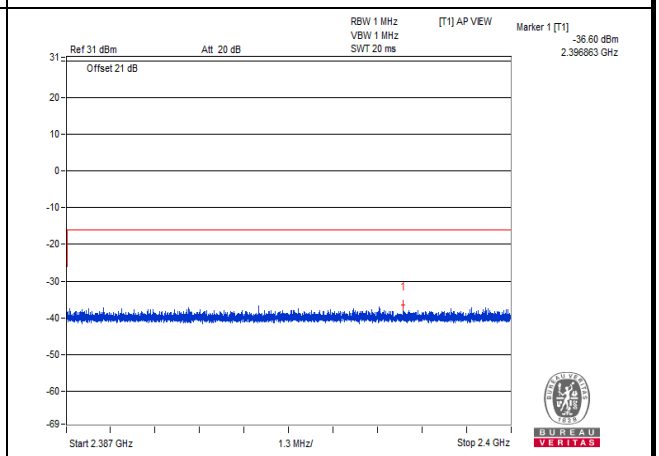
CH 7 (2442MHz)

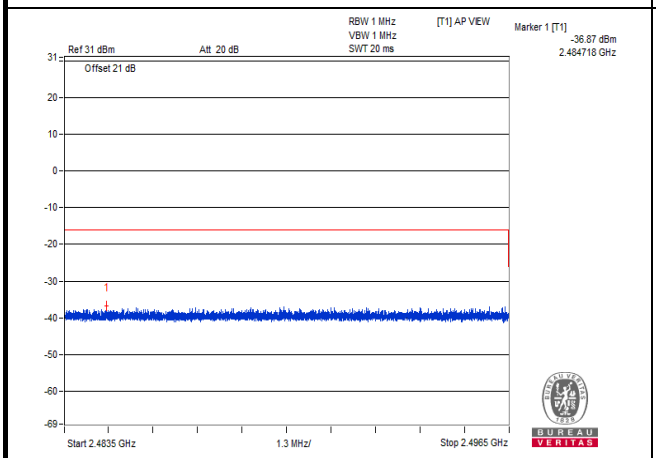
Vmin.

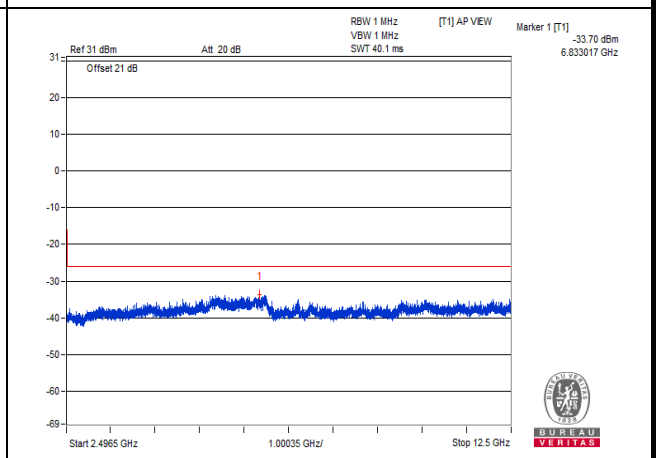






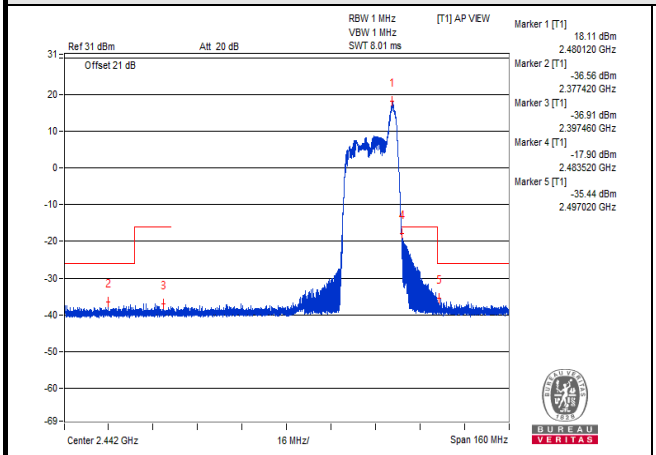


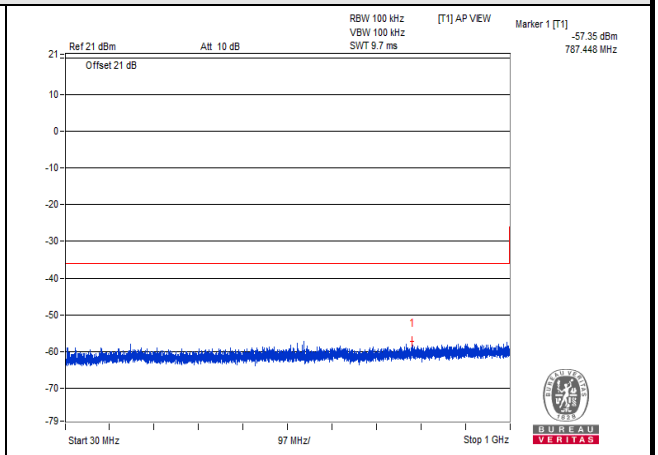


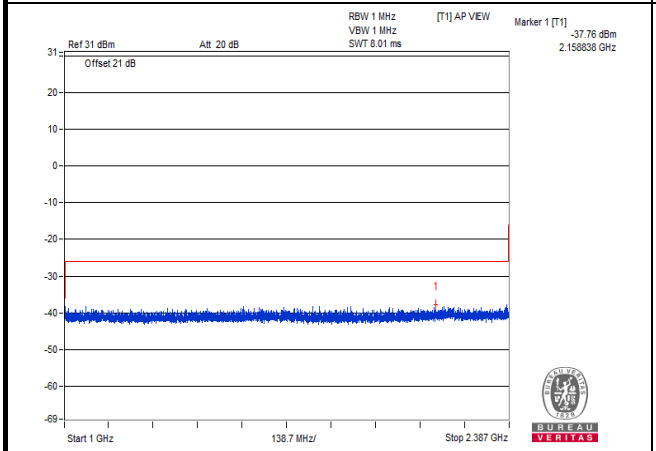


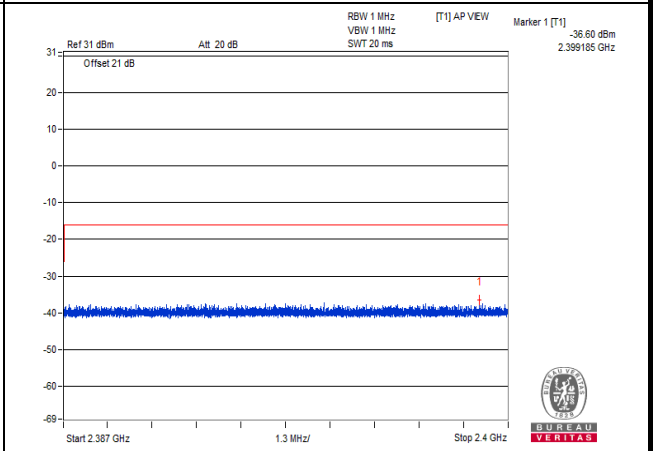
CH 7 (2442MHz)

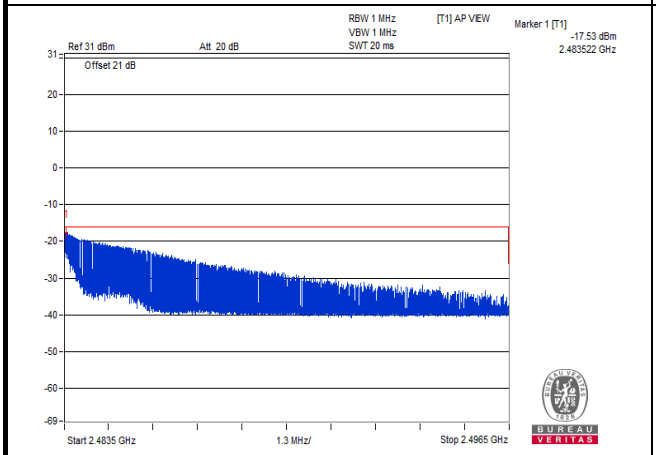
Vnormal

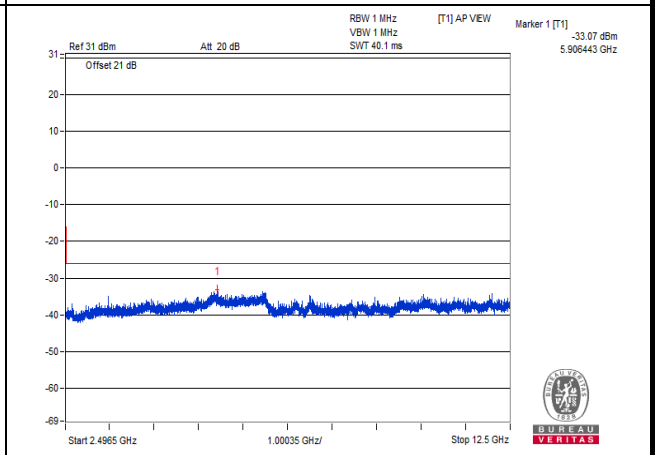






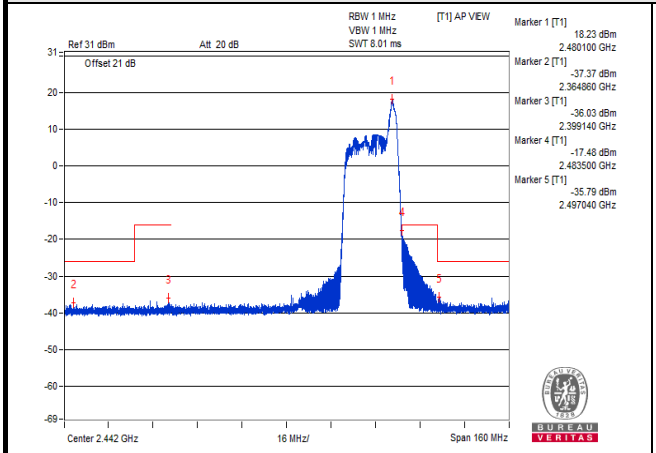


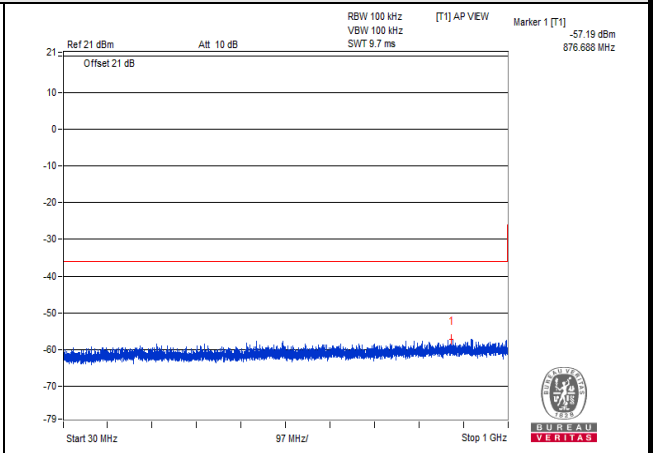


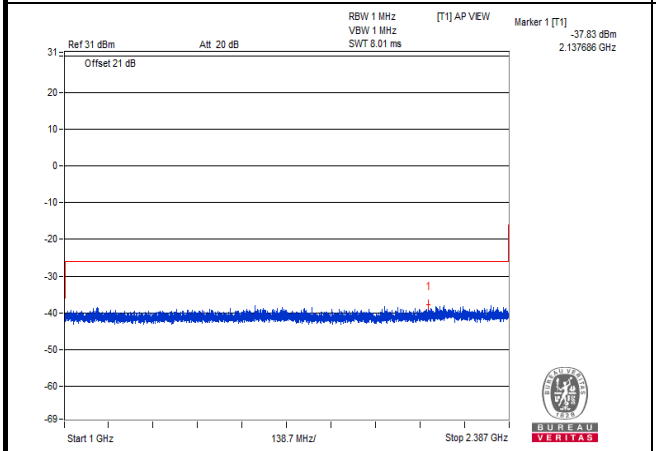


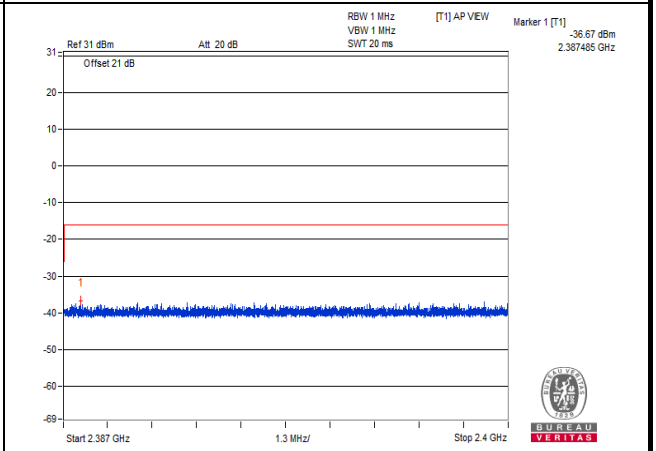
CH 13 (2472MHz)

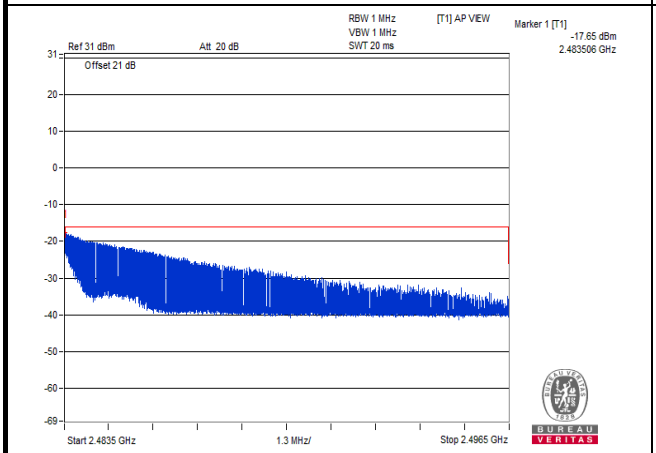
Vmax.

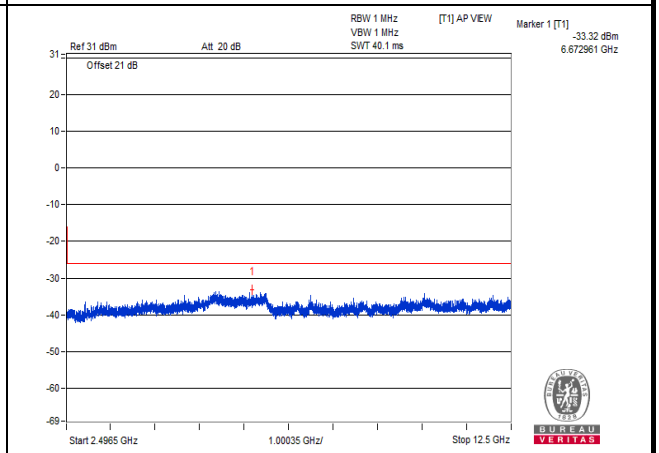






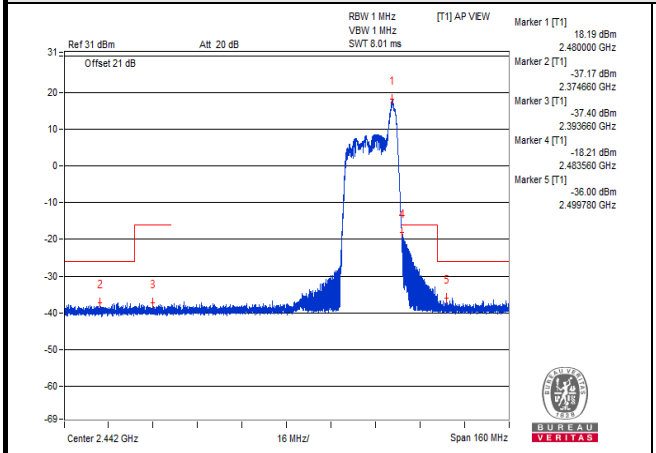


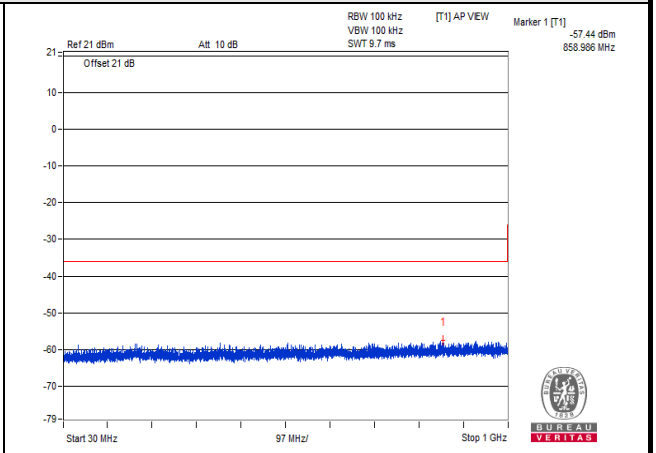


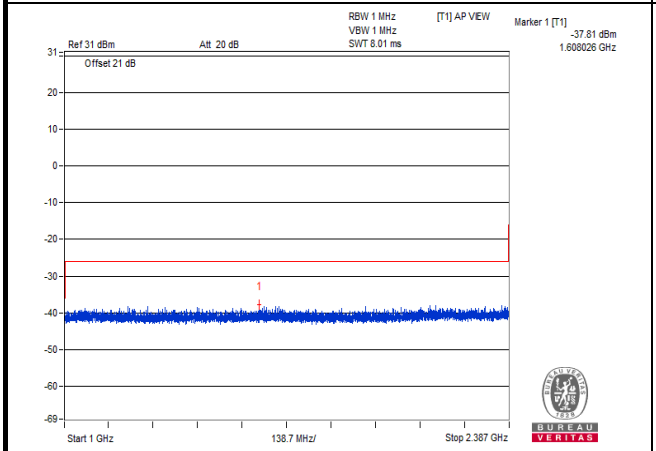


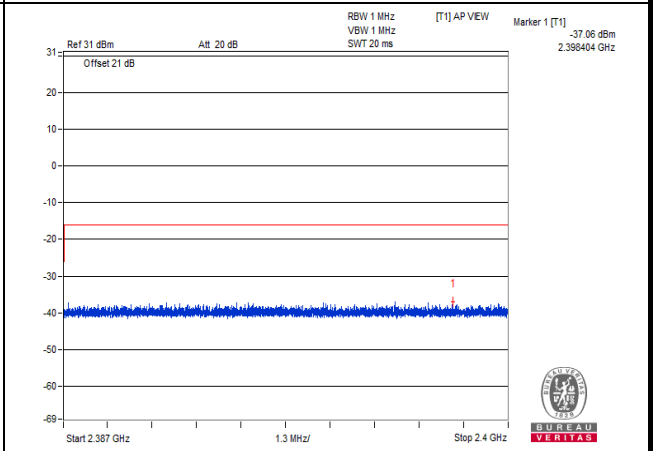
CH 13 (2472MHz)

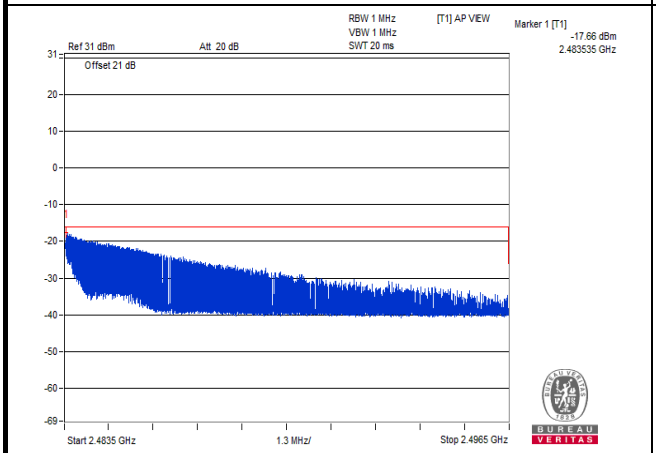
Vmin.

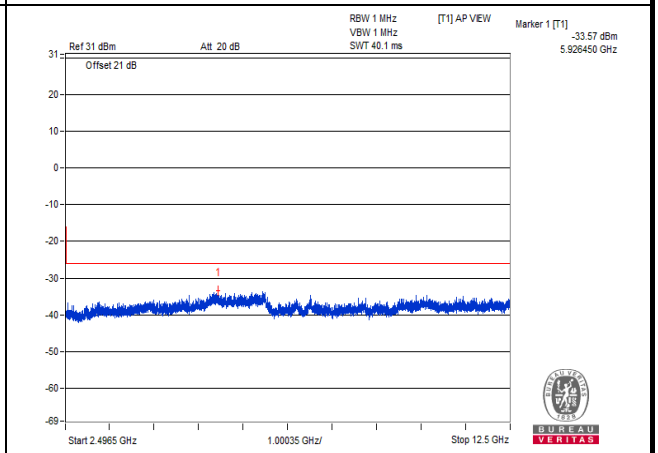












CH 13 (2472MHz)

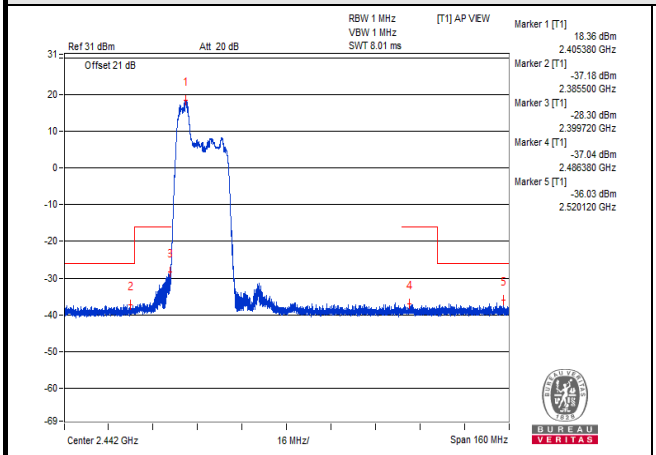
802.11ax (RU52)

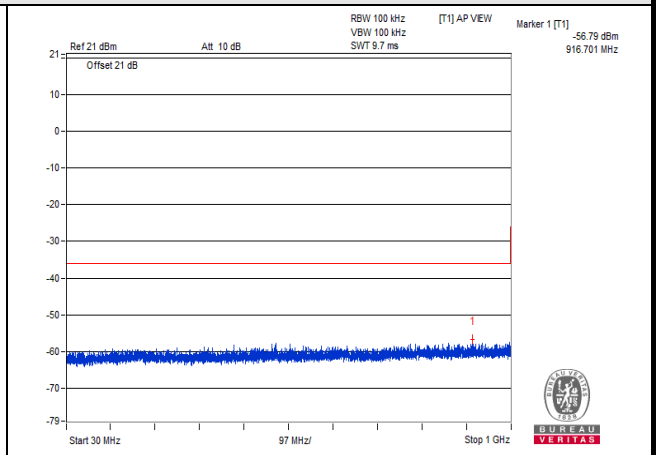
TEST CHANNEL		CH 1 (2412MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	916.701	0.002094	0.25	PASS
	1000.0 to 2387.0	2299.098	0.181970	2.5	PASS
	2387.0 to 2400.0	2399.923	1.588547	25	PASS
	2483.5 to 2496.5	2493.461	0.210863	25	PASS
	2496.5 to 12500.0	5893.938	0.467735	2.5	PASS
$V_{max.}$	30.0 to 1000.0	865.048	0.001841	0.25	PASS
	1000.0 to 2387.0	2351.458	0.175388	2.5	PASS
	2387.0 to 2400.0	2399.881	1.555966	25	PASS
	2483.5 to 2496.5	2484.793	0.215774	25	PASS
	2496.5 to 12500.0	6955.560	0.469894	2.5	PASS
$V_{min.}$	30.0 to 1000.0	913.670	0.001866	0.25	PASS
	1000.0 to 2387.0	2156.411	0.177828	2.5	PASS
	2387.0 to 2400.0	2399.969	1.599558	25	PASS
	2483.5 to 2496.5	2493.391	0.226986	25	PASS
	2496.5 to 12500.0	5878.933	0.462381	2.5	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	513.666	0.002138	0.25	PASS
	1000.0 to 2387.0	2121.389	0.165196	2.5	PASS
	2387.0 to 2400.0	2397.434	0.230144	25	PASS
	2483.5 to 2496.5	2487.417	0.219280	25	PASS
	2496.5 to 12500.0	6978.068	0.436516	2.5	PASS
$V_{max.}$	30.0 to 1000.0	782.235	0.001803	0.25	PASS
	1000.0 to 2387.0	1924.955	0.170608	2.5	PASS
	2387.0 to 2400.0	2390.887	0.204644	25	PASS
	2483.5 to 2496.5	2485.968	0.250035	25	PASS
	2496.5 to 12500.0	6539.164	0.528445	2.5	PASS
$V_{min.}$	30.0 to 1000.0	992.846	0.001837	0.25	PASS
	1000.0 to 2387.0	1222.440	0.163682	2.5	PASS
	2387.0 to 2400.0	2398.758	0.230675	25	PASS
	2483.5 to 2496.5	2484.736	0.267917	25	PASS
	2496.5 to 12500.0	5780.148	0.466659	2.5	PASS

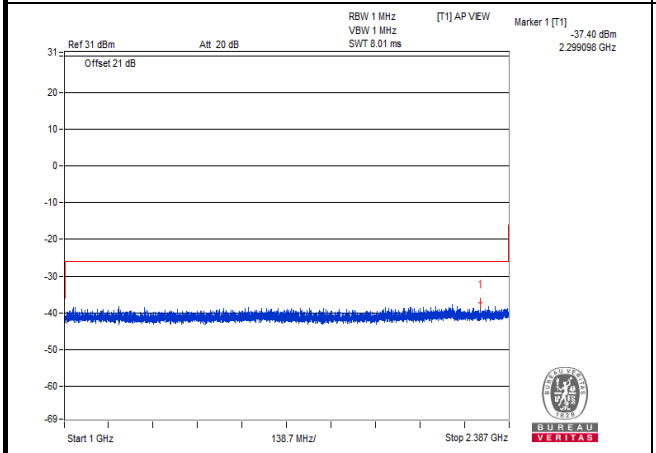
TEST CHANNEL		CH 13 (2472MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	757.863	0.002153	0.25	PASS
	1000.0 to 2387.0	1904.670	0.173780	2.5	PASS
	2387.0 to 2400.0	2394.211	0.203236	25	PASS
	2483.5 to 2496.5	2483.543	19.186687	25	PASS
	2496.5 to 12500.0	6751.738	0.407380	2.5	PASS
$V_{max.}$	30.0 to 1000.0	975.507	0.001905	0.25	PASS
	1000.0 to 2387.0	1476.434	0.164437	2.5	PASS
	2387.0 to 2400.0	2398.256	0.239332	25	PASS
	2483.5 to 2496.5	2483.532	21.037784	25	PASS
	2496.5 to 12500.0	6157.781	0.465586	2.5	PASS
$V_{min.}$	30.0 to 1000.0	914.761	0.001910	0.25	PASS
	1000.0 to 2387.0	2185.018	0.158855	2.5	PASS
	2387.0 to 2400.0	2391.561	0.219280	25	PASS
	2483.5 to 2496.5	2483.513	20.090928	25	PASS
	2496.5 to 12500.0	6941.805	0.458142	2.5	PASS

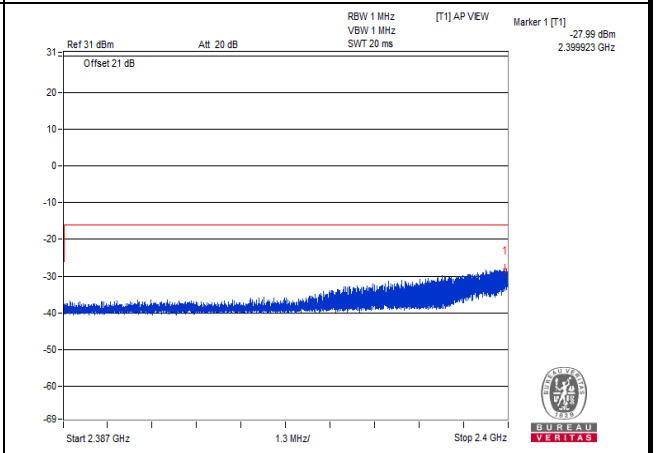
NOTE: 1. The spectrum plots are attached on the following pages.

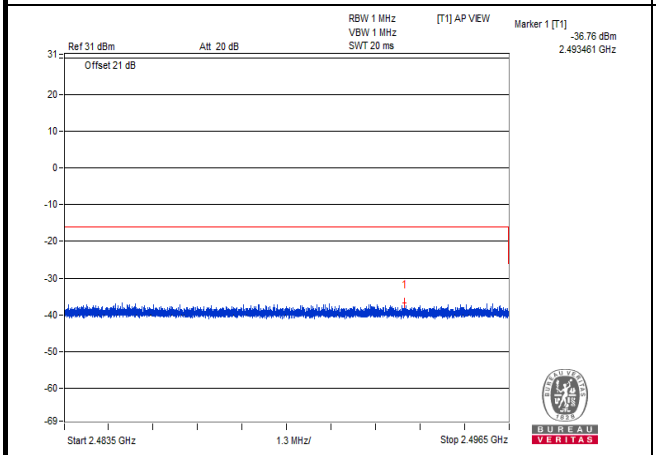
Vnormal

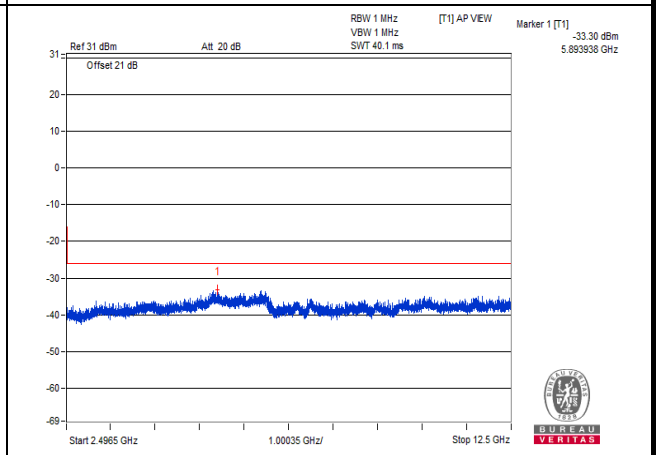






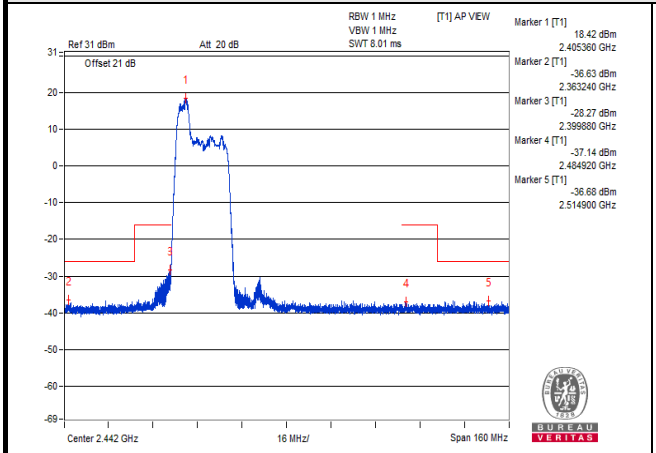


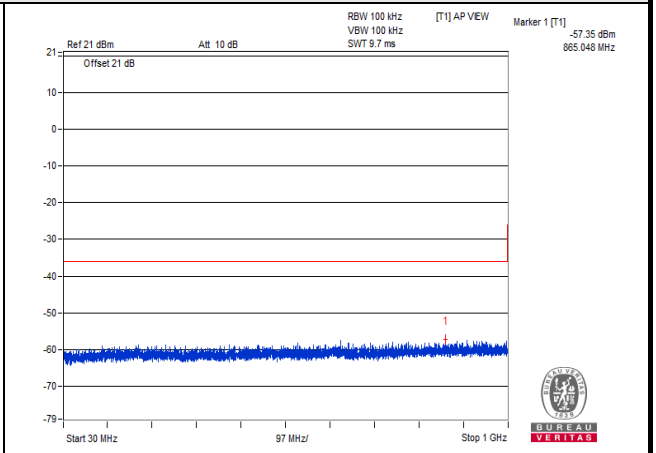


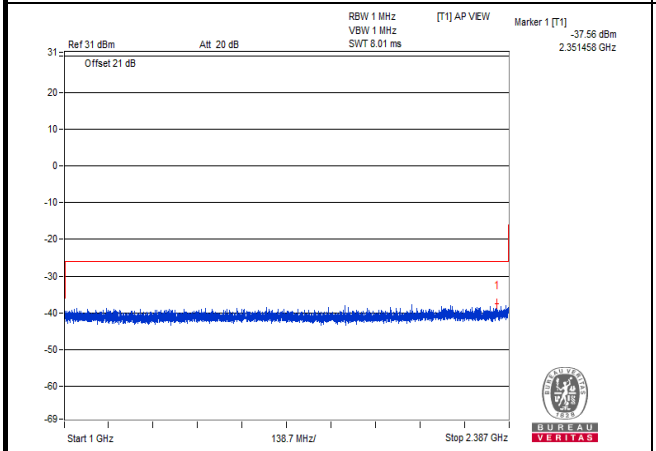


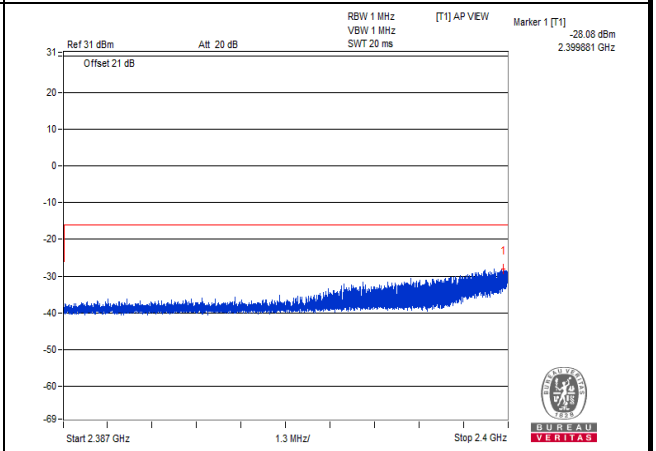
CH 1 (2412MHz)

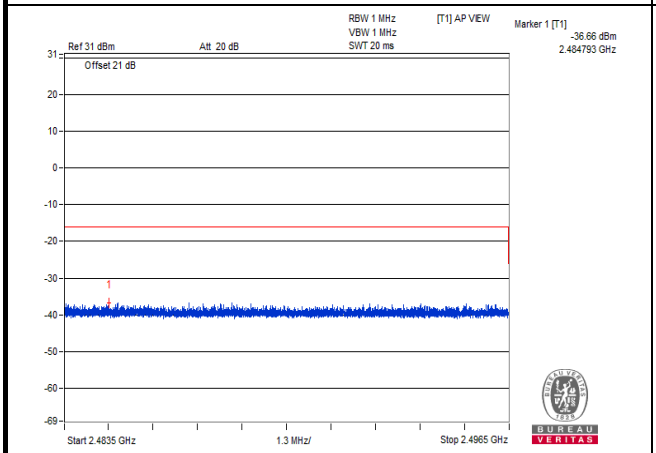
Vmax.

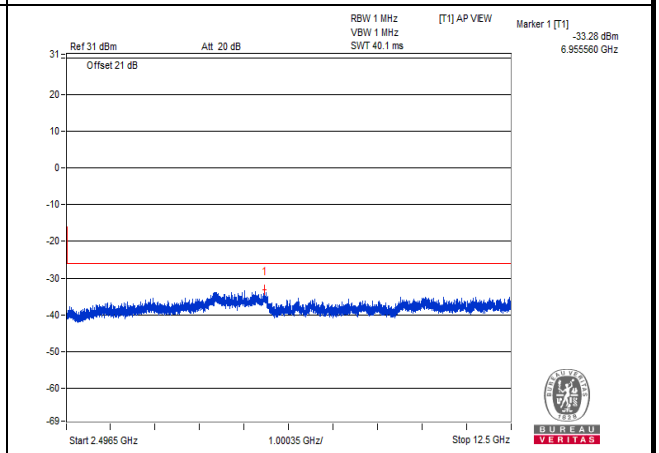






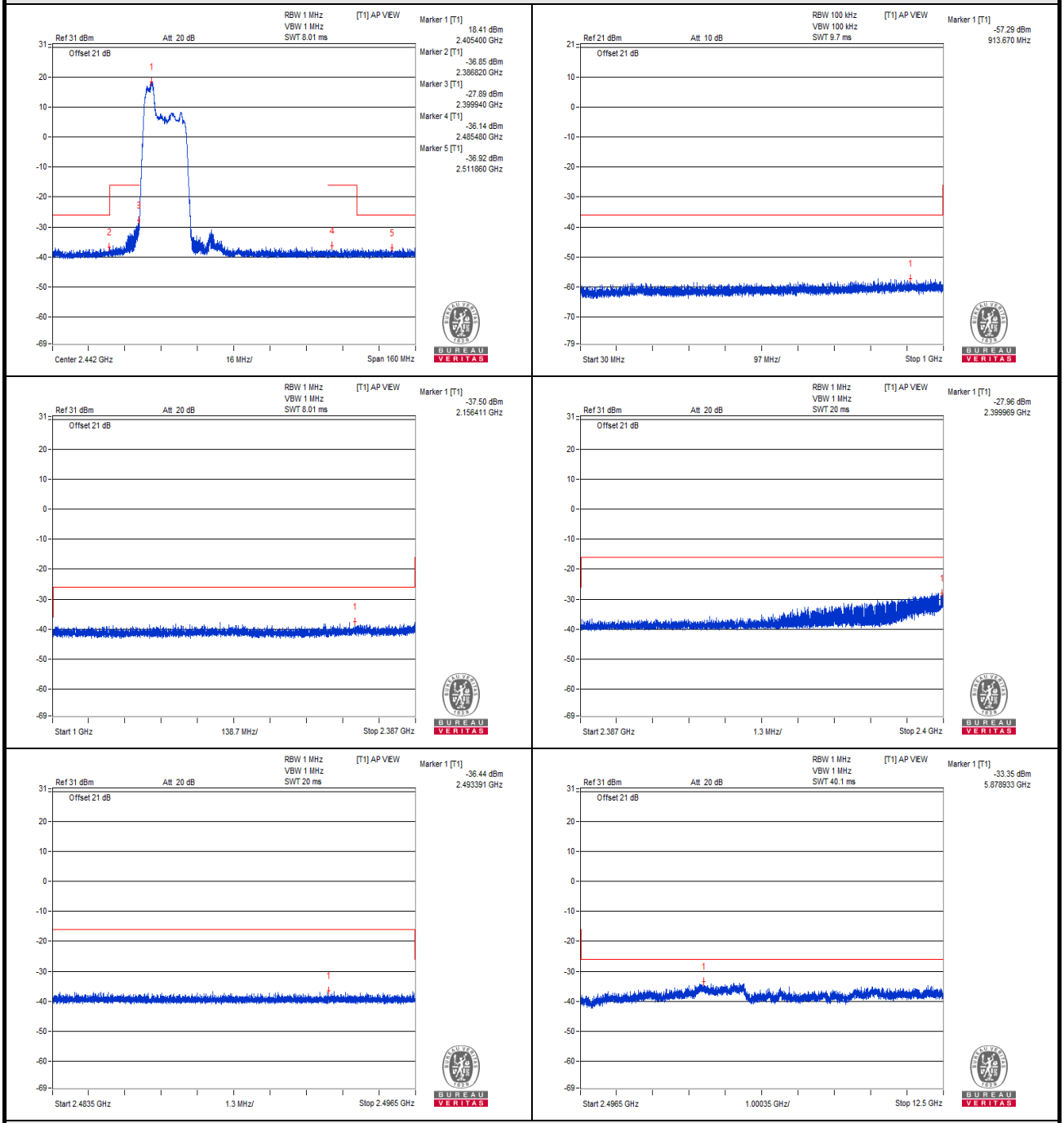






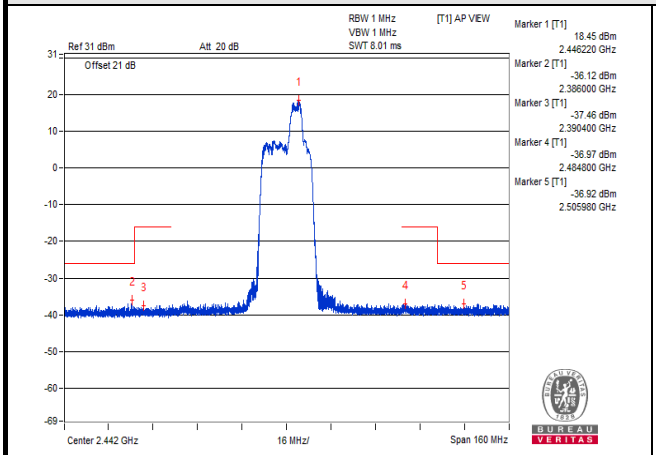
CH 1 (2412MHz)

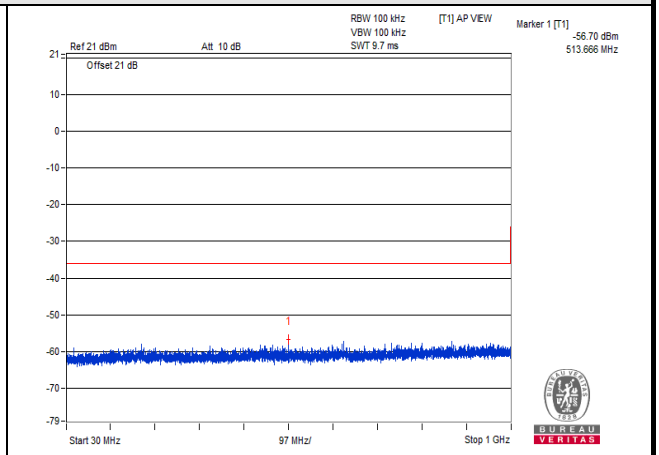
Vmin.

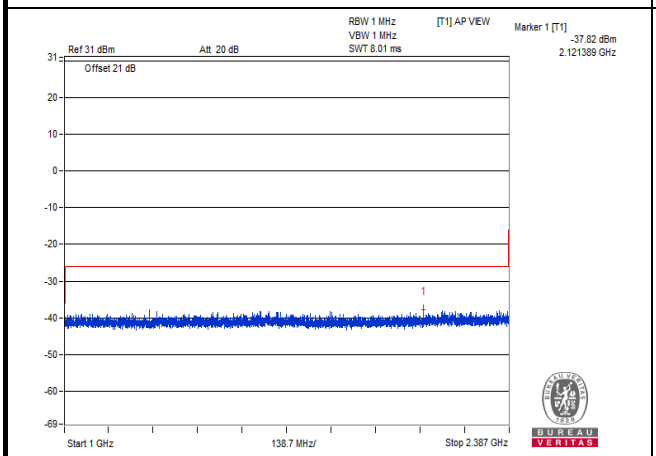


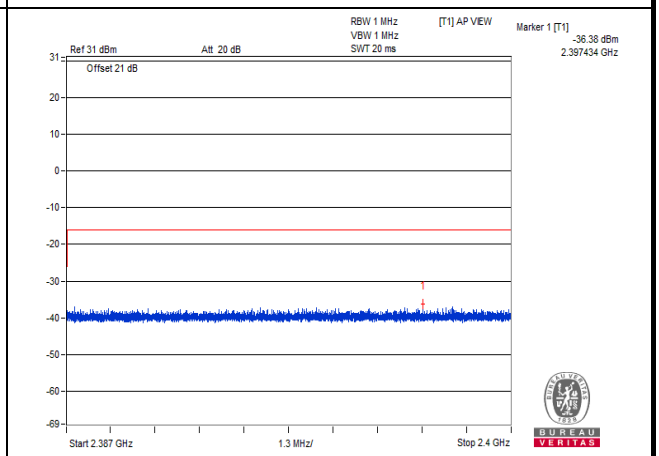
CH 1 (2412MHz)

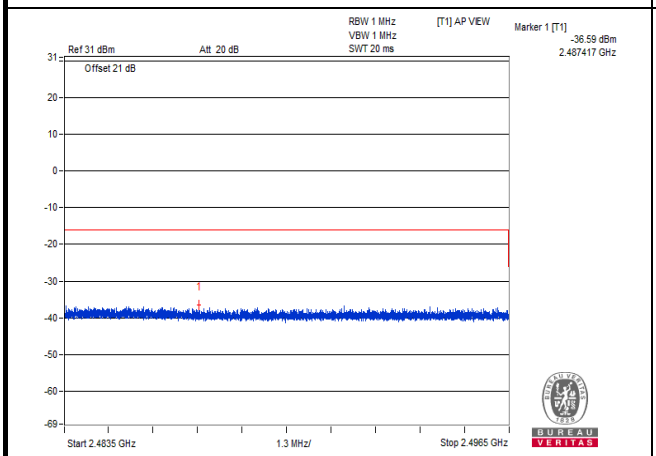
Vnormal

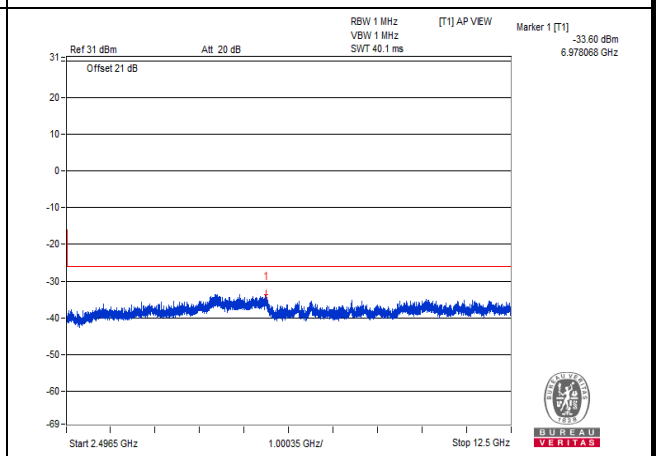






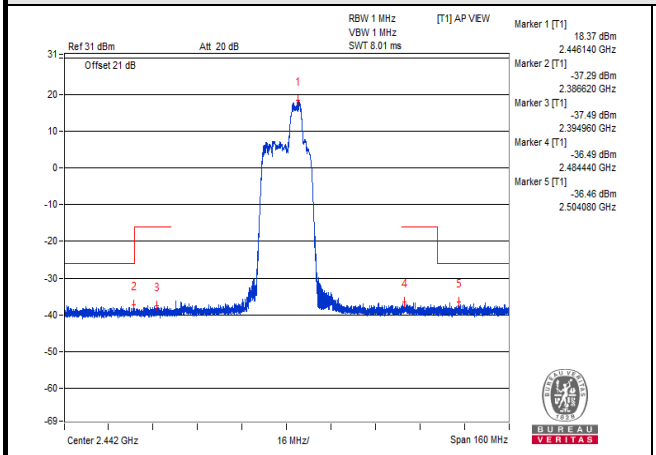


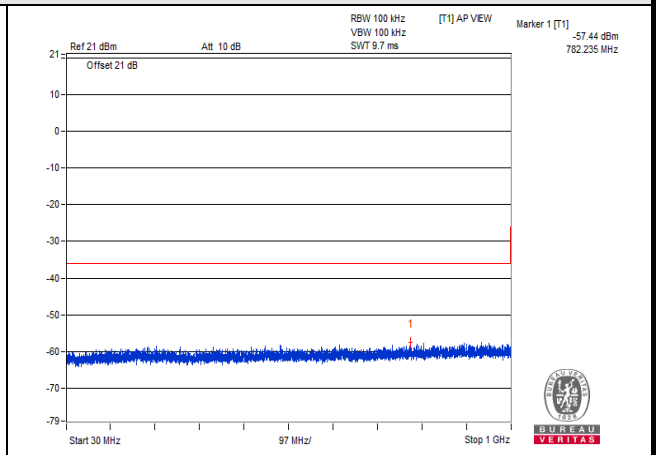


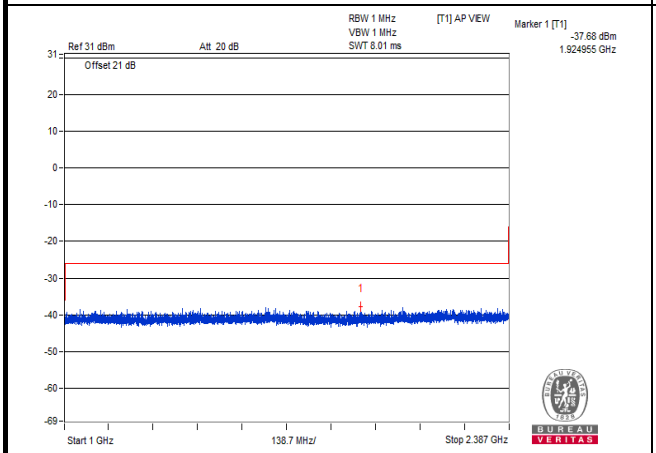


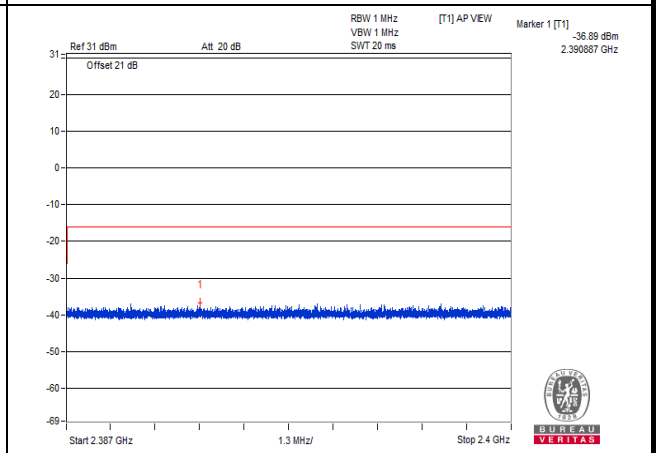
CH 7 (2442MHz)

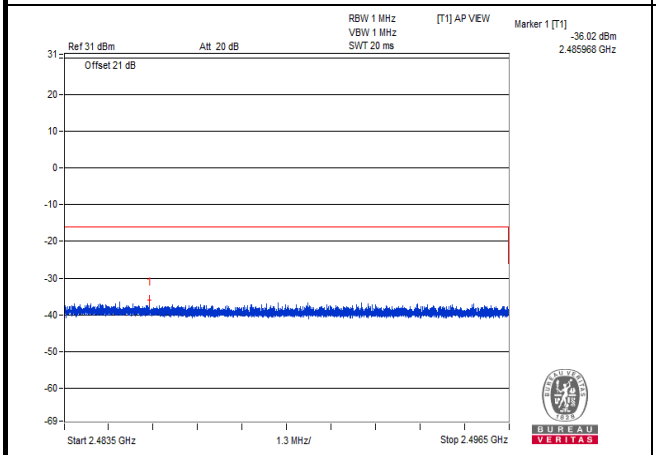
Vmax.

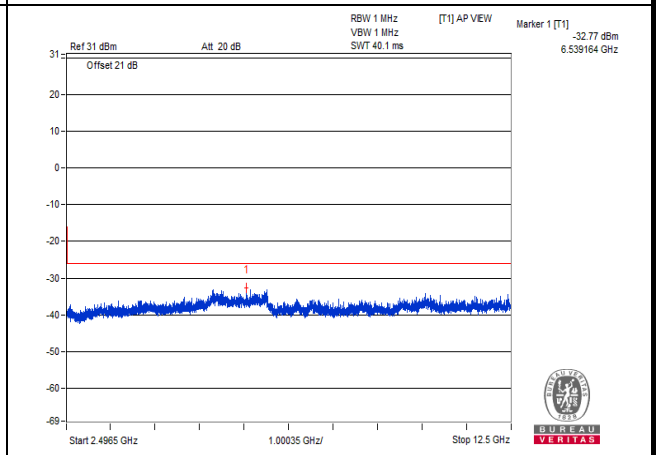






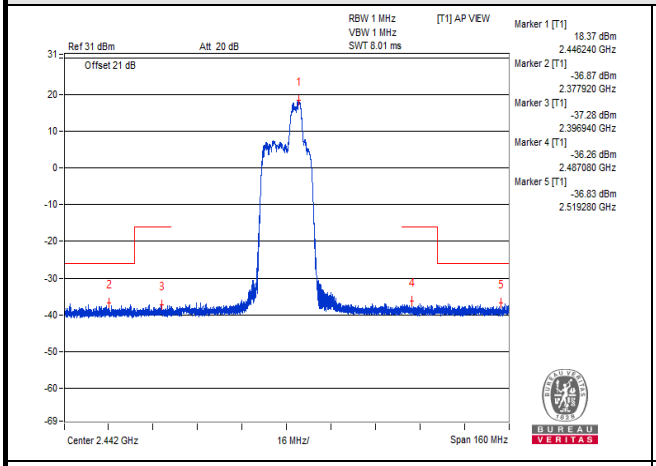


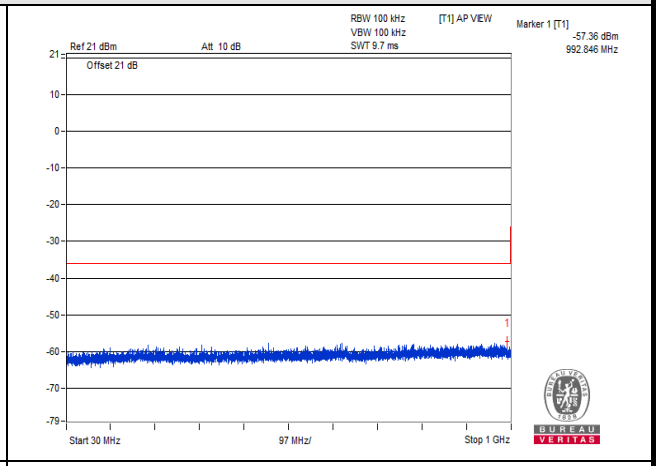


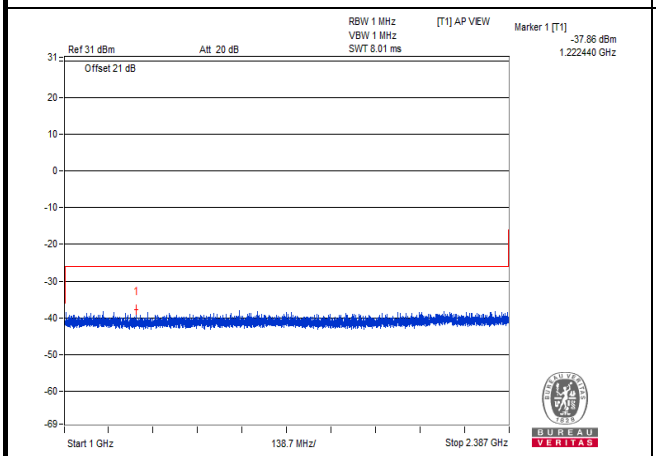


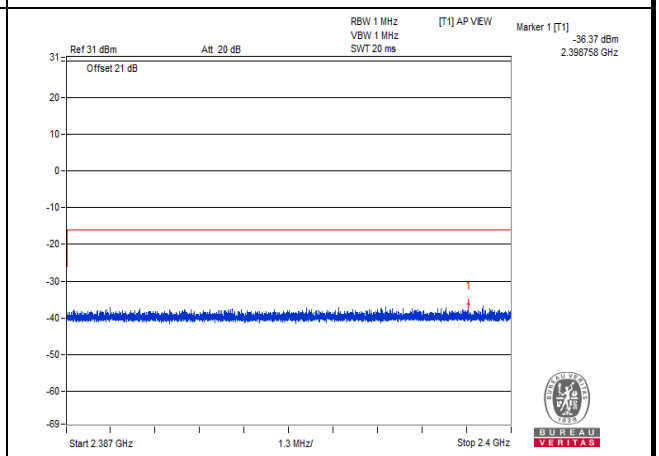
CH 7 (2442MHz)

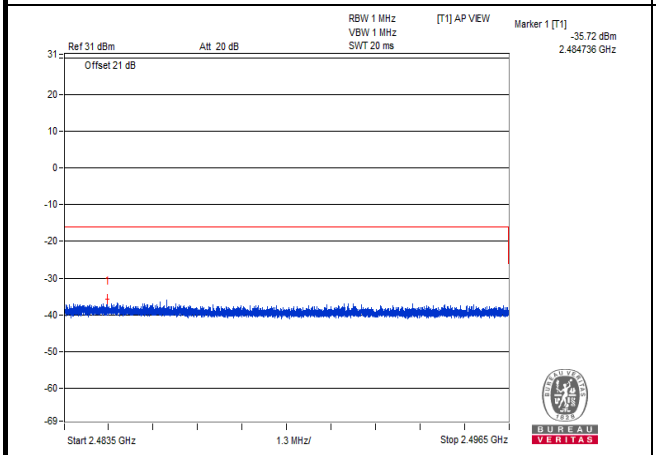
Vmin.

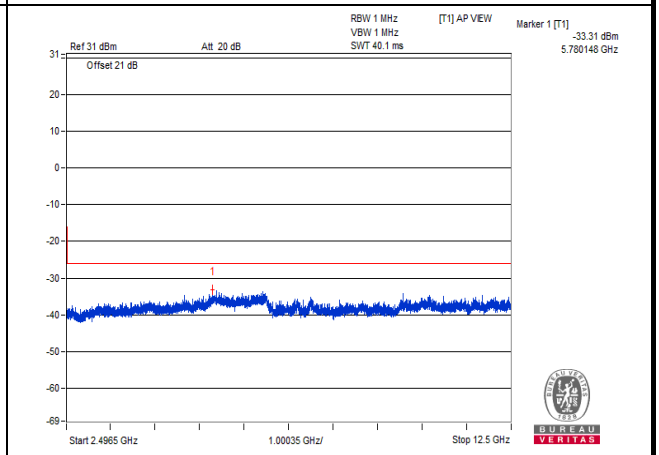






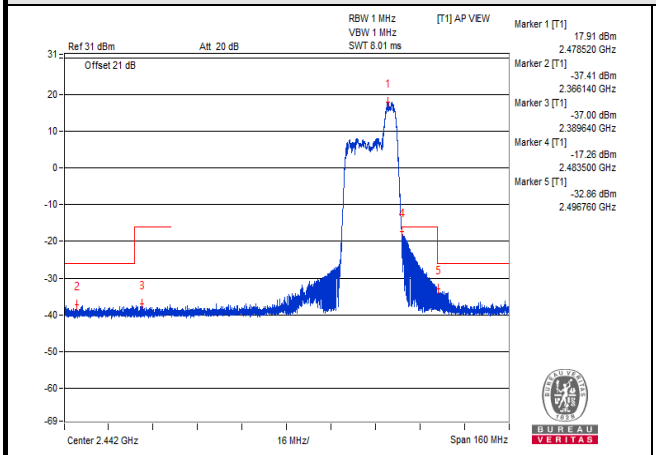


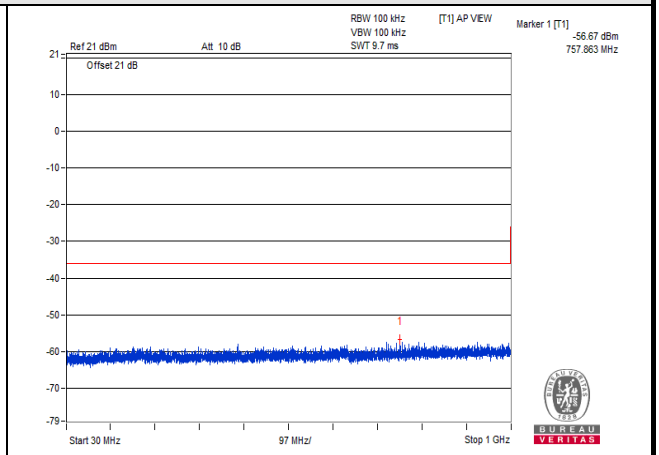


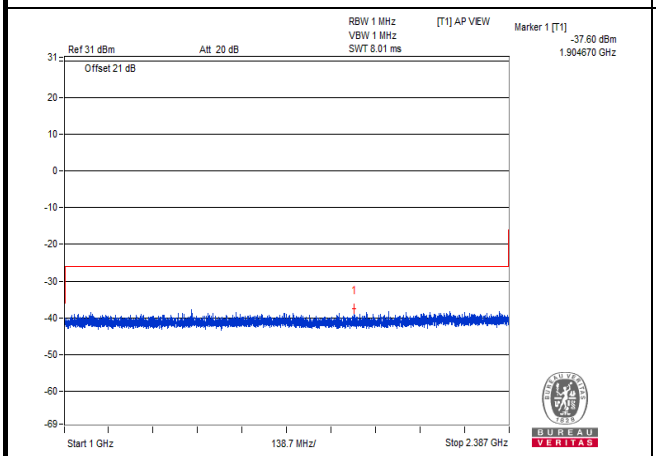


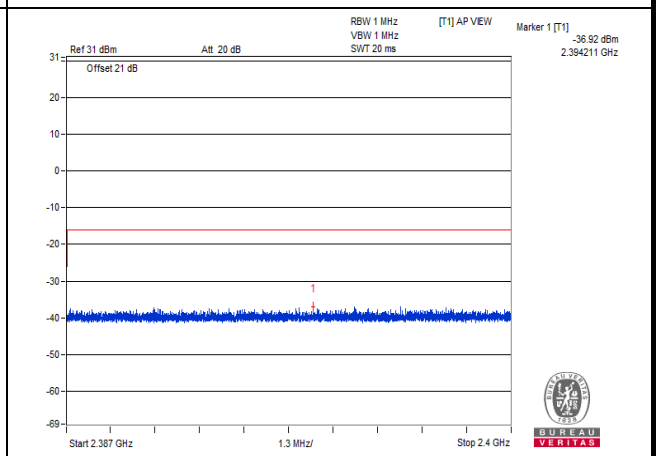
CH 7 (2442MHz)

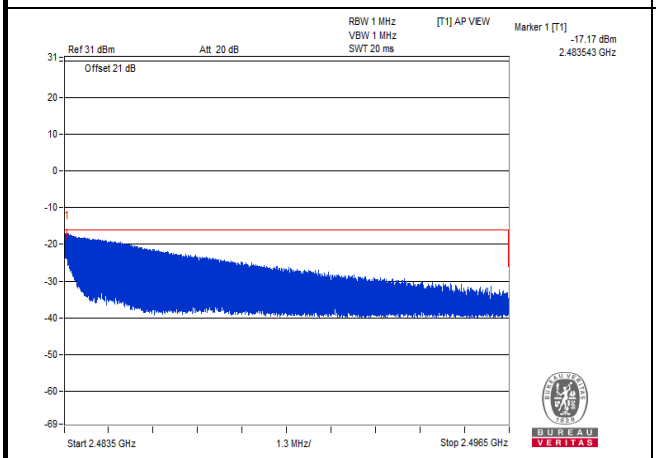
Vnormal

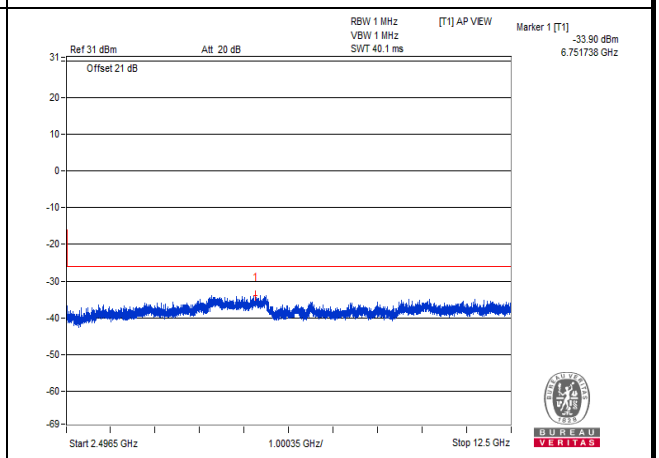






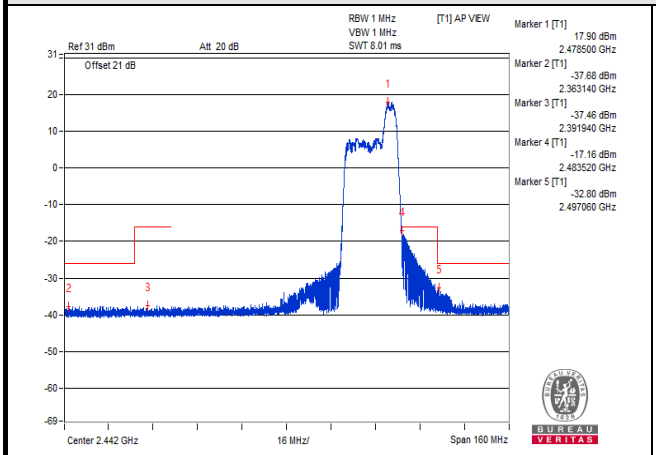


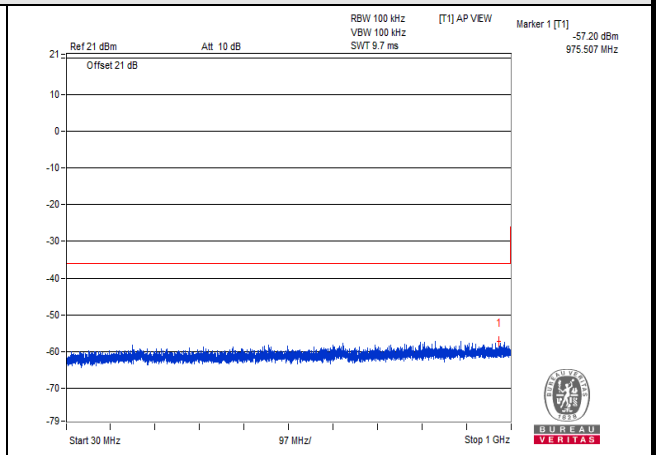


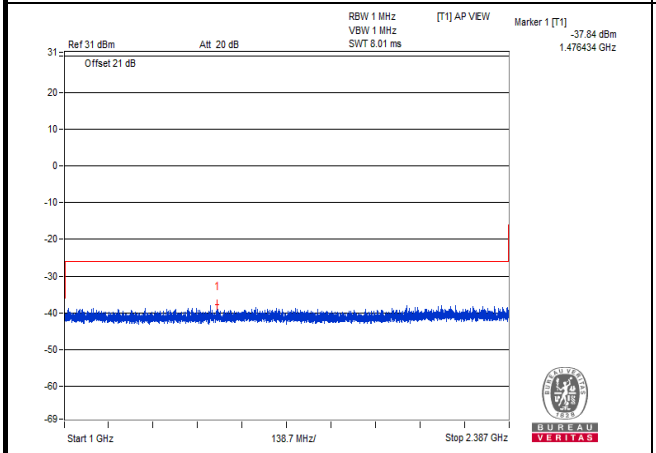


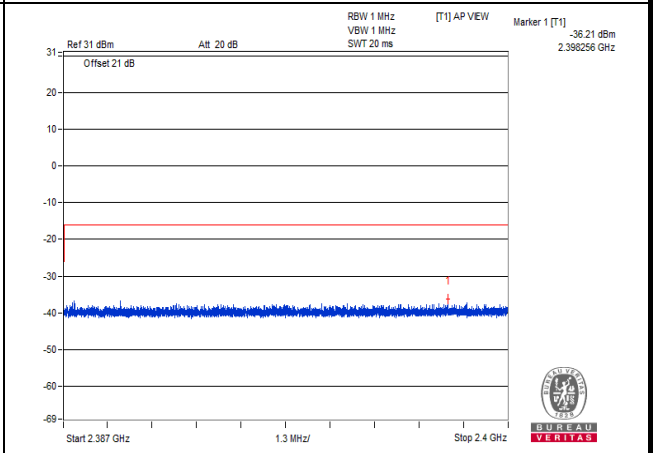
CH 13 (2472MHz)

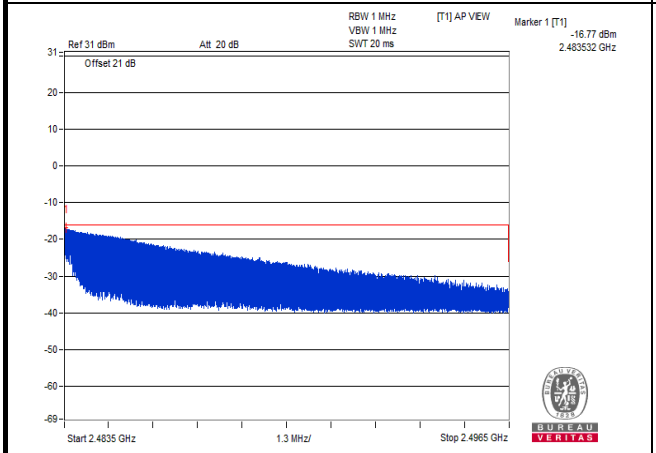
Vmax.

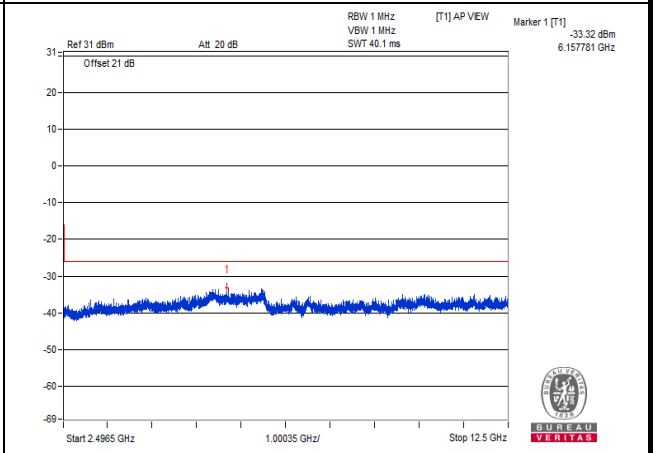






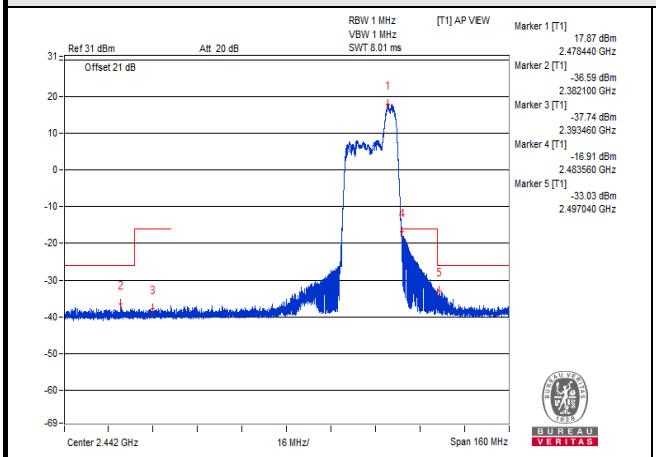


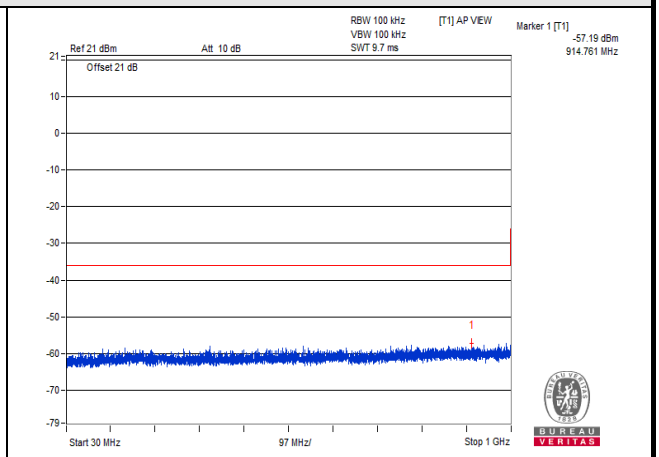


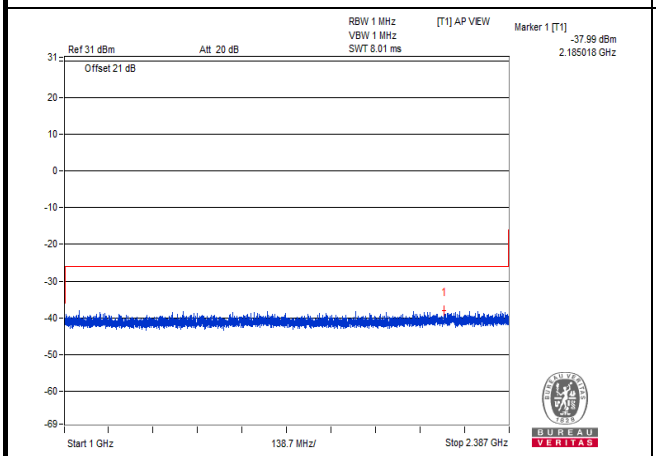


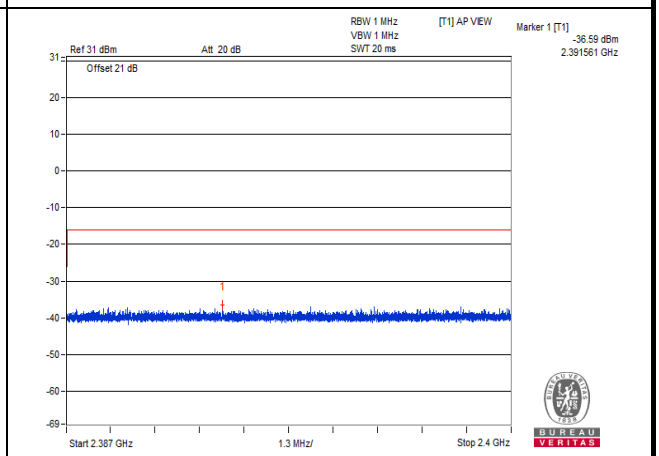
CH 13 (2472MHz)

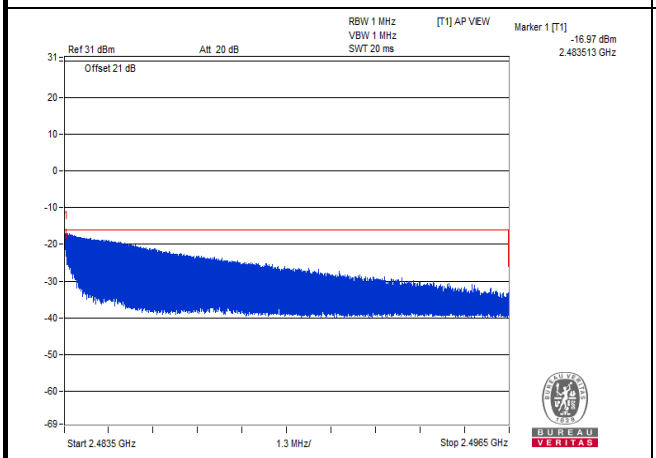
Vmin.

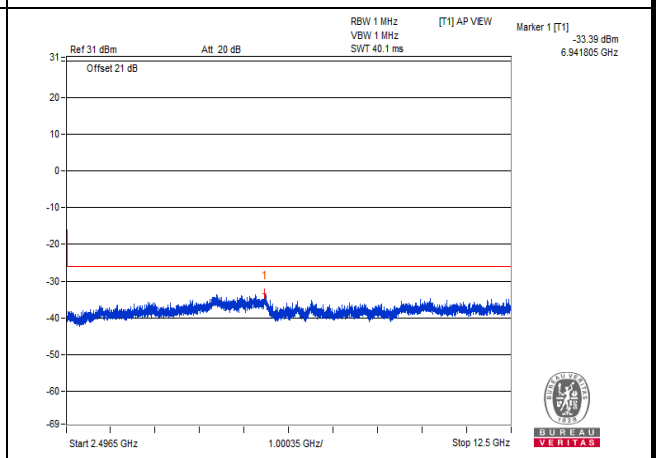












CH 13 (2472MHz)

802.11ax (RU106)

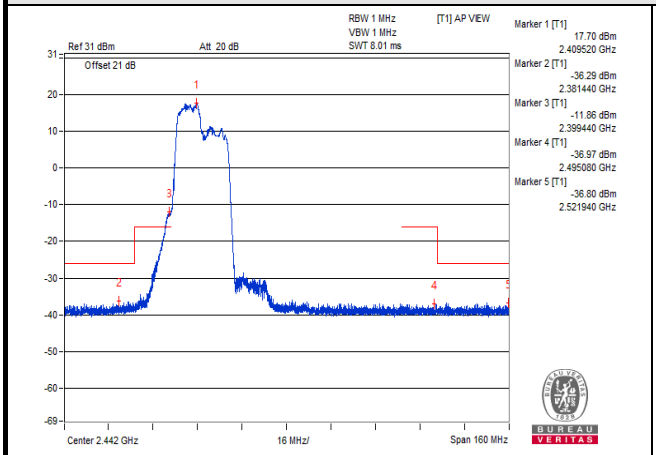
TEST CHANNEL		CH 1 (2412MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	952.106	0.001845	0.25	PASS
	1000.0 to 2387.0	2381.452	0.176604	2.5	PASS
	2387.0 to 2400.0	2399.512	0.333087	25	PASS(1)
	2483.5 to 2496.5	2484.271	0.279254	25	PASS
	2496.5 to 12500.0	6751.738	0.540754	2.5	PASS
$V_{max.}$	30.0 to 1000.0	923.127	0.002350	0.25	PASS
	1000.0 to 2387.0	1001.907	0.186209	2.5	PASS
	2387.0 to 2400.0	2399.380	0.174077	25	PASS(2)
	2483.5 to 2496.5	2487.328	0.218273	25	PASS
	2496.5 to 12500.0	6085.255	0.443609	2.5	PASS
$V_{min.}$	30.0 to 1000.0	578.171	0.001828	0.25	PASS
	1000.0 to 2387.0	2250.380	0.176604	2.5	PASS
	2387.0 to 2400.0	2399.389	0.183974	25	PASS(3)
	2483.5 to 2496.5	2493.300	0.223357	25	PASS
	2496.5 to 12500.0	6995.574	0.504661	2.5	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	938.768	0.001828	0.25	PASS
	1000.0 to 2387.0	1578.032	0.173780	2.5	PASS
	2387.0 to 2400.0	2398.275	0.255270	25	PASS
	2483.5 to 2496.5	2491.220	0.291743	25	PASS
	2496.5 to 12500.0	6737.984	0.467735	2.5	PASS
$V_{max.}$	30.0 to 1000.0	848.316	0.002014	0.25	PASS
	1000.0 to 2387.0	2186.751	0.176604	2.5	PASS
	2387.0 to 2400.0	2399.008	0.218273	25	PASS
	2483.5 to 2496.5	2491.023	0.330370	25	PASS
	2496.5 to 12500.0	6979.318	0.487528	2.5	PASS
$V_{min.}$	30.0 to 1000.0	726.945	0.002113	0.25	PASS
	1000.0 to 2387.0	2383.185	0.162181	2.5	PASS
	2387.0 to 2400.0	2393.864	0.238232	25	PASS
	2483.5 to 2496.5	2487.513	0.251189	25	PASS
	2496.5 to 12500.0	6843.020	0.466659	2.5	PASS

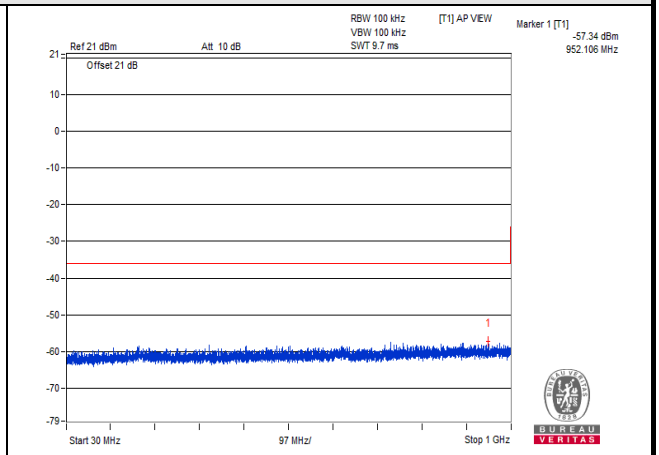
TEST CHANNEL		CH 13 (2472MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(uW)	LIMIT (uW)	RESULT
V_{normal}	30.0 to 1000.0	851.105	0.002366	0.25	PASS
	1000.0 to 2387.0	2161.785	0.155955	2.5	PASS
	2387.0 to 2400.0	2392.518	0.228560	25	PASS
	2483.5 to 2496.5	2483.574	0.254013	25	PASS(4)
	2496.5 to 12500.0	5813.910	0.465586	2.5	PASS
$V_{max.}$	30.0 to 1000.0	891.723	0.002014	0.25	PASS
	1000.0 to 2387.0	2330.826	0.172187	2.5	PASS
	2387.0 to 2400.0	2391.925	0.215774	25	PASS
	2483.5 to 2496.5	2483.511	0.263905	25	PASS(5)
	2496.5 to 12500.0	6959.311	0.457088	2.5	PASS
$V_{min.}$	30.0 to 1000.0	859.350	0.001742	0.25	PASS
	1000.0 to 2387.0	1617.041	0.167109	2.5	PASS
	2387.0 to 2400.0	2395.224	0.224905	25	PASS
	2483.5 to 2496.5	2483.543	0.255021	25	PASS(6)
	2496.5 to 12500.0	6828.015	0.463447	2.5	PASS

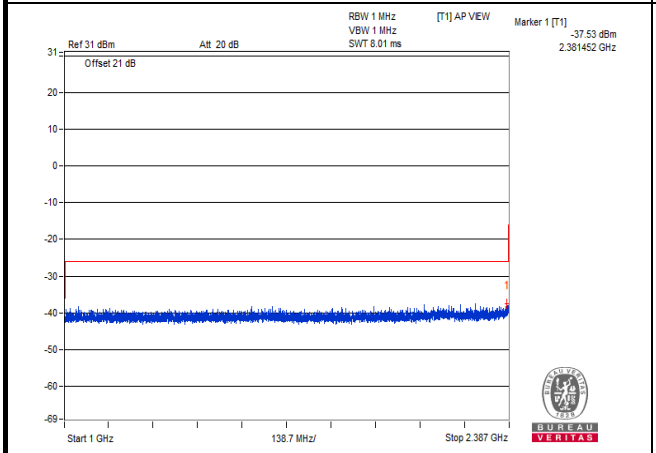
NOTE: 1. The spectrum plots are attached on the following pages.

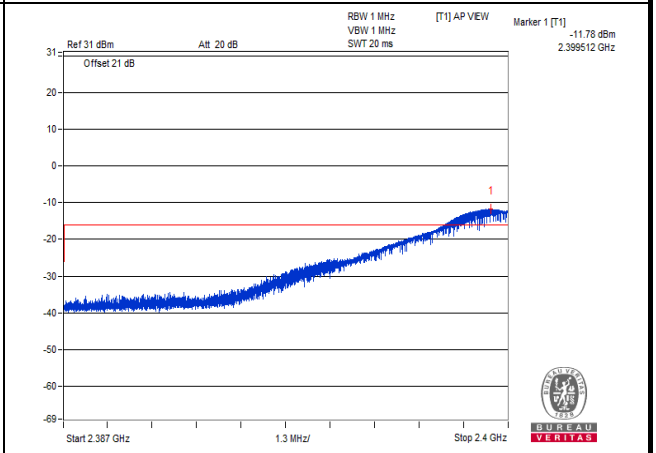
2. (No.): The value was tested under Measuring Mode *Zero Span.

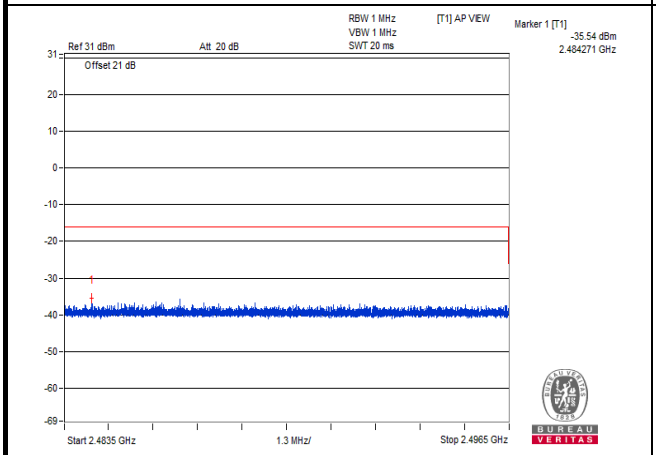
Vnormal

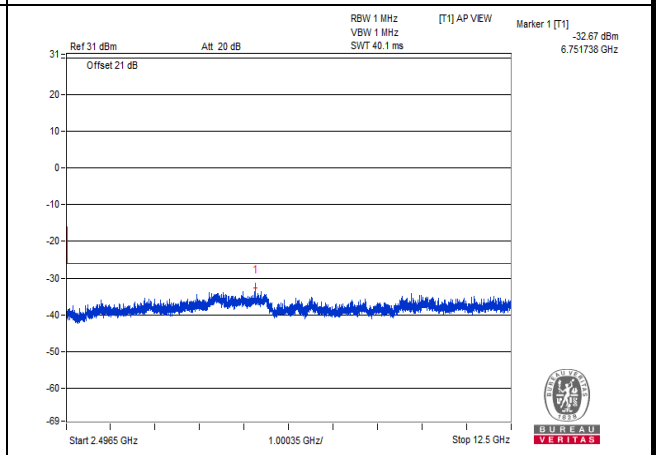






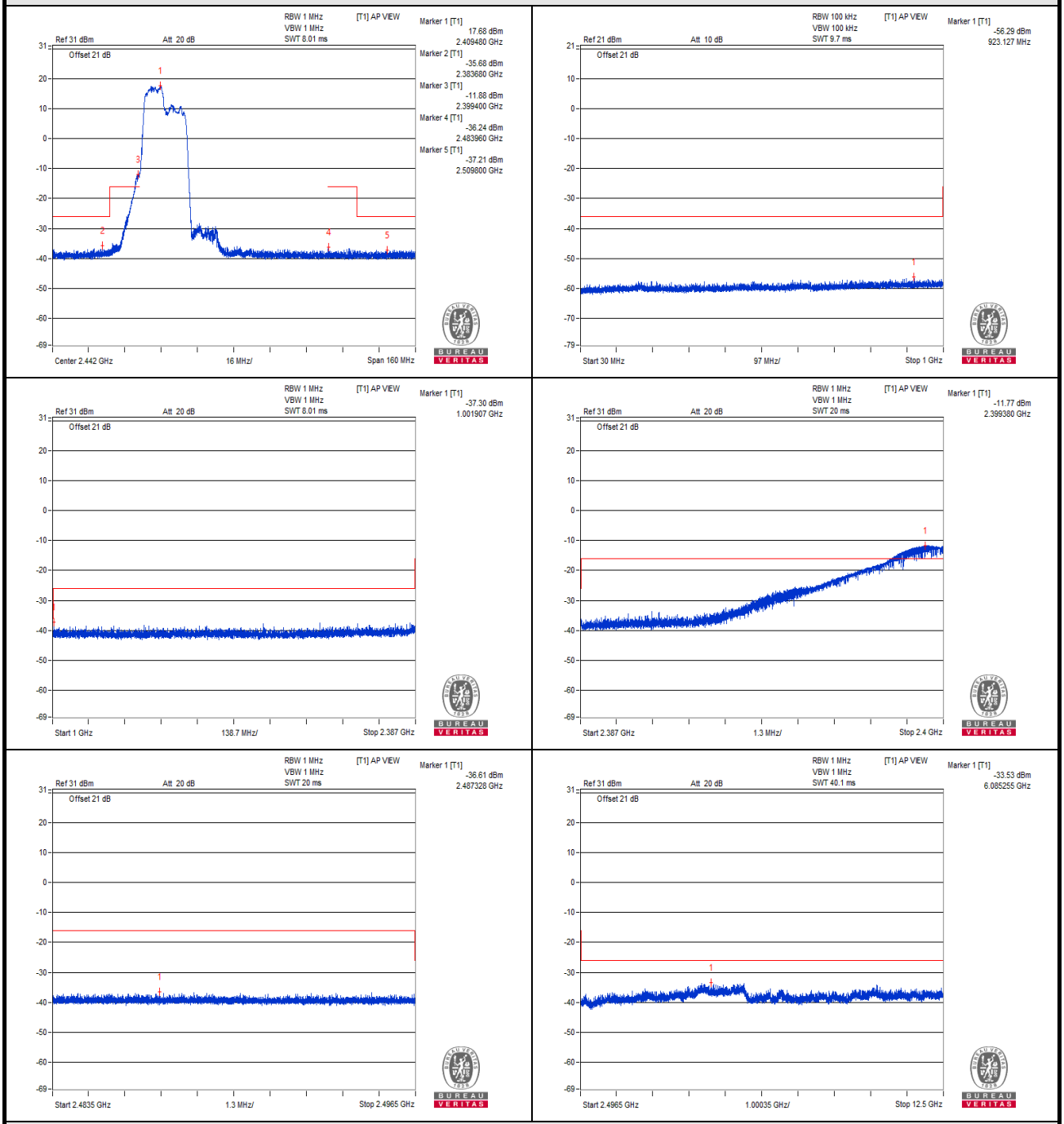






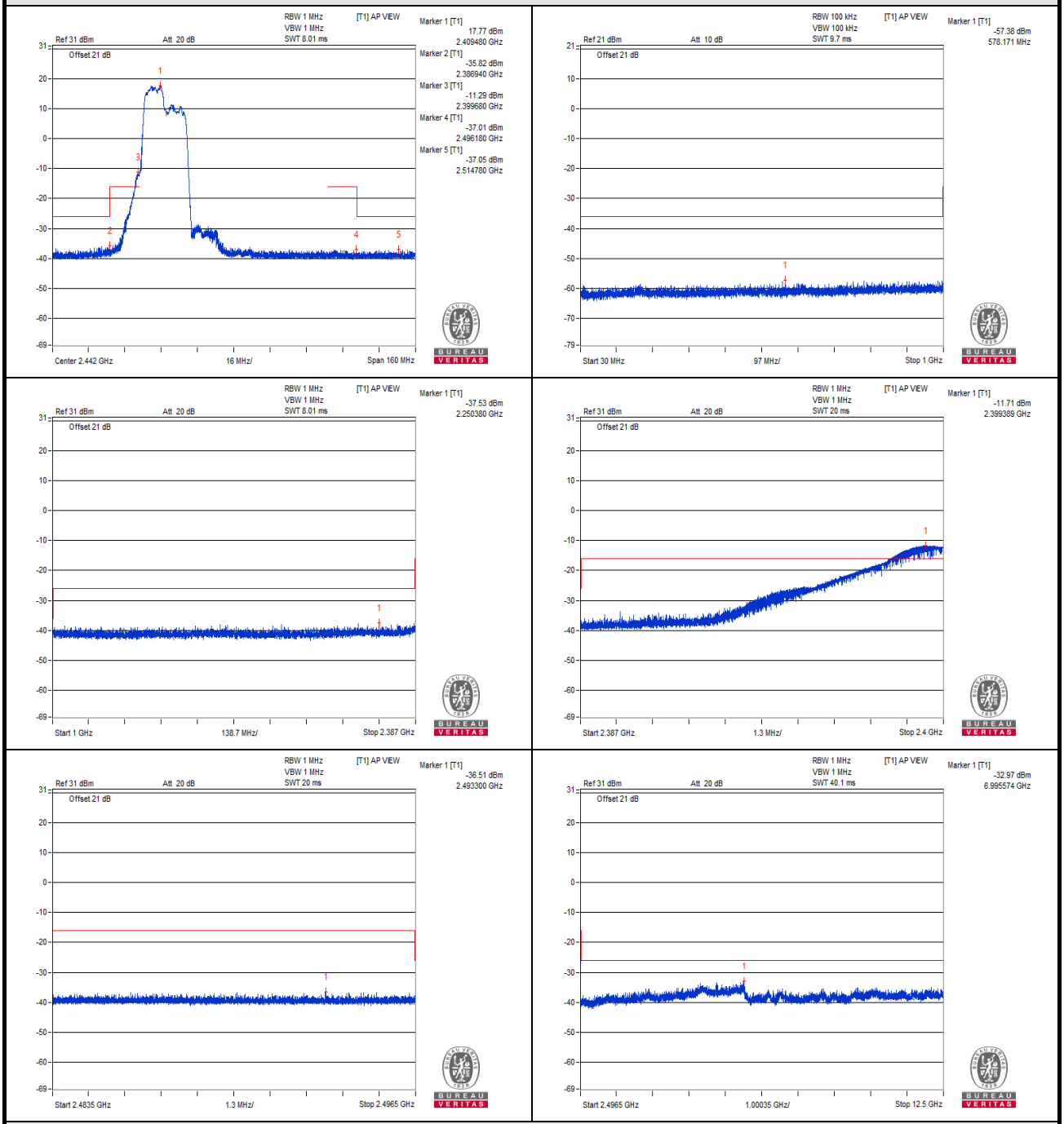
CH 1 (2412MHz)

Vmax.



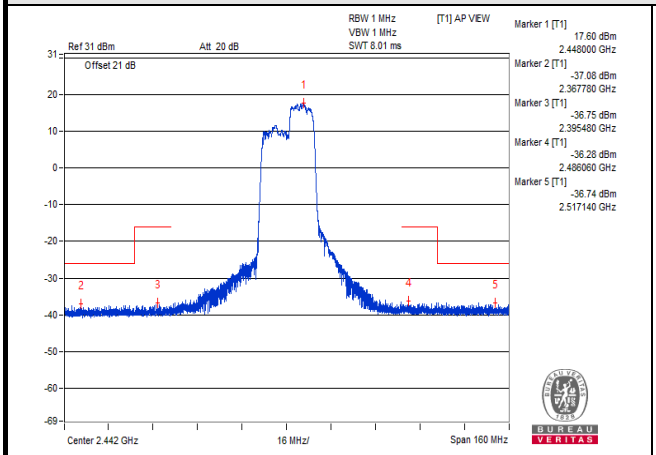
CH 1 (2412MHz)

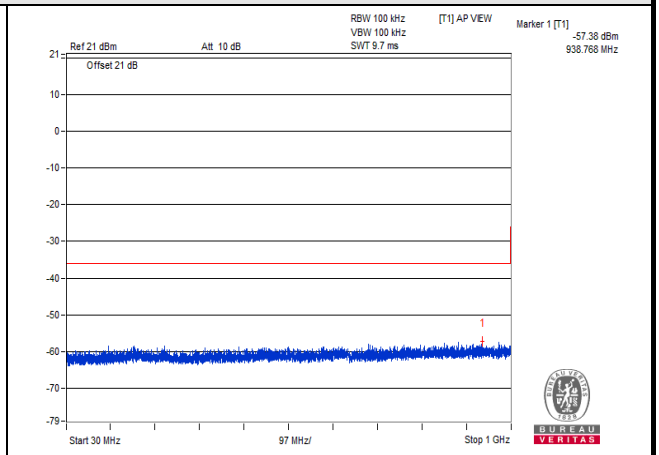
Vmin.

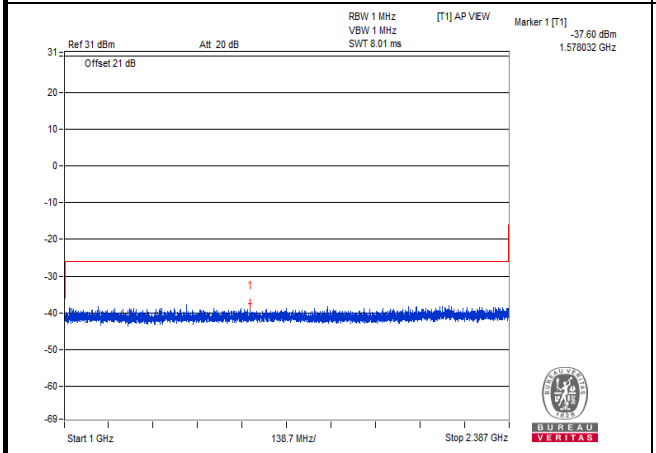


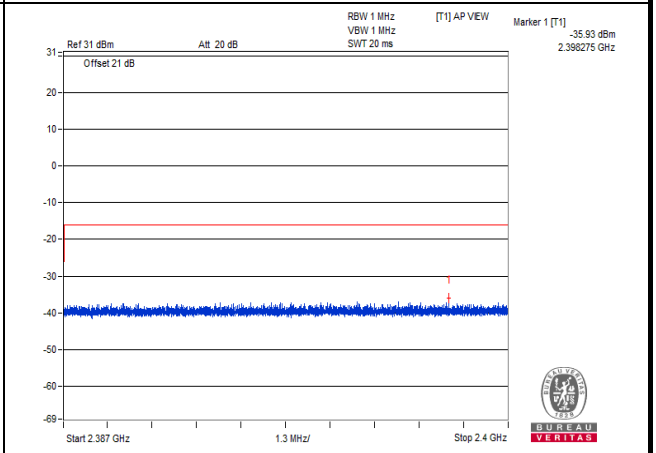
CH 1 (2412MHz)

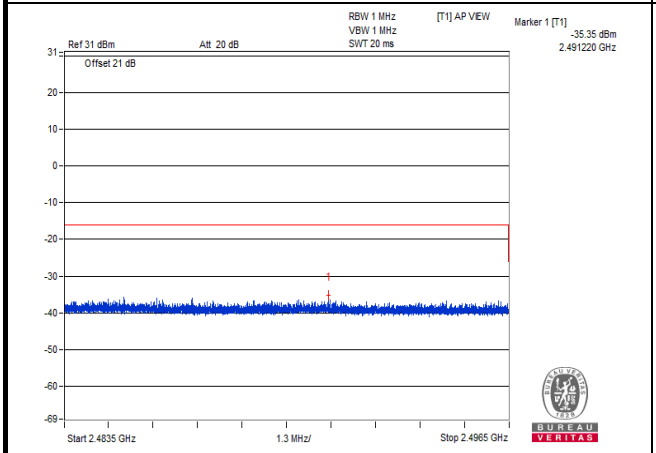
Vnormal

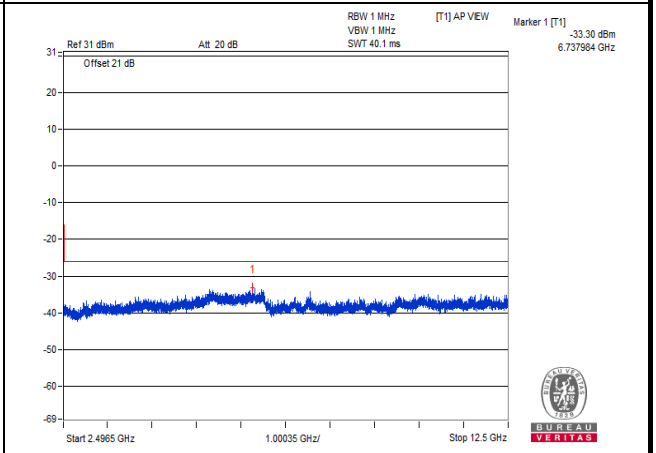






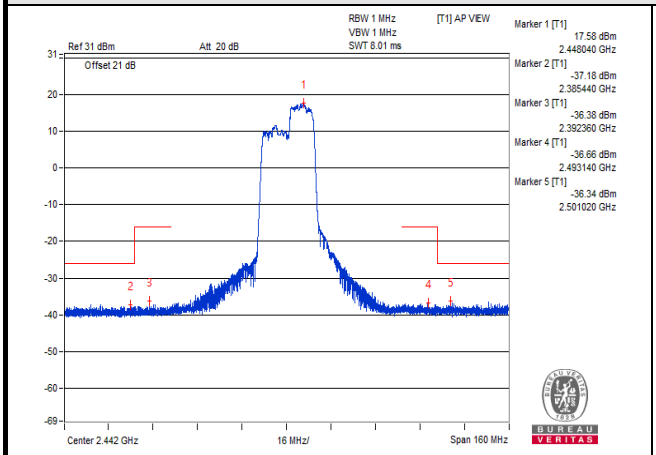


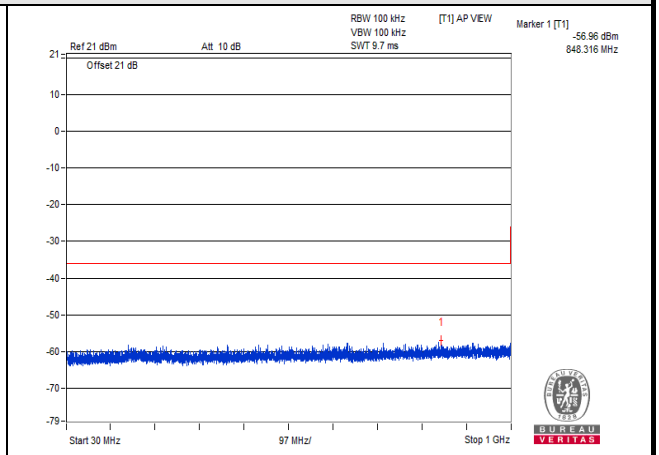


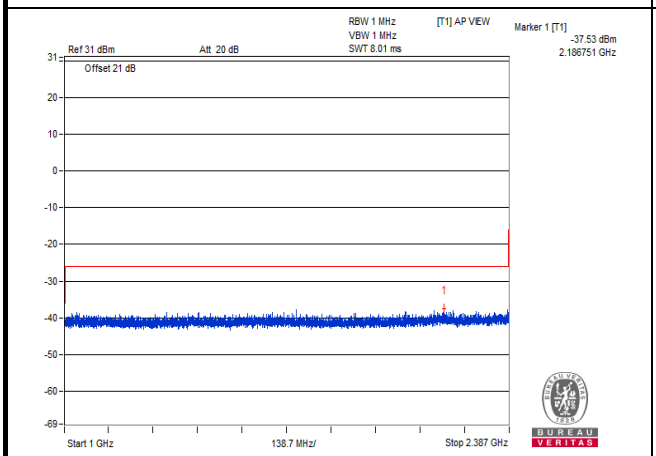


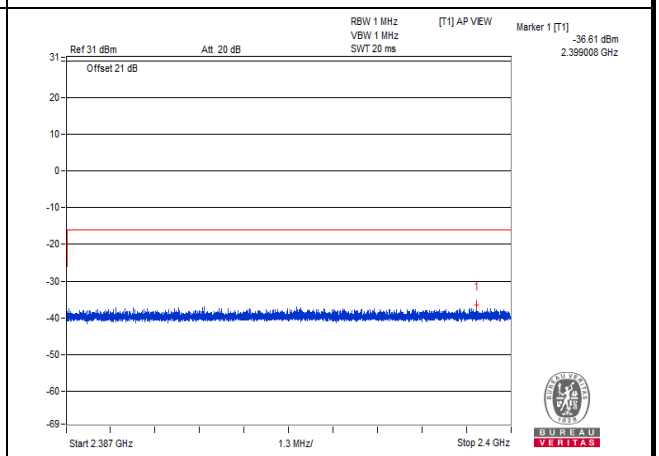
CH 7 (2442MHz)

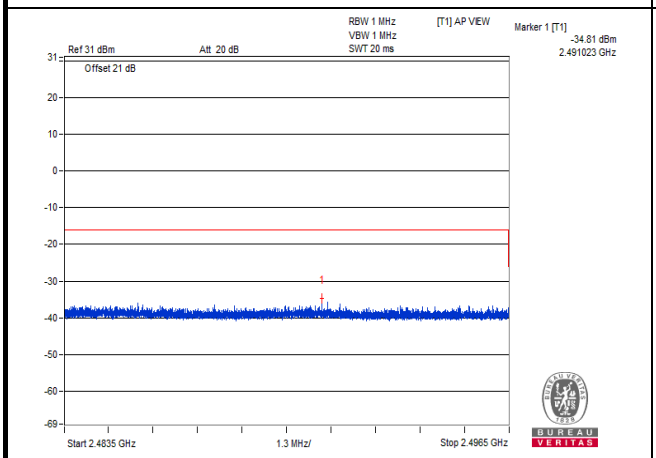
Vmax.

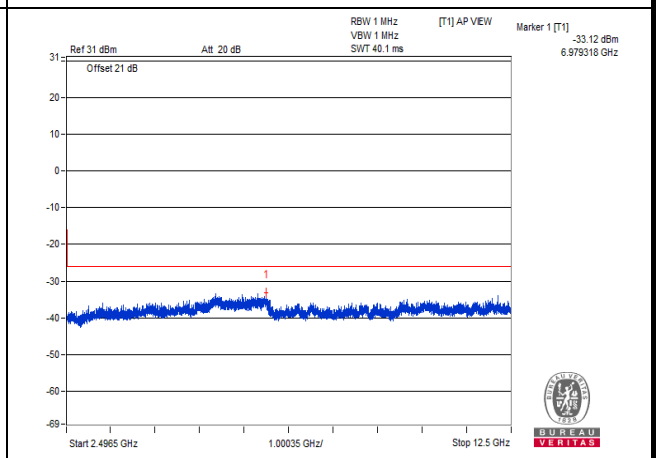






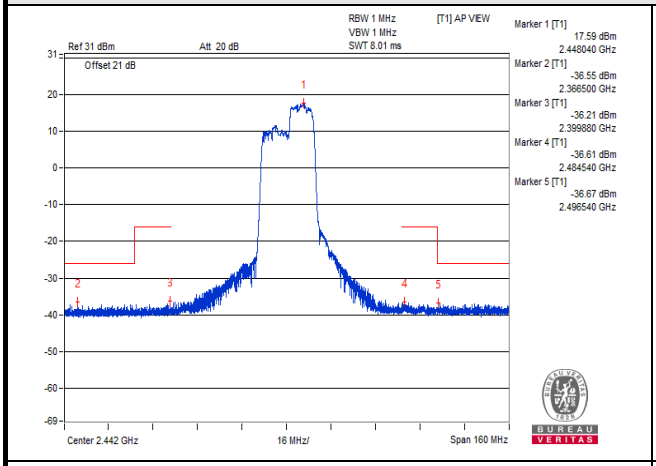


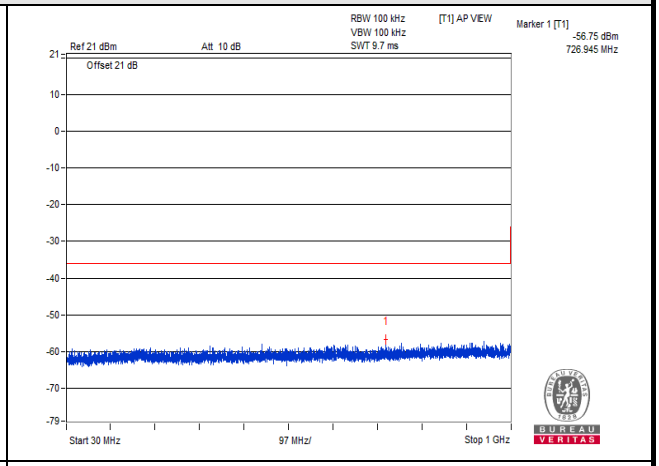


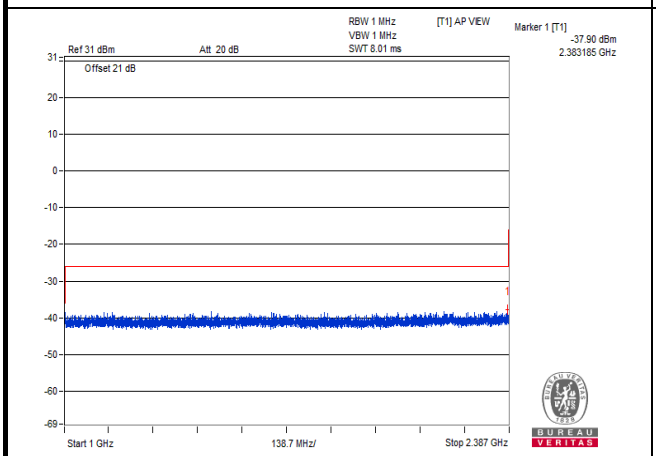


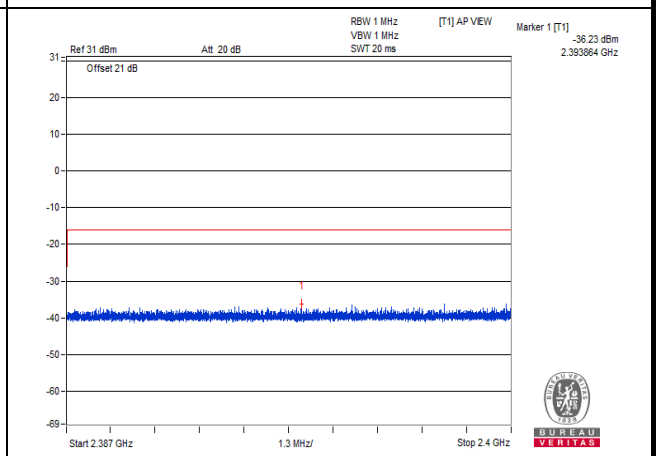
CH 7 (2442MHz)

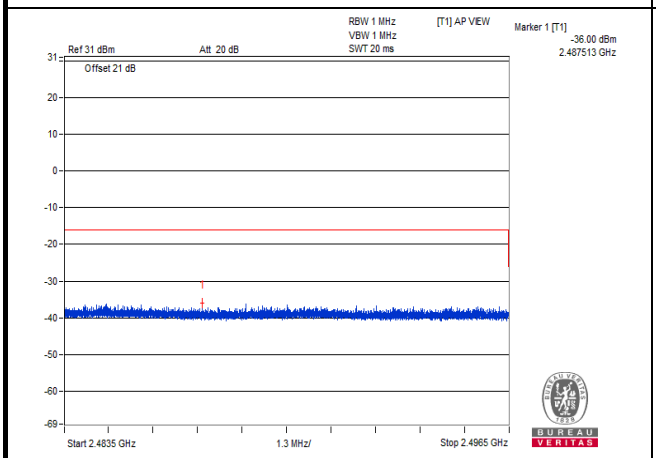
Vmin.

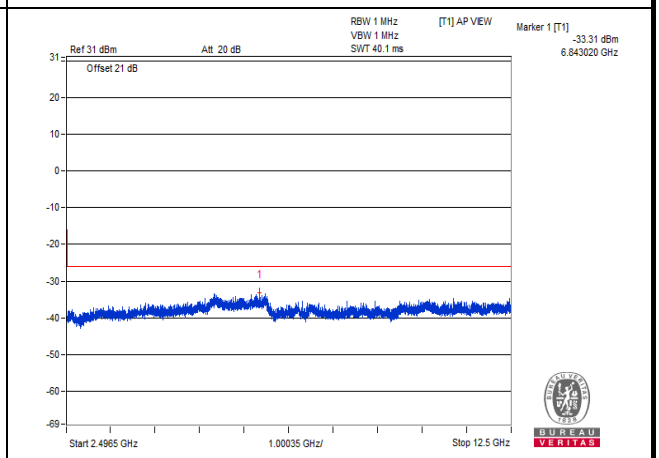






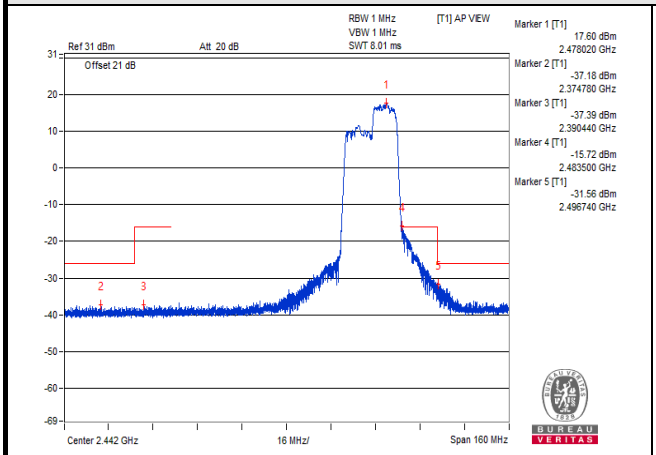


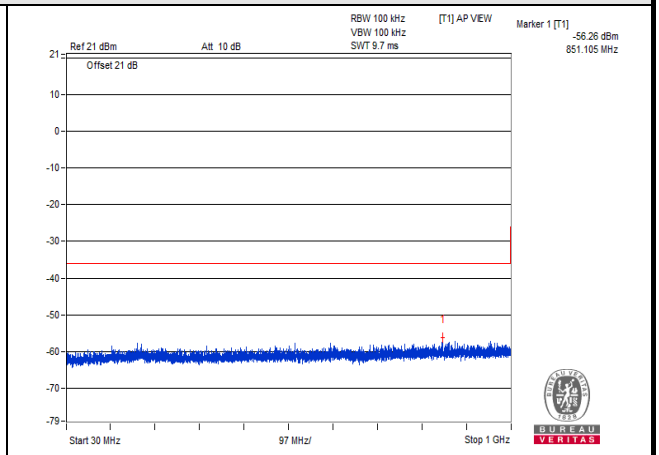


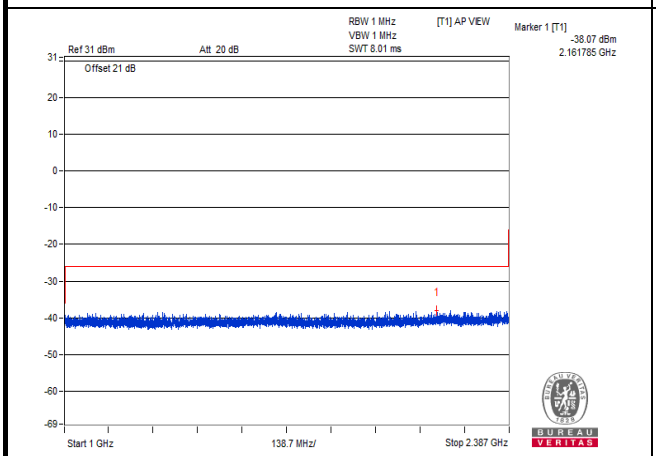


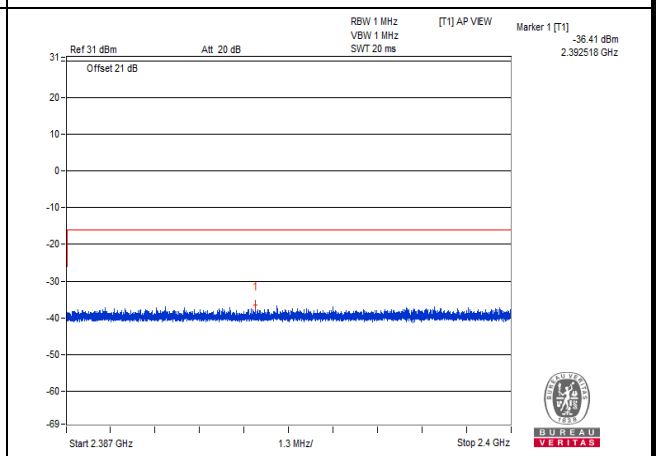
CH 7 (2442MHz)

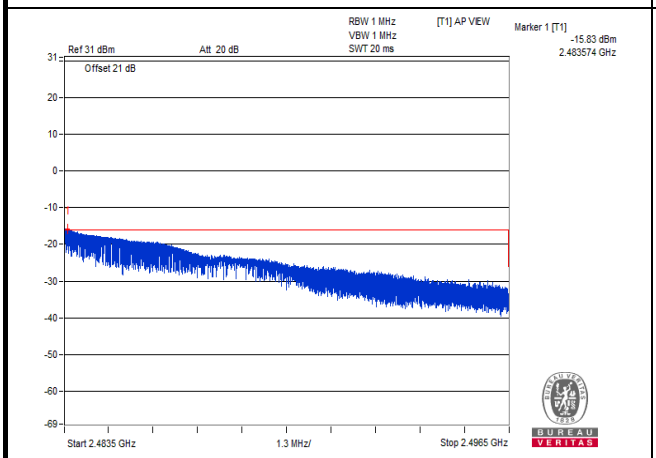
Vnormal

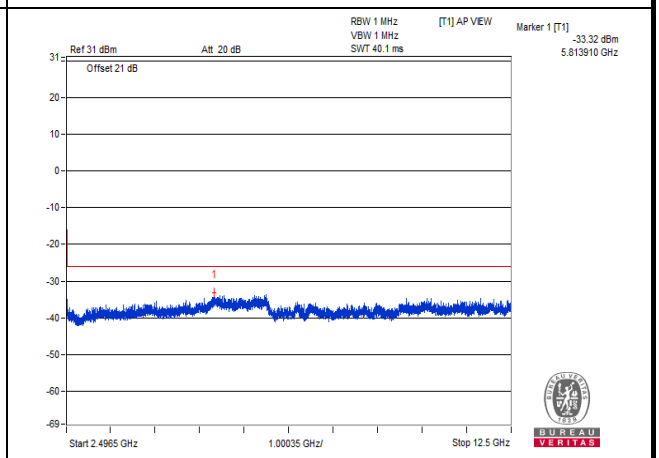






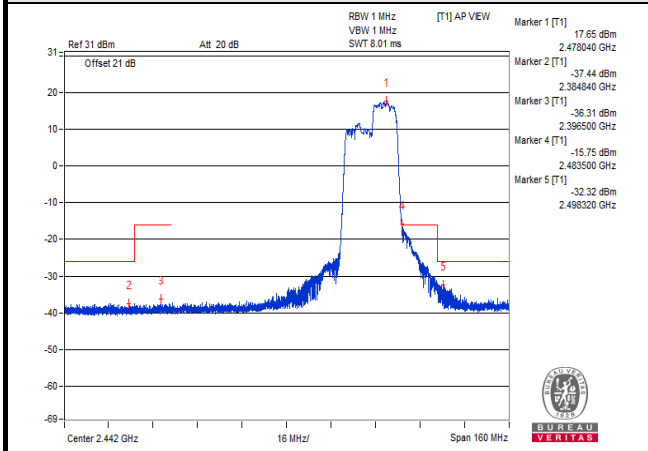


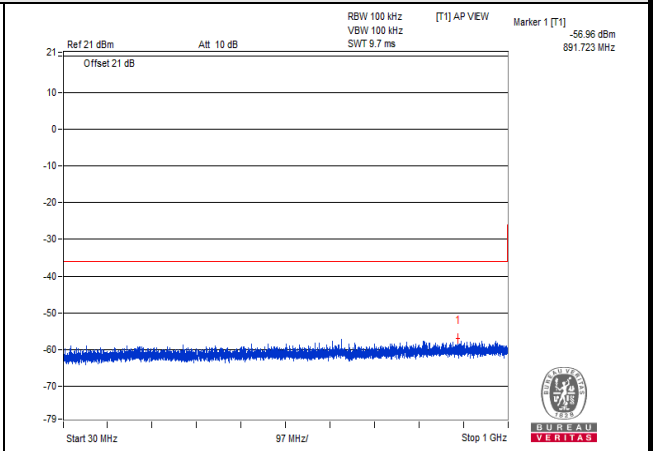


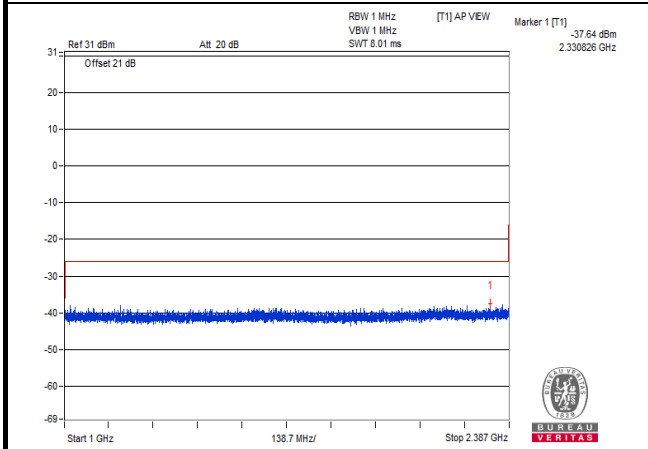


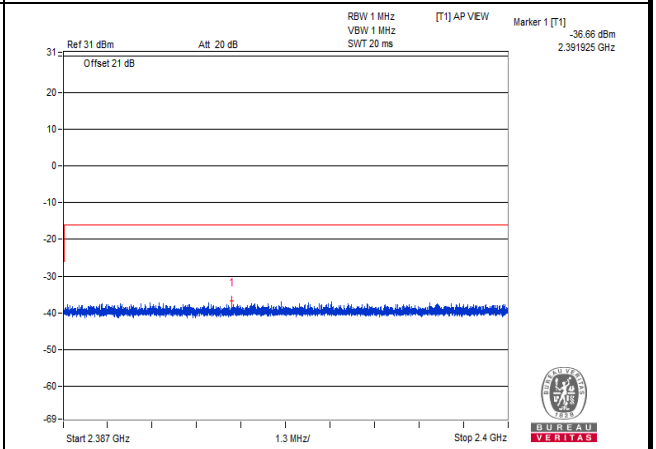
CH 13 (2472MHz)

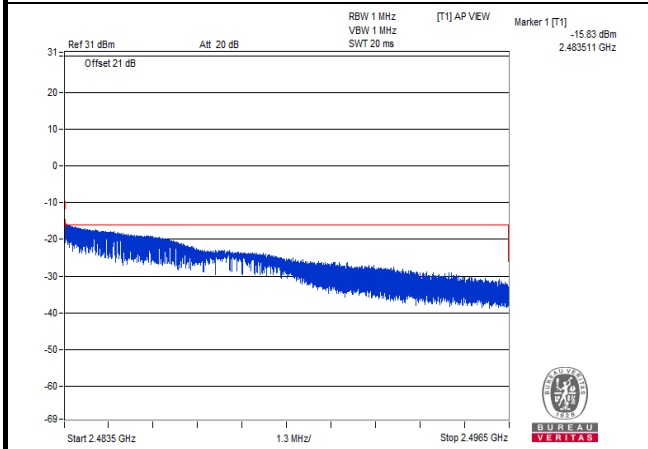
Vmax.

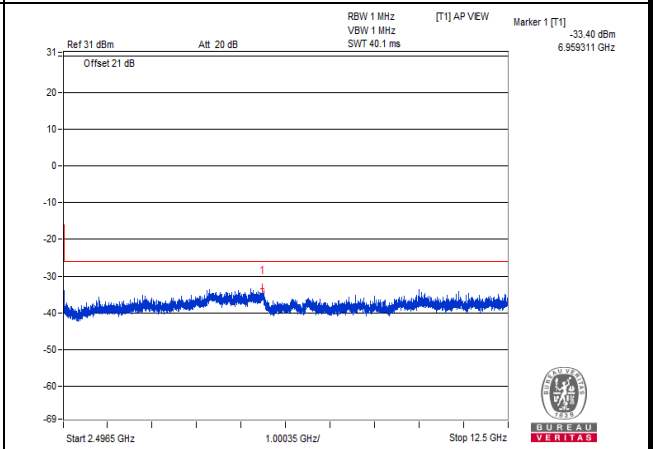






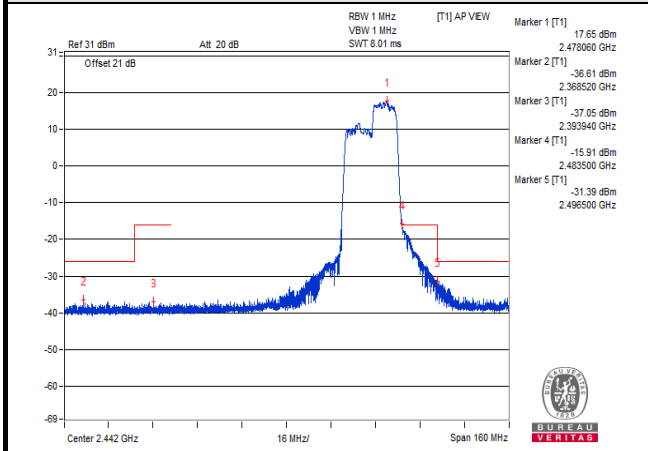


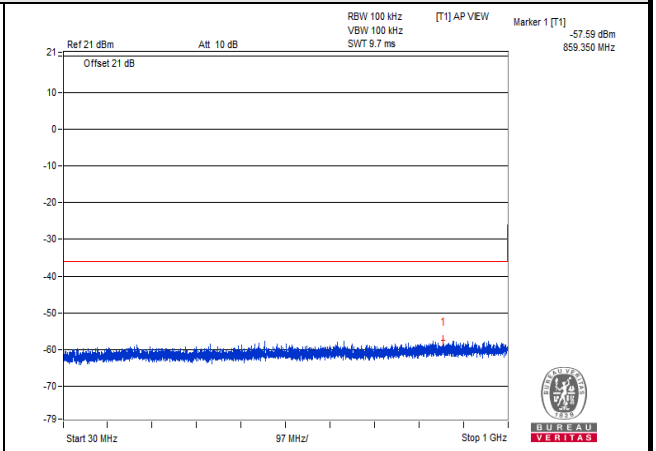


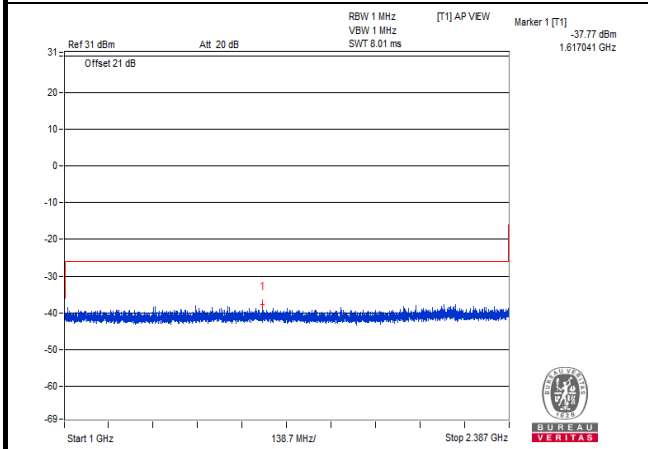


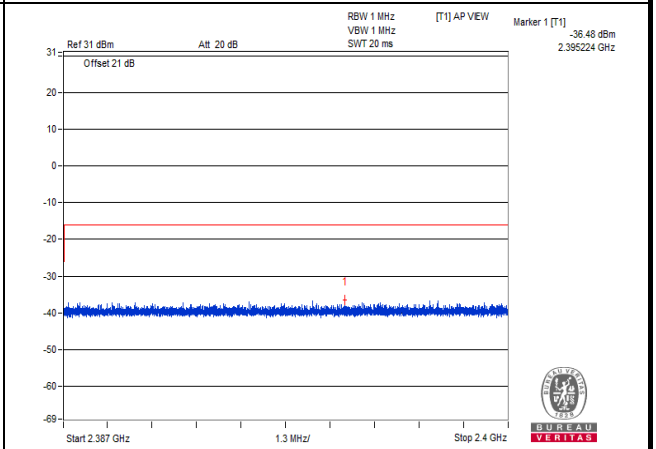
CH 13 (2472MHz)

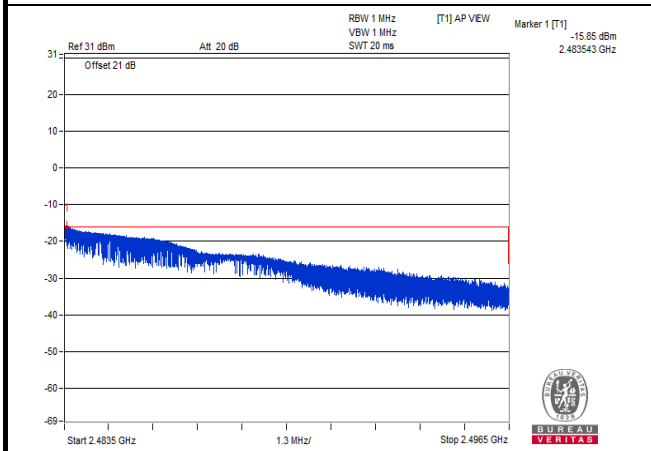
Vmin.

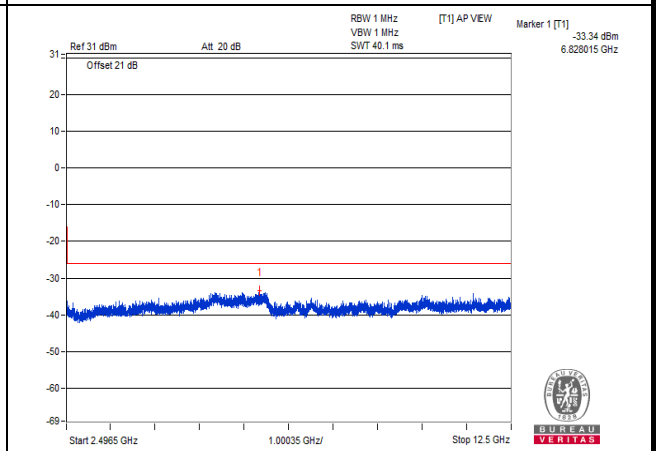








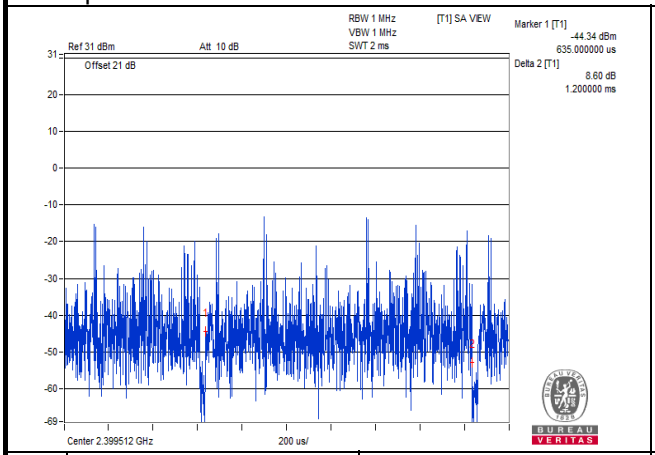




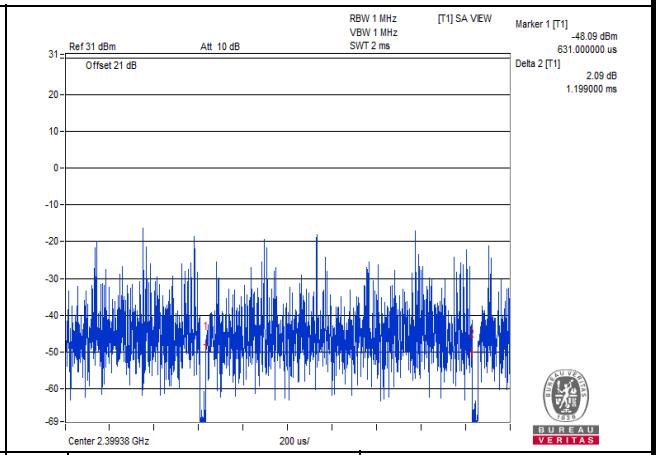
CH 13 (2472MHz)

Measuring Mode *Zero Span

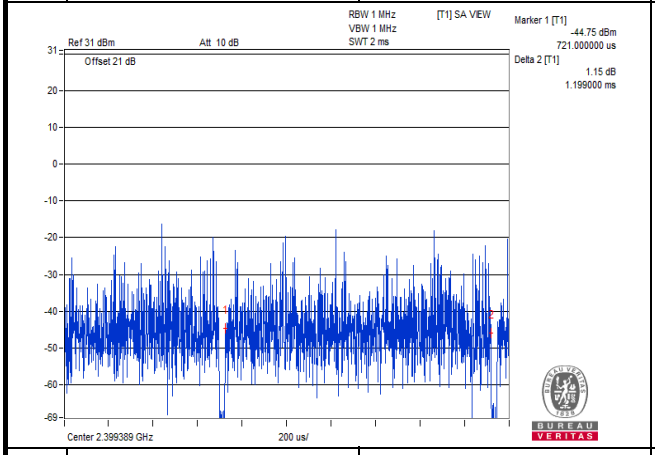
1. Set the spectrum analyzer as below and it takes in a value of all data point.
2. Regarding the all data value, it transforms the “dBm” value into “uW” value.
3. It adds the all values and calculates a grand total. Define a grand total as “P”.
4. It divides “P” by sample data point (ex.501) and calculates the mean value.
5. It reports the mean value.



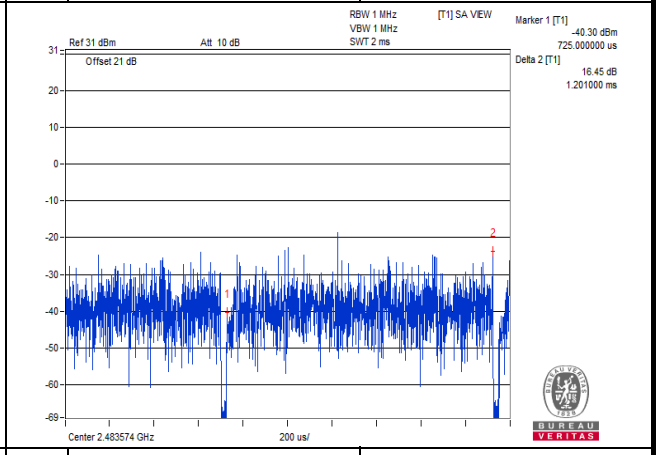
1	2399.512MHz	P = 0.333087uW



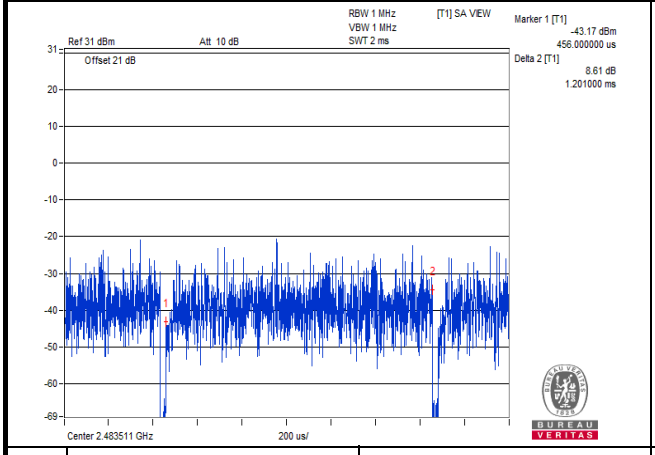
2	2399.380MHz	P = 0.174077uW



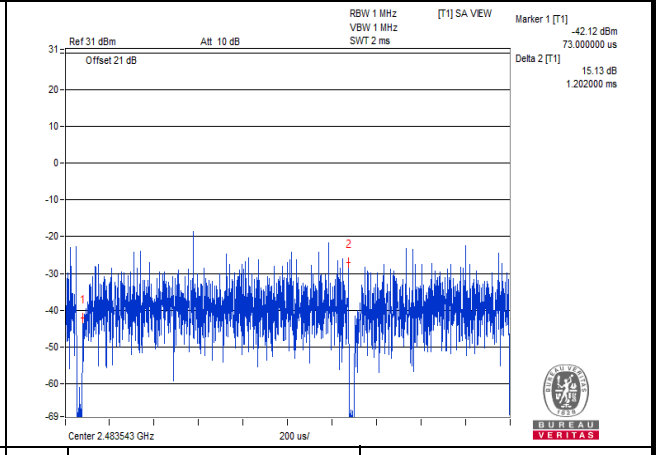
3	2399.389MHz	P = 0.183974uW



4	2483.574MHz	P = 0.254013uW



5	2483.511MHz	P = 0.263905uW



6	2483.543MHz	P = 0.255021uW

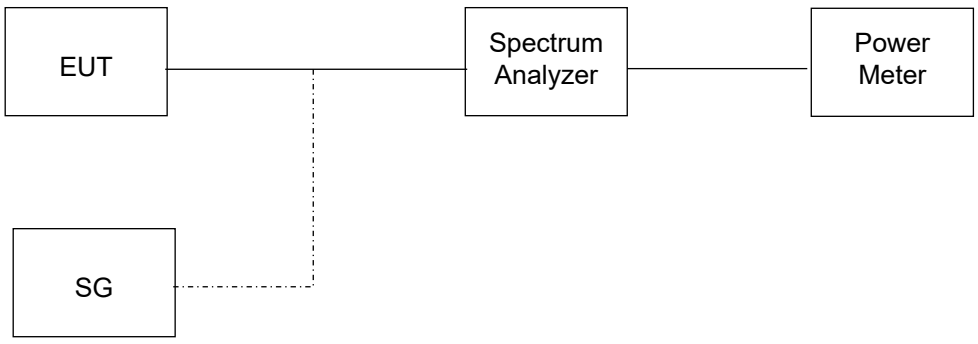
4.5 Antenna Power Measurement

4.5.1 Limits of Antenna Power

Modulation Method	Frequency Band Used	Antenna Power (Max.)	EIRP Limit (Note 3)
DSSS	2400 – 2483.5 MHz	10mW/MHz	12.14 dBm/MHz ~ 22.14 dBm/MHz (16.368 mW/MHz ~ 163.68 mW/MHz)
OFDM (Note 1)	2400 – 2483.5 MHz	10mW/MHz	12.14 dBm/MHz ~ 22.14 dBm/MHz (16.368 mW/MHz ~ 163.68 mW/MHz)
OFDM (Note 2)	2400 – 2483.5 MHz	5 mW/MHz	9.13 dBm/MHz ~ 19.13 dBm/MHz (8.184 mW/MHz ~ 81.84 mW/MHz)
Modulation System	**Frequency Band Used**	**Antenna Power (Max.)**	**EIRP Limit**
DS	2471 – 2497 MHz	10mW/MHz	12.14 dBm/MHz (16.368 mW/MHz)

Note:
1. Occupied bandwidth is less than 26MHz
2. Occupied bandwidth is more that 26MHz and less than 38MHz
3. EIRP limit is variable by the HPBA, the HPBA (half-power beam width) of the antenna shall be 360/A degrees or less, where A = EIRP/(2.14 dBi + “Antenna Power (limit)).
4. Tolerance of antenna power shall be +20% (upper value) and –80% (lower value).

4.5.2 Test Setup



4.5.3 Test Results (Mode 1)

802.11b

Voltage (Vdc)	Channel Number	Frequency (MHz)	Conducted RF Output Power Density (mW/MHz)			Radiated RF Output Power Density (mW/MHz)
			Chain 0	Chain 1	Total Power Density	
3.3	1	2412	3.366	3.742	7.108	15.913
	7	2442	3.148	3.549	6.697	14.993
	13	2472	3.444	3.691	7.135	15.973
	14	2484	3.267	3.708	6.975	15.615
3.63	1	2412	3.327	3.733	7.06	15.805
	7	2442	3.32	3.785	7.105	15.906
	13	2472	3.565	3.648	7.213	16.148
	14	2484	3.343	3.716	7.059	15.803
2.97	1	2412	3.244	3.716	6.96	15.581
	7	2442	3.289	3.533	6.822	15.273
	13	2472	3.282	3.674	6.956	15.573
	14	2484	3.244	3.557	6.801	15.226
Max. Limit (mW/MHz):					10	-
Rated Power (mW/MHz):					7.3	-
Tolerance of Antenna Power (mW/MHz):					1.46 ~ 8.76	-
Max. EIRP Limit (mW/MHz):					-	16.368

Note: 1. Antenna gain is 3.5 dBi.

2. The radiated RF output power density is a “calculated” value derived from the conducted value.

3. Formula: Radiated RF output power density = Conducted RF output power density + Antenna gain

802.11g

Voltage (Vdc)	Channel Number	Frequency (MHz)	Conducted RF Output Power Density (mW/MHz)			Radiated RF Output Power Density (mW/MHz)
			Chain 0	Chain 1	Total Power Density	
3.3	1	2412	3.582	3.648	7.23	16.186
	7	2442	3.468	3.716	7.184	16.083
	13	2472	3.381	3.674	7.055	15.794
3.63	1	2412	3.397	3.691	7.088	15.868
	7	2442	3.533	3.716	7.249	16.228
	13	2472	3.358	3.648	7.006	15.684
2.97	1	2412	3.405	3.829	7.234	16.195
	7	2442	3.444	3.699	7.143	15.991
	13	2472	3.508	3.742	7.25	16.231
Max. Limit (mW/MHz):					10	-
Rated Power (mW/MHz):					7.3	-
Tolerance of Antenna Power (mW/MHz):					1.46 ~ 8.76	-
Max. EIRP Limit (mW/MHz):					-	16.368

Note: 1. Antenna gain is 3.5 dBi.

2. The radiated RF output power density is a “calculated” value derived from the conducted value.

3. Formula: Radiated RF output power density = Conducted RF output power density + Antenna gain

VHT20

Voltage (Vdc)	Channel Number	Frequency (MHz)	Conducted RF Output Power Density (mW/MHz)			Radiated RF Output Power Density (mW/MHz)
			Chain 0	Chain 1	Total Power Density	
3.3	1	2412	3.374	3.533	6.907	15.463
	7	2442	3.5	3.751	7.251	16.233
	13	2472	3.374	3.708	7.082	15.855
3.63	1	2412	3.428	3.811	7.239	16.206
	7	2442	3.374	3.533	6.907	15.463
	13	2472	3.358	3.59	6.948	15.555
2.97	1	2412	3.46	3.785	7.245	16.22
	7	2442	3.549	3.59	7.139	15.982
	13	2472	3.312	3.549	6.861	15.36
Max. Limit (mW/MHz):					10	-
Rated Power (mW/MHz):					7.3	-
Tolerance of Antenna Power (mW/MHz):					1.46 ~ 8.76	-
Max. EIRP Limit (mW/MHz):					-	16.368

Note: 1. Antenna gain is 3.5 dBi.

2. The radiated RF output power density is a “calculated” value derived from the conducted value.

3. Formula: Radiated RF output power density = Conducted RF output power density + Antenna gain

VHT40

Voltage (Vdc)	Channel Number	Frequency (MHz)	Conducted RF Output Power Density (mW/MHz)			Radiated RF Output Power Density (mW/MHz)
			Chain 0	Chain 1	Total Power Density	
3.3	3	2422	1.675	1.799	3.474	7.777
	7	2442	1.691	1.85	3.541	7.927
	11	2462	1.71	1.82	3.53	7.903
3.63	3	2422	1.71	1.901	3.611	8.084
	7	2442	1.75	1.787	3.537	7.918
	11	2462	1.645	1.791	3.436	7.692
2.97	3	2422	1.742	1.812	3.554	7.956
	7	2442	1.742	1.812	3.554	7.956
	11	2462	1.726	1.897	3.623	8.111
Max. Limit (mW/MHz):					5	-
Rated Power (mW/MHz):					3.65	-
Tolerance of Antenna Power (mW/MHz):					0.73 ~ 4.38	-
Max. EIRP Limit (mW/MHz):					-	8.184

Note: 1. Antenna gain is 3.5 dBi.

2. The radiated RF output power density is a “calculated” value derived from the conducted value.

3. Formula: Radiated RF output power density = Conducted RF output power density + Antenna gain

802.11ax (HE20)

Voltage (Vdc)	Channel Number	Frequency (MHz)	Conducted RF Output Power Density (mW/MHz)			Radiated RF Output Power Density (mW/MHz)
			Chain 0	Chain 1	Total Power Density	
3.3	1	2412	3.428	3.598	7.026	15.729
	7	2442	3.516	3.607	7.123	15.946
	13	2472	3.508	3.64	7.148	16.002
3.63	1	2412	3.468	3.565	7.033	15.745
	7	2442	3.35	3.665	7.015	15.705
	13	2472	3.533	3.524	7.057	15.799
2.97	1	2412	3.312	3.64	6.952	15.564
	7	2442	3.516	3.648	7.164	16.038
	13	2472	3.358	3.665	7.023	15.723
Max. Limit (mW/MHz):					10	-
Rated Power (mW/MHz):					7.3	-
Tolerance of Antenna Power (mW/MHz):					1.46 ~ 8.76	-
Max. EIRP Limit (mW/MHz):					-	16.368

Note: 1. Antenna gain is 3.5 dBi.

2. The radiated RF output power density is a “calculated” value derived from the conducted value.

3. Formula: Radiated RF output power density = Conducted RF output power density + Antenna gain

802.11ax (HE40)

Voltage (Vdc)	Channel Number	Frequency (MHz)	Conducted RF Output Power Density (mW/MHz)			Radiated RF Output Power Density (mW/MHz)
			Chain 0	Chain 1	Total Power Density	
3.3	3	2422	1.841	1.791	3.632	8.131
	7	2442	1.75	1.795	3.545	7.936
	11	2462	1.664	1.808	3.472	7.773
3.63	3	2422	1.783	1.766	3.549	7.945
	7	2442	1.742	1.795	3.537	7.918
	11	2462	1.808	1.799	3.607	8.075
2.97	3	2422	1.82	1.75	3.57	7.992
	7	2442	1.726	1.833	3.559	7.968
	11	2462	1.758	1.779	3.537	7.918
Max. Limit (mW/MHz):					5	-
Rated Power (mW/MHz):					3.65	-
Tolerance of Antenna Power (mW/MHz):					0.73 ~ 4.38	-
Max. EIRP Limit (mW/MHz):					-	8.184

Note: 1. Antenna gain is 3.5 dBi.

2. The radiated RF output power density is a “calculated” value derived from the conducted value.

3. Formula: Radiated RF output power density = Conducted RF output power density + Antenna gain

802.11ax (RU26)

Voltage (Vdc)	Channel Number	Frequency (MHz)	Conducted RF Output Power Density (mW/MHz)			Radiated RF Output Power Density (mW/MHz)
			Chain 0	Chain 1	Total Power Density	
3.3	1	2412	2.825	4.267	7.092	15.877
	7	2442	3.665	3.484	7.149	16.005
	13	2472	3.381	3.777	7.158	16.025
3.63	1	2412	2.819	4.257	7.076	15.841
	7	2442	3.5	3.327	6.827	15.284
	13	2472	3.32	3.708	7.028	15.734
2.97	1	2412	2.774	4.396	7.17	16.052
	7	2442	3.508	3.59	7.098	15.89
	13	2472	3.282	3.838	7.12	15.94
Max. Limit (mW/MHz):					10	-
Rated Power (mW/MHz):					7.2	-
Tolerance of Antenna Power (mW/MHz):					1.44 ~ 8.64	-
Max. EIRP Limit (mW/MHz):					-	16.368

Note: 1. Antenna gain is 3.5 dBi.

2. The radiated RF output power density is a “calculated” value derived from the conducted value.

3. Formula: Radiated RF output power density = Conducted RF output power density + Antenna gain

802.11ax (RU52)

Voltage (Vdc)	Channel Number	Frequency (MHz)	Conducted RF Output Power Density (mW/MHz)			Radiated RF Output Power Density (mW/MHz)
			Chain 0	Chain 1	Total Power Density	
3.3	1	2412	3.366	3.891	7.257	16.246
	7	2442	3.565	3.648	7.213	16.148
	13	2472	3.229	3.955	7.184	16.083
3.63	1	2412	3.304	3.733	7.037	15.754
	7	2442	3.541	3.557	7.098	15.89
	13	2472	3.134	3.856	6.99	15.649
2.97	1	2412	3.358	3.785	7.143	15.991
	7	2442	3.46	3.623	7.083	15.857
	13	2472	3.163	4.047	7.21	16.141
Max. Limit (mW/MHz):					10	-
Rated Power (mW/MHz):					7.3	-
Tolerance of Antenna Power (mW/MHz):					1.46 ~ 8.76	-
Max. EIRP Limit (mW/MHz):					-	16.368

Note: 1. Antenna gain is 3.5 dBi.
2. The radiated RF output power density is a “calculated” value derived from the conducted value.
3. Formula: Radiated RF output power density = Conducted RF output power density + Antenna gain

802.11ax (RU106)

Voltage (Vdc)	Channel Number	Frequency (MHz)	Conducted RF Output Power Density (mW/MHz)			Radiated RF Output Power Density (mW/MHz)
			Chain 0	Chain 1	Total Power Density	
3.3	1	2412	3.259	3.909	7.168	16.047
	7	2442	3.397	3.803	7.2	16.119
	13	2472	3.327	3.674	7.001	15.673
3.63	1	2412	3.222	3.918	7.14	15.984
	7	2442	3.366	3.803	7.169	16.049
	13	2472	3.267	3.829	7.096	15.886
2.97	1	2412	3.192	3.927	7.119	15.937
	7	2442	3.327	3.725	7.052	15.787
	13	2472	3.237	3.829	7.066	15.819
Max. Limit (mW/MHz):					10	-
Rated Power (mW/MHz):					7.3	-
Tolerance of Antenna Power (mW/MHz):					1.46 ~ 8.76	-
Max. EIRP Limit (mW/MHz):					-	16.368

Note: 1. Antenna gain is 3.5 dBi.
2. The radiated RF output power density is a “calculated” value derived from the conducted value.
3. Formula: Radiated RF output power density = Conducted RF output power density + Antenna gain

4.5.4 Test Results (Mode 2)

802.11b

Voltage (Vdc)	Channel Number	Frequency (MHz)	Conducted RF Output Power Density (mW/MHz)	Radiated RF Output Power Density (mW/MHz)
3.3	1	2412	7.246	16.222
	7	2442	6.809	15.243
	13	2472	6.968	15.599
	14	2484	6.952	15.564
3.63	1	2412	7.229	16.184
	7	2442	7.263	16.26
	13	2472	6.888	15.42
	14	2484	6.968	15.599
2.97	1	2412	7.196	16.11
	7	2442	6.778	15.174
	13	2472	6.936	15.528
	14	2484	6.67	14.932
Max. Limit (mW/MHz):			10	-
Rated Power (mW/MHz):			7.3	-
Tolerance of Antenna Power (mW/MHz):			1.46 ~ 8.76	-
Max. EIRP Limit (mW/MHz):			-	16.368

Note: 1. Antenna gain is 3.5 dBi.
2. The radiated RF output power density is a “calculated” value derived from the conducted value.
3. Formula: Radiated RF output power density = Conducted RF output power density + Antenna gain

802.11g

Voltage (Vdc)	Channel Number	Frequency (MHz)	Conducted RF Output Power Density (mW/MHz)	Radiated RF Output Power Density (mW/MHz)
3.3	1	2412	6.825	15.279
	7	2442	7.081	15.852
	13	2472	7.032	15.743
3.63	1	2412	6.904	15.456
	7	2442	7.081	15.852
	13	2472	6.984	15.635
2.97	1	2412	7.163	16.036
	7	2442	7.048	15.779
	13	2472	7.163	16.036
Max. Limit (mW/MHz):			10	-
Rated Power (mW/MHz):			7.2	-
Tolerance of Antenna Power (mW/MHz):			1.44 ~ 8.64	-
Max. EIRP Limit (mW/MHz):			-	16.368

Note: 1. Antenna gain is 3.5 dBi.
2. The radiated RF output power density is a “calculated” value derived from the conducted value.
3. Formula: Radiated RF output power density = Conducted RF output power density + Antenna gain

VHT20

Voltage (Vdc)	Channel Number	Frequency (MHz)	Conducted RF Output Power Density (mW/MHz)	Radiated RF Output Power Density (mW/MHz)
3.3	1	2412	6.488	14.525
	7	2442	7	15.671
	13	2472	6.872	15.384
3.63	1	2412	7	15.671
	7	2442	6.593	14.76
	13	2472	6.654	14.896
2.97	1	2412	6.952	15.564
	7	2442	6.7	14.999
	13	2472	6.578	14.726
Max. Limit (mW/MHz):			10	-
Rated Power (mW/MHz):			7.2	-
Tolerance of Antenna Power (mW/MHz):			1.44 ~ 8.64	-
Max. EIRP Limit (mW/MHz):			-	16.368

Note: 1. Antenna gain is 3.5 dBi.

2. The radiated RF output power density is a “calculated” value derived from the conducted value.

3. Formula: Radiated RF output power density = Conducted RF output power density + Antenna gain

VHT40

Voltage (Vdc)	Channel Number	Frequency (MHz)	Conducted RF Output Power Density (mW/MHz)	Radiated RF Output Power Density (mW/MHz)
3.3	3	2422	3.374	7.553
	7	2442	3.549	7.945
	11	2462	3.484	7.8
3.63	3	2422	3.565	7.981
	7	2442	3.428	7.674
	11	2462	3.428	7.674
2.97	3	2422	3.397	7.605
	7	2442	3.476	7.782
	11	2462	3.632	8.131
Max. Limit (mW/MHz):			5	-
Rated Power (mW/MHz):			3.6	-
Tolerance of Antenna Power (mW/MHz):			0.72 ~ 4.32	-
Max. EIRP Limit (mW/MHz):			-	8.184

Note: 1. Antenna gain is 3.5 dBi.

2. The radiated RF output power density is a “calculated” value derived from the conducted value.

3. Formula: Radiated RF output power density = Conducted RF output power density + Antenna gain

802.11ax (HE20)

Voltage (Vdc)	Channel Number	Frequency (MHz)	Conducted RF Output Power Density (mW/MHz)	Radiated RF Output Power Density (mW/MHz)
3.3	1	2412	6.92	15.492
	7	2442	6.952	15.564
	13	2472	7.048	15.779
3.63	1	2412	6.856	15.349
	7	2442	7.065	15.817
	13	2472	6.825	15.279
2.97	1	2412	7	15.671
	7	2442	7.032	15.743
	13	2472	7.097	15.888
Max. Limit (mW/MHz):			10	-
Rated Power (mW/MHz):			7.2	-
Tolerance of Antenna Power (mW/MHz):			1.44 ~ 8.64	-
Max. EIRP Limit (mW/MHz):			-	16.368

Note: 1. Antenna gain is 3.5 dBi.
2. The radiated RF output power density is a “calculated” value derived from the conducted value.
3. Formula: Radiated RF output power density = Conducted RF output power density + Antenna gain

802.11ax (HE40)

Voltage (Vdc)	Channel Number	Frequency (MHz)	Conducted RF Output Power Density (mW/MHz)	Radiated RF Output Power Density (mW/MHz)
3.3	3	2422	3.549	7.945
	7	2442	3.5	7.836
	11	2462	3.607	8.075
3.63	3	2422	3.5	7.836
	7	2442	3.5	7.836
	11	2462	3.59	8.037
2.97	3	2422	3.468	7.764
	7	2442	3.574	8.001
	11	2462	3.549	7.945
Max. Limit (mW/MHz):			5	-
Rated Power (mW/MHz):			3.6	-
Tolerance of Antenna Power (mW/MHz):			0.72 ~ 4.32	-
Max. EIRP Limit (mW/MHz):			-	8.184

Note: 1. Antenna gain is 3.5 dBi.
2. The radiated RF output power density is a “calculated” value derived from the conducted value.
3. Formula: Radiated RF output power density = Conducted RF output power density + Antenna gain

802.11ax (RU26)

Voltage (Vdc)	Channel Number	Frequency (MHz)	Conducted RF Output Power Density (mW/MHz)	Radiated RF Output Power Density (mW/MHz)
3.3	1	2412	7	15.671
	7	2442	7.147	16
	13	2472	6.92	15.492
3.63	1	2412	6.7	14.999
	7	2442	6.888	15.42
	13	2472	7.196	16.11
2.97	1	2412	7.213	16.148
	7	2442	7	15.671
	13	2472	7.032	15.743
Max. Limit (mW/MHz):			10	-
Rated Power (mW/MHz):			7	-
Tolerance of Antenna Power (mW/MHz):			1.4 ~ 8.4	-
Max. EIRP Limit (mW/MHz):			-	16.368

Note: 1. Antenna gain is 3.5 dBi.
2. The radiated RF output power density is a “calculated” value derived from the conducted value.
3. Formula: Radiated RF output power density = Conducted RF output power density + Antenna gain

802.11ax (RU52)

Voltage (Vdc)	Channel Number	Frequency (MHz)	Conducted RF Output Power Density (mW/MHz)	Radiated RF Output Power Density (mW/MHz)
3.3	1	2412	7.246	16.222
	7	2442	7.048	15.779
	13	2472	6.794	15.21
3.63	1	2412	6.952	15.564
	7	2442	7.263	16.26
	13	2472	6.624	14.829
2.97	1	2412	7.048	15.779
	7	2442	7	15.671
	13	2472	6.952	15.564
Max. Limit (mW/MHz):			10	-
Rated Power (mW/MHz):			7.3	-
Tolerance of Antenna Power (mW/MHz):			1.46 ~ 8.76	-
Max. EIRP Limit (mW/MHz):			-	16.368

Note: 1. Antenna gain is 3.5 dBi.
2. The radiated RF output power density is a “calculated” value derived from the conducted value.
3. Formula: Radiated RF output power density = Conducted RF output power density + Antenna gain

802.11ax (RU106)

Voltage (Vdc)	Channel Number	Frequency (MHz)	Conducted RF Output Power Density (mW/MHz)	Radiated RF Output Power Density (mW/MHz)
3.3	1	2412	7.163	16.036
	7	2442	6.747	15.105
	13	2472	6.92	15.492
3.63	1	2412	7.18	16.074
	7	2442	6.747	15.105
	13	2472	7.213	16.148
2.97	1	2412	7.196	16.11
	7	2442	7	15.671
	13	2472	7.213	16.148
Max. Limit (mW/MHz):			10	-
Rated Power (mW/MHz):			7.3	-
Tolerance of Antenna Power (mW/MHz):			1.46 ~ 8.76	-
Max. EIRP Limit (mW/MHz):			-	16.368

Note: 1. Antenna gain is 3.5 dBi.

2. The radiated RF output power density is a “calculated” value derived from the conducted value.

3. Formula: Radiated RF output power density = Conducted RF output power density + Antenna gain

4.6 Spurious Emissions for Receiver

4.6.1 Limits of Spurious Emissions for Receiver

Frequencies (MHz)	Limit
Below 1GHz	≦4nW/100kHz (-54dBm)
Above 1GHz	≦20nW/MHz (-47dBm)

4.6.2 Test Setup

4.6.3 Test Results (Mode 1)

802.11b / 802.11g / VHT20 / 802.11ax (HE20)

Chain 0

TEST CHANNEL		CH 1 (2412MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(nW)	LIMIT (nW)	RESULT
V_{normal}	30.0 to 1000.0	586.901	0.001982	2.0	PASS
	1000.0 to 12500.0	6432.312	0.490908	10.0	PASS
$V_{max.}$	30.0 to 1000.0	645.343	0.002133	2.0	PASS
	1000.0 to 12500.0	6432.312	0.501187	10.0	PASS
$V_{min.}$	30.0 to 1000.0	989.936	0.002089	2.0	PASS
	1000.0 to 12500.0	6432.312	0.567545	10.0	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	701.361	0.002239	2.0	PASS
	1000.0 to 12500.0	6511.375	0.529663	10.0	PASS
$V_{max.}$	30.0 to 1000.0	904.940	0.002183	2.0	PASS
	1000.0 to 12500.0	6511.375	0.601174	10.0	PASS
$V_{min.}$	30.0 to 1000.0	389.506	0.002193	2.0	PASS
	1000.0 to 12500.0	6512.812	0.554626	10.0	PASS
TEST CHANNEL		CH 13 (2472MHz)			
V_{normal}	30.0 to 1000.0	723.671	0.001932	2.0	PASS
	1000.0 to 12500.0	6591.875	0.610942	10.0	PASS
$V_{max.}$	30.0 to 1000.0	784.781	0.002051	2.0	PASS
	1000.0 to 12500.0	6591.875	0.623735	10.0	PASS
$V_{min.}$	30.0 to 1000.0	846.740	0.001972	2.0	PASS
	1000.0 to 12500.0	6591.875	0.612350	10.0	PASS
TEST CHANNEL		CH 14 (2484MHz)			
V_{normal}	30.0 to 1000.0	689.963	0.001982	2.0	PASS
	1000.0 to 12500.0	6624.937	0.386367	10.0	PASS
$V_{max.}$	30.0 to 1000.0	67.102	0.002193	2.0	PASS
	1000.0 to 12500.0	6624.937	0.380189	10.0	PASS
$V_{min.}$	30.0 to 1000.0	965.080	0.001950	2.0	PASS
	1000.0 to 12500.0	6624.937	0.390841	10.0	PASS

* Channel 14 is only for 802.11b.

NOTE: 1. The spectrum plots are attached on the following pages.

Chain 1

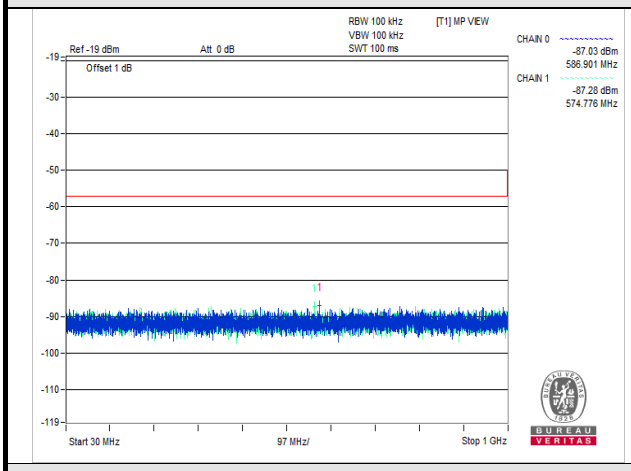
TEST CHANNEL		CH 1 (2412MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(nW)	LIMIT (nW)	RESULT
V_{normal}	30.0 to 1000.0	574.776	0.001871	2.0	PASS
	1000.0 to 12500.0	6432.312	0.219280	10.0	PASS
$V_{max.}$	30.0 to 1000.0	760.652	0.002065	2.0	PASS
	1000.0 to 12500.0	6432.312	0.177011	10.0	PASS
$V_{min.}$	30.0 to 1000.0	645.707	0.002612	2.0	PASS
	1000.0 to 12500.0	6432.312	0.233884	10.0	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	881.175	0.002168	2.0	PASS
	1000.0 to 12500.0	6512.812	0.212814	10.0	PASS
$V_{max.}$	30.0 to 1000.0	151.613	0.002138	2.0	PASS
	1000.0 to 12500.0	6512.812	0.201837	10.0	PASS
$V_{min.}$	30.0 to 1000.0	793.268	0.002080	2.0	PASS
	1000.0 to 12500.0	6512.812	0.247172	10.0	PASS
TEST CHANNEL		CH 13 (2472MHz)			
V_{normal}	30.0 to 1000.0	627.277	0.002307	2.0	PASS
	1000.0 to 12500.0	6591.875	0.287078	10.0	PASS
$V_{max.}$	30.0 to 1000.0	777.142	0.002163	2.0	PASS
	1000.0 to 12500.0	6591.875	0.258821	10.0	PASS
$V_{min.}$	30.0 to 1000.0	762.350	0.002350	2.0	PASS
	1000.0 to 12500.0	6591.875	0.266073	10.0	PASS
TEST CHANNEL		CH 14 (2484MHz)			
V_{normal}	30.0 to 1000.0	330.457	0.002399	2.0	PASS
	1000.0 to 12500.0	6624.937	0.148252	10.0	PASS
$V_{max.}$	30.0 to 1000.0	399.933	0.002056	2.0	PASS
	1000.0 to 12500.0	6624.937	0.178649	10.0	PASS
$V_{min.}$	30.0 to 1000.0	447.827	0.001879	2.0	PASS
	1000.0 to 12500.0	6624.937	0.171396	10.0	PASS

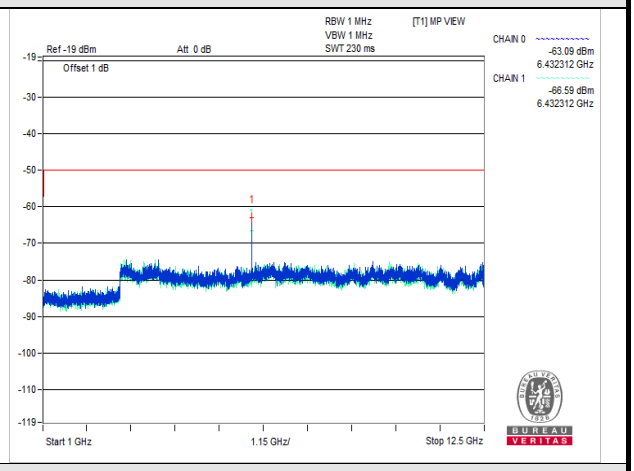
* Channel 14 is only for 802.11b.

NOTE: 1. The spectrum plots are attached on the following pages.

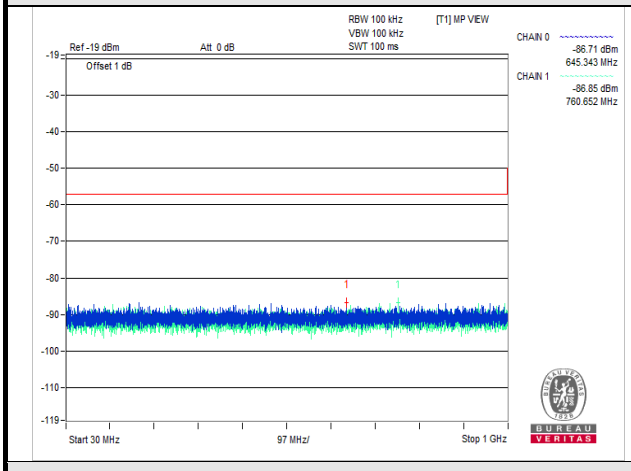
Graph

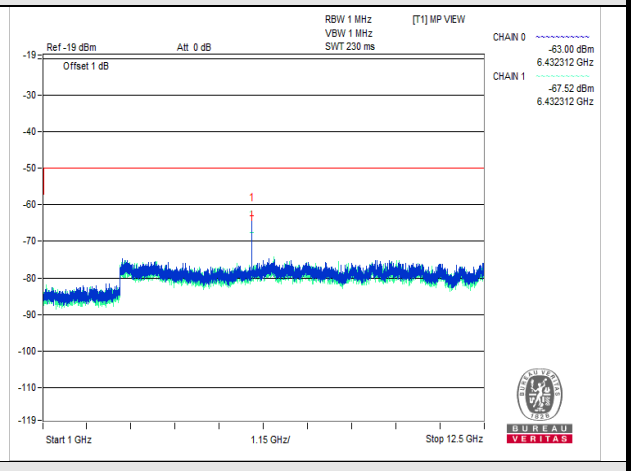
Vnormal



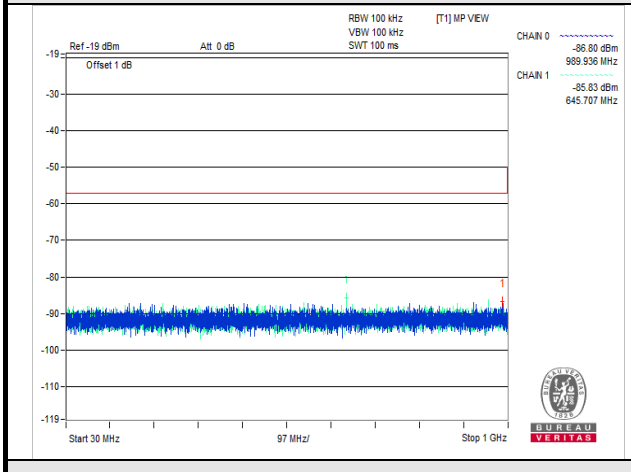


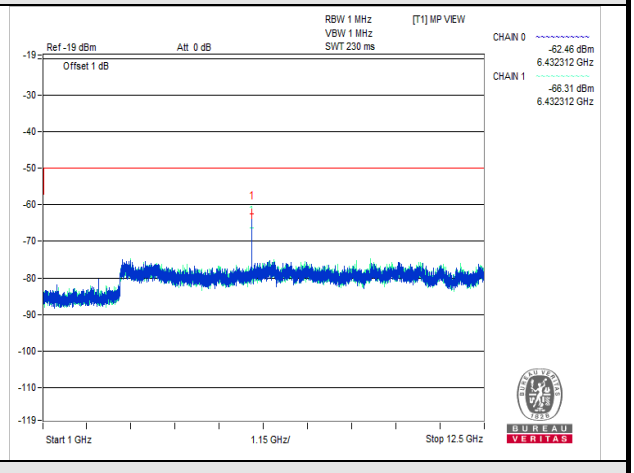
Vmax.





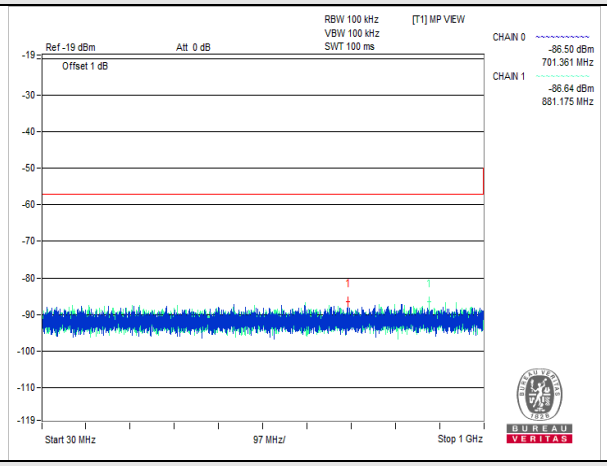
Vmin.

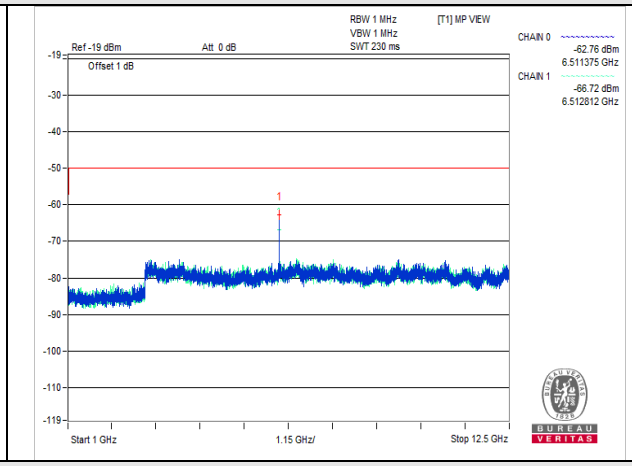




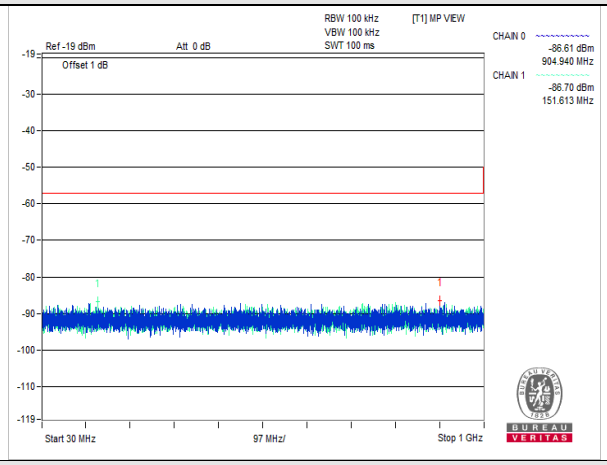
CH 1 (2412MHz)

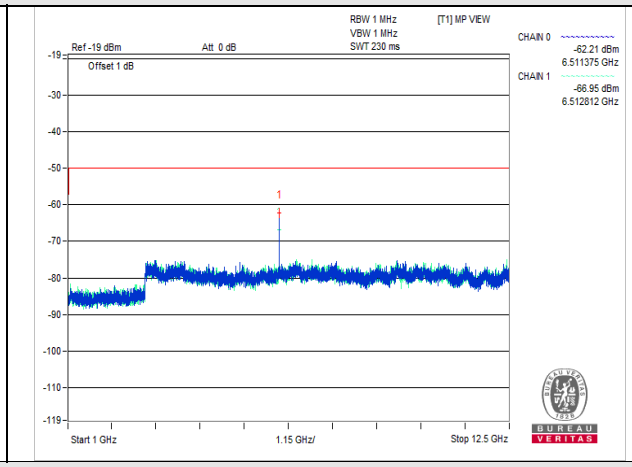
Vnormal



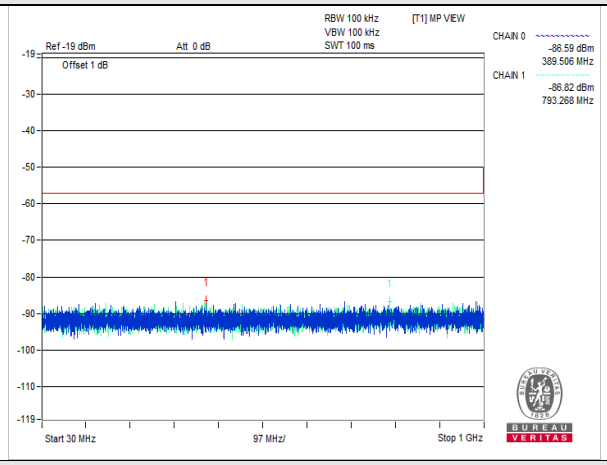


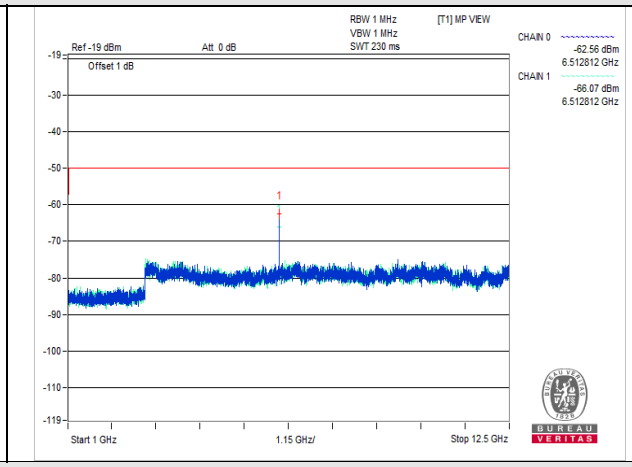
Vmax.





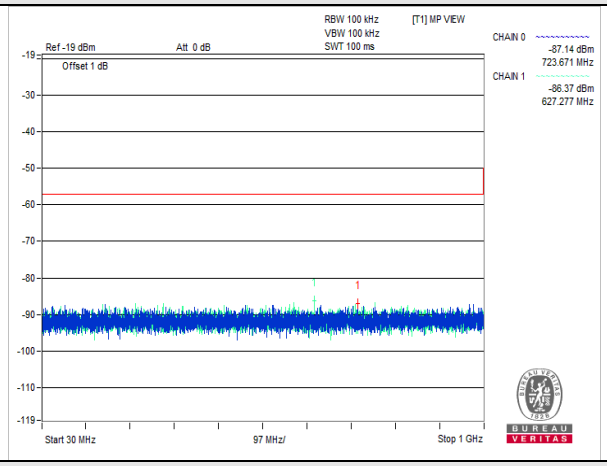
Vmin.

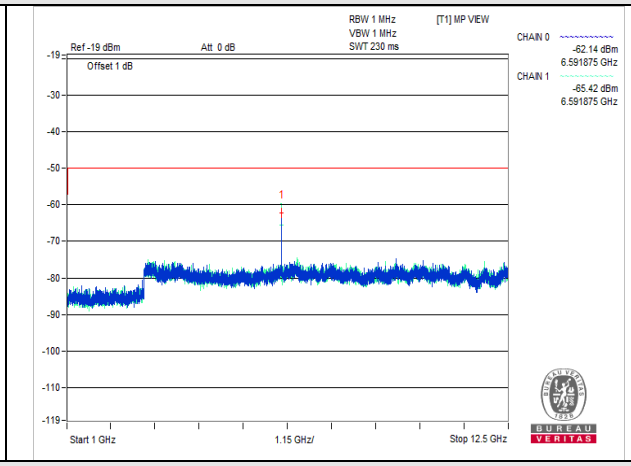




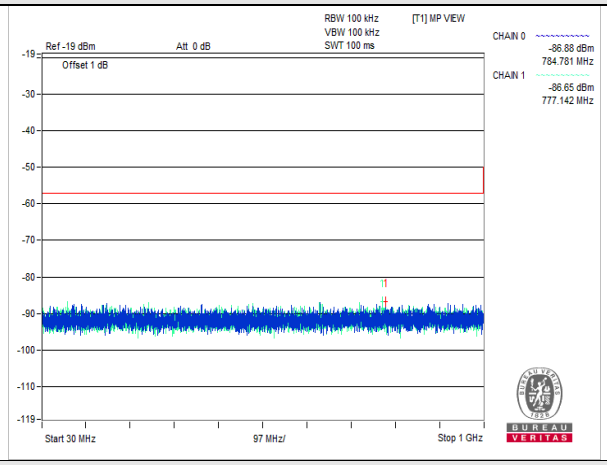
CH 7 (2442MHz)

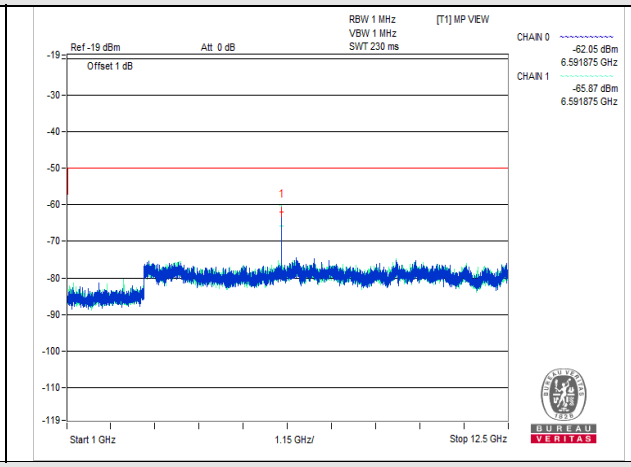
Vnormal



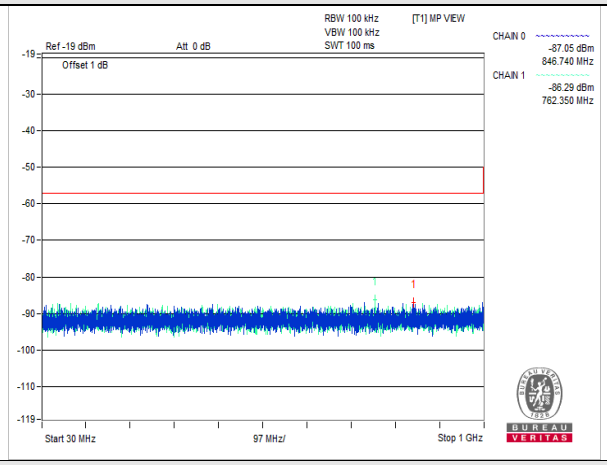


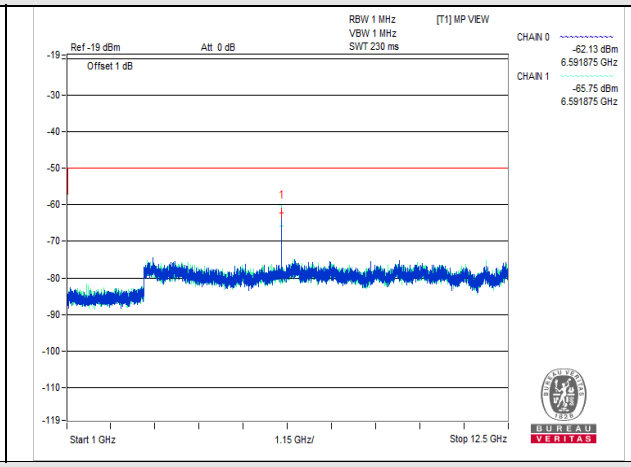
Vmax.





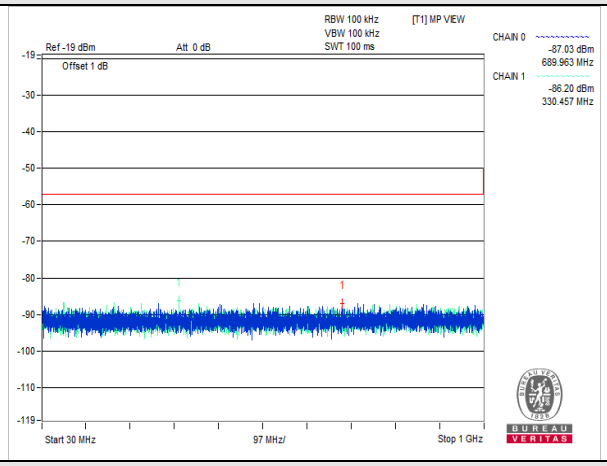
Vmin.

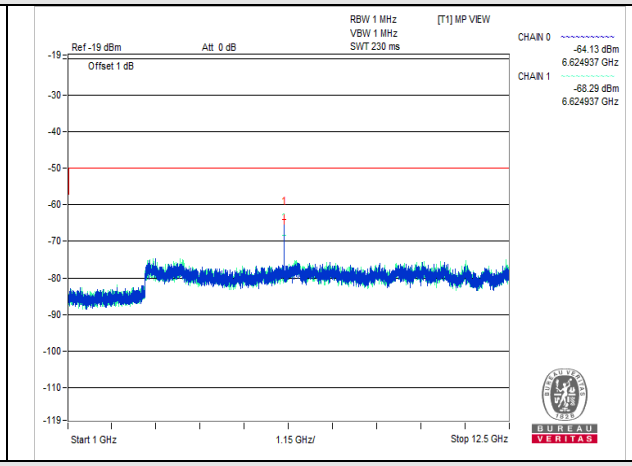




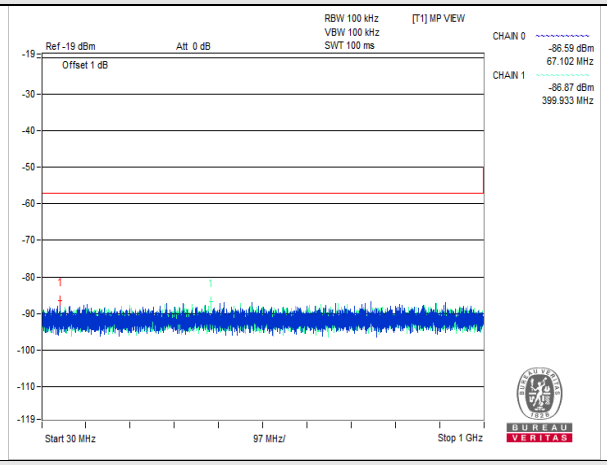
CH 13 (2472MHz)

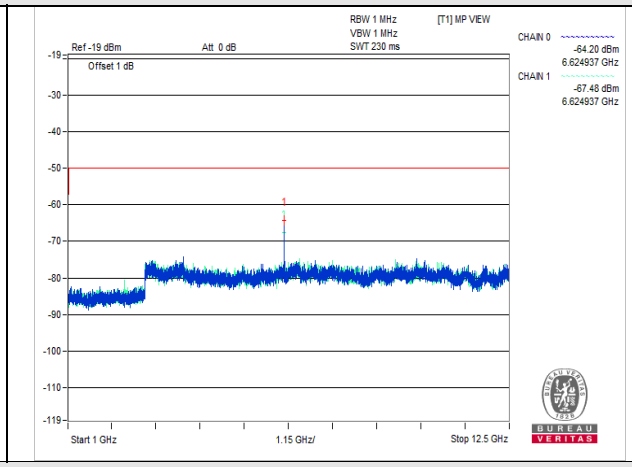
Vnormal



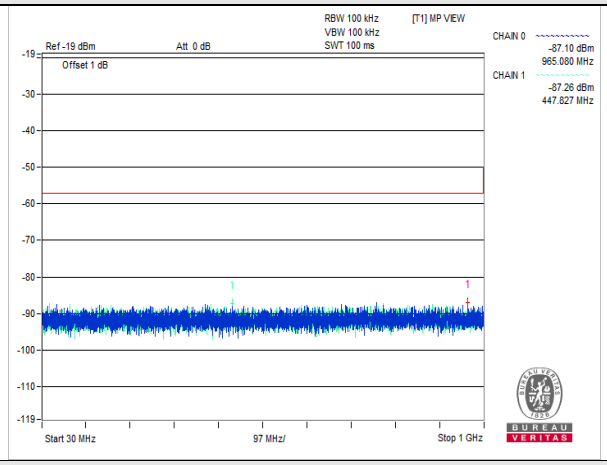


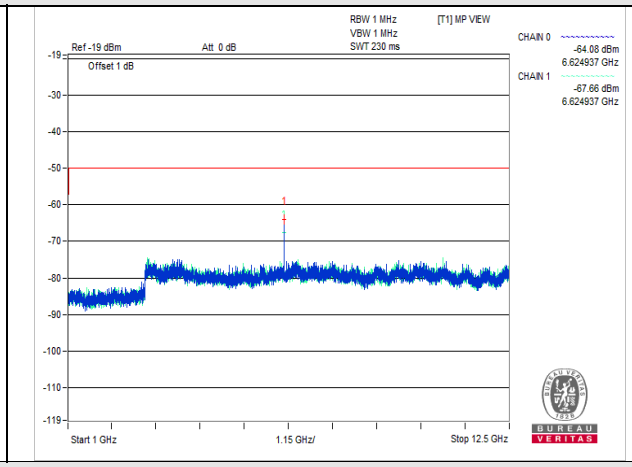
Vmax.





Vmin.





CH 14 (2484MHz)

Sum of each Chain

TEST CHANNEL		CH 1 (2412MHz)		
TEST CONDITION	FREQUENCY RANGE(MHz)	MEASURE. VALUE (nW)	LIMIT (nW)	RESULT
V_{normal}	30.0 to 1000.0	0.003853	4	PASS
	1000.0 to 12500.0	0.710188	20	PASS
$V_{max.}$	30.0 to 1000.0	0.004198	4	PASS
	1000.0 to 12500.0	0.678198	20	PASS
$V_{min.}$	30.0 to 1000.0	0.004701	4	PASS
	1000.0 to 12500.0	0.801429	20	PASS
TEST CHANNEL		CH 7 (2442MHz)		
V_{normal}	30.0 to 1000.0	0.004407	4	PASS
	1000.0 to 12500.0	0.742477	20	PASS
$V_{max.}$	30.0 to 1000.0	0.004321	4	PASS
	1000.0 to 12500.0	0.803011	20	PASS
$V_{min.}$	30.0 to 1000.0	0.004273	4	PASS
	1000.0 to 12500.0	0.801798	20	PASS
TEST CHANNEL		CH 13 (2472MHz)		
V_{normal}	30.0 to 1000.0	0.004239	4	PASS
	1000.0 to 12500.0	0.898020	20	PASS
$V_{max.}$	30.0 to 1000.0	0.004214	4	PASS
	1000.0 to 12500.0	0.882556	20	PASS
$V_{min.}$	30.0 to 1000.0	0.004322	4	PASS
	1000.0 to 12500.0	0.878423	20	PASS
TEST CHANNEL		CH 14 (2484MHz)		
V_{normal}	30.0 to 1000.0	0.004381	4	PASS
	1000.0 to 12500.0	0.534619	20	PASS
$V_{max.}$	30.0 to 1000.0	0.004249	4	PASS
	1000.0 to 12500.0	0.558838	20	PASS
$V_{min.}$	30.0 to 1000.0	0.003829	4	PASS
	1000.0 to 12500.0	0.562237	20	PASS

* Channel 14 is only for 802.11b.

VHT40 / 802.11ax (HE40)

Chain 0

TEST CHANNEL		CH 3 (2422MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(nW)	LIMIT (nW)	RESULT
V_{normal}	30.0 to 1000.0	378.230	0.002168	2.0	PASS
	1000.0 to 12500.0	6459.625	0.462381	10.0	PASS
$V_{max.}$	30.0 to 1000.0	456.557	0.002203	2.0	PASS
	1000.0 to 12500.0	6458.187	0.435512	10.0	PASS
$V_{min.}$	30.0 to 1000.0	346.705	0.002075	2.0	PASS
	1000.0 to 12500.0	6459.625	0.454988	10.0	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	331.912	0.002208	2.0	PASS
	1000.0 to 12500.0	6512.812	0.559758	10.0	PASS
$V_{max.}$	30.0 to 1000.0	706.938	0.002642	2.0	PASS
	1000.0 to 12500.0	6512.812	0.584790	10.0	PASS
$V_{min.}$	30.0 to 1000.0	832.553	0.002291	2.0	PASS
	1000.0 to 12500.0	6512.812	0.616595	10.0	PASS
TEST CHANNEL		CH 11 (2462MHz)			
V_{normal}	30.0 to 1000.0	746.466	0.004055	2.0	PASS
	1000.0 to 12500.0	6566.000	0.726106	10.0	PASS
$V_{max.}$	30.0 to 1000.0	777.627	0.002427	2.0	PASS
	1000.0 to 12500.0	6566.000	0.783430	10.0	PASS
$V_{min.}$	30.0 to 1000.0	365.135	0.002291	2.0	PASS
	1000.0 to 12500.0	6566.000	0.724436	10.0	PASS

NOTE: 1. The spectrum plots are attached on the following pages.

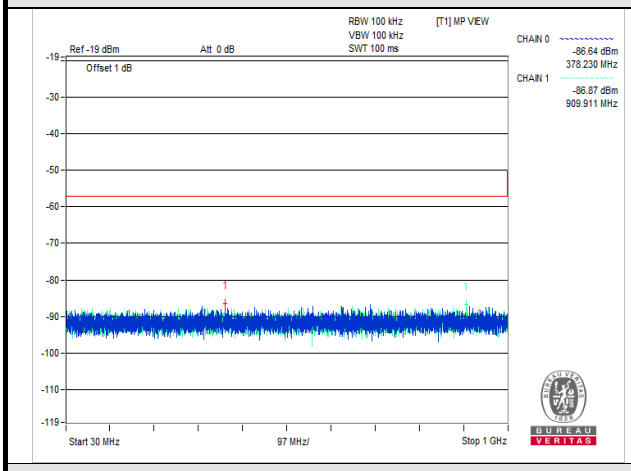
Chain 1

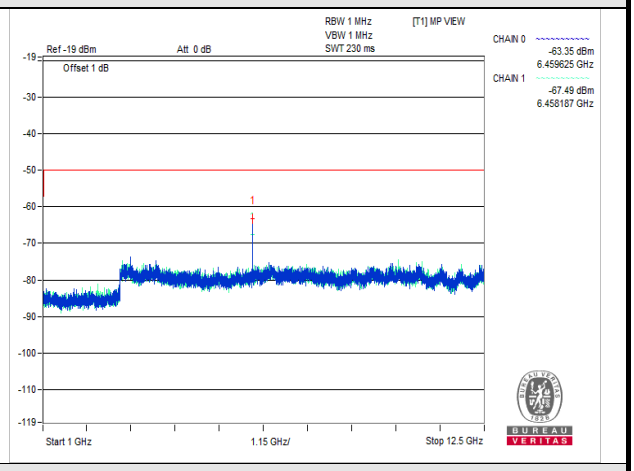
TEST CHANNEL		CH 3 (2422MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(nW)	LIMIT (nW)	RESULT
V_{normal}	30.0 to 1000.0	909.911	0.002056	2.0	PASS
	1000.0 to 12500.0	6458.187	0.178238	10.0	PASS
$V_{max.}$	30.0 to 1000.0	813.881	0.002344	2.0	PASS
	1000.0 to 12500.0	6458.187	0.184927	10.0	PASS
$V_{min.}$	30.0 to 1000.0	957.562	0.002427	2.0	PASS
	1000.0 to 12500.0	6459.625	0.196336	10.0	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	703.180	0.002028	2.0	PASS
	1000.0 to 12500.0	6511.375	0.233346	10.0	PASS
$V_{max.}$	30.0 to 1000.0	420.546	0.002421	2.0	PASS
	1000.0 to 12500.0	6512.812	0.225424	10.0	PASS
$V_{min.}$	30.0 to 1000.0	520.698	0.001968	2.0	PASS
	1000.0 to 12500.0	6511.375	0.258226	10.0	PASS
TEST CHANNEL		CH 11 (2462MHz)			
V_{normal}	30.0 to 1000.0	561.802	0.002032	2.0	PASS
	1000.0 to 12500.0	6566.000	0.301301	10.0	PASS
$V_{max.}$	30.0 to 1000.0	576.837	0.002679	2.0	PASS
	1000.0 to 12500.0	6566.000	0.309742	10.0	PASS
$V_{min.}$	30.0 to 1000.0	434.247	0.002032	2.0	PASS
	1000.0 to 12500.0	6566.000	0.311889	10.0	PASS

NOTE: 1. The spectrum plots are attached on the following pages.

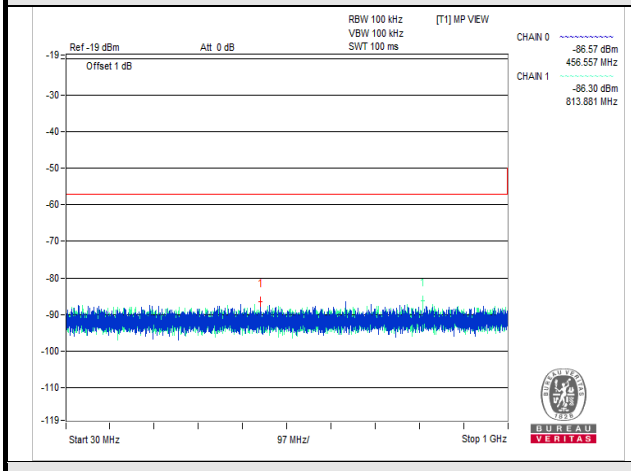
Graph

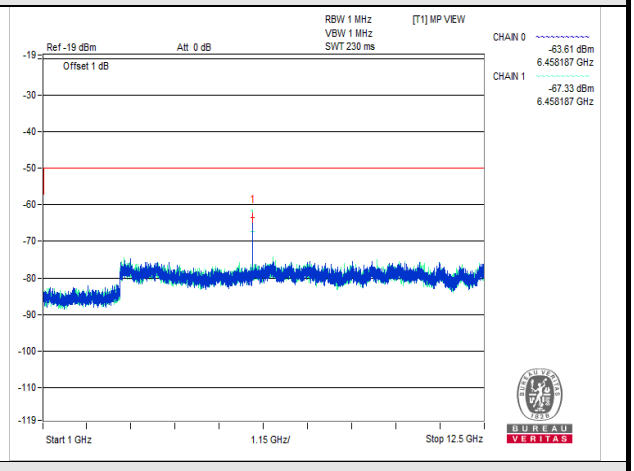
Vnormal



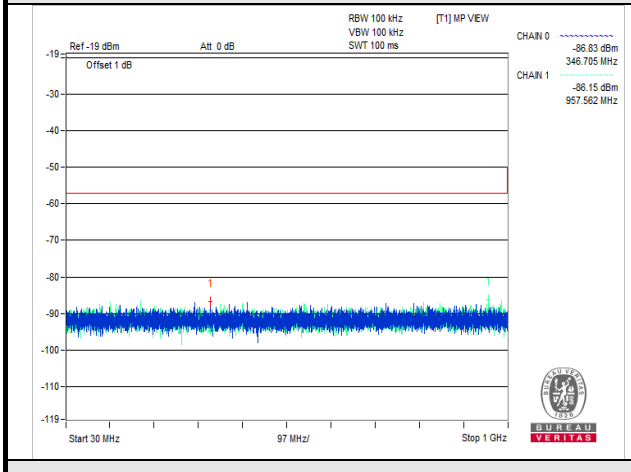


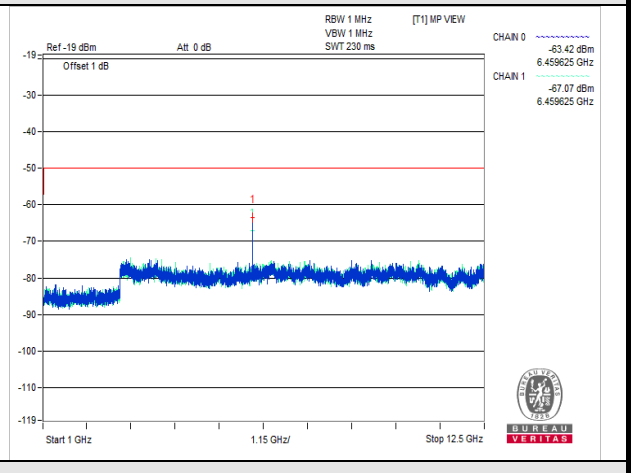
Vmax.





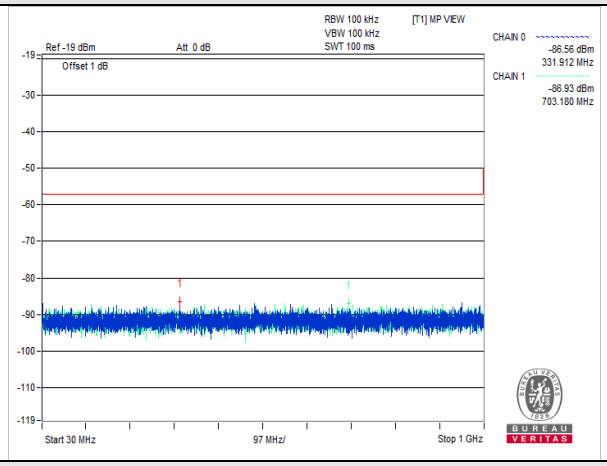
Vmin.

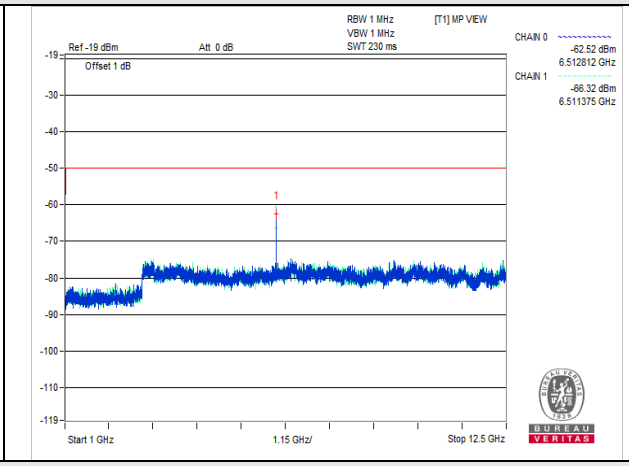




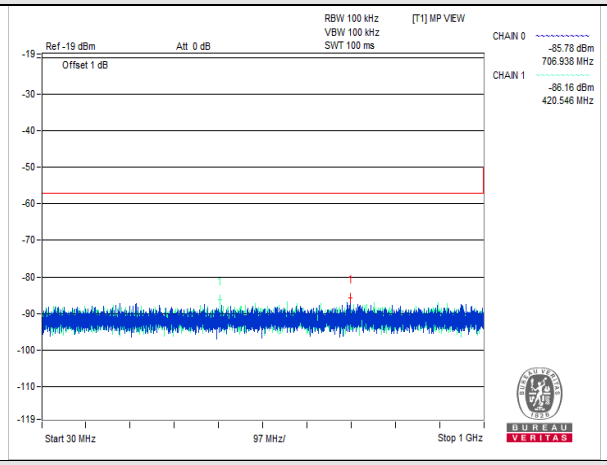
CH 3 (2422MHz)

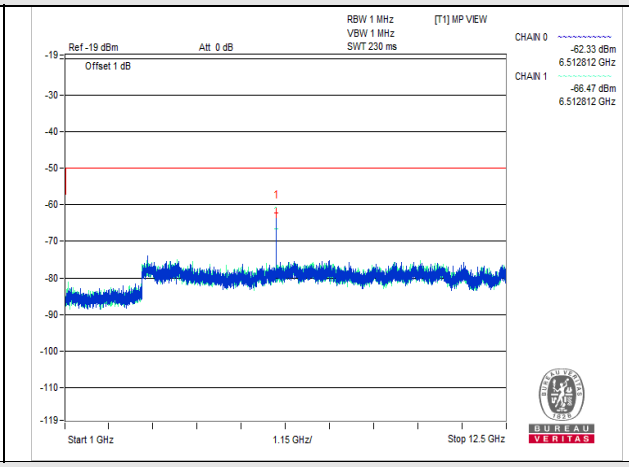
Vnormal



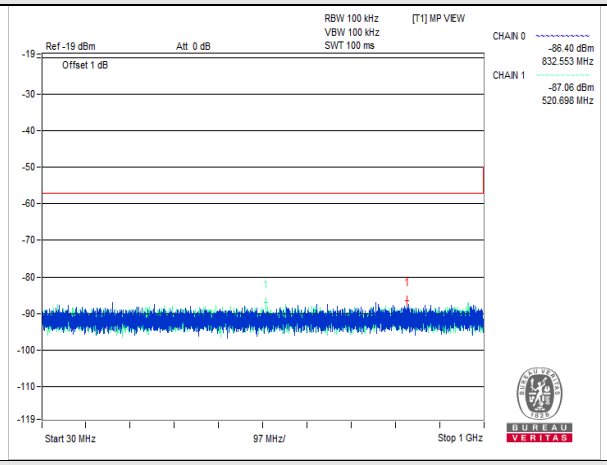


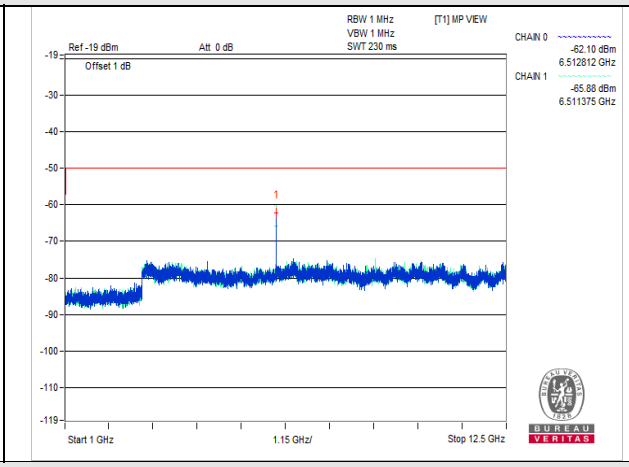
Vmax.





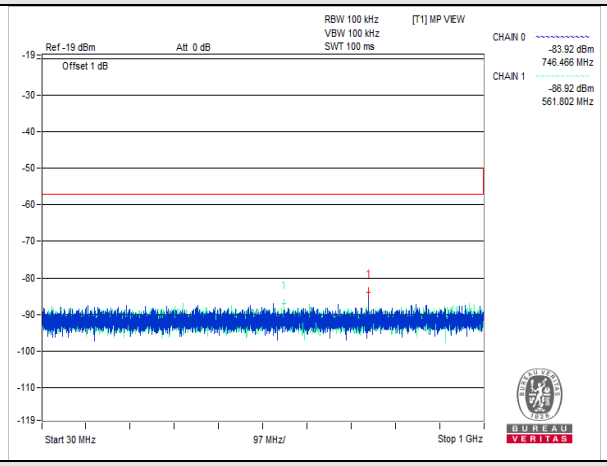
Vmin.

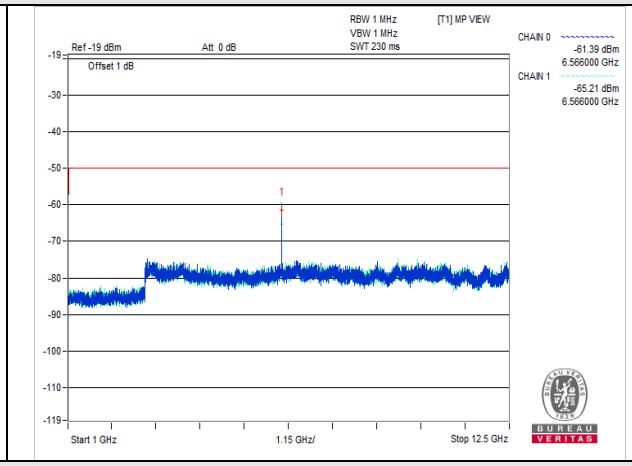




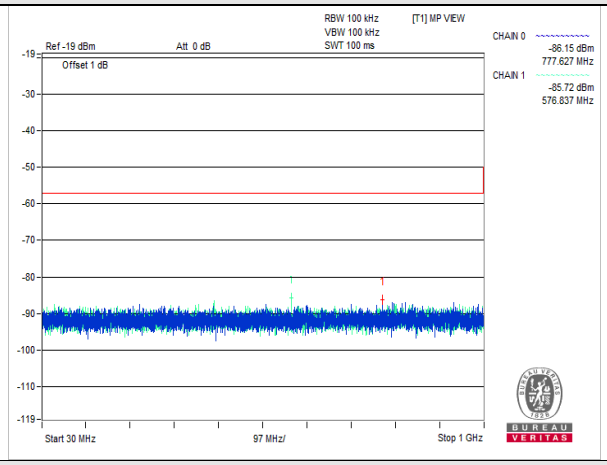
CH 7 (2442MHz)

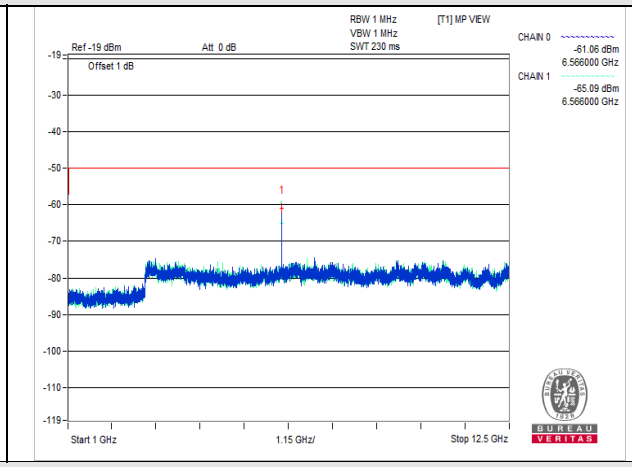
Vnormal



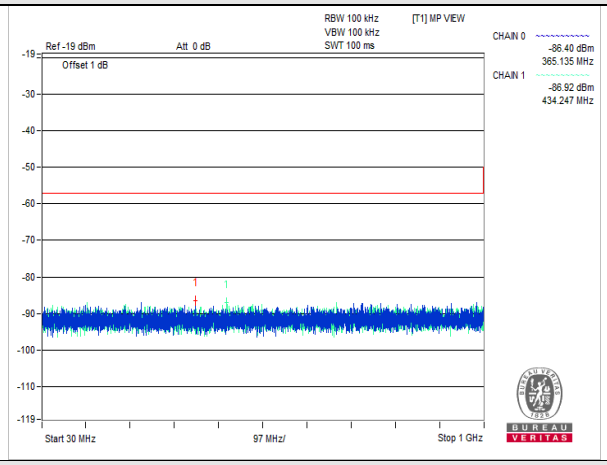


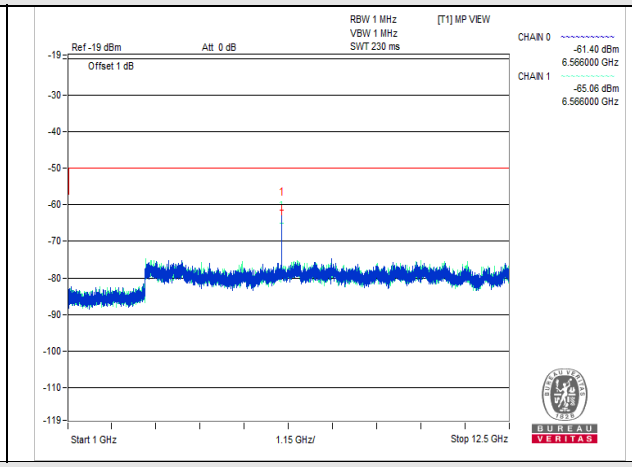
Vmax.





Vmin.





CH 11 (2462MHz)

Sum of each Chain

TEST CHANNEL		CH 3 (2422MHz)		
TEST CONDITION	FREQUENCY RANGE(MHz)	MEASURE. VALUE (nW)	LIMIT (nW)	RESULT
V_{normal}	30.0 to 1000.0	0.004224	4	PASS
	1000.0 to 12500.0	0.640619	20	PASS
$V_{max.}$	30.0 to 1000.0	0.004547	4	PASS
	1000.0 to 12500.0	0.620439	20	PASS
$V_{min.}$	30.0 to 1000.0	0.004502	4	PASS
	1000.0 to 12500.0	0.651324	20	PASS
TEST CHANNEL		CH 7 (2442MHz)		
V_{normal}	30.0 to 1000.0	0.004236	4	PASS
	1000.0 to 12500.0	0.793104	20	PASS
$V_{max.}$	30.0 to 1000.0	0.005063	4	PASS
	1000.0 to 12500.0	0.810214	20	PASS
$V_{min.}$	30.0 to 1000.0	0.004259	4	PASS
	1000.0 to 12500.0	0.874821	20	PASS
TEST CHANNEL		CH 11 (2462MHz)		
V_{normal}	30.0 to 1000.0	0.006087	4	PASS
	1000.0 to 12500.0	1.027407	20	PASS
$V_{max.}$	30.0 to 1000.0	0.005106	4	PASS
	1000.0 to 12500.0	1.093172	20	PASS
$V_{min.}$	30.0 to 1000.0	0.004323	4	PASS
	1000.0 to 12500.0	1.036325	20	PASS

4.6.4 Test Results (Mode 2)

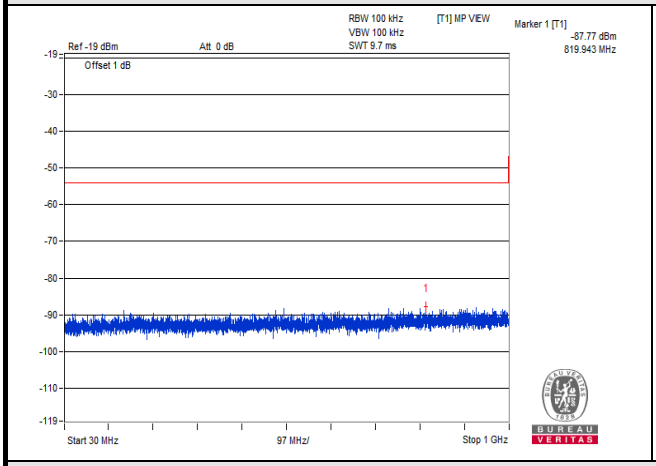
802.11b / 802.11g / VHT20 / 802.11ax (HE20)

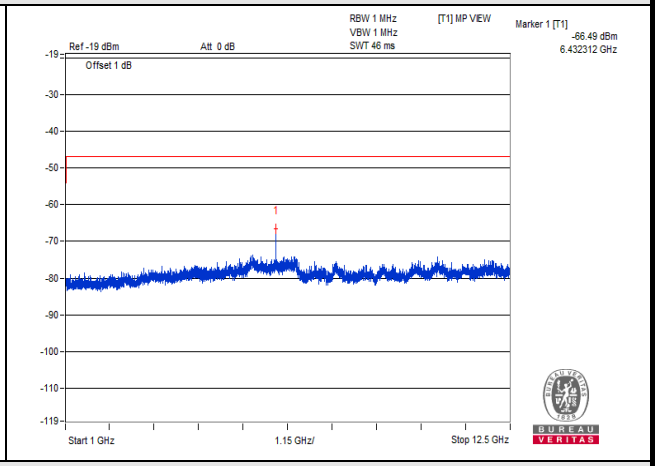
TEST CHANNEL		CH 1 (2412MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(nW)	LIMIT (nW)	RESULT
V_{normal}	30.0 to 1000.0	819.943	0.001671	4.0	PASS
	1000.0 to 12500.0	6432.312	0.224388	20.0	PASS
$V_{max.}$	30.0 to 1000.0	938.890	0.002028	4.0	PASS
	1000.0 to 12500.0	6432.312	0.231739	20.0	PASS
$V_{min.}$	30.0 to 1000.0	758.712	0.001472	4.0	PASS
	1000.0 to 12500.0	6432.312	0.223872	20.0	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	991.997	0.002109	4.0	PASS
	1000.0 to 12500.0	6511.375	0.257040	20.0	PASS
$V_{max.}$	30.0 to 1000.0	933.918	0.001660	4.0	PASS
	1000.0 to 12500.0	6511.375	0.221309	20.0	PASS
$V_{min.}$	30.0 to 1000.0	992.967	0.001626	4.0	PASS
	1000.0 to 12500.0	6512.812	0.239332	20.0	PASS
TEST CHANNEL		CH 13 (2472MHz)			
V_{normal}	30.0 to 1000.0	984.843	0.001871	4.0	PASS
	1000.0 to 12500.0	6591.875	0.200909	20.0	PASS
$V_{max.}$	30.0 to 1000.0	901.181	0.002317	4.0	PASS
	1000.0 to 12500.0	6591.875	0.194536	20.0	PASS
$V_{min.}$	30.0 to 1000.0	785.023	0.001770	4.0	PASS
	1000.0 to 12500.0	6591.875	0.232274	20.0	PASS
TEST CHANNEL		CH 14 (2484MHz)			
V_{normal}	30.0 to 1000.0	881.781	0.001968	4.0	PASS
	1000.0 to 12500.0	6623.500	0.198609	20.0	PASS
$V_{max.}$	30.0 to 1000.0	959.987	0.001820	4.0	PASS
	1000.0 to 12500.0	6623.500	0.234423	20.0	PASS
$V_{min.}$	30.0 to 1000.0	995.513	0.002143	4.0	PASS
	1000.0 to 12500.0	6623.500	0.202768	20.0	PASS

* Channel 14 is only for 802.11b.

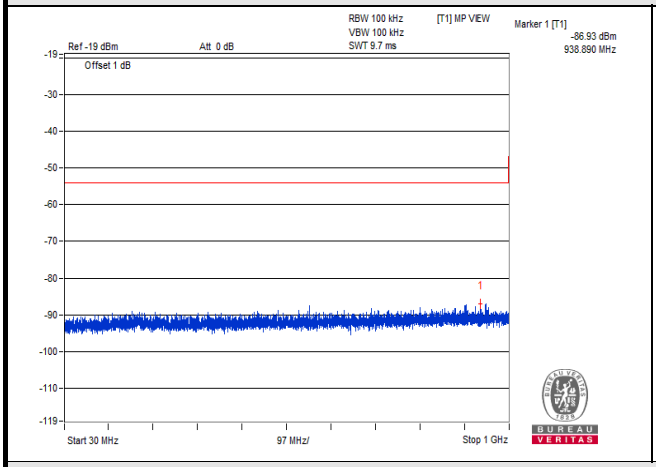
NOTE: 1. The spectrum plots are attached on the following pages.

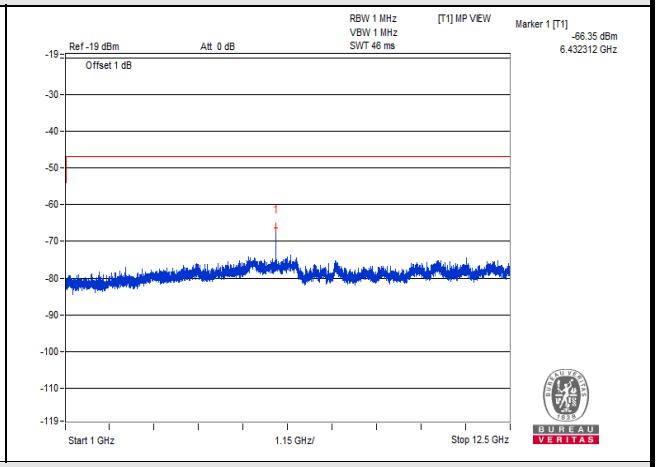
Vnormal



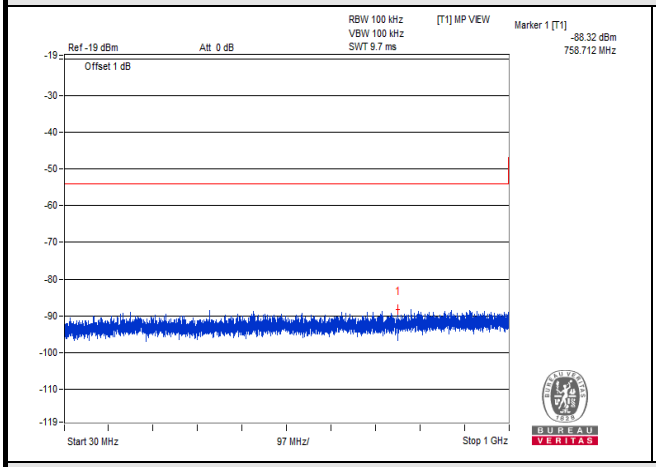


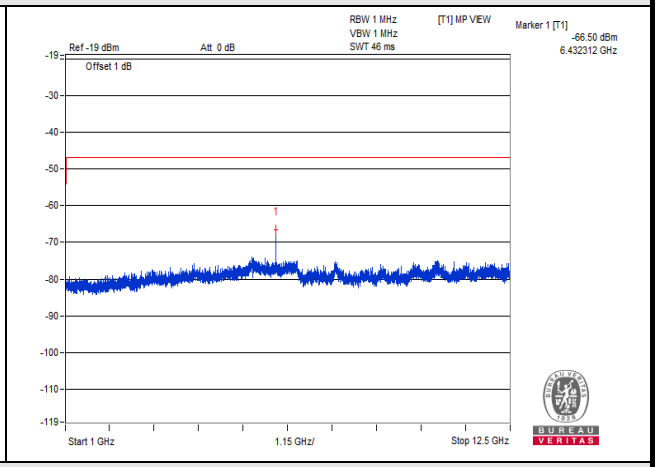
Vmax.





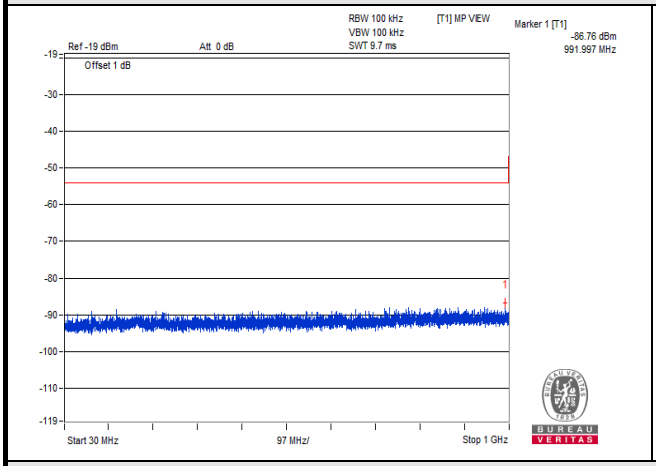
Vmin.

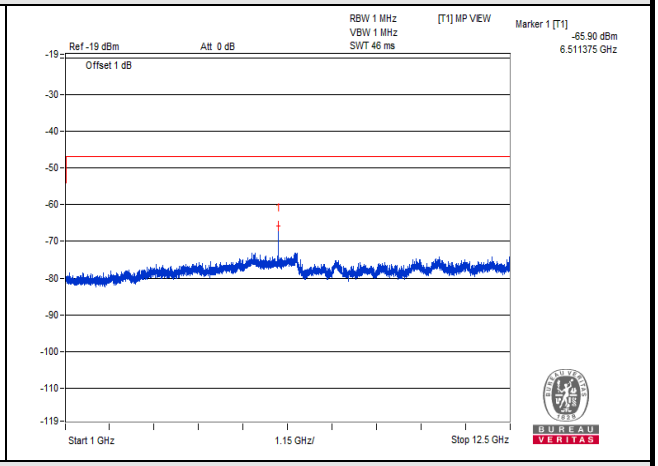




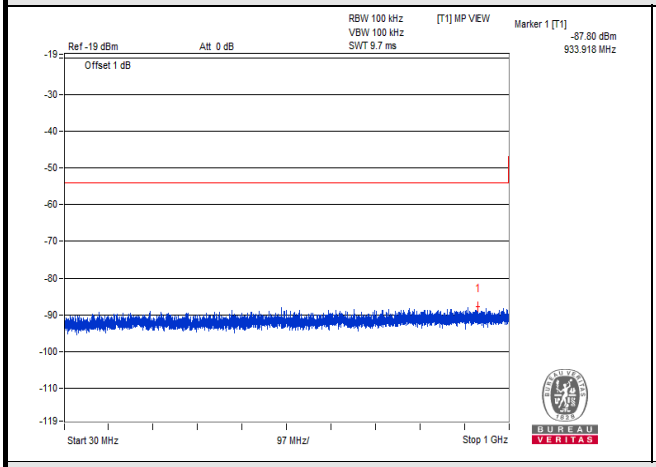
CH 1 (2412MHz)

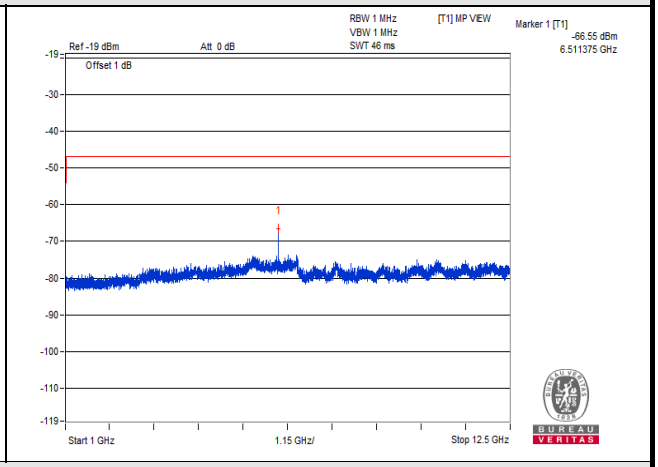
Vnormal



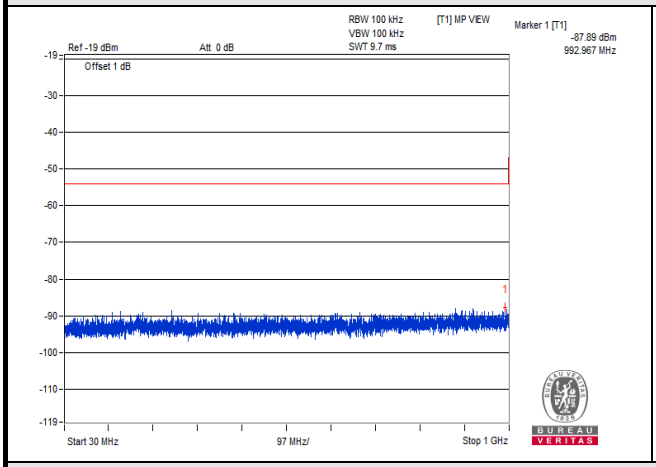


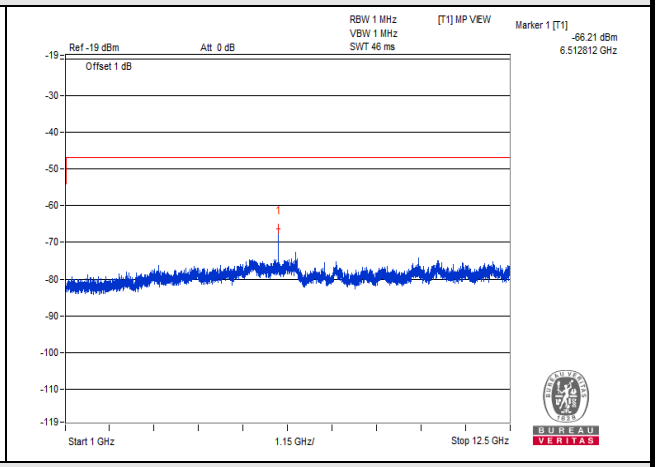
Vmax.





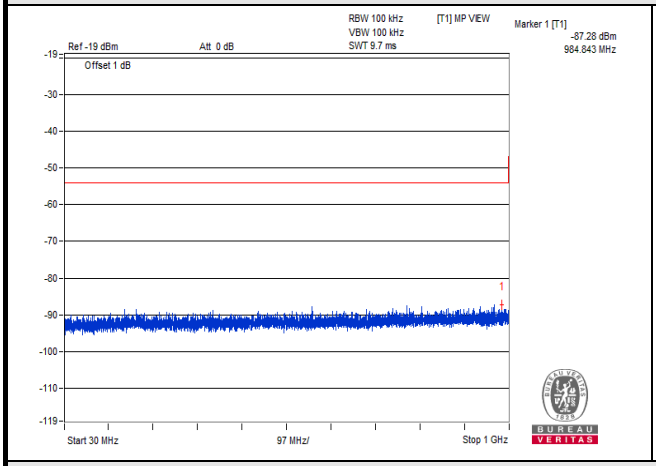
Vmin.

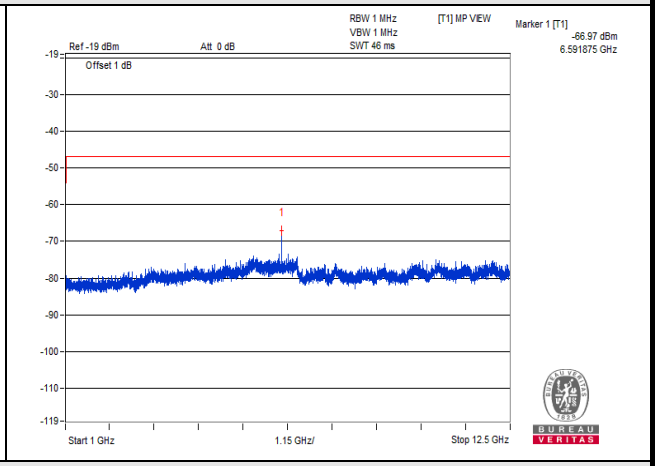




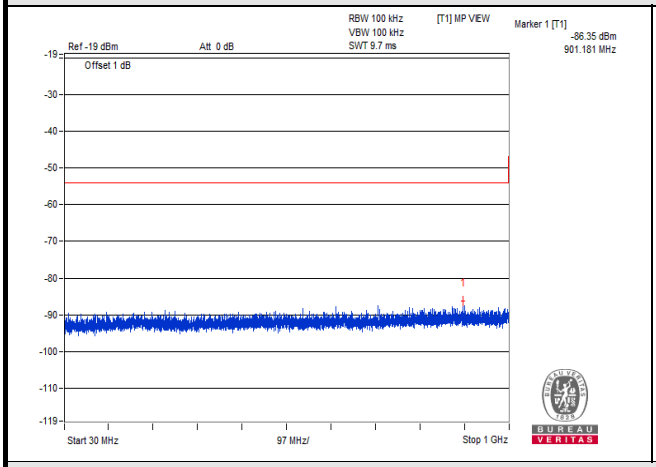
CH 7 (2442MHz)

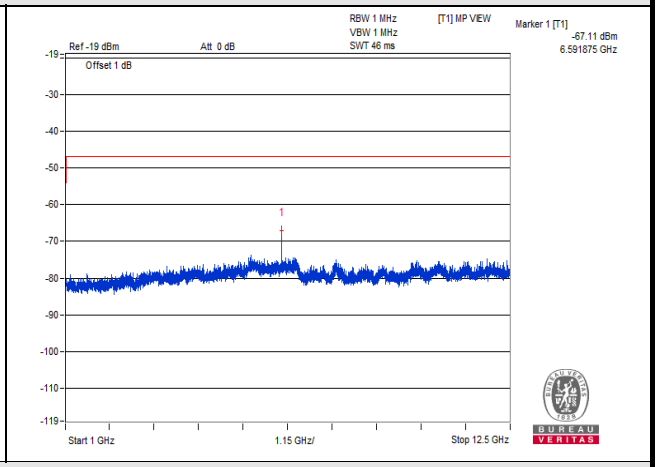
Vnormal



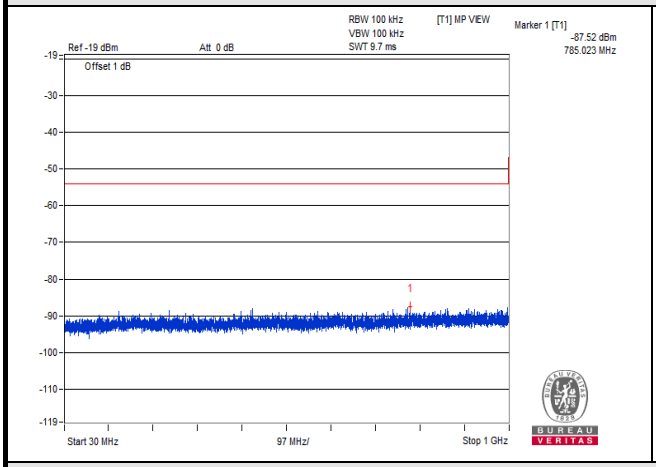


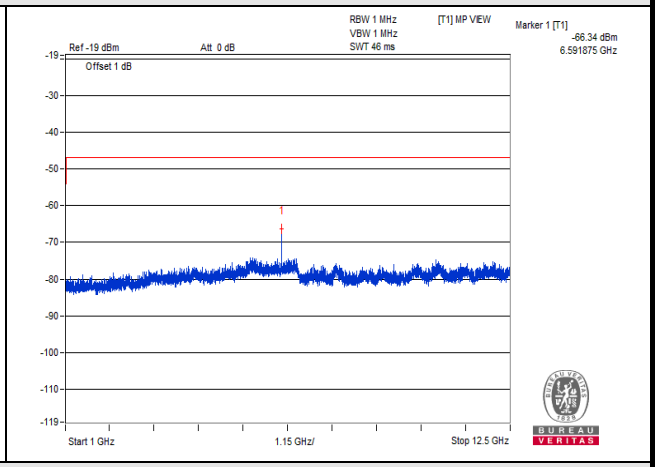
Vmax.





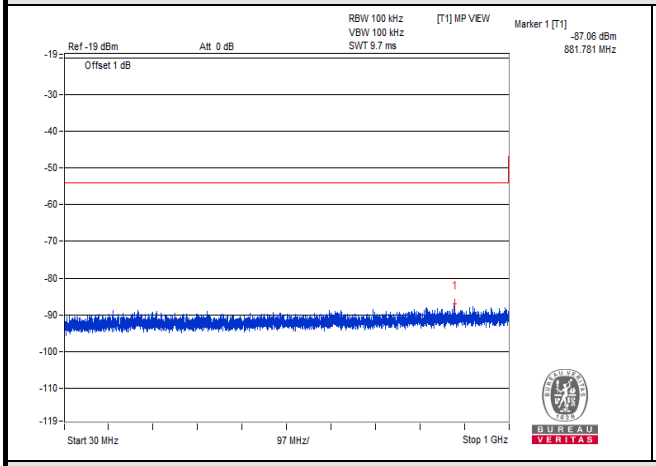
Vmin.

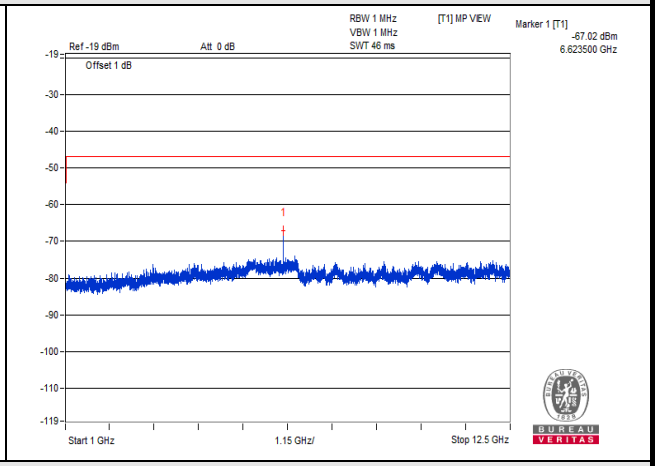




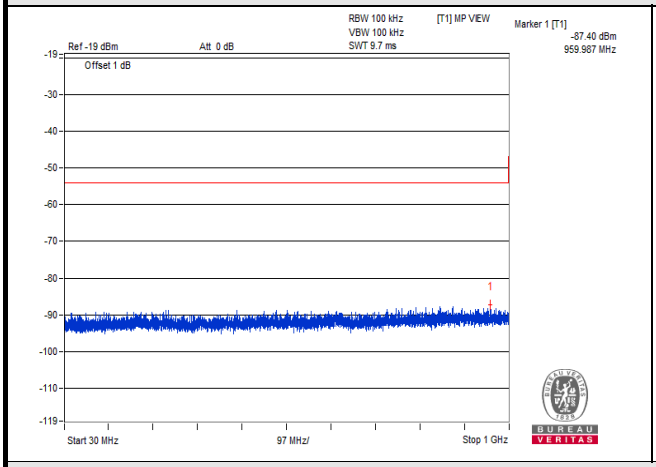
CH 13 (2472MHz)

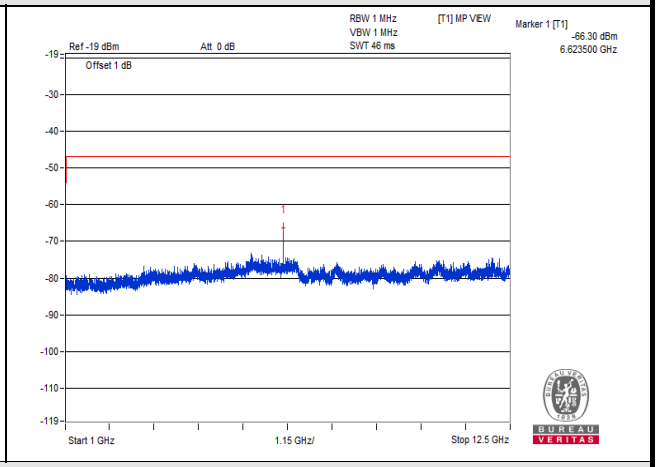
Vnormal



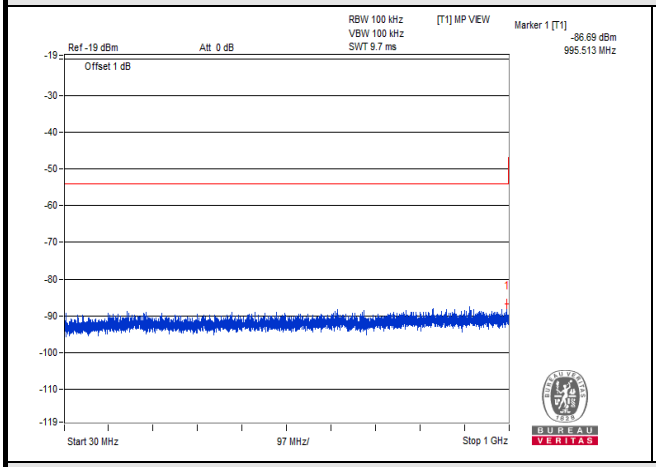


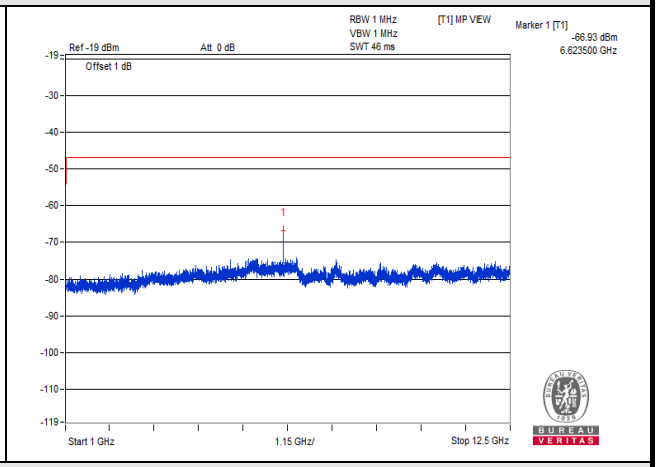
Vmax.





Vmin.





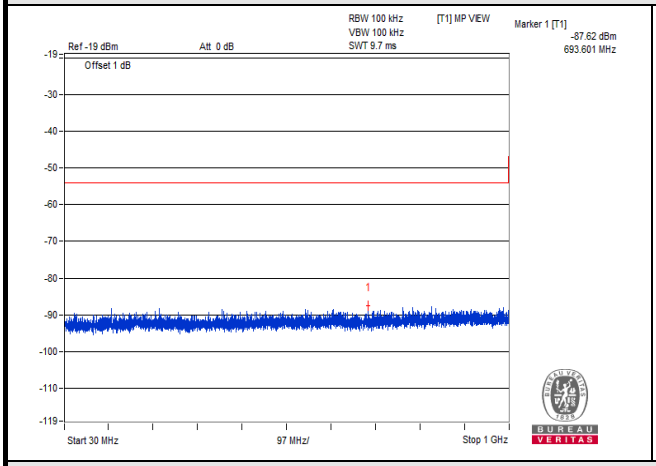
CH 14 (2484MHz)

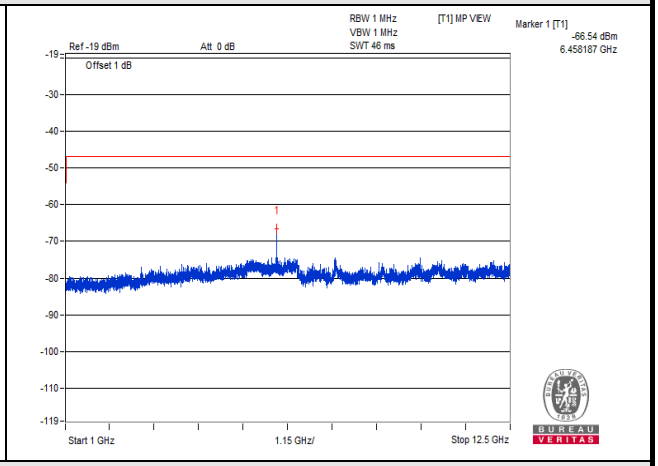
VHT40 / 802.11ax (HE40)

TEST CHANNEL		CH 3 (2422MHz)			
TEST CONDITION	FREQUENCY RANGE(MHz)	FREQUENCY (MHz)	MEASURE. VALUE(nW)	LIMIT (nW)	RESULT
V_{normal}	30.0 to 1000.0	693.601	0.001730	4.0	PASS
	1000.0 to 12500.0	6458.187	0.221820	20.0	PASS
$V_{max.}$	30.0 to 1000.0	986.056	0.001570	4.0	PASS
	1000.0 to 12500.0	6459.625	0.200909	20.0	PASS
$V_{min.}$	30.0 to 1000.0	792.420	0.002178	4.0	PASS
	1000.0 to 12500.0	6458.187	0.249459	20.0	PASS
TEST CHANNEL		CH 7 (2442MHz)			
V_{normal}	30.0 to 1000.0	797.027	0.001694	4.0	PASS
	1000.0 to 12500.0	6512.812	0.238781	20.0	PASS
$V_{max.}$	30.0 to 1000.0	813.881	0.001791	4.0	PASS
	1000.0 to 12500.0	6511.375	0.207014	20.0	PASS
$V_{min.}$	30.0 to 1000.0	759.803	0.001730	4.0	PASS
	1000.0 to 12500.0	6512.812	0.225424	20.0	PASS
TEST CHANNEL		CH 11 (2462MHz)			
V_{normal}	30.0 to 1000.0	992.482	0.002529	4.0	PASS
	1000.0 to 12500.0	6566.000	0.207014	20.0	PASS
$V_{max.}$	30.0 to 1000.0	916.337	0.001845	4.0	PASS
	1000.0 to 12500.0	6566.000	0.221820	20.0	PASS
$V_{min.}$	30.0 to 1000.0	995.635	0.001778	4.0	PASS
	1000.0 to 12500.0	6566.000	0.253513	20.0	PASS

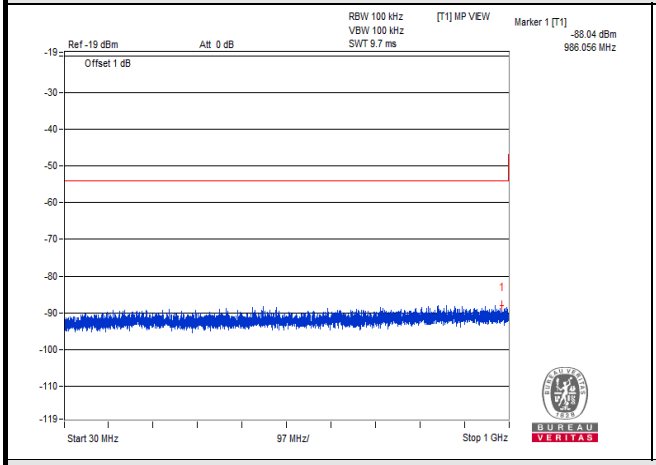
NOTE: 1. The spectrum plots are attached on the following pages.

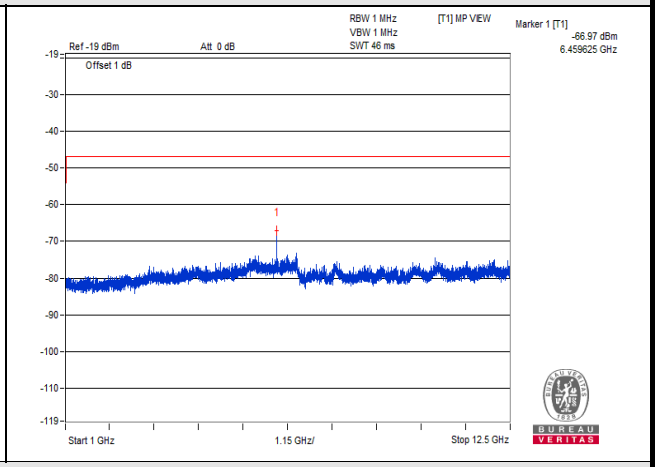
Vnormal



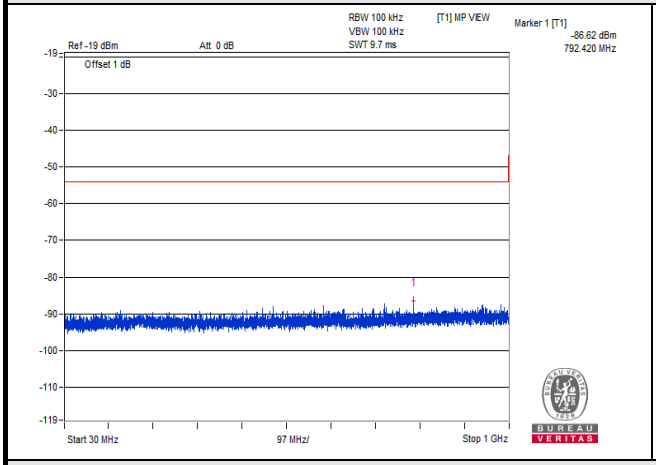


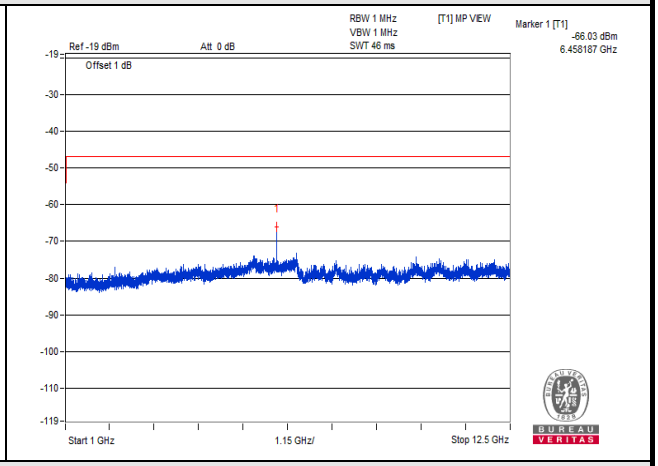
Vmax.





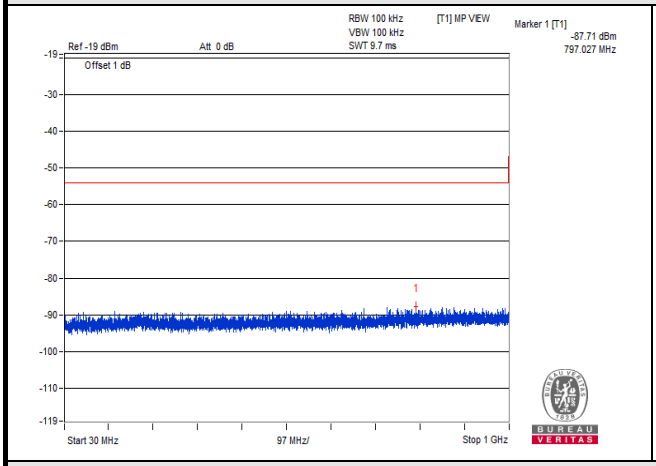
Vmin.

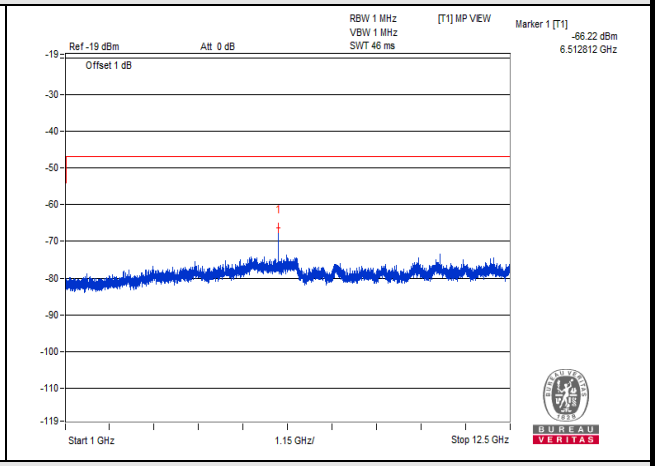




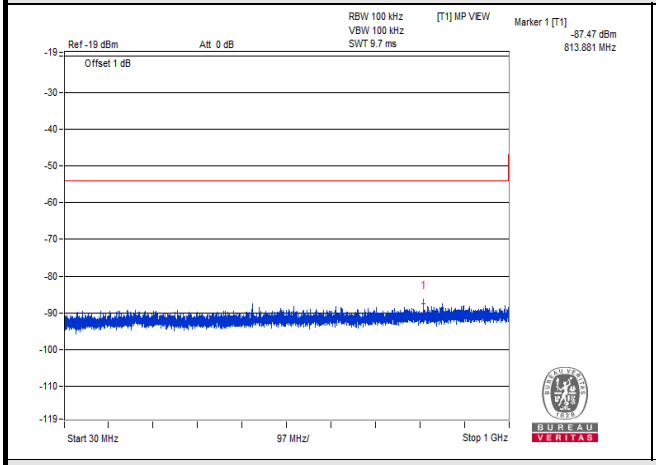
CH 3 (2422MHz)

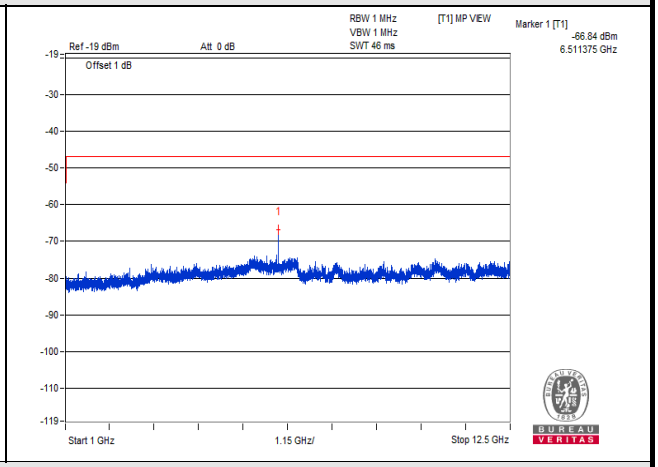
Vnormal



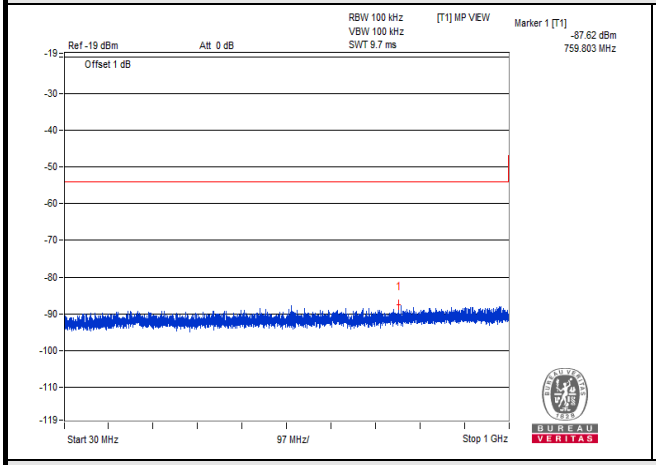


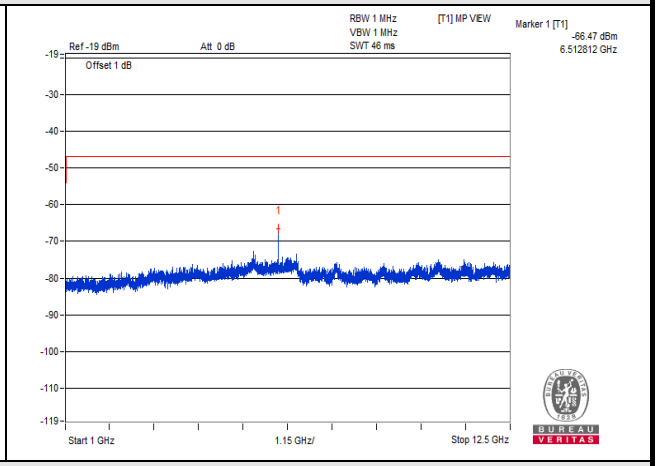
Vmax.





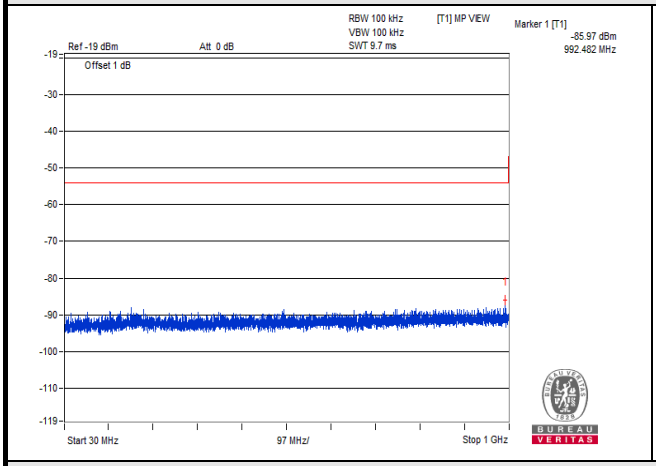
Vmin.

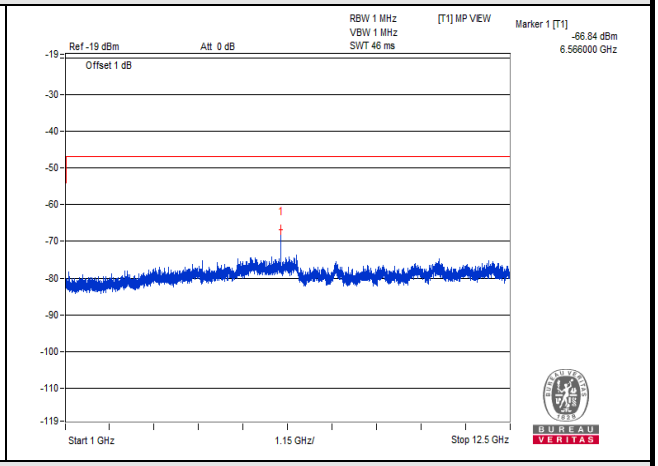




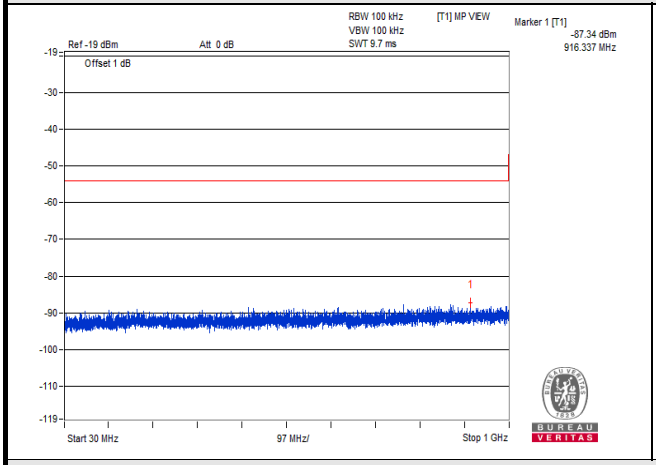
CH 7 (2442MHz)

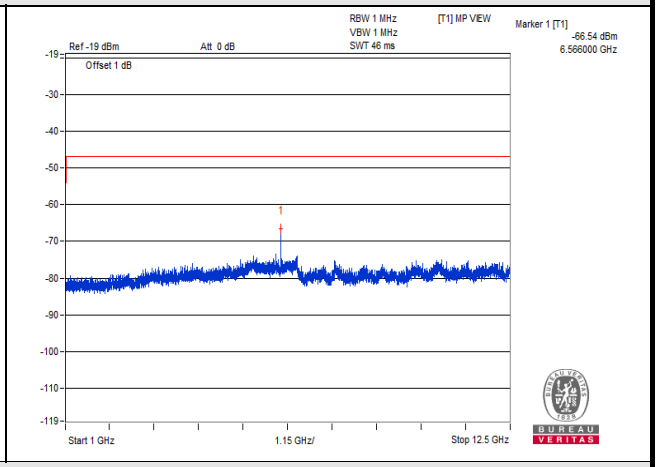
Vnormal



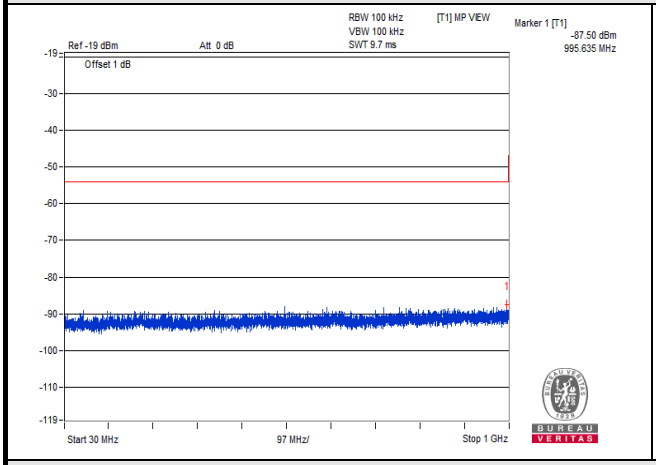


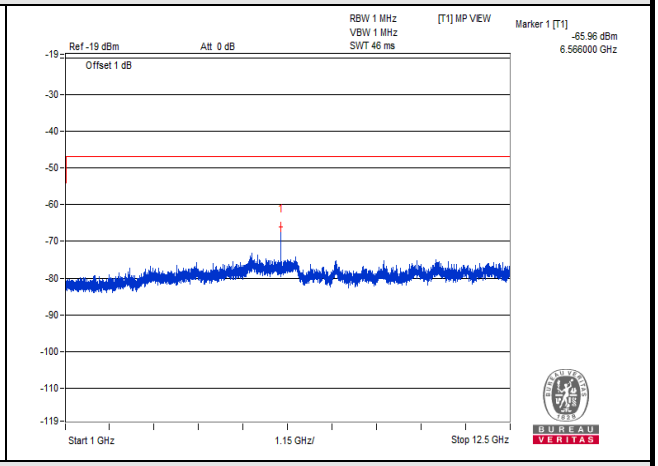
Vmax.





Vmin.

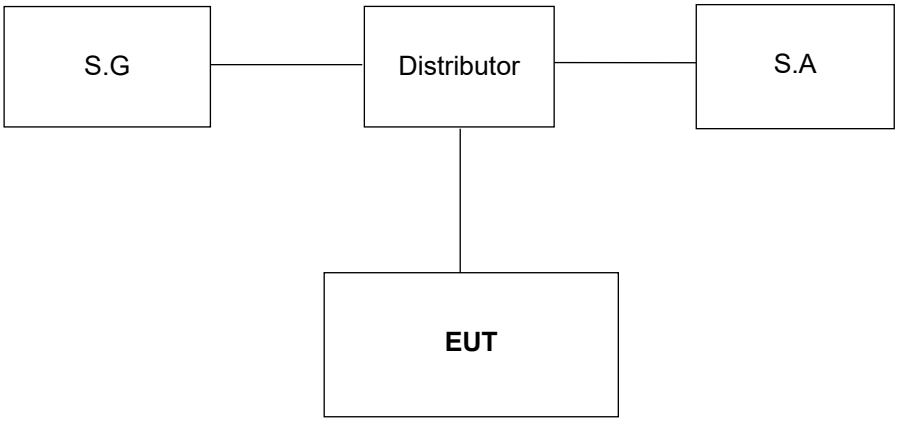




CH 11 (2462MHz)

4.7 Carrier Sense Capability

4.7.1 Measuring System Block Diagram



4.7.2 Measuring Operation Procedures

a) Turn the standard signal generator output OFF. Leave the equipment under test to be ready for transmission and verify the transmission with the spectrum analyzer.

b) Set the equipment under test to the receiving state.

c) Turn the standard signal generator ON and leave the equipment under test to be ready for transmission and verify with the spectrum analyzer that no transmission is being made.

4.7.3 Level of the Ambient Carrier

802.11b

Frequency (MHz)	Pcs (dBm)
2484	-42.12

Note:
Pcs (dBm) = 22.79 + Gr - 20log(F).
Gr: Antenna gain (2.4GHz: 3 dBi).
F: Transmission frequency (MHz).

VHT40 / 802.11ax (HE40)

Frequency (MHz)	Pcs (dBm)
2422	-41.90
2442	-41.97
2462	-42.04

Note:
Pcs (dBm) = 22.79 + Gr - 20log(F).
Gr: Antenna gain (2.4GHz: 3 dBi).
F: Transmission frequency (MHz).

4.7.4 Test Result

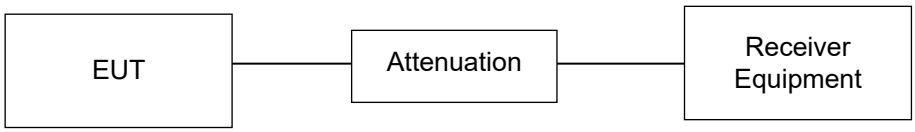
Environmental Conditions	25 deg.C, 60 % RH
Link Mode	**Test Result**
WiFi	Pass

4.8 Interference Prevention Function

4.8.1 Limits of Interference Prevention Function

Radio equipment used mainly on the same premises and automatically transmits or receives identification code.

4.8.2 Test Setup



4.8.3 Test Results

Environmental Conditions	25 deg.C, 60 % RH
Link Mode	**Test Result**
WiFi	Pass

4.9 Number of Carriers within 1 MHz Bandwidth in OFDM

4.9.1 Limit of Number of Carriers

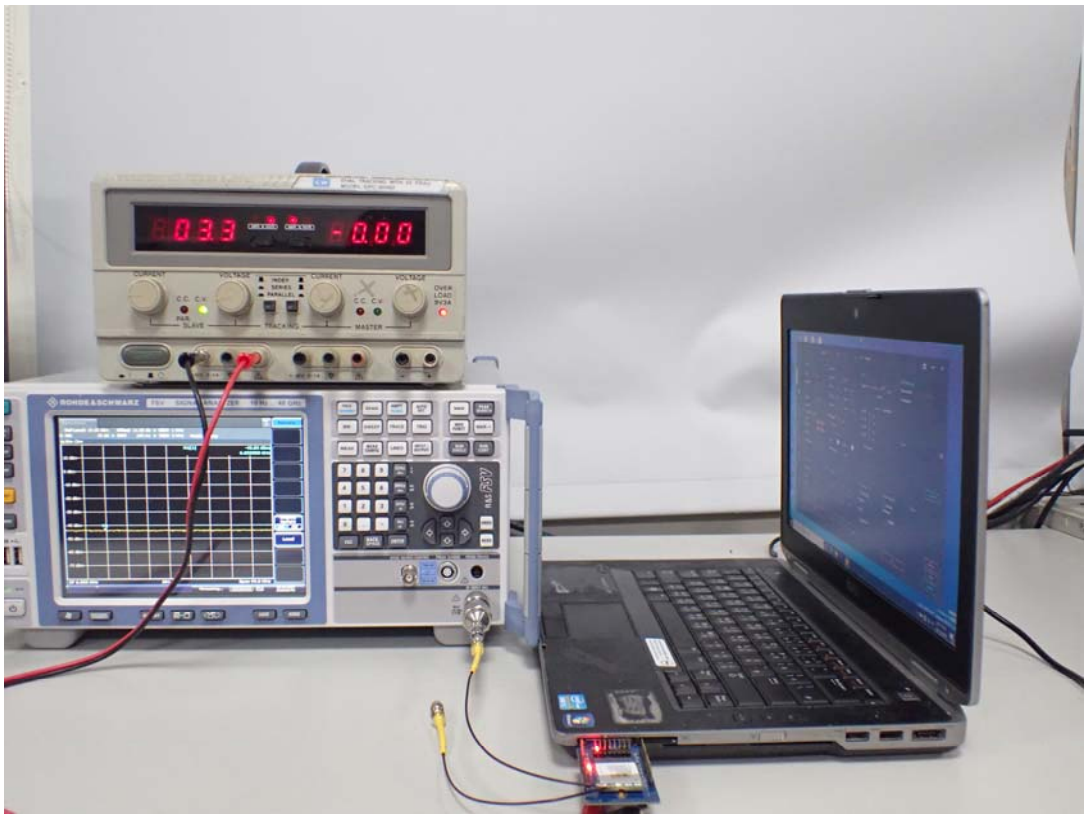
For each 1MHz bandwidth in OFDM, there should be at least 1 carrier

4.9.2 Test Setup

4.9.3 Test Result

About OFDM Technical, one OFDM Channel will have 52 sub-carriers. At present, we observe this product via the spectrum, and we know that there are 3 carriers in 1 MHz bandwidth in OFDM.

5 Photographs of the Test Configuration



Appendix - Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are accredited and approved according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

Lin Kou EMC/RF Lab
Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab
Tel: 886-3-6668565
Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab
Tel: 886-3-3183232
Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com
Web Site: www.bureauveritas-adt.com

The address and road map of all our labs can be found in our web site also.

--- END ---