

# TEST REPORT

Report No.: BCTC2304709645-1E

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Applicant: ROCKPI TRADING LIMITED

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Product Name: Radxa ROCK 3 Model C

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Model/Type reference: Radxa ROCK 3 Model C

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Tested Date: 2023-04-07 to 2023-05-17

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Issued Date: 2023-05-26

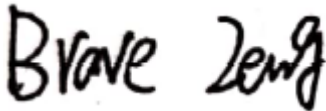
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**Shenzhen BCTC Testing Co., Ltd.**



Product Name: Radxa ROCK 3 Model C  
Trademark: N/A  
Model/Type reference: Radxa ROCK 3 Model C  
Radxa ROCK 3 Model C 1GB, Radxa ROCK 3 Model C 2GB,  
Radxa ROCK 3 Model C 4GB, Radxa ROCK 3 Model C 8GB  
Prepared For: ROCKPI TRADING LIMITED  
Address: Room 11, 27 / f, Ga wah international centre, 191 Javaroad, north point, Hong Kong  
Manufacturer: ROCKPI TRADING LIMITED  
Address: Room 11, 27 / f, Ga wah international centre, 191 Javaroad, north point, Hong Kong  
Prepared By: Shenzhen BCTC Testing Co., Ltd.  
Address: 1-2/F., Building B, Pengzhou Industrial Park, No.158, Fuyuan 1st Road, Zhancheng,  
Fuhai Subdistrict, Bao'an District, Shenzhen, Guangdong, China  
Sample Received Date: 2023-04-07  
Sample tested Date: 2023-04-07 to 2023-05-17  
Issue Date: 2023-05-26  
Report No.: BCTC2304709645-1E  
Test Standards: EN IEC 62311:2020  
Test Results: PASS  
Remark: This is RED Health test report.

Tested by:



Brave Zeng/ Project Handler

Approved by:



Zero Zhou/Reviewer

The test report is effective only with both signature and specialized stamp. This result(s) shown in this report refer only to the sample(s) tested. Without written approval of Shenzhen BCTC Testing Co., Ltd, this report can't be reproduced except in full. The tested sample(s) and the sample information are provided by the client.

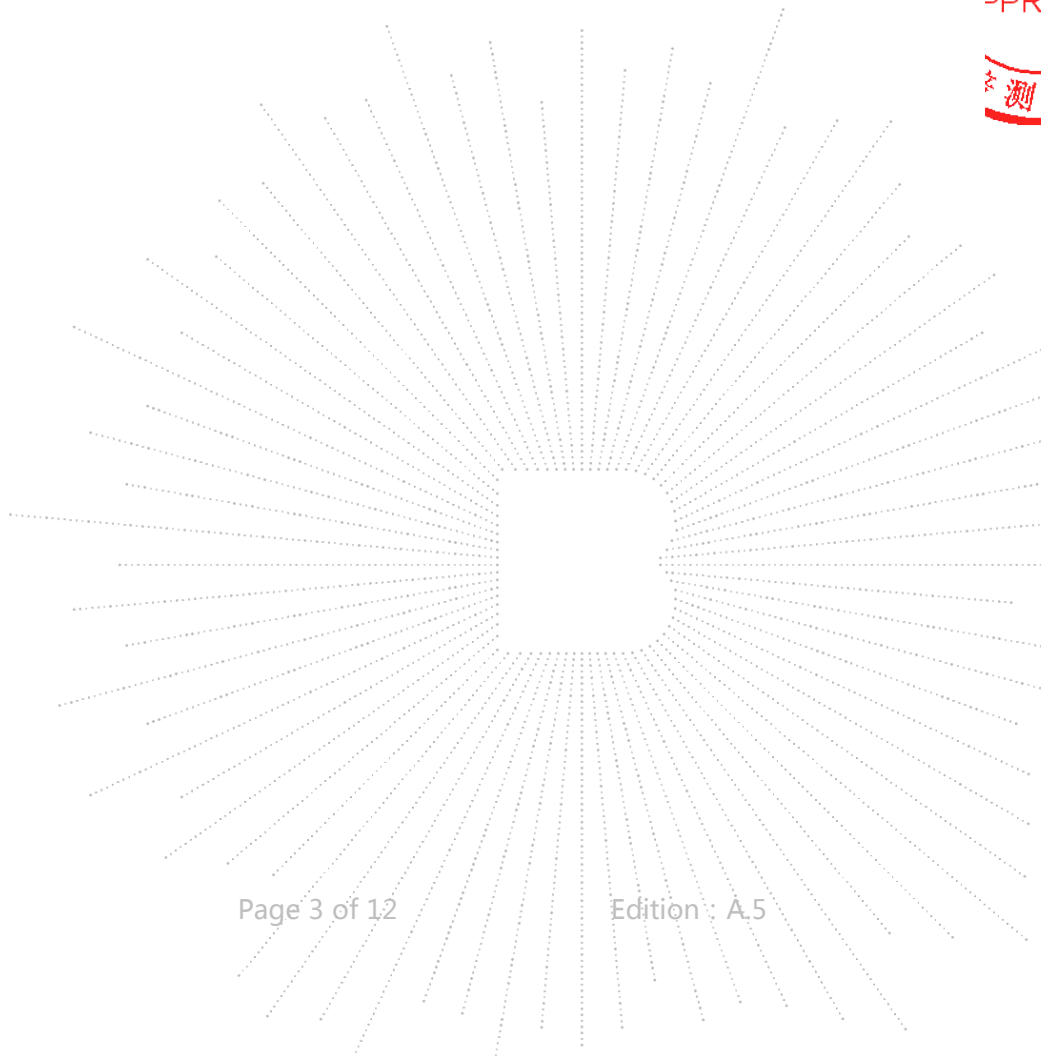


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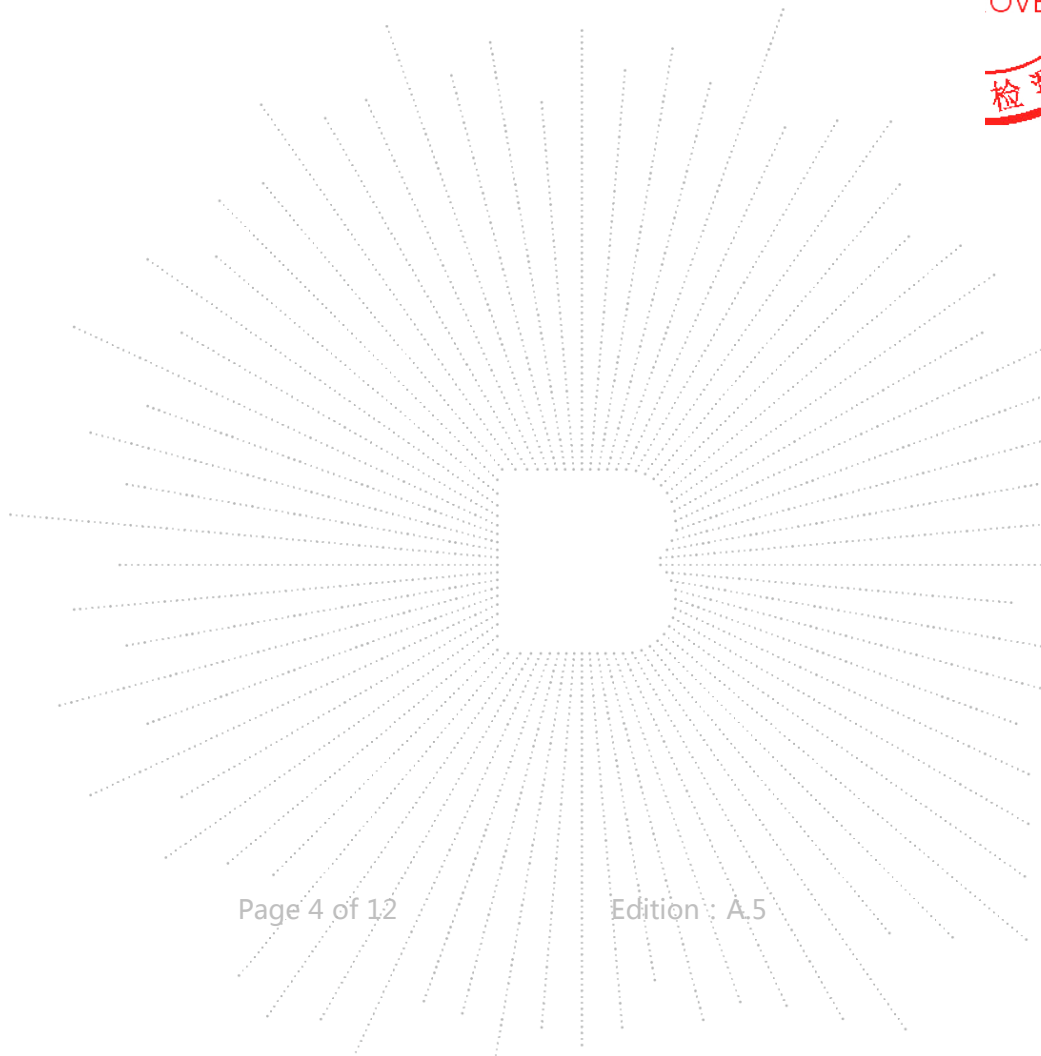
(Note: N/A Means Not Applicable)

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**1. Version**

Report No.	Issue Date	Description	Approved
BCTC2304709645-1E	2023-05-26	Original	Valid



## 2. Product Information And Test Setup

### 2.1 Product Information

Model/Type reference:	Radxa ROCK 3 Model C Radxa ROCK 3 Model C 1GB, Radxa ROCK 3 Model C 2GB, Radxa ROCK 3 Model C 4GB, Radxa ROCK 3 Model C 8GB
Model differences:	All the model are the same circuit and RF module, except model names.
Bluetooth version:	5.0
Hardware Version:	V1.32
Software Version:	V1.0
Operation Frequency:	Bluetooth(EDR+BLE): 2402-2480MHz WIFI(2.4GHz): IEEE 802.11b/g/n HT20: 2412-2472MHz WIFI(5.1GHz): IEEE 802.11a/n/ac HT20:5180MHz-5240MHz IEEE 802.11n/ac HT40:5190MHz-5230MHz IEEE 802.11ac HT80:5210MHz
Max. RF output power:	Bluetooth(EDR): 0.97 dBm Bluetooth(BLE): 2.95 dBm WIFI(2.4GHz): 12.61 dBm WIFI(5.1GHz): 2.5 dBm
Type of Modulation:	Bluetooth(EDR): GFSK, $\pi$ /4DQPSK, 8DPSK Bluetooth(BLE):GFSK WIFI(2.4GHz): DSSS, OFDM WIFI(5.1GHz): OFDM-BPSK, QPSK, 16QAM, 64QAM, 256QAM
Antenna installation:	Internal antenna
Antenna Gain:	Bluetooth(EDR+BLE)+WIFI(2.4GHz): 1.5 dBi WIFI(5.1GHz): 2.3 dBi
Ratings:	DC 5V from adapter



### 3. Health Requirements

#### 3.1 Limits

According to Council Recommendation: the criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) radiation.

Reference levels for electric, magnetic and electromagnetic fields (0Hz to 300GHz, unperturbed RMS values)

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field ( $\mu\text{T}$ )	Equivalent plane wave power density Seq (W/m <sup>2</sup> )
0-1 Hz	-	$3.2 \times 10^4$	$4 \times 10^4$	-
1-8 Hz	10000	$3.2 \times 10^4 / f^2$	$4 \times 10^4 / f^2$	-
8-25 Hz	10000	$4000 / f$	$5000 / f$	-
0.025-0.8 kHz	$250 / f$	$4 / f$	$5 / f$	-
0.8-3 kHz	$250 / f$	5	6.25	-
3-150 kHz	87	5	6.25	-
0.15-1 MHz	87	$0.73 / f$	$0.92 / f$	-
1-10 MHz	$87 / f^{1/2}$	$0.73 / f$	$0.92 / f$	-
10-400 MHz	28	0.073	0.095	2
400-2000 MHz	$1.375 f^{1/2}$	$0.0037 f^{1/2}$	$0.0046 f^{1/2}$	$f / 200$
2-300 GHz	61	0.16	0.2	10

Note:

1. f as indicated in the frequency range column.
2. For frequencies between 100 kHz and 10 GHz, Seq, E<sup>2</sup>, H<sup>2</sup> and B<sup>2</sup> are to be averaged over any six-minute period.
3. For frequencies exceeding 10 GHz, Seq, E<sup>2</sup>, H<sup>2</sup> and B<sup>2</sup> are to be averaged over any  $68 / f^{1.05}$  minute period (f in GHz).

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### 3.2 Exposure Evaluation

From Council Recommendation 1999/519/EC table 2, the maximum power density is 10 W/m<sup>2</sup>.

Power density (S) is calculated by the following formula:

$$S = PG * \text{Duty factor} / 4\pi R^2$$

P = Peak Power Input to antenna (Watts)

G =Antenna Gain (numeric)

R = distance to the center of radiation of antenna (in meter) = 0.20 m

Note:

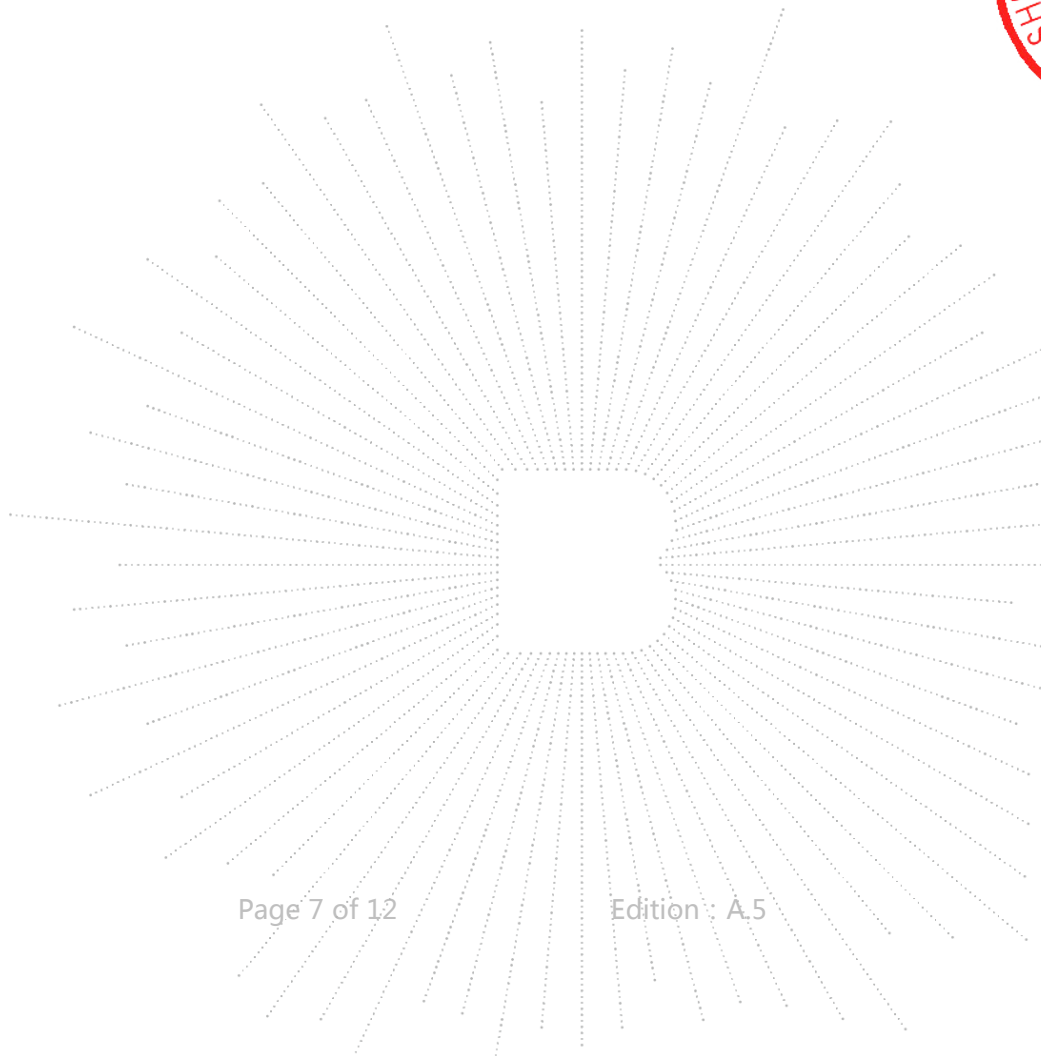
1)  $P \text{ (Watts)} = (10^{(\text{dBm} / 10)}) / 1000$

2)  $G \text{ (Antenna gain in numeric)} = 10^{(\text{Antenna gain in dBi} / 10)}$

3) Duty factor=1.0

4)  $\pi = 3.142$

Mode	Total Antenna Gain (dBi)	Total Antenna Gain (numeric)	Max. Total Output Power (dBm)	Max. Total Output Power (W)	Duty factor	Calculated RF Exposure (W/ m <sup>2</sup> )	Limit (W/ m <sup>2</sup> )
BT	1.50	1.4125	0.97	0.0013	1.00	0.0035	10
BLE	1.50	1.4125	2.95	0.0020	1.00	0.0055	10
2.4GHz	1.50	1.4125	12.61	0.0182	1.00	0.0512	10
5.1GHz	2.30	1.6982	2.50	0.0018	1.00	0.0060	10



#### 4. EUT Photographs

EUT Photo 1

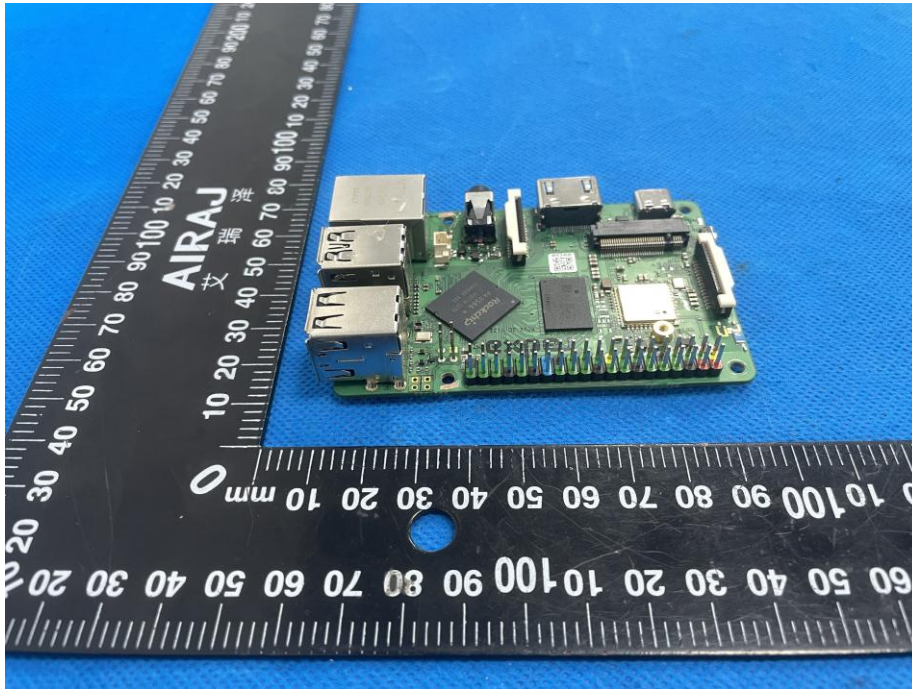


EUT Photo 2





EUT Photo 3

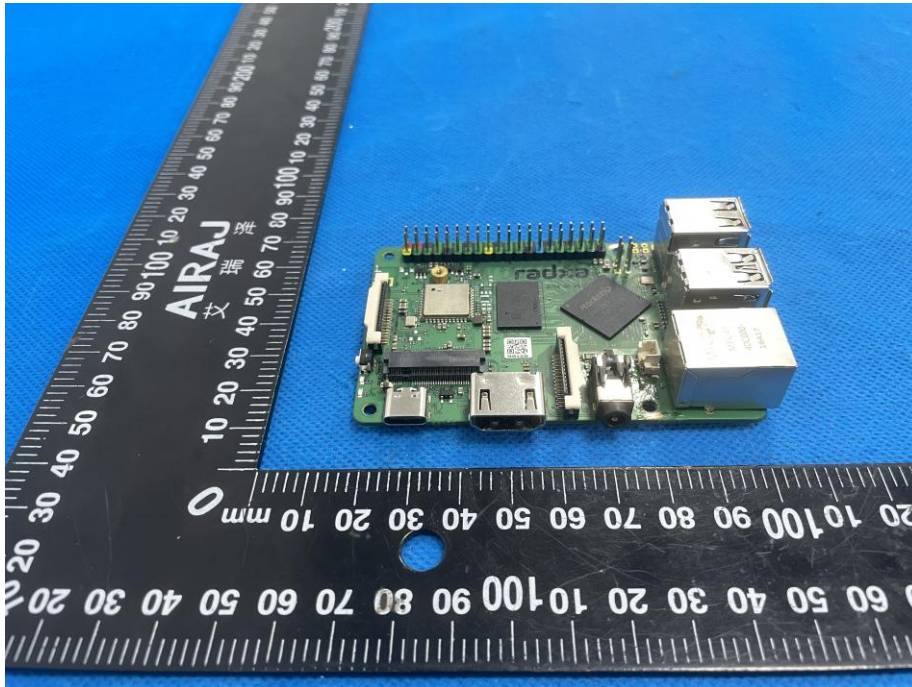


EUT Photo 4



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EUT Photo 5



EUT Photo 6

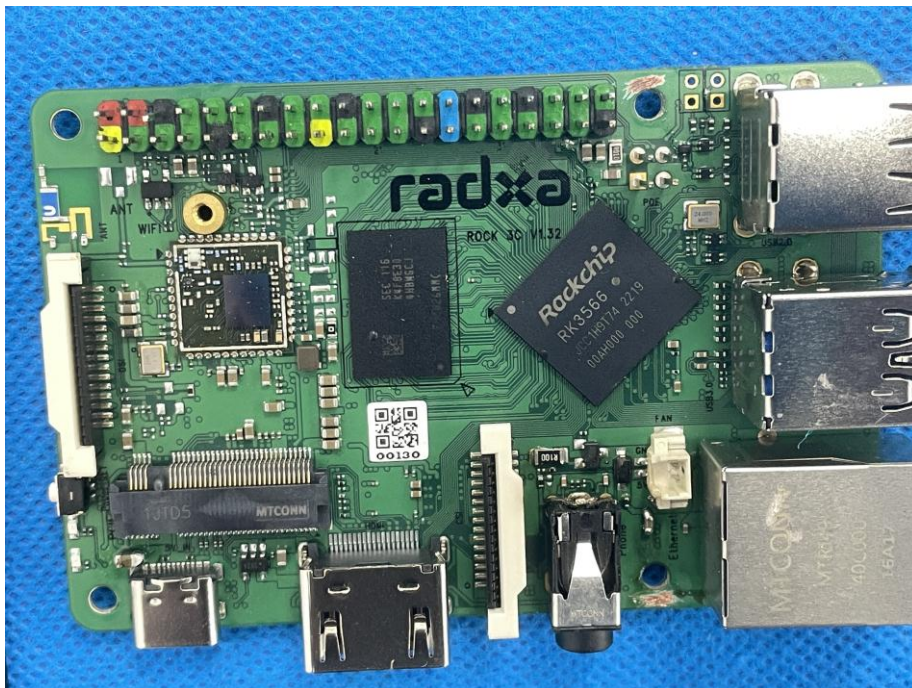


TEC  
TC  
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EUT Photo 7



EUT Photo 8



**STATEMENT**

1. The equipment lists are traceable to the national reference standards.
2. The test report can not be partially copied unless prior written approval is issued from our lab.
3. The test report is invalid without the "special seal for inspection and testing".
4. The test report is invalid without the signature of the approver.
5. The test process and test result is only related to the Unit Under Test.
6. Sample information is provided by the client and the laboratory is not responsible for its authenticity.
7. The test report without CMA mark is only used for scientific research, teaching, enterprise product development and internal quality control purposes.
8. The quality system of our laboratory is in accordance with ISO/IEC17025.
9. If there is any objection to this test report, the client should inform issuing laboratory within 15 days from the date of receiving test report.

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**\*\*\*\*\* END \*\*\*\*\***