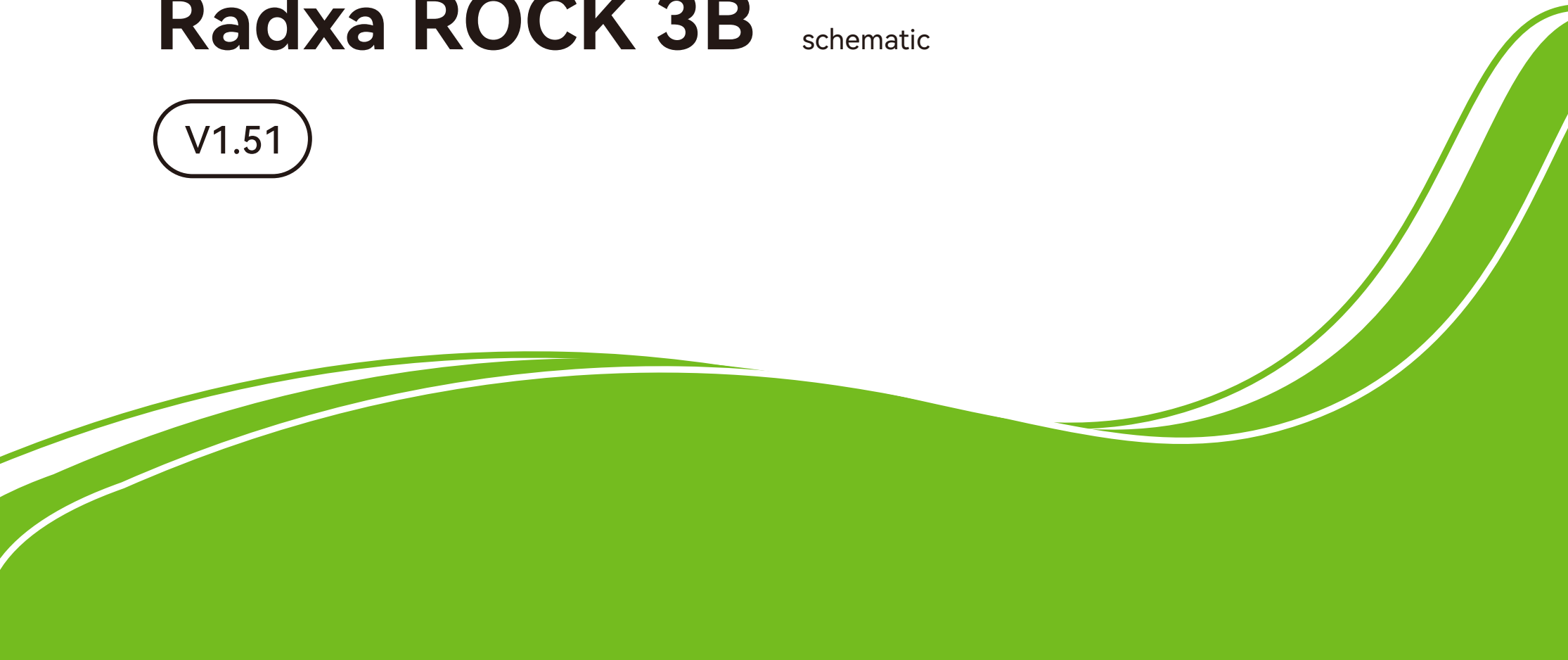




Radxa ROCK 3B

schematic

V1.51

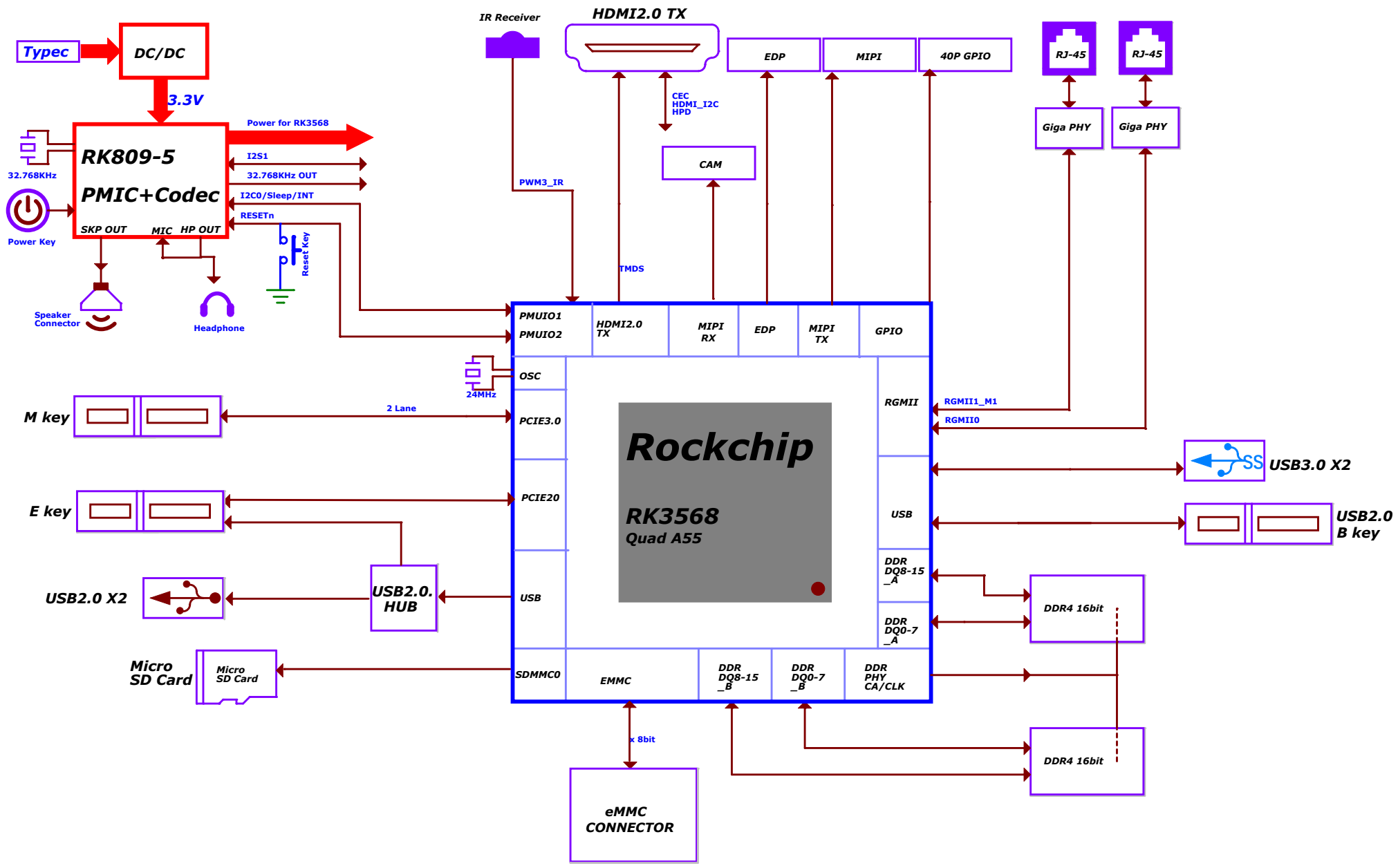


CONTENT

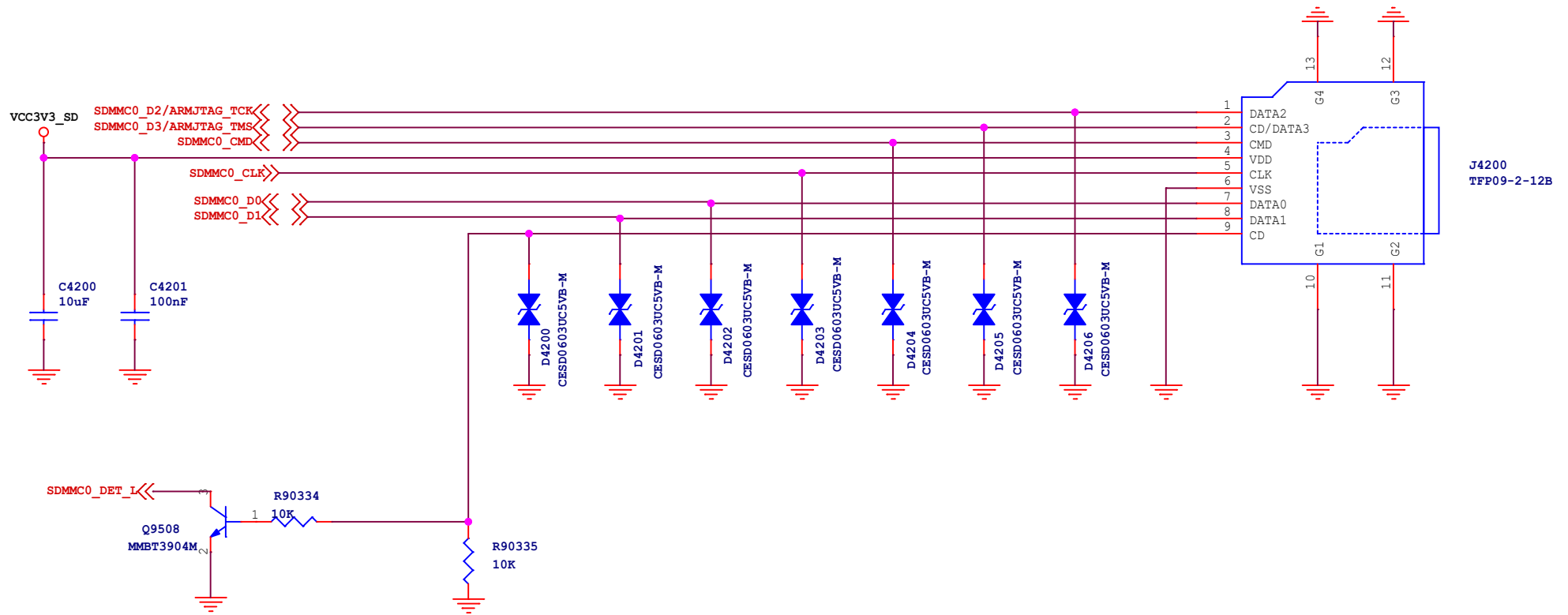
- 01.Cover
- 02.Content
- 03.Framwork
- 04.RK3568_Flash/SD Controller
- 05.RK3568_USB/PCIE/SATA PHY
- 06.RK3568_SARADC/GPIO
- 07.RK3568_VI Interface
- 08.RK3568_VO Interface_1
- 09.RK3568_VO Interface_2
- 10.RK3568_Audio Interface
- 11.RK3568_Power/GND
- 12.RK3568_OSC/PLL/PMUIO
- 13.Power_Ext Discrete/RTC IC
- 14.Power_Flash Power Manage
- 15.RK3568_DDR PHY
- 16.DRAM-LPDDR4X_1X32bit_200P
- 17.Flash-eMMC Flash
- 18.Flash-MicroSD Card
- 19.Flash-SPI FLASH(Optional)
- 20.VI-Camera MIPI_CSI_1x_2Lanes
- 21.VO-HDMI2.0 TX
- 22.VO-LCM_MIPI_DSI_TX0
- 23.VO-LCM_eDP_TX
- 24.TP Connector COF
- 25.WIFI/BT-M.2-KEY-E
- 26.Ethernet-GEPHY_RGMII0
- 27.Ethernet-GEPHY_RGMII1_M1
- 28.Audio-Headphone Port
- 29.KEY Array/SARADC
- 30.USB2HUB
- 31.M2_KEYE_and_M2_KEYB
- 32.IR Receiver
- 33.CONNECTOR
- 34.Power_DC IN
- 35.Power_PMIC
- 36.USB2/USB3 Port



Size	Title: ROCK 3B	REV
A4	Page Name: 02.Content	1.51
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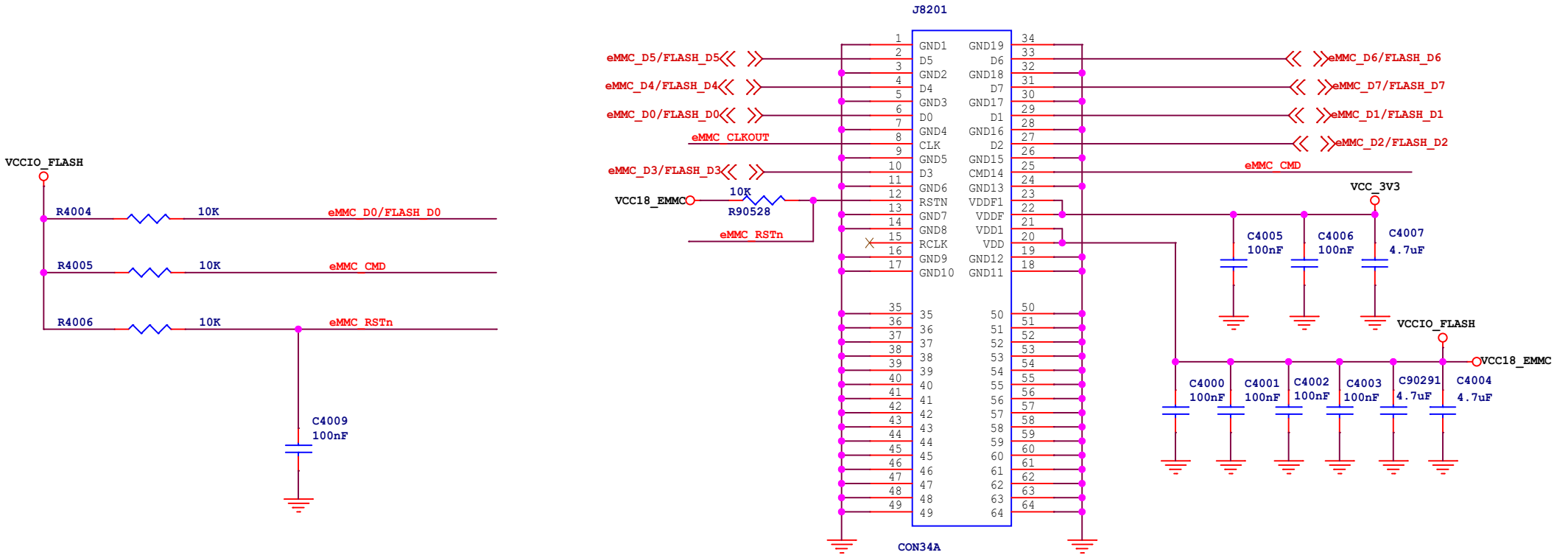
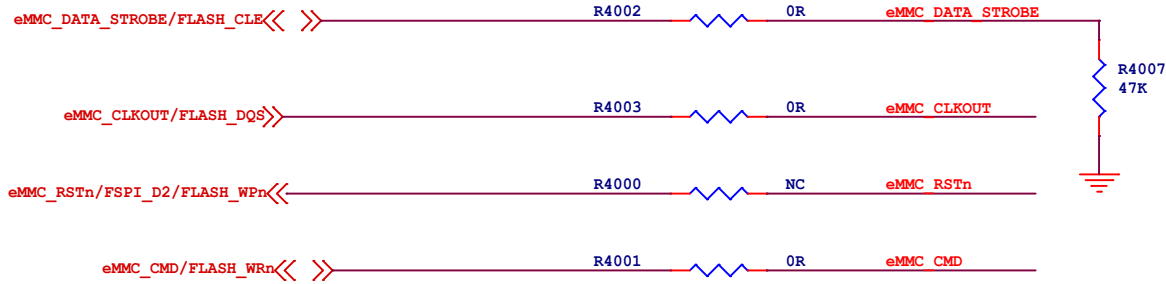


MicroSD Card



Size	Title: ROCK 3B	REV
A4	Page Name: Block Diagram	1.51
Date: Wednesday, November 15, 2023 Sheet 3 of 36		

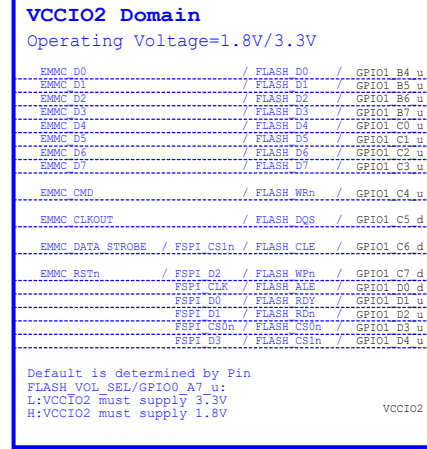
eMMC Flash



Size	Title: ROCK 3B	REV
A4	Page Name: Block Diagram	1.51
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RK3568_I (VCCIO2 Domain)

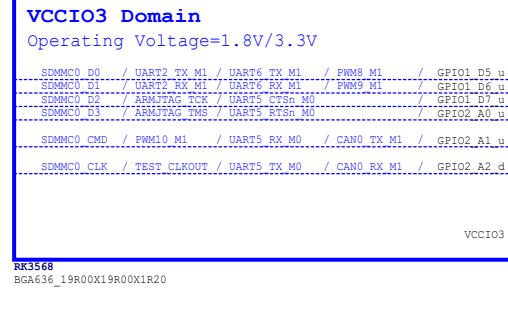
U1000I



RK3568
BGA636_19R00X19R00X1R20

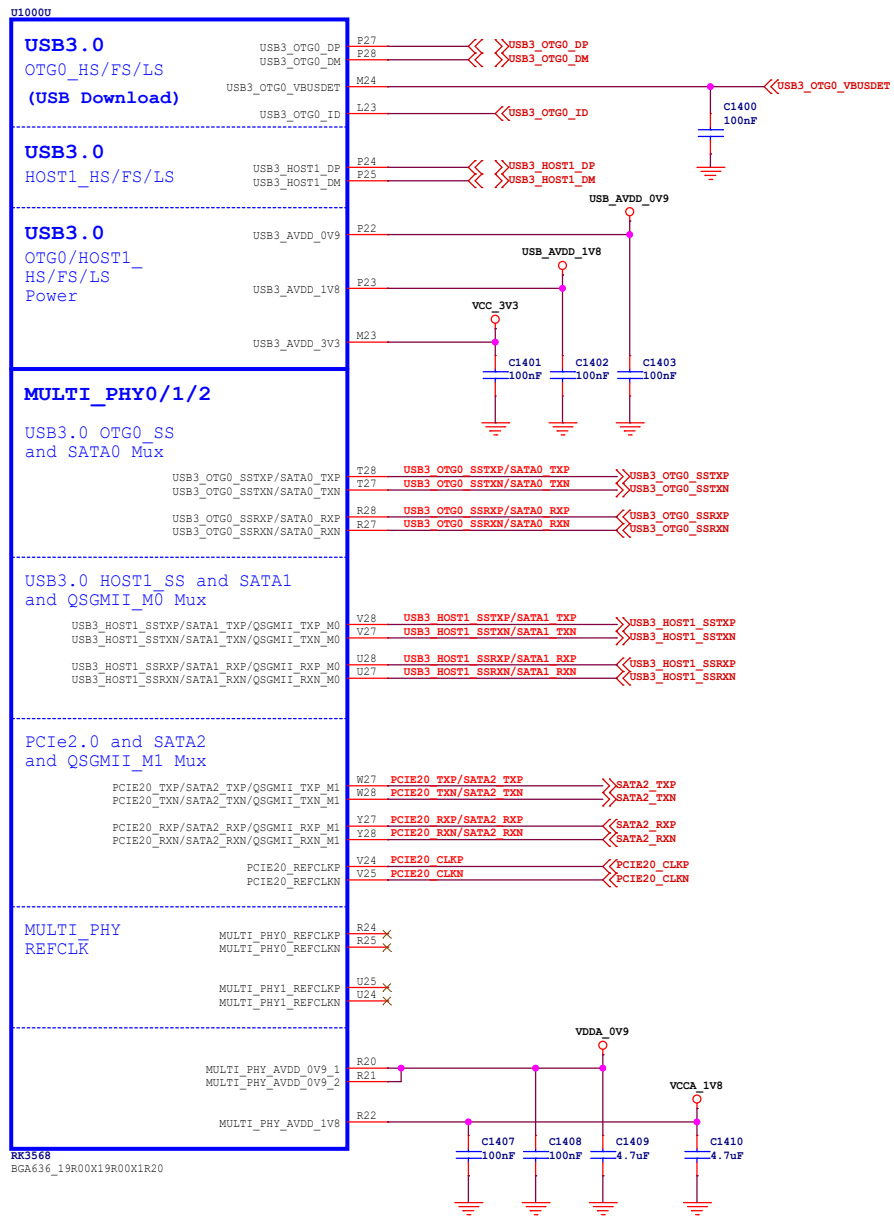
RK3568_J (VCCIO3 Domain)

U1000J



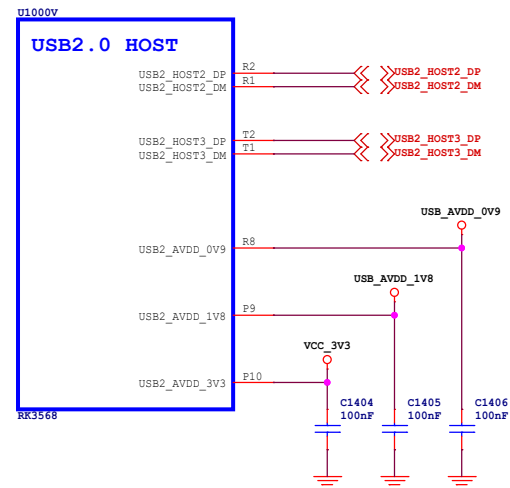
RK3568
BGA636_19R00X19R00X1R20

RK3568_U (USB3.0/SATA/QSGMII/PCIE2.0 x1)

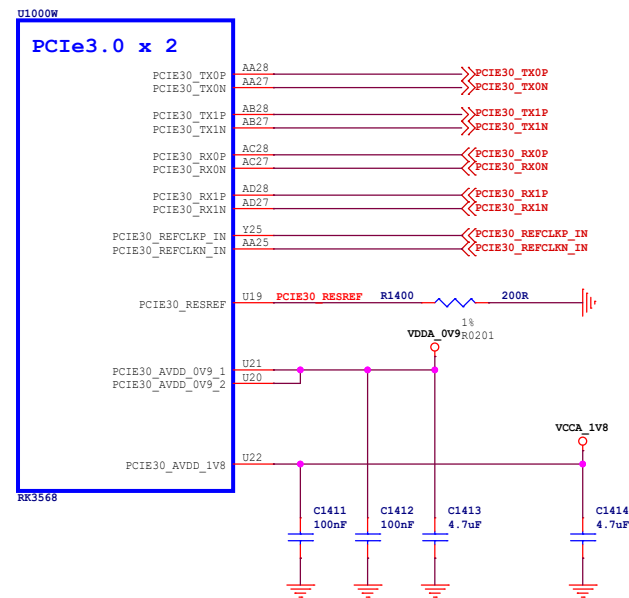


RK3568
BGA636_19R00X19R00X1R20

RK3568_V (USB2.0 HOST)



RK3568_W (PCIE3.0 x2)

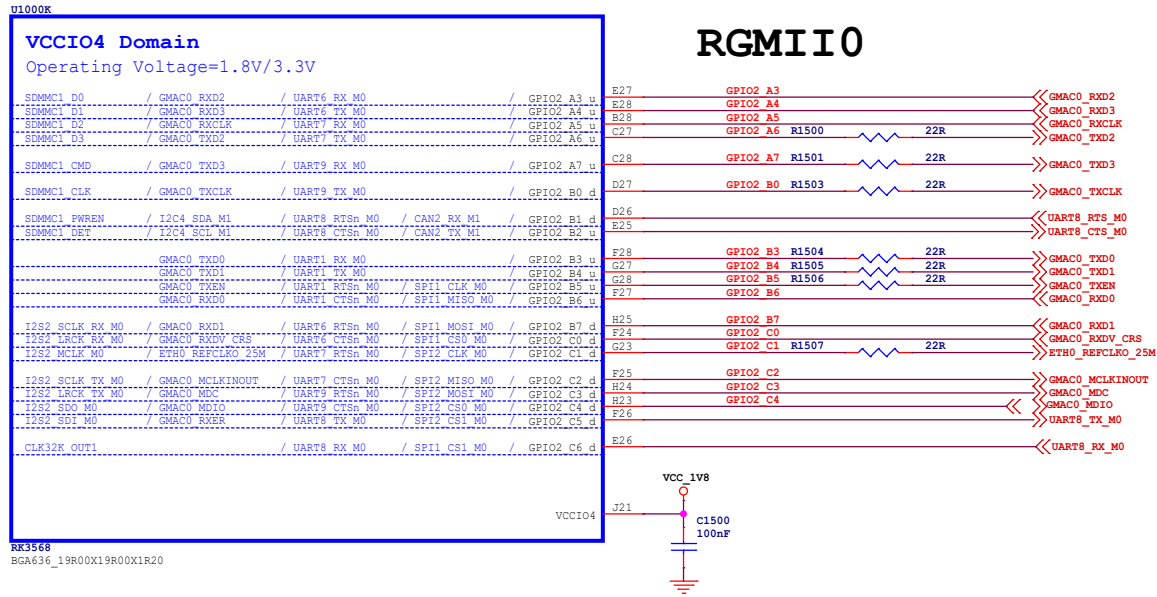


RK3568

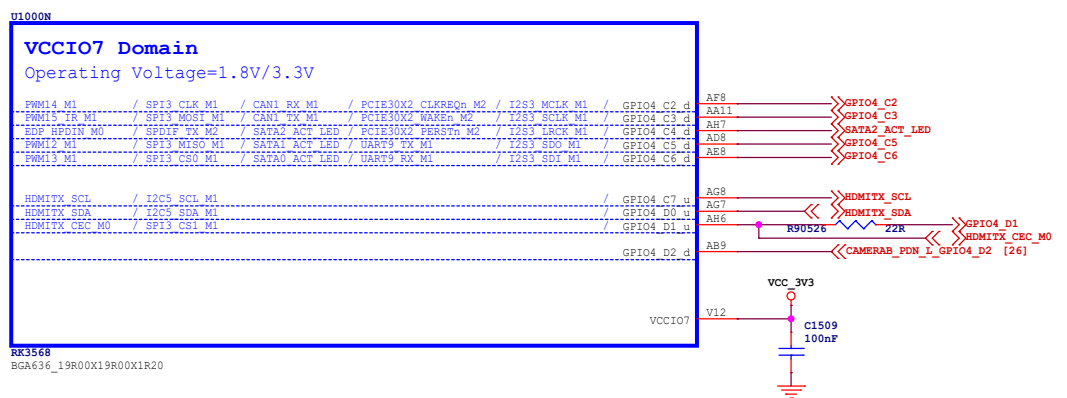


Size	Title: ROCK 3B	REV
A3	Page Name: 05.RK3568_USB/PCIE/SATA PHY	1.51
Date: Wednesday, November 15, 2023	Sheet 5 of 36	

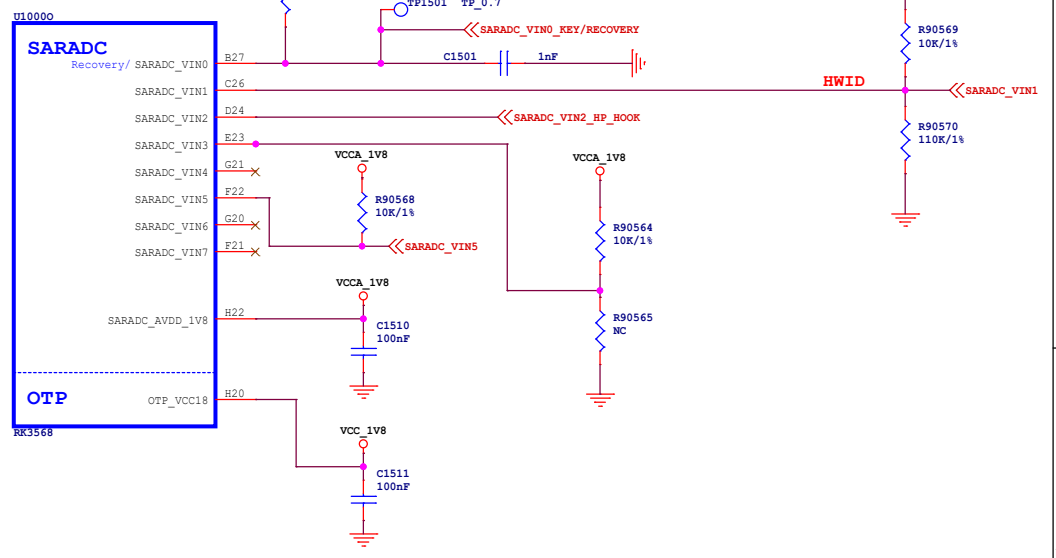
RK3568_K (VCCIO4 Domain)



RK3568_N (VCCIO7 Domain)



RK3568_O (SARADC/OTP)

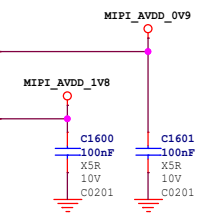
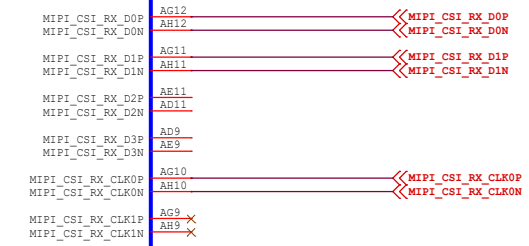


Size	Title: ROCK 3B	REV
A3	Page Name: 06.RK3568_SARADC/GPIO	1.51
Date: Wednesday, November 15, 2023	Sheet 6 of 36	

RK3568_P (MIPI_CSI_RX)

U1000P

MIPI CSI RX



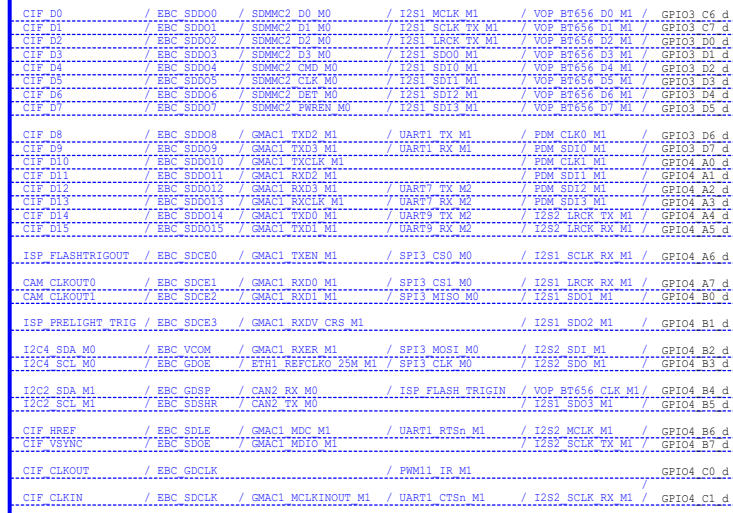
RK3568
BGA636_19R00X19R00X1R20

RK3568_M (VCCIO6 Domain)

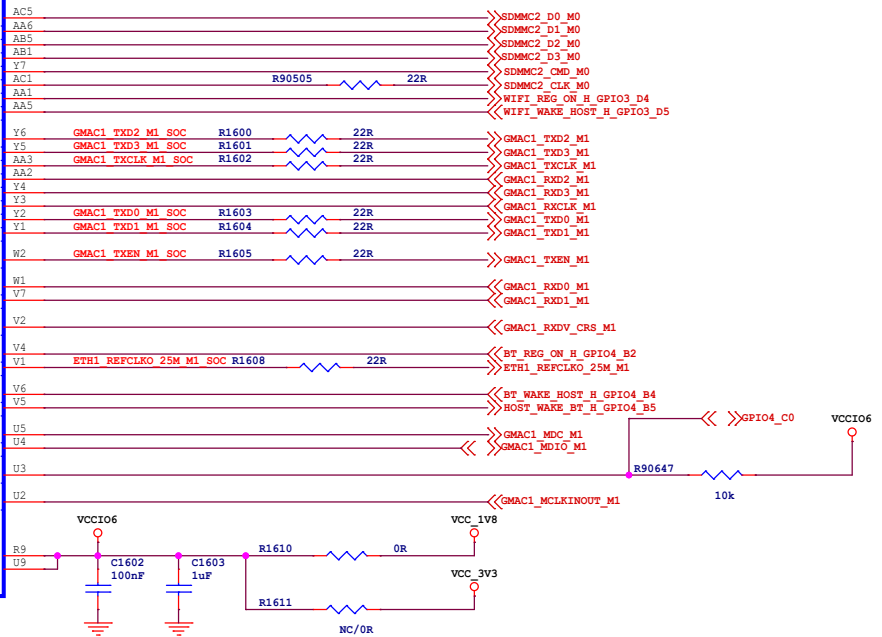
U1000M

VCCIO6 Domain

Operating Voltage=1.8V/3.3V



RK3568
BGA636_19R00X19R00X1R20

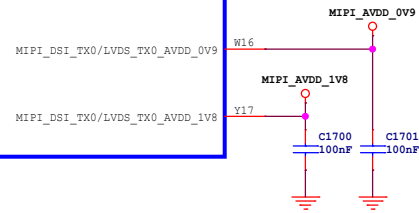
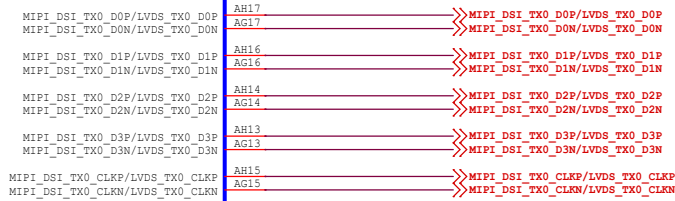


Size	Title: ROCK 3B	REV
A3	Page Name: 07.RK3568_VI Interface	1.51
Date: Wednesday, November 15, 2023	Sheet 7 of 36	

RK3568_R (MIPI_DSI_TX0/LVDS_TX0)

U1000R

MIPI DSI TX0/LVDS TX0

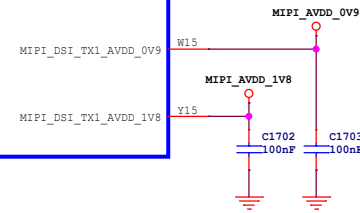
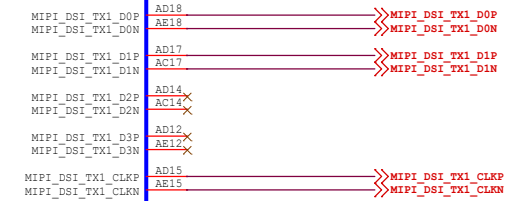


RK3568

RK3568_S (MIPI_DSI_TX1)

U1000S

MIPI DSI TX1

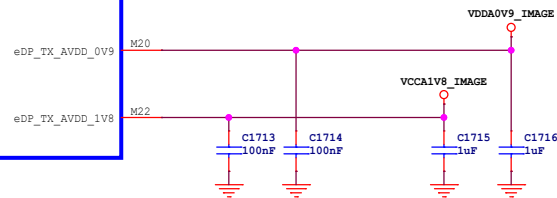
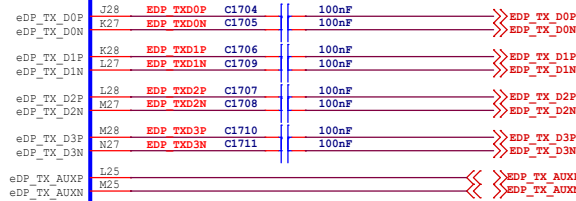


RK3568

RK3568_T (eDP TX)

U1000T

eDP_TX

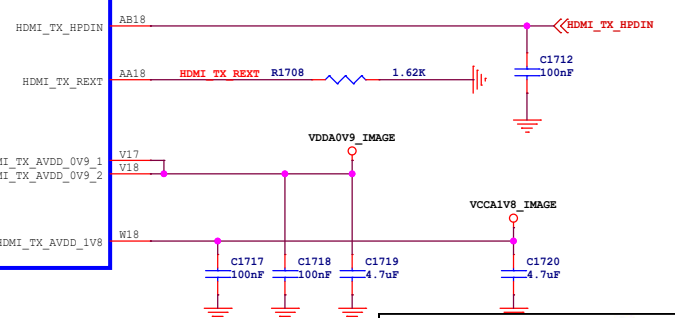
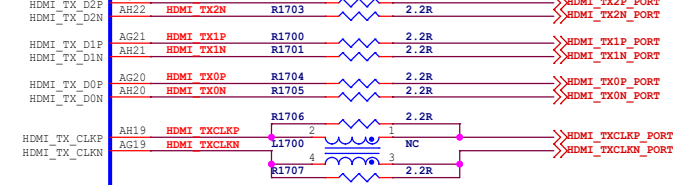


RK3568

RK3568_Q (HDMI2.0 TX)

U1000Q

HDMI2.0 TX



RK3568



Size	Title:	ROCK 3B	REV
A3	Page Name:	08.RK3568_VO Interface_1	1.51
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RK3568_L (VCCIO5 Domain)

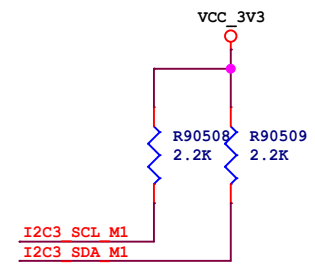
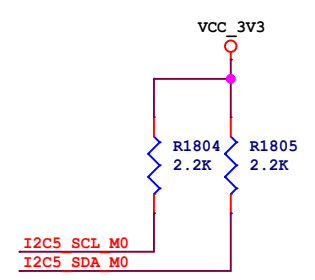
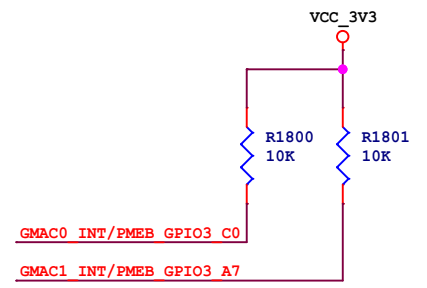
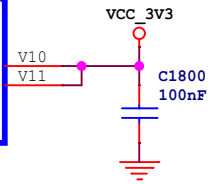
U1000L

VCCIO5 Domain


Operating Voltage=1.8V/3.3V

LCDC D0	/ VOP BT656 D0 M0	/ SPI0 MISO M1	/ PCIE20 CLKREOn M1	/ I2S1 MCLK M2	/ GPIO2 D0 d
LCDC D1	/ VOP BT656 D1 M0	/ SPI0 MOSI M1	/ PCIE20 WAKEn M1	/ I2S1 SCLK TX M2	/ GPIO2 D1 d
LCDC D2	/ VOP BT656 D2 M0	/ SPI0 CS0 M1	/ PCIE30X1 CLKREOn M1	/ I2S1 LRCK TX M2	/ GPIO2 D2 d
LCDC D3	/ VOP BT656 D3 M0	/ SPI0 CLK M1	/ PCIE30X1 WAKEn M1	/ I2S1 SDIO M2	/ GPIO2 D3 d
LCDC D4	/ VOP BT656 D4 M0	/ SPI2 CS1 M1	/ PCIE30X2 CLKREOn M1	/ I2S1 SDI1 M2	/ GPIO2 D4 d
LCDC D5	/ VOP BT656 D5 M0	/ SPI2 CS0 M1	/ PCIE30X2 WAKEn M1	/ I2S1 SDI2 M2	/ GPIO2 D5 d
LCDC D6	/ VOP BT656 D6 M0	/ SPI2 MOSI M1	/ PCIE30X2 PERSTn M1	/ I2S1 SDI3 M2	/ GPIO2 D6 d
LCDC D7	/ VOP BT656 D7 M0	/ SPI2 MISO M1	/ UART8 TX M1	/ I2S1 SDO0 M2	/ GPIO2 D7 d
LCDC CLK	/ VOP BT656 CLK M0	/ SPI2 CLK M1	/ UART8 RX M1	/ I2S1 SDO1 M2	/ GPIO3 A0 d
LCDC D8	/ VOP BT1120 D0	/ SPI1 CS0 M1	/ PCIE30X1 PERSTn M1	/ SDMMC2 D0 M1	/ GPIO3 A1 d
LCDC D9	/ VOP BT1120 D1	/ GMAC1 TXD2 M0	/ I2S3 MCLK M0	/ SDMMC2 D1 M1	/ GPIO3 A2 d
LCDC D10	/ VOP BT1120 D2	/ GMAC1 TXD3 M0	/ I2S3 SCLK M0	/ SDMMC2 D2 M1	/ GPIO3 A3 d
LCDC D11	/ VOP BT1120 D3	/ GMAC1 RXD2 M0	/ I2S3 LRCK M0	/ SDMMC2 D3 M1	/ GPIO3 A4 d
LCDC D12	/ VOP BT1120 D4	/ GMAC1 RXD3 M0	/ I2S3 SDO M0	/ SDMMC2 CMD M1	/ GPIO3 A5 d
LCDC D13	/ VOP BT1120 CLK	/ GMAC1 TXCLK M0	/ I2S3 SDI M0	/ SDMMC2 CLK M1	/ GPIO3 A6 d
LCDC D14	/ VOP BT1120 D5	/ GMAC1 RXCLK M0	/ SDMMC2 DET M1	/ GPIO3 A7 d	
LCDC D15	/ VOP BT1120 D6	/ ETH1 REFCLK0 25M M0	/ SDMMC2 PWREN M1	/ GPIO3 B0 d	
LCDC D16	/ VOP BT1120 D7	/ GMAC1 RXD0 M0	/ UART4 RX M1	/ PWM8 M0	/ GPIO3 B1 d
LCDC D17	/ VOP BT1120 D8	/ GMAC1 RXD1 M0	/ UART4 TX M1	/ PWM9 M0	/ GPIO3 B2 d
LCDC D18	/ VOP BT1120 D9	/ GMAC1 RXDV CRS M0	/ I2C5 SCL M0	/ PDM SDI0 M2	/ GPIO3 B3 d
LCDC D19	/ VOP BT1120 D10	/ GMAC1 RXER M0	/ I2C5 SDA M0	/ PDM SDI1 M2	/ GPIO3 B4 d
LCDC D20	/ VOP BT1120 D11	/ GMAC1 TXD0 M0	/ I2C3 SCL M1	/ PWM10 M0	/ GPIO3 B5 d
LCDC D21	/ VOP BT1120 D12	/ GMAC1 TXD1 M0	/ I2C3 SDA M1	/ PWM11 IR M0	/ GPIO3 B6 d
LCDC D22	/ PWM12 M0	/ GMAC1 TXEN M0	/ UART3 TX M1	/ PDM SDI2 M2	/ GPIO3 B7 d
LCDC D23	/ PWM13 M0	/ GMAC1 MCLKINOUT M0	/ UART3 RX M1	/ PDM SDI3 M2	/ GPIO3 C0 d
LCDC HSYNC	/ VOP BT1120 D13	/ SPI1 MOSI M1	/ PCIE20 PERSTn M1	/ I2S1 SDO2 M2	/ GPIO3 C1 d
LCDC VSYNC	/ VOP BT1120 D14	/ SPI1 MISO M1	/ UART5 TX M1	/ I2S1 SDO3 M2	/ GPIO3 C2 d
LCDC DEN	/ VOP BT1120 D15	/ SPI1 CLK M1	/ UART5 RX M1	/ I2S1 SCLK RX M2	/ GPIO3 C3 d
PWM14 M0	/ VOP PWM M1	/ GMAC1 MDC M0	/ UART7 TX M1	/ PDM CLK1 M2	/ GPIO3 C4 d
PWM15 IR M0	/ SPDF TX M1	/ GMAC1 MDIO M0	/ UART7 RX M1	/ I2S1 LRCK RX M2	/ GPIO3 C5 d

VCCIO5_1
VCCIO5_2



RK3568
BGA636_19R00X19R00X1R20



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A4	Page Name: 09.RK3568_VO Interface_2	1.51
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RK3568_H (VCCIO1 Domain)

U1000H

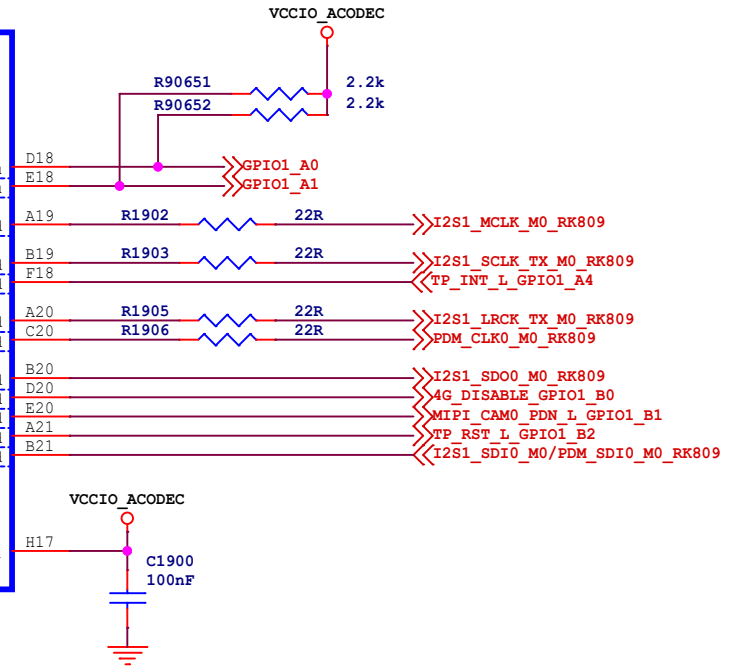
VCCIO1 Domain

Operating Voltage=1.8V/3.3V

I2C3 SDA M0	/ UART3 RX M0	/ CAN1 RX M0	/ AUDIOPWM LOUT P	/ ACODEC ADC DATA	/ GPIO1 A0 u
I2C3 SCL M0	/ UART3 TX M0	/ CAN1 TX M0	/ AUDIOPWM LOUT N	/ ACODEC ADC CLK	/ GPIO1 A1 u
I2S1 MCLK M0	/ UART3 RTSn M0	/ SCR CLK	/ PCIE30X1 PERStn M2		/ GPIO1 A2 d
I2S1 SCLK TX M0	/ UART3 CTSn M0	/ SCR IO	/ PCIE30X1 WAKEn M2	/ ACODEC DAC CLK	/ GPIO1 A3 d
I2S1 SCLK RX M0	/ UART4 RX M0	/ PDM CLK1 M0	/ SPDIF TX M0		/ GPIO1 A4 d
I2S1 LRCK TX M0	/ UART4 RTSn M0	/ SCR RST	/ PCIE30X1 CLKREQn M2	/ ACODEC DAC SYNC	/ GPIO1 A5 d
I2S1 LRCK RX M0	/ UART4 TX M0	/ PDM CLK0 M0	/ AUDIOPWM ROUT P		/ GPIO1 A6 d
I2S1 SD00 M0	/ UART4 CTSn M0	/ SCR DET	/ AUDIOPWM ROUT N	/ ACODEC DAC DATAL	/ GPIO1 A7 d
I2S1 SD01 M0	/ I2S1 SDI3 M0	/ PDM SDI3 M0	/ PCIE20 CLKREQn M2	/ ACODEC DAC DATAR	/ GPIO1 B0 d
I2S1 SD02 M0	/ I2S1 SDI2 M0	/ PDM SDI2 M0	/ PCIE20 WAKEn M2	/ ACODEC ADC SYNC	/ GPIO1 B1 d
I2S1 SD03 M0	/ I2S1 SDI1 M0	/ PDM SDI1 M0	/ PCIE20 PERStn M2		/ GPIO1 B2 d
	/ I2S1 SDI0 M0	/ PDM SDI0 M0			/ GPIO1 B3 d

RK3568
BGA636_19R00X19R00X1R20

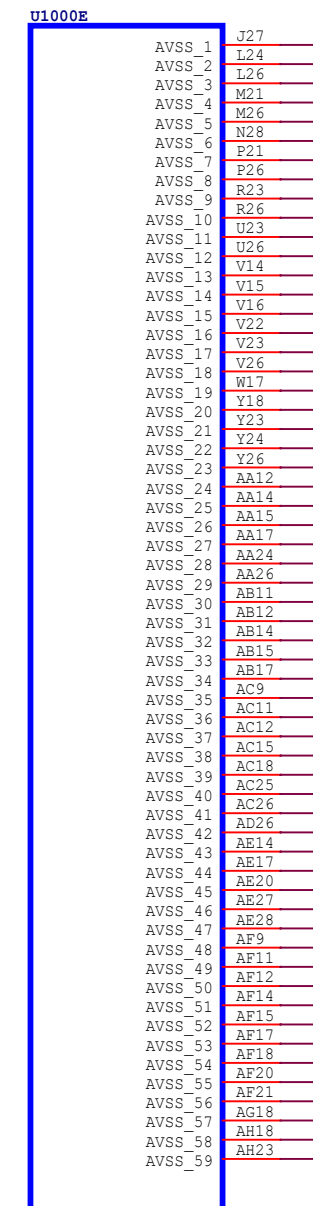
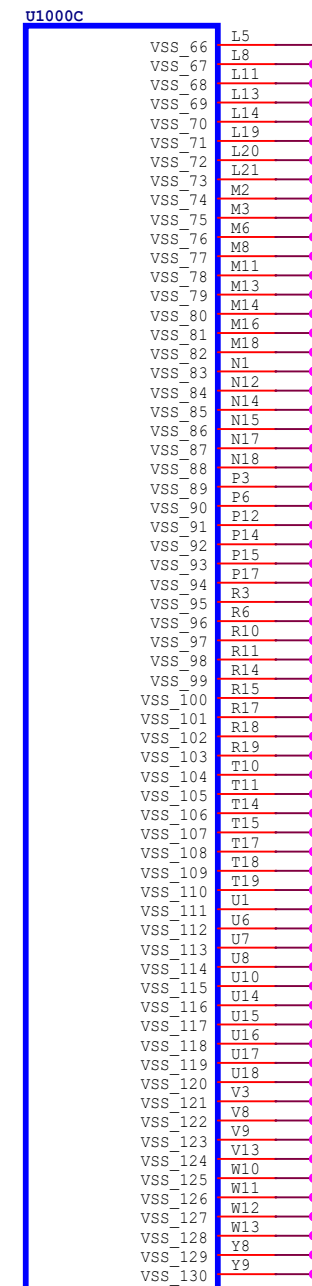
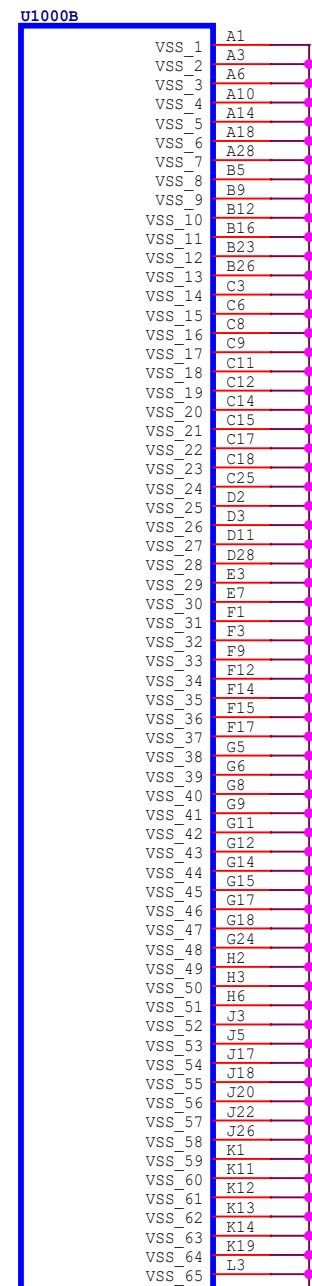
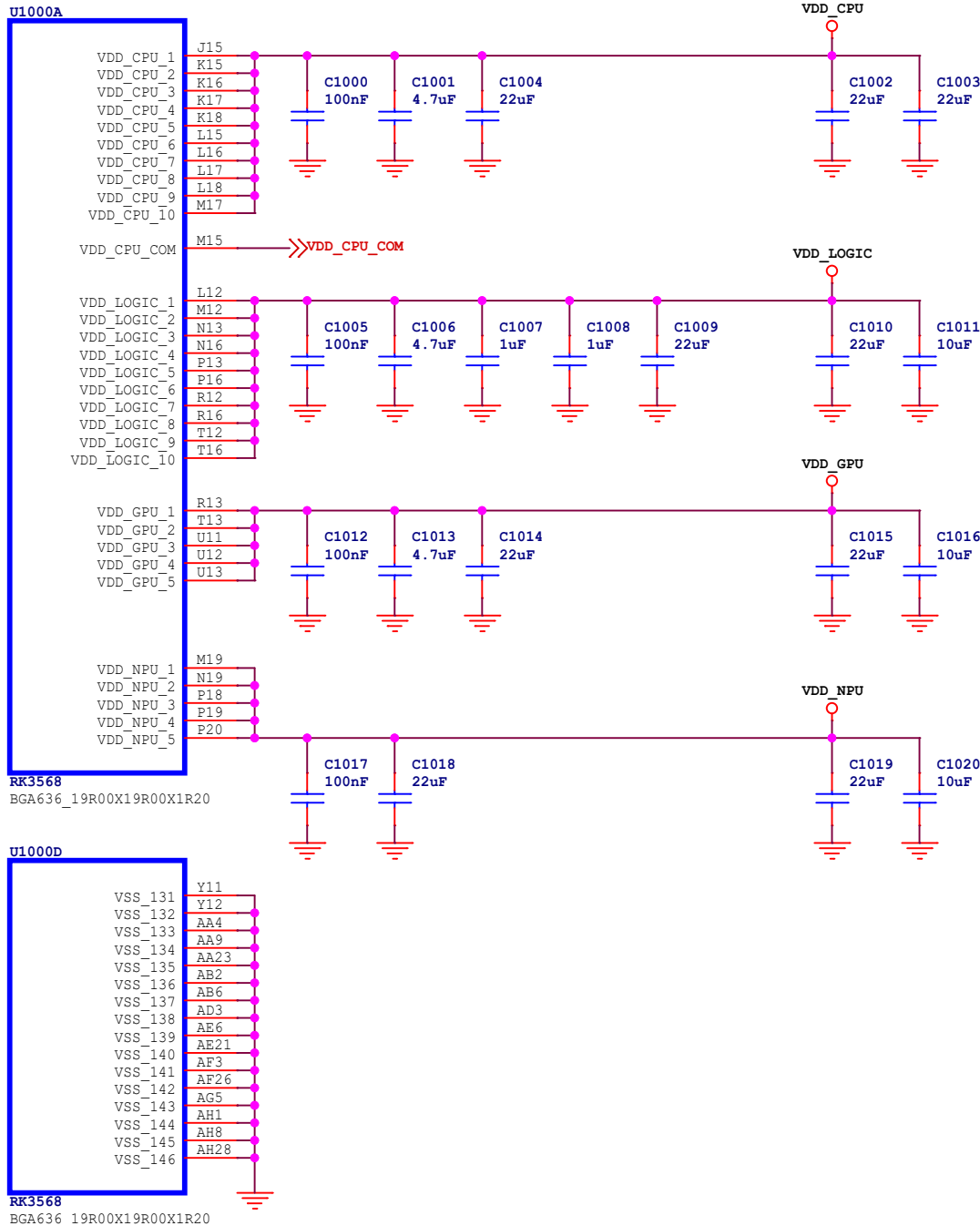
VCCIO1



radxa

Size	Title: ROCK 3B	REV
A4	Page Name: 10.RK3568_Audio Interface	1.51
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RK3568_ABCDE (Power&Gnd)

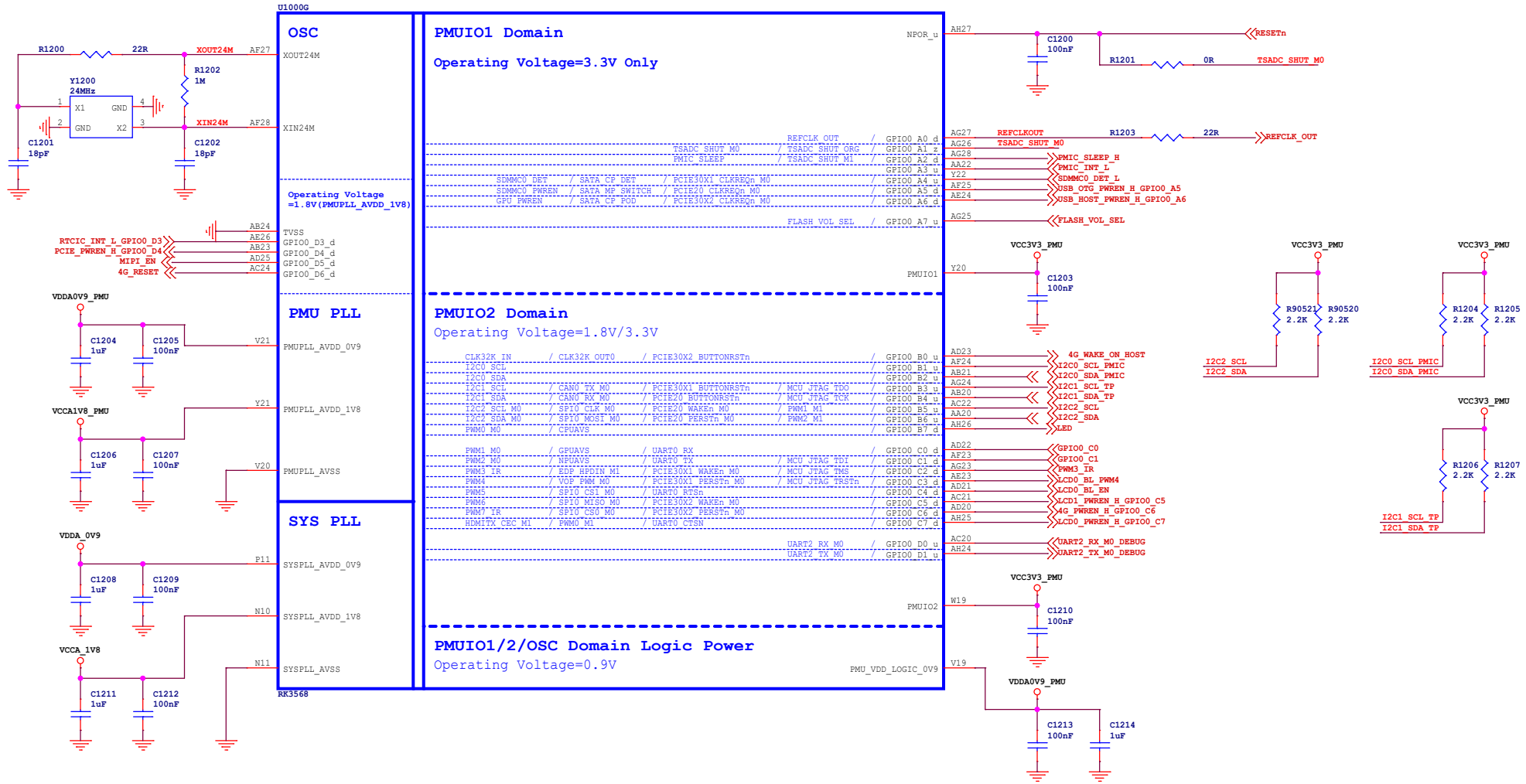


RK3568
BGA636_19R00X19R00X1R20

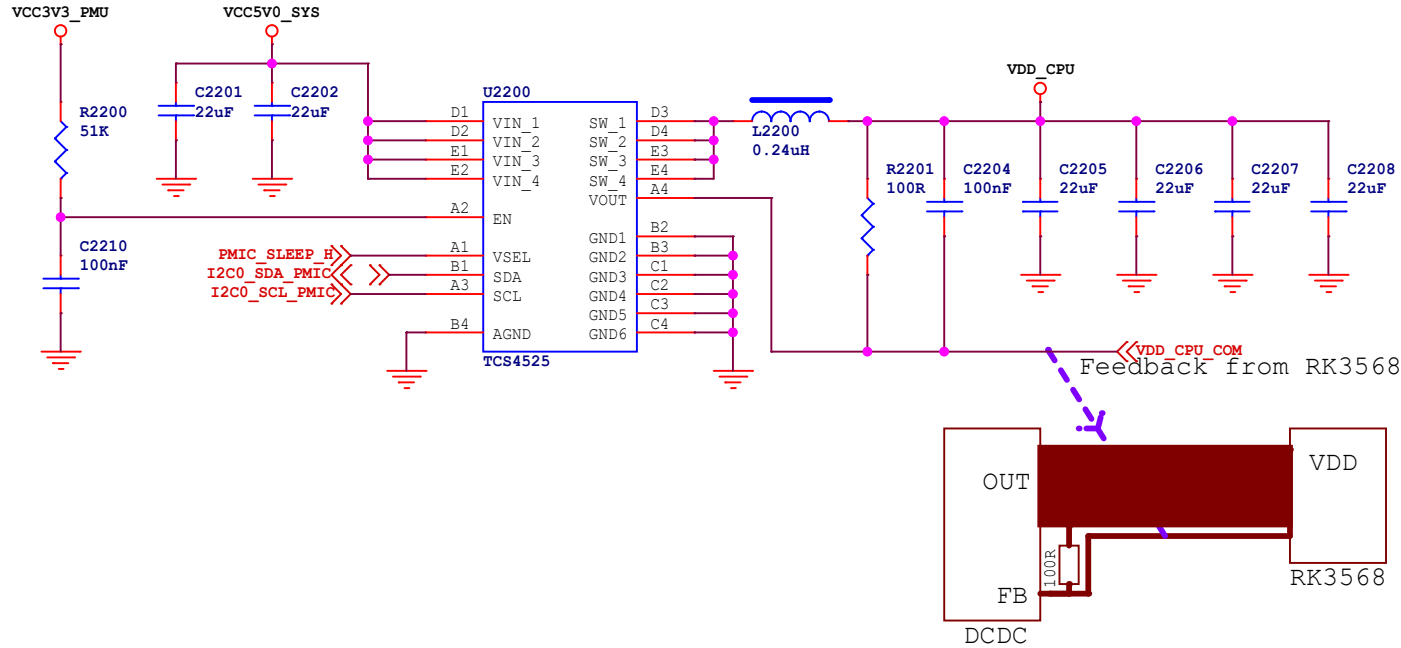


Size	Title: ROCK 3B	REV
A4	Page Name: 11.RK3568_Power/GND	1.51
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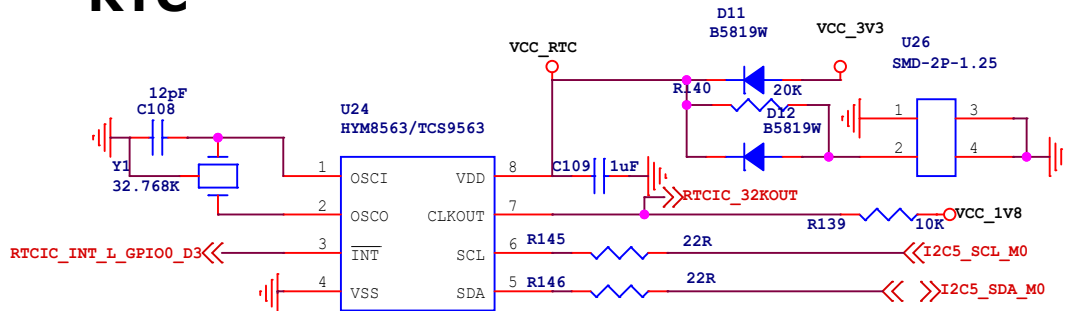
RK3568_G (OSC/PLL/PMUIO1/2)



VDD_CPU

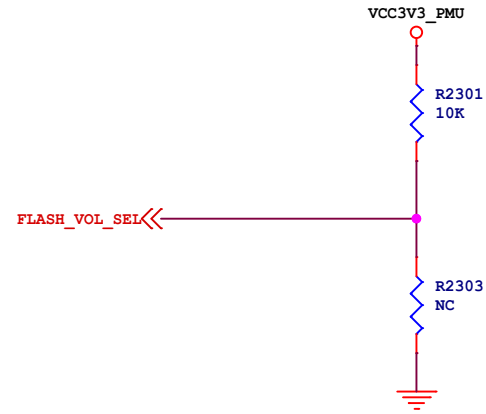
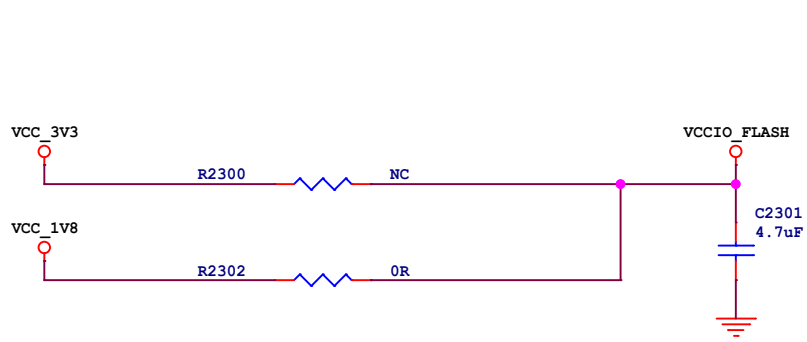


RTC



Size	Title: ROCK 3B	REV
A4	Page Name: 13.Power_Ext Discrete/RTC IC	1.51
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Flash Power Manage



Size	Title: ROCK 3B	REV
A4	Page Name: 14.Power_Flash Power Manage	1.51
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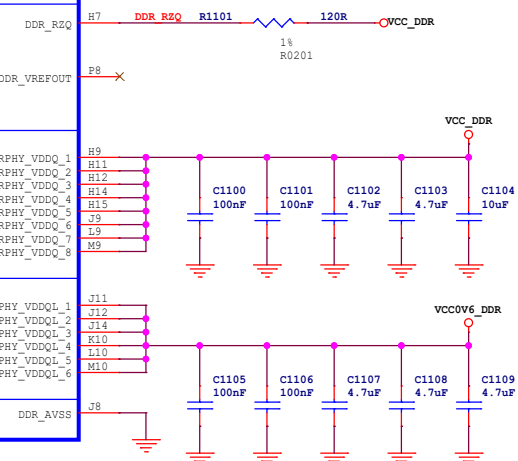
RK3568_F (DDR PHY)

U1000F

Signal	DDR4	LPDDR4	DDR3	LPDDR3
LPDDR4_DQ0_A	DDR DQ0 A	F2	DDR DQ0 A / DDR4 DQ0 A	LPDDR4 DQ0 A / DDR3 DQ0 / LPDDR3 DQ0
LPDDR4_DQ1_A	DDR DQ1 A	E1	DDR DQ1 A / DDR4 DQ1 A	LPDDR4 DQ1 A / DDR3 DQ1 / LPDDR3 DQ1
LPDDR4_DQ2_A	DDR DQ2 A	E2	DDR DQ2 A / DDR4 DQ2 A	LPDDR4 DQ2 A / DDR3 DQ2 / LPDDR3 DQ2
LPDDR4_DQ3_A	DDR DQ3 A	D1	DDR DQ3 A / DDR4 DQ3 A	LPDDR4 DQ3 A / DDR3 DQ3 / LPDDR3 DQ3
LPDDR4_DQ4_A	DDR DQ4 A	F1	DDR DQ4 A / DDR4 DQ4 A	LPDDR4 DQ4 A / DDR3 DQ4 / LPDDR3 DQ4
LPDDR4_DQ5_A	DDR DQ5 A	J2	DDR DQ5 A / DDR4 DQ5 A	LPDDR4 DQ5 A / DDR3 DQ5 / LPDDR3 DQ5
LPDDR4_DQ6_A	DDR DQ6 A	H1	DDR DQ6 A / DDR4 DQ6 A	LPDDR4 DQ6 A / DDR3 DQ6 / LPDDR3 DQ6
LPDDR4_DQ7_A	DDR DQ7 A	H4	DDR DQ7 A / DDR4 DQ7 A	LPDDR4 DQ7 A / DDR3 DQ7 / LPDDR3 DQ7
LPDDR4_DM0_A	DDR DM0 A	H5	DDR DM0 A / DDR4 DM0 A	LPDDR4 DM0 A / DDR3 DM0 / LPDDR3 DM1
LPDDR4_DQS0P_A	DDR DQS0P A	G1	DDR DQS0P A / DDR4 DQSL P A	LPDDR4 DQS0P A / DDR3 DQS0P / LPDDR3 DQS1P
LPDDR4_DQS0N_A	DDR DQS0N A	G2	DDR DQS0N A / DDR4 DQSL N A	LPDDR4 DQS0N A / DDR3 DQS0N / LPDDR3 DQS1N
LPDDR4_DQ8_A	DDR DQ8 A	M1	DDR DQ8 A / DDR4 DQ8 A	LPDDR4 DQ8 A / DDR3 DQ8 / LPDDR3 DQ25
LPDDR4_DQ9_A	DDR DQ9 A	M2	DDR DQ9 A / DDR4 DQ9 A	LPDDR4 DQ9 A / DDR3 DQ9 / LPDDR3 DQ26
LPDDR4_DQ10_A	DDR DQ10 A	L7	DDR DQ10 A / DDR4 DQ10 A	LPDDR4 DQ10 A / DDR3 DQ10 / LPDDR3 DQ28
LPDDR4_DQ11_A	DDR DQ11 A	L6	DDR DQ11 A / DDR4 DQ11 A	LPDDR4 DQ11 A / DDR3 DQ11 / LPDDR3 DQ29
LPDDR4_DQ12_A	DDR DQ12 A	K2	DDR DQ12 A / DDR4 DQ12 A	LPDDR4 DQ12 A / DDR3 DQ12 / LPDDR3 DQ26
LPDDR4_DQ13_A	DDR DQ13 A	J6	DDR DQ13 A / DDR4 DQ13 A	LPDDR4 DQ13 A / DDR3 DQ13 / LPDDR3 DQ27
LPDDR4_DQ14_A	DDR DQ14 A	J7	DDR DQ14 A / DDR4 DQ14 A	LPDDR4 DQ14 A / DDR3 DQ14 / LPDDR3 DQ27
LPDDR4_DQ15_A	DDR DQ15 A	L4	DDR DQ15 A / DDR4 DQ15 A	LPDDR4 DQ15 A / DDR3 DQ15 / LPDDR3 DQ27
LPDDR4_DM1_A	DDR DM1 A	J4	DDR DM1 A / DDR4 DM1 A	LPDDR4 DM1 A / DDR3 DM1 / LPDDR3 DM3
LPDDR4_DQS1P_A	DDR DQS1P A	L2	DDR DQS1P A / DDR4 DQS P A	LPDDR4 DQS1P A / DDR3 DQS1P / LPDDR3 DQS3P
LPDDR4_DQS1N_A	DDR DQS1N A	L1	DDR DQS1N A / DDR4 DQS N A	LPDDR4 DQS1N A / DDR3 DQS1N / LPDDR3 DQS3N
LPDDR4_DQ0_B	DDR DQ0 B	B10	DDR DQ0 B / DDR4 DQ0 B	LPDDR4 DQ0 B / DDR3 DQ16 / LPDDR3 DQ1
LPDDR4_DQ1_B	DDR DQ1 B	A9	DDR DQ1 B / DDR4 DQ1 B	LPDDR4 DQ1 B / DDR3 DQ17 / LPDDR3 DQ2
LPDDR4_DQ2_B	DDR DQ2 B	D12	DDR DQ2 B / DDR4 DQ2 B	LPDDR4 DQ2 B / DDR3 DQ18 / LPDDR3 DQ2
LPDDR4_DQ3_B	DDR DQ3 B	E12	DDR DQ3 B / DDR4 DQ3 B	LPDDR4 DQ3 B / DDR3 DQ19 / LPDDR3 DQ2
LPDDR4_DQ4_B	DDR DQ4 B	A12	DDR DQ4 B / DDR4 DQ4 B	LPDDR4 DQ4 B / DDR3 DQ20 / LPDDR3 DQ2
LPDDR4_DQ5_B	DDR DQ5 B	D15	DDR DQ5 B / DDR4 DQ5 B	LPDDR4 DQ5 B / DDR3 DQ21 / LPDDR3 DQ2
LPDDR4_DQ6_B	DDR DQ6 B	E15	DDR DQ6 B / DDR4 DQ6 B	LPDDR4 DQ6 B / DDR3 DQ22 / LPDDR3 DQ2
LPDDR4_DQ7_B	DDR DQ7 B	E14	DDR DQ7 B / DDR4 DQ7 B	LPDDR4 DQ7 B / DDR3 DQ23 / LPDDR3 DQ2
LPDDR4_DM0_B	DDR DM0 B	D14	DDR DM0 B / DDR4 DM0 B	LPDDR4 DM0 B / DDR3 DM2 / LPDDR3 DM0
LPDDR4_DQS0P_B	DDR DQS0P B	A11	DDR DQS0P B / DDR4 DQS P B	LPDDR4 DQS0P B / DDR3 DQS2P / LPDDR3 DQS0P
LPDDR4_DQS0N_B	DDR DQS0N B	B11	DDR DQS0N B / DDR4 DQS N B	LPDDR4 DQS0N B / DDR3 DQS2N / LPDDR3 DQS0N
LPDDR4_DQ8_B	DDR DQ8 B	A16	DDR DQ8 B / DDR4 DQ8 B	LPDDR4 DQ8 B / DDR3 DQ24 / LPDDR3 DQ18
LPDDR4_DQ9_B	DDR DQ9 B	B17	DDR DQ9 B / DDR4 DQ9 B	LPDDR4 DQ9 B / DDR3 DQ25 / LPDDR3 DQ19
LPDDR4_DQ10_B	DDR DQ10 B	A17	DDR DQ10 B / DDR4 DQ10 B	LPDDR4 DQ10 B / DDR3 DQ26 / LPDDR3 DQ22
LPDDR4_DQ11_B	DDR DQ11 B	B18	DDR DQ11 B / DDR4 DQ11 B	LPDDR4 DQ11 B / DDR3 DQ27 / LPDDR3 DQ23
LPDDR4_DQ12_B	DDR DQ12 B	B13	DDR DQ12 B / DDR4 DQ12 B	LPDDR4 DQ12 B / DDR3 DQ28 / LPDDR3 DQ16
LPDDR4_DQ13_B	DDR DQ13 B	A13	DDR DQ13 B / DDR4 DQ13 B	LPDDR4 DQ13 B / DDR3 DQ29 / LPDDR3 DQ17
LPDDR4_DQ14_B	DDR DQ14 B	D17	DDR DQ14 B / DDR4 DQ14 B	LPDDR4 DQ14 B / DDR3 DQ30 / LPDDR3 DQ20
LPDDR4_DQ15_B	DDR DQ15 B	B14	DDR DQ15 B / DDR4 DQ15 B	LPDDR4 DQ15 B / DDR3 DQ31 / LPDDR3 DQ21
LPDDR4_DM1_B	DDR DM1 B	E17	DDR DM1 B / DDR4 DM1 B	LPDDR4 DM1 B / DDR3 DM3 / LPDDR3 DM2
LPDDR4_DQS1P_B	DDR DQS1P B	B15	DDR DQS1P B / DDR4 DQSL P B	LPDDR4 DQS1P B / DDR3 DQS3P / LPDDR3 DQS2P
LPDDR4_DQS1N_B	DDR DQS1N B	A15	DDR DQS1N B / DDR4 DQSL N B	LPDDR4 DQS1N B / DDR3 DQS3N / LPDDR3 DQS2N
DDR ECC DQ0	DDR ECC DQ0		DDR ECC DQ0	
DDR ECC DQ1	DDR ECC DQ1		DDR ECC DQ1	
DDR ECC DQ2	DDR ECC DQ2		DDR ECC DQ2	
DDR ECC DQ3	DDR ECC DQ3		DDR ECC DQ3	
DDR ECC DQ4	DDR ECC DQ4		DDR ECC DQ4	
DDR ECC DQ5	DDR ECC DQ5		DDR ECC DQ5	
DDR ECC DQ6	DDR ECC DQ6		DDR ECC DQ6	
DDR ECC DQ7	DDR ECC DQ7		DDR ECC DQ7	
DDR ECC DM	DDR ECC DM		DDR ECC DM	
DDR ECC DQS P	DDR ECC DQS P		DDR ECC DQS P	
DDR ECC DQS N	DDR ECC DQS N		DDR ECC DQS N	

Signal	DDR4	LPDDR4	DDR3	LPDDR3
DDR4 A0	LPDDR4 CLKP B	DDR3 A9	---	AC0
DDR4 A1	---	DDR3 A2	---	AC1
DDR4 A2	LPDDR4 A1 A	DDR3 A4	---	AC2
DDR4 A3	LPDDR4 CRE1 A	DDR3 A3	---	AC3
DDR4 A4	LPDDR4 A3 B	DDR3 BA1	LPDDR3 A3	AC4
DDR4 A5	LPDDR4 A5 B	DDR3 A11	LPDDR3 A2	AC5
DDR4 A6	LPDDR4 A1 B	DDR3 A4	LPDDR3 A1	AC6
DDR4 A7	LPDDR4 ODT0 CA B	DDR3 A6	---	AC7
DDR4 A8	LPDDR4 ODT0 CA A	DDR3 A6	LPDDR3 A9	AC8
DDR4 A9	LPDDR4 CLKN B	DDR3 A5	---	AC9
DDR4 A10	LPDDR4 CRE0 B	DDR3 A10	---	AC10
DDR4 A11	LPDDR4 A0 A	DDR3 A7	LPDDR3 A8	AC11
DDR4 A12	LPDDR4 A3 A	DDR3 BA2	---	AC12
DDR4 A13	LPDDR4 A0 B	DDR3 A14	LPDDR3 A0	AC13
DDR4 A14 WEN	LPDDR4 A1 A	DDR3 A15	LPDDR3 A5	AC14
DDR4 A15 CASn	LPDDR4 A2 A	DDR3 A0	---	AC15
DDR4 A16 RASn	LPDDR4 A5 A	DDR3 RASn	LPDDR3 A7	AC16
DDR4 A17	LPDDR4 CRE1 B	DDR3 CASn	---	AC17
DDR4 BA0	LPDDR4 A2 B	DDR3 A1	---	AC18
DDR4 BA1	LPDDR4 A4 B	DDR3 A12	LPDDR3 A4	AC19
DDR4 B0	LPDDR4 ODT1 CA B	DDR3 WEN	---	AC20
DDR4 B01	LPDDR4 ODT1 CA A	DDR3 BA0	---	AC21
DDR4 CRE	LPDDR4 CRE0 A	DDR3 CRE	LPDDR3 CRE	AC22
DDR4 CLKP	LPDDR4 CLKP A	DDR3 CLKP	LPDDR3 CLKP	AC23
DDR4 CLKN	LPDDR4 CLKN A	DDR3 CLKN	LPDDR3 CLKN	AC24
DDR4 CS0n	LPDDR4 CS0n A	DDR3 ODT1	LPDDR3 ODT0	AC25
DDR4 CS1n	LPDDR4 CS1n A	DDR3 CS1n	LPDDR3 CS1n	AC26
DDR4 CS2n	LPDDR4 CS2n A	DDR3 CS2n	LPDDR3 CS2n	AC27
DDR4 CS3n	LPDDR4 CS3n A	DDR3 CS3n	LPDDR3 CS3n	AC28
DDR4 CS4n	LPDDR4 CS4n A	DDR3 CS4n	LPDDR3 CS4n	AC29
DDR4 RESETn	LPDDR4 RESETn	DDR3 RESETn	---	AC29

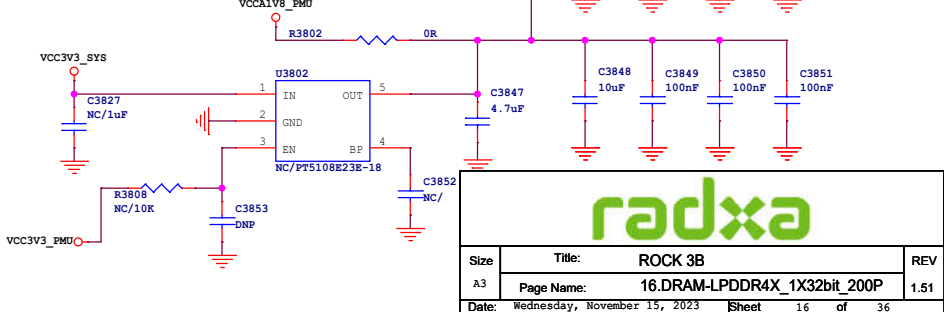
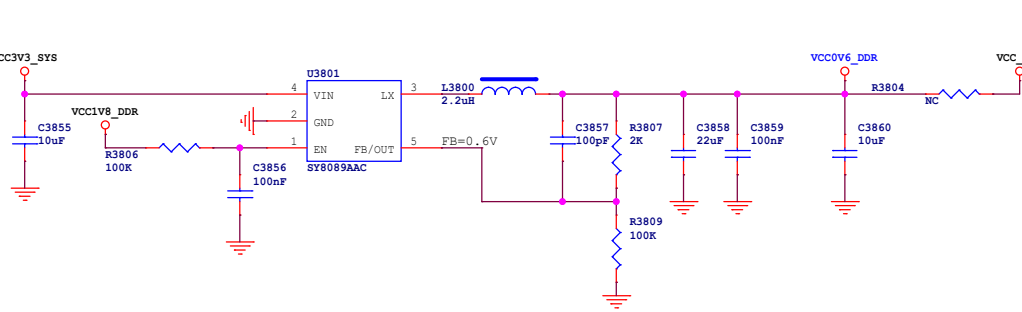
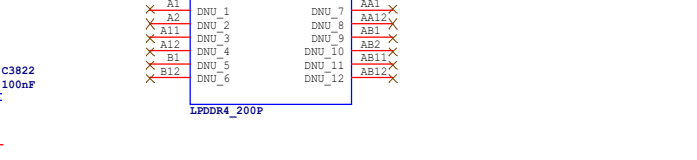
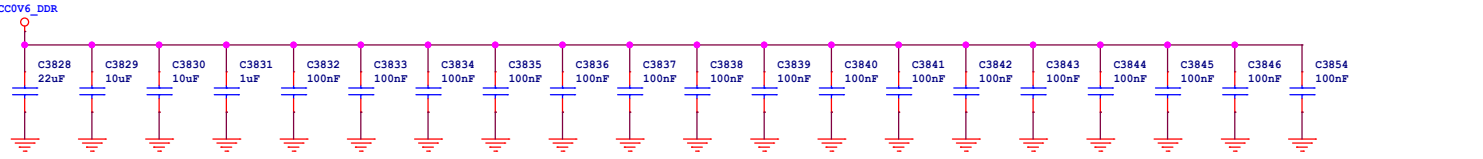
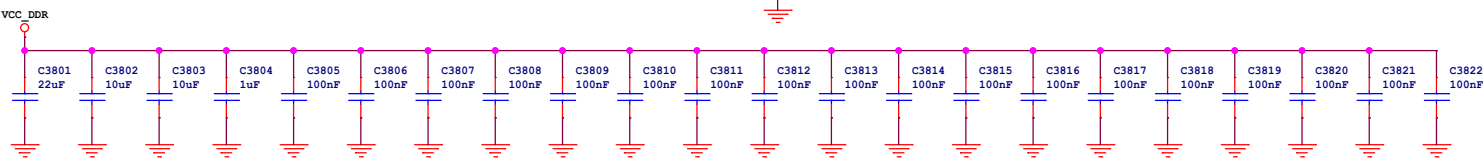
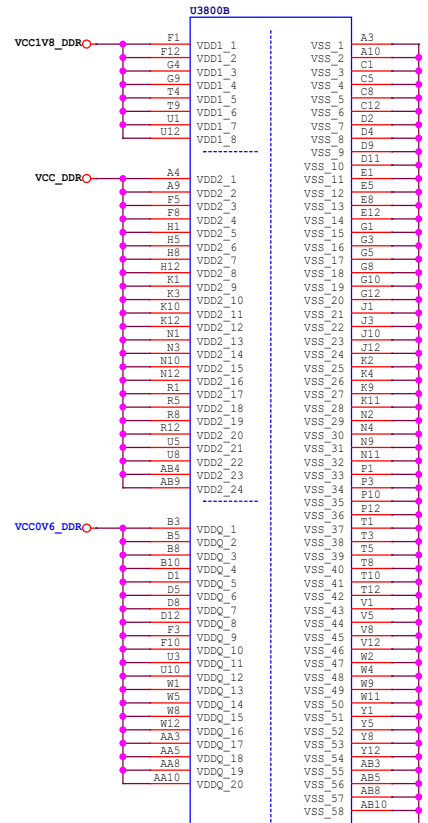
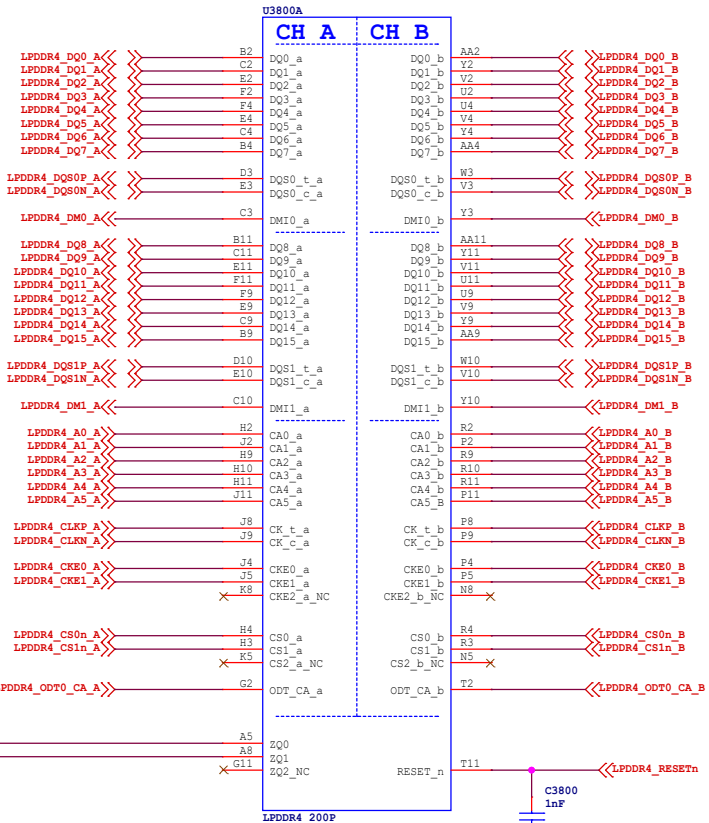
Note: Sequences can not be swap



Note: Except DDR3, other DQ sequences can not be swap

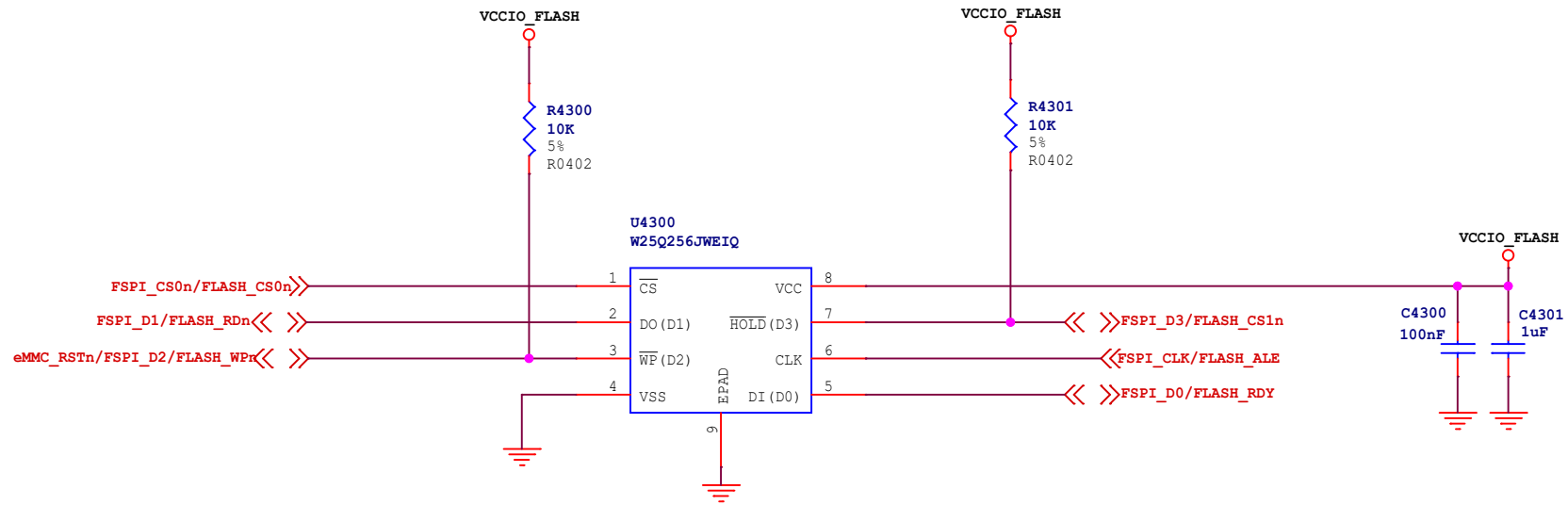
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BGR636 19R00X19R00X1R20





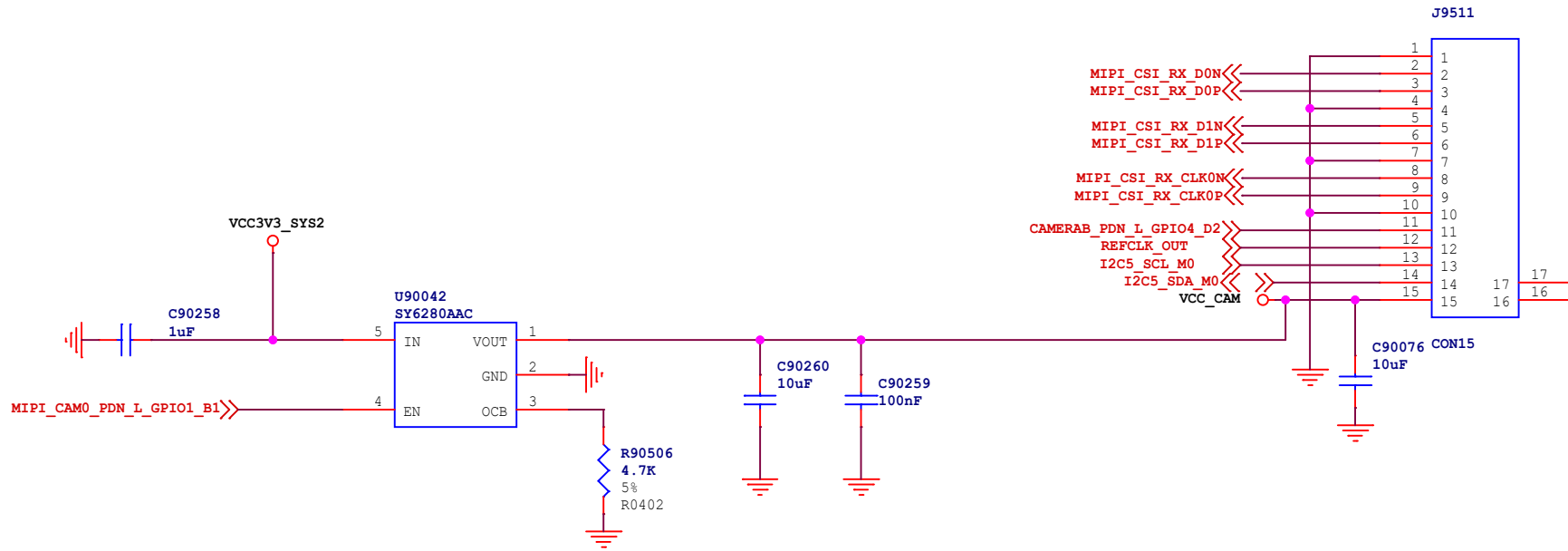
Size	Title:	ROCK 3B	REV
A3	Page Name:	16.DRAM-LPDDR4X_1X32bit_200P	1.51
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SPI Flash



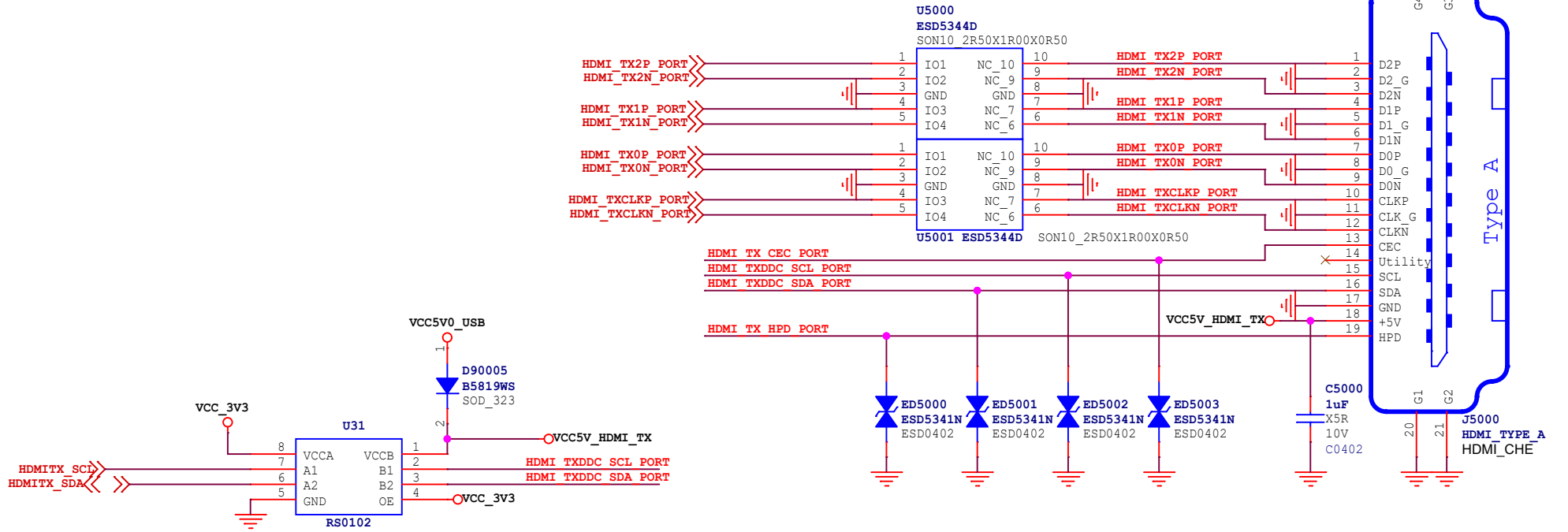
Size	Title: ROCK 3B	REV
A4	Page Name: 19.Flash-SPI FLASH(Optional)	1.51
Date: Wednesday, November 15, 2023	Sheet 19 of 36	

Camera

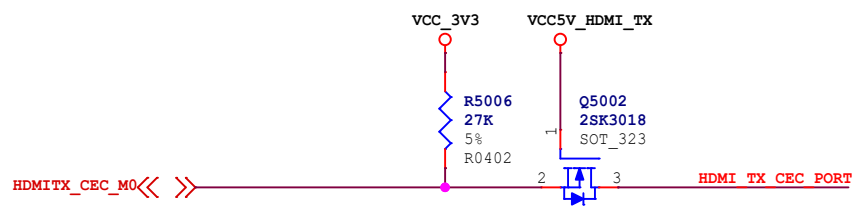


Size	Title: ROCK 3B	REV
A4	Page Name: 20.VI-Camera_MIPI_CSI_1x 2Lanes	1.51
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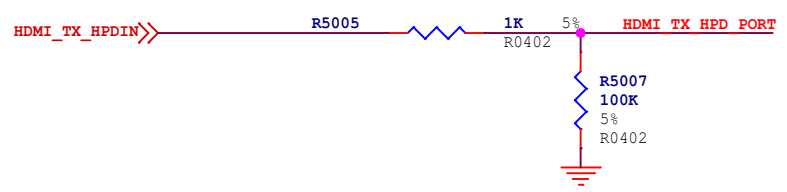
HDMI2.0 TX



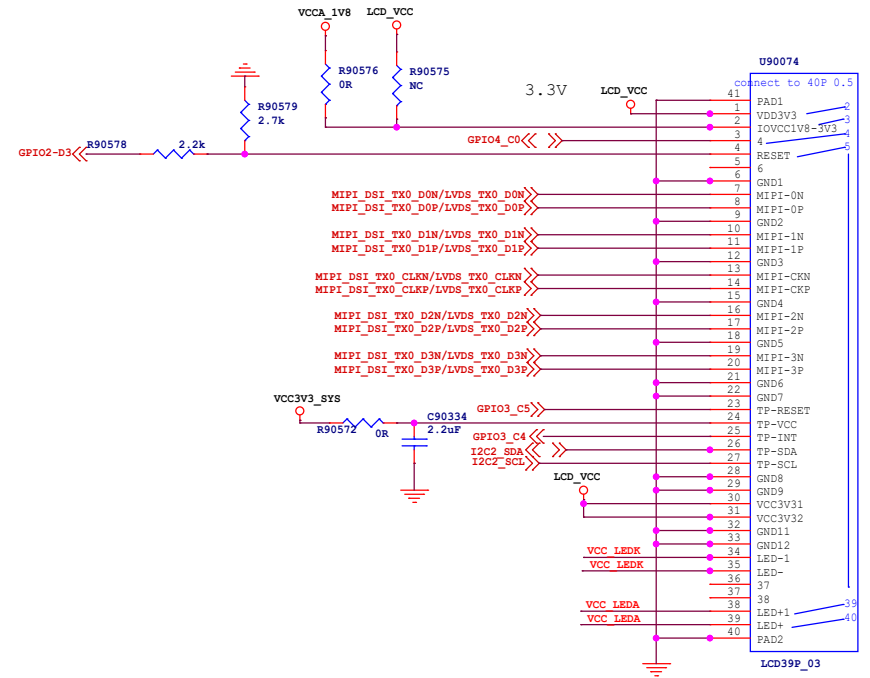
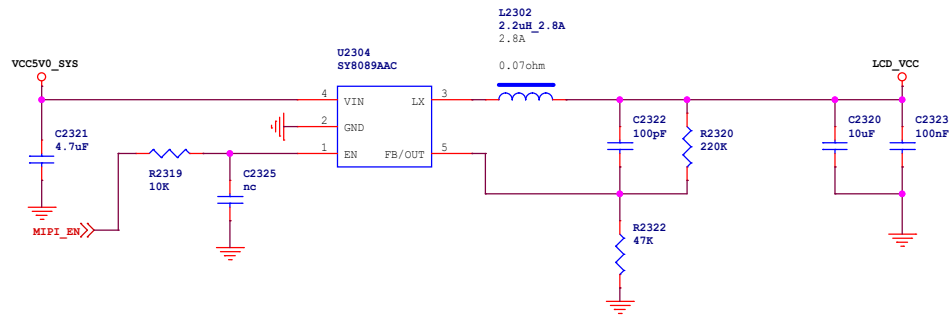
HDMI TX CEC



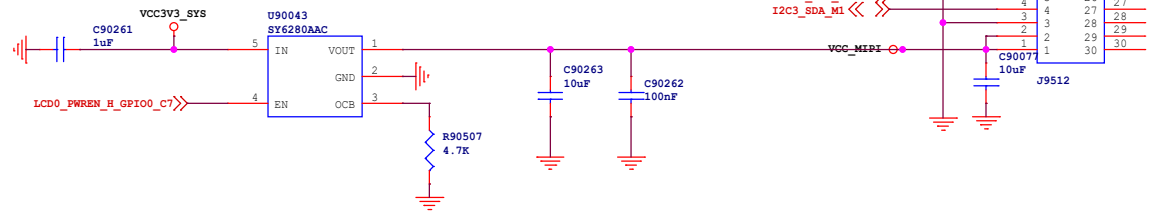
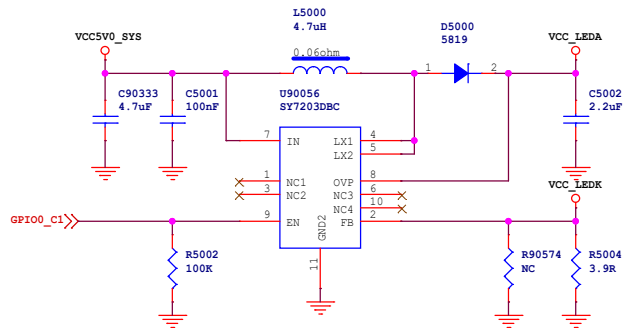
HDMI TX HPD




radxa		
Size	Title: ROCK 3B	REV
A4	Page Name: 21.VO-HDMI2.0 TX	1.51
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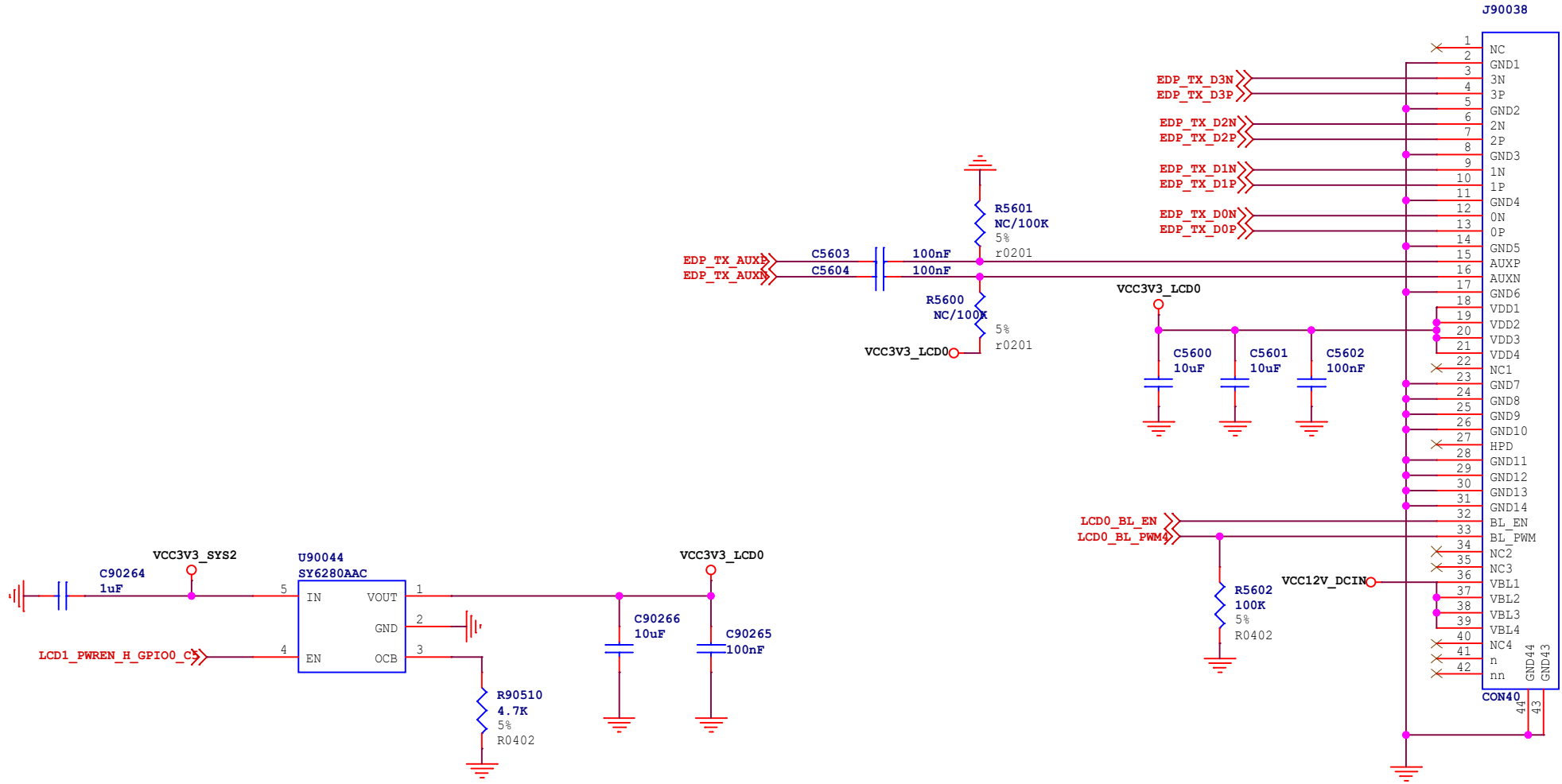
LCD



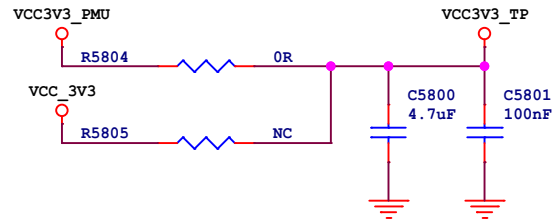
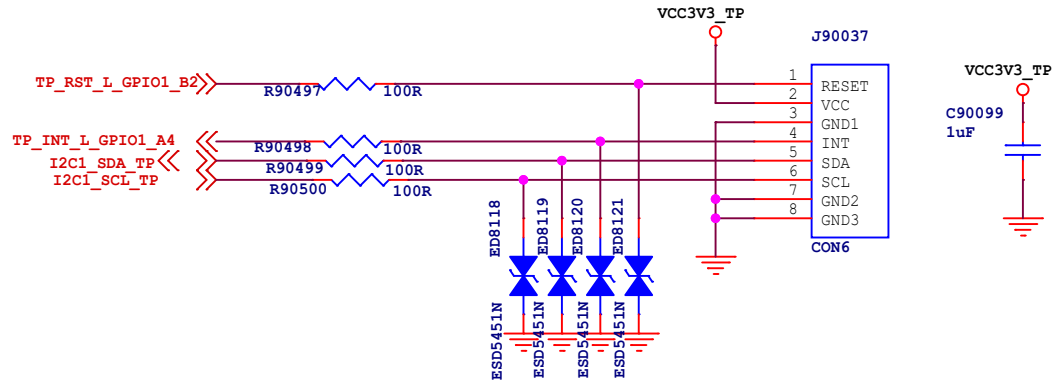



Size	Title: ROCK 3B	REV
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Single-eDP LCM



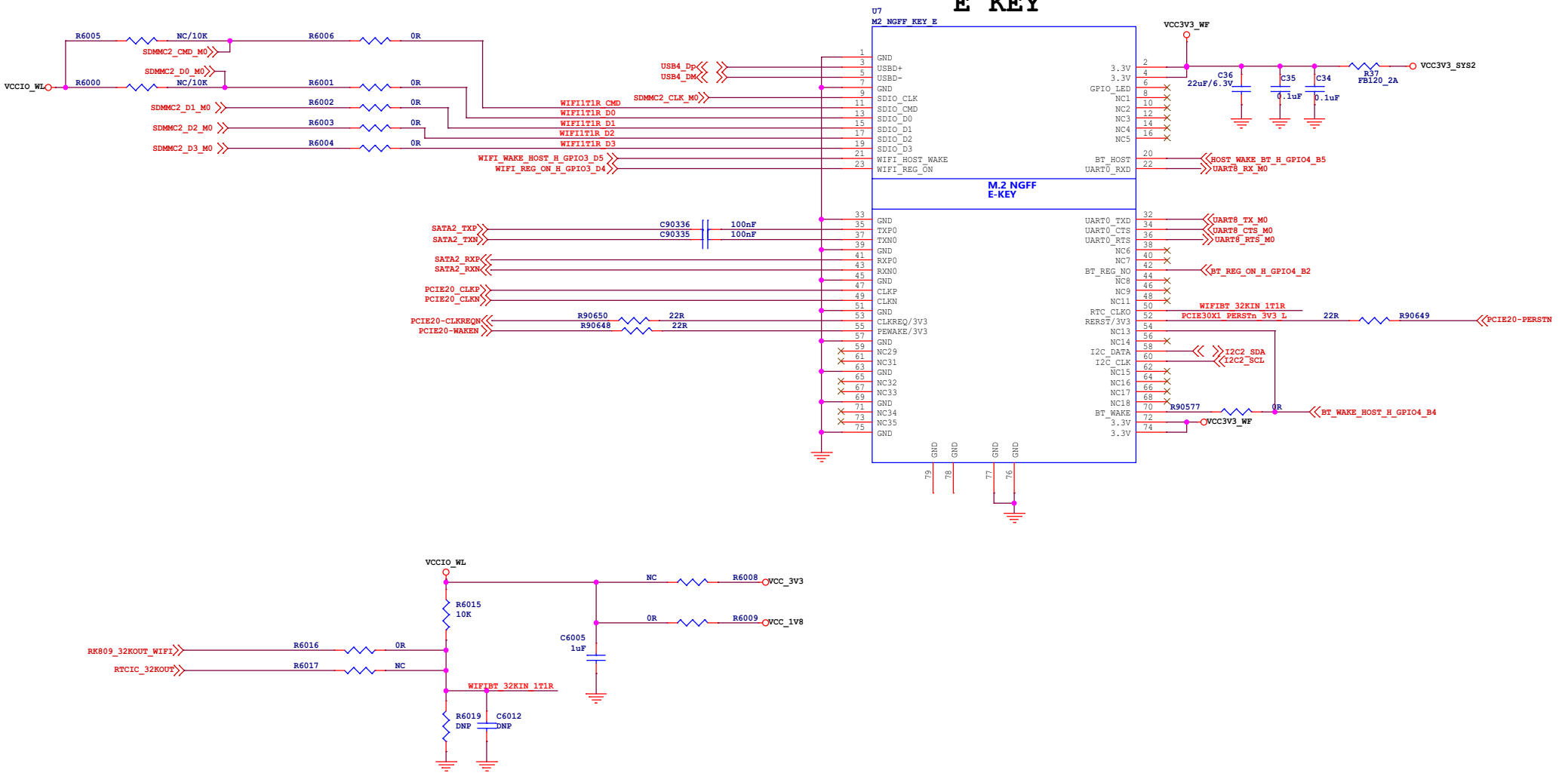
Touch Panel connector



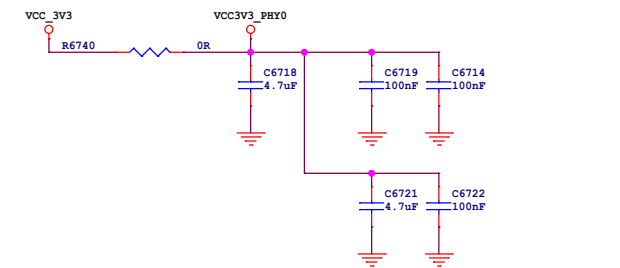
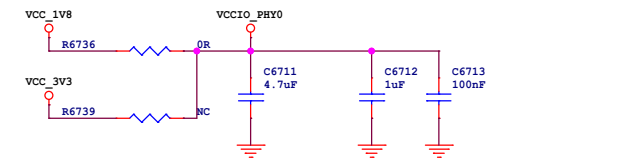
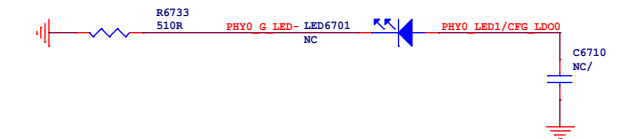
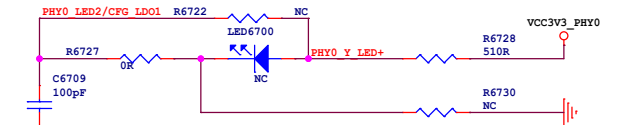
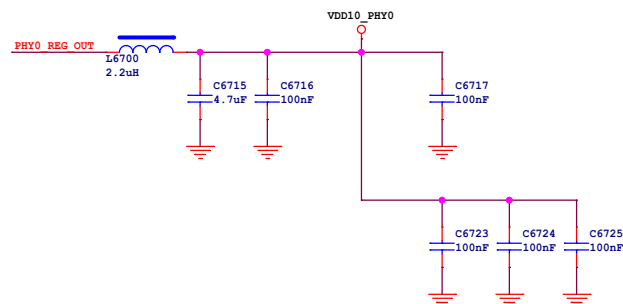
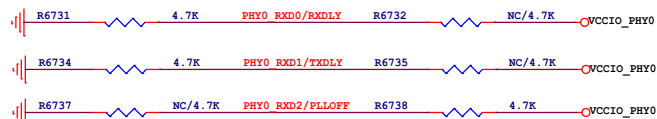
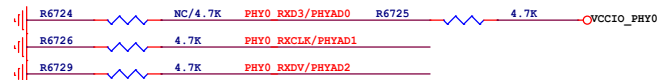
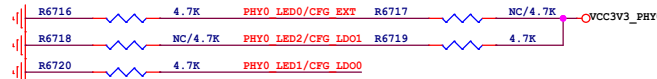
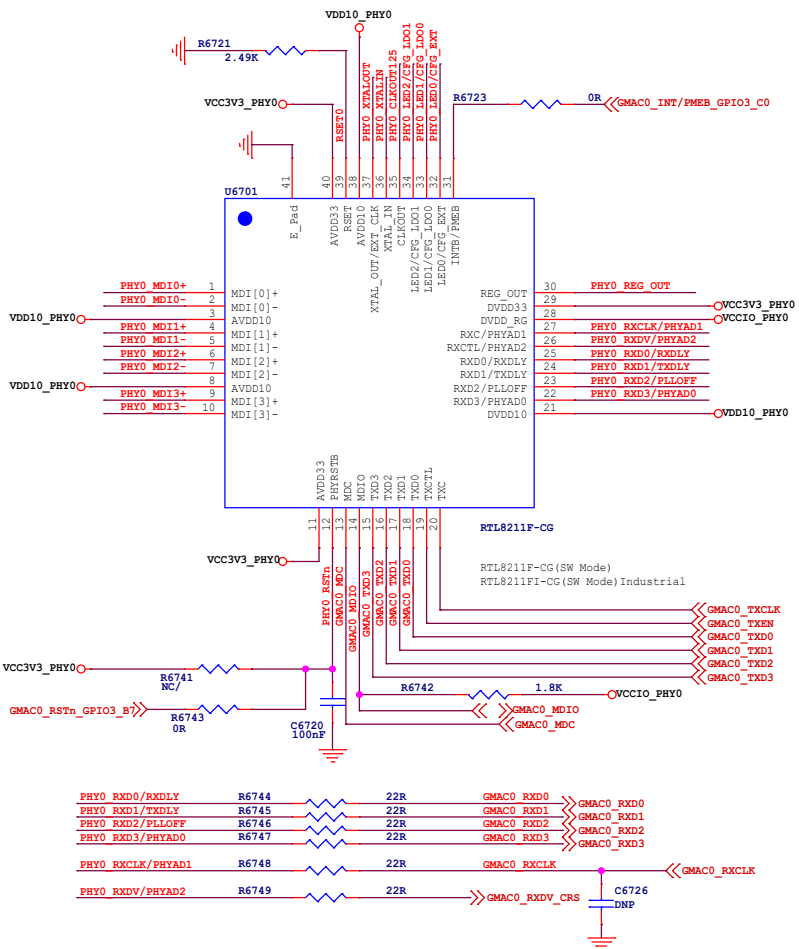
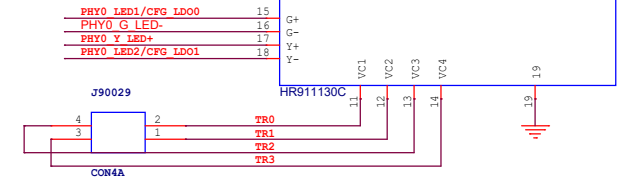
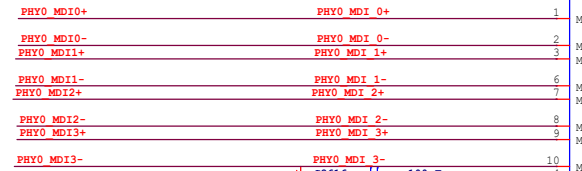
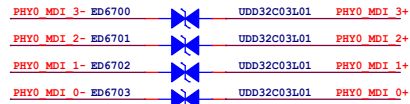
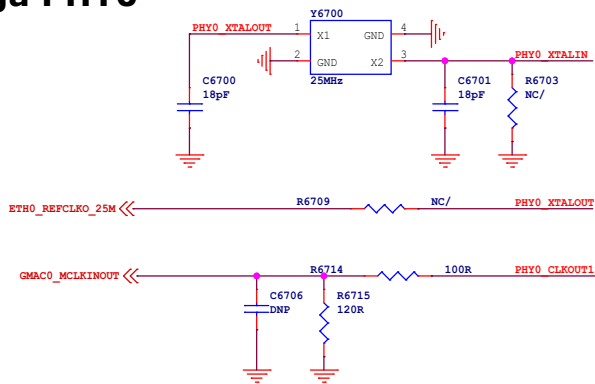
		
Size	Title: ROCK 3B	REV
A4	Page Name: 24.TP Connector_COF	1.51
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SDIO WIFI/BT MODULE

E KEY



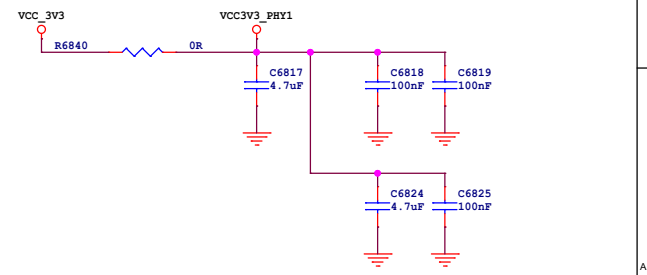
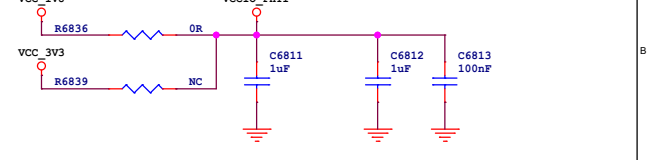
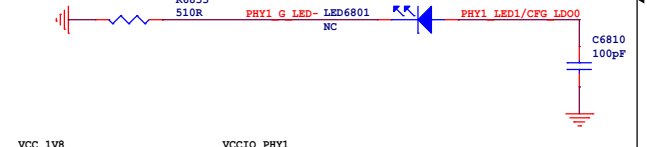
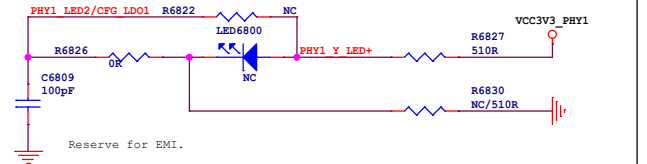
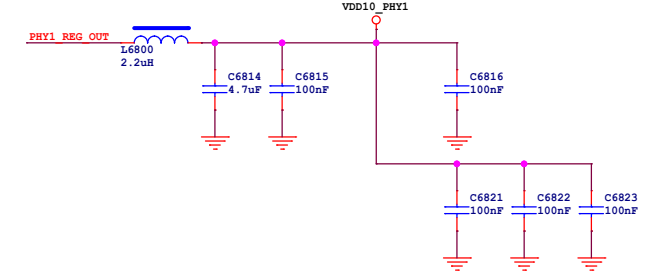
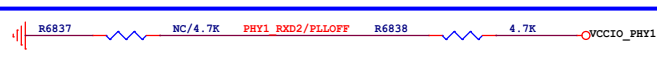
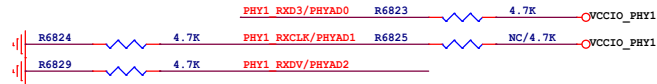
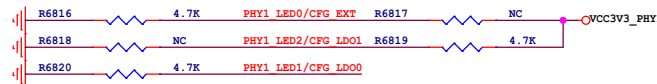
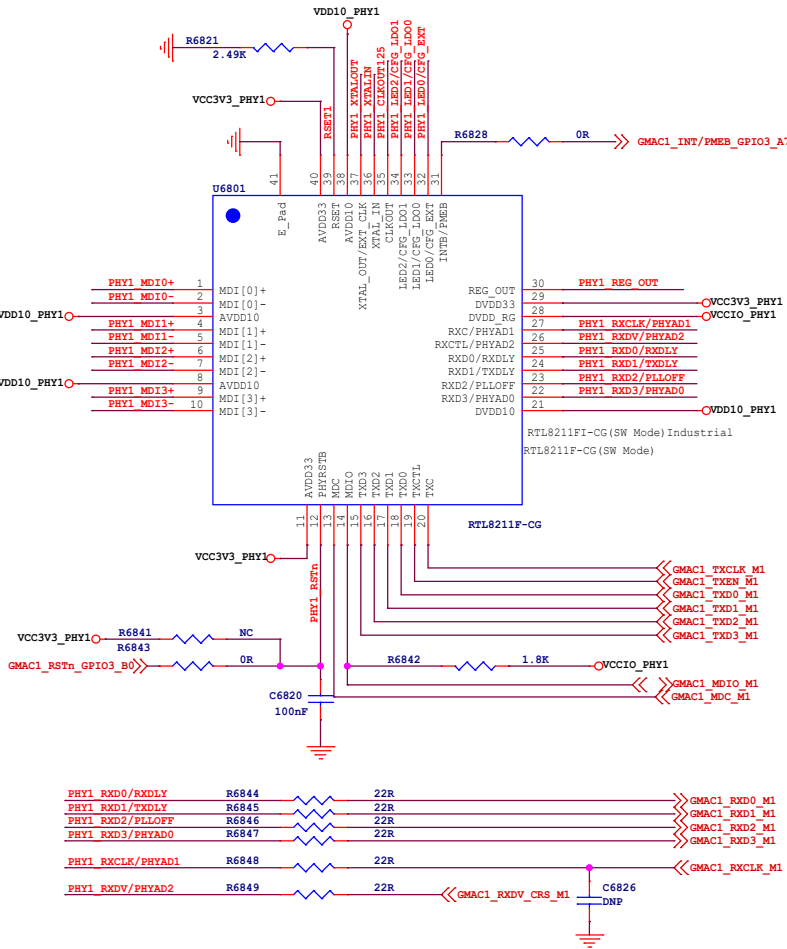
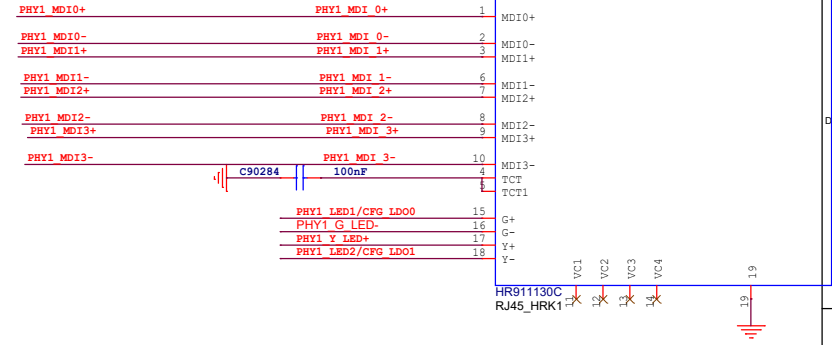
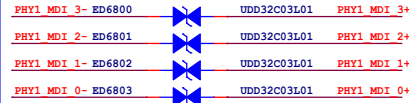
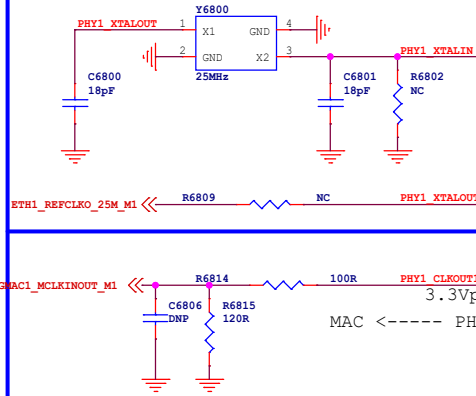
Giga PHY0

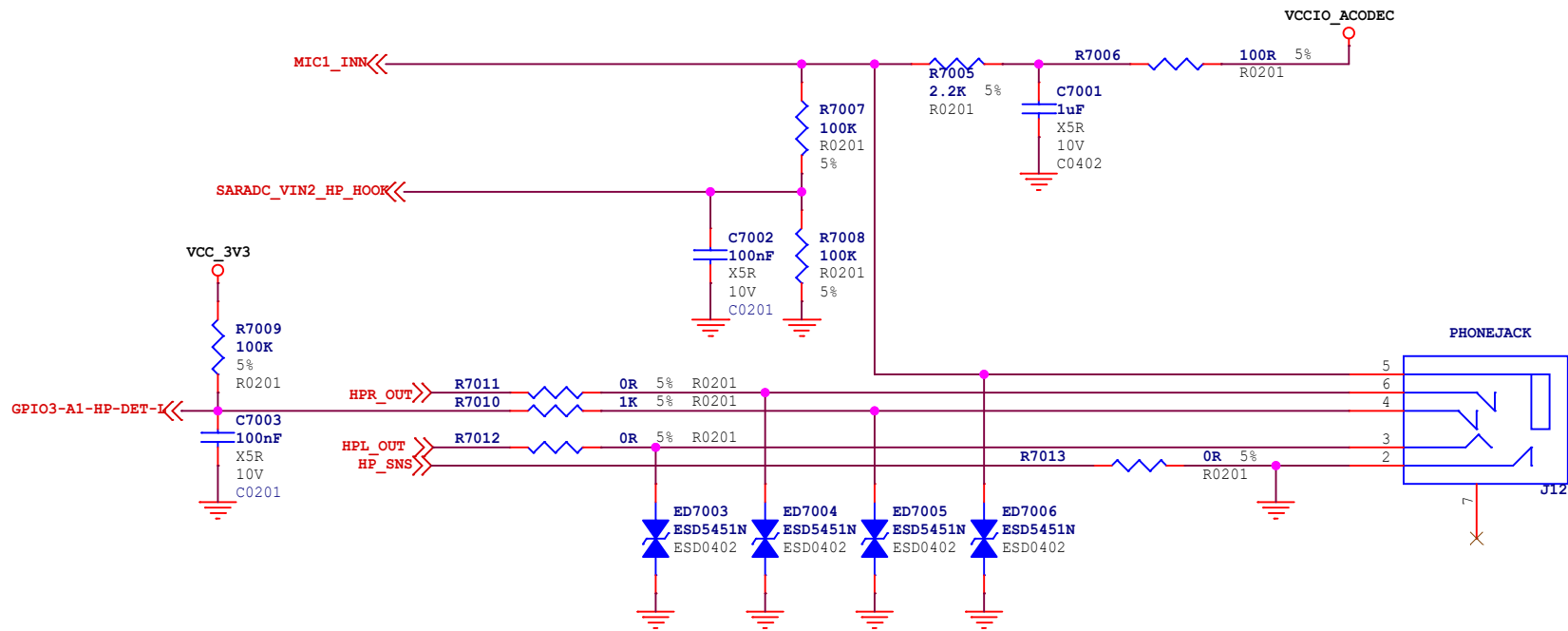




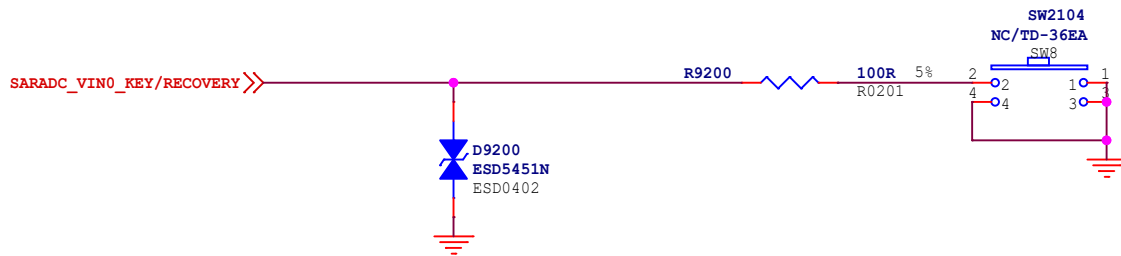
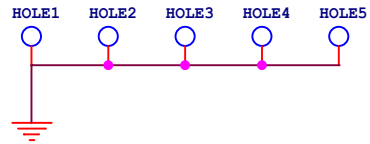
Size	Title: ROCK 3B	REV
a3	Page Name: 26.Ethernet-GEPHY_RGMII0	1.51
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Giga PHY1

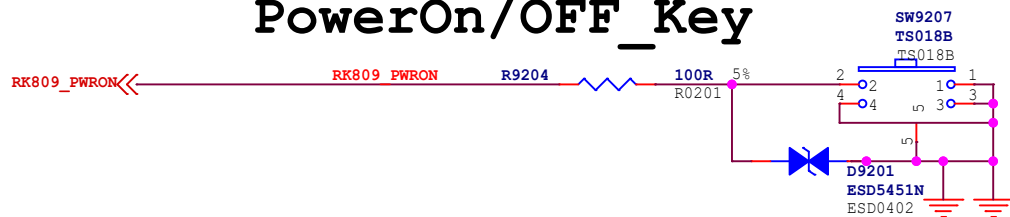




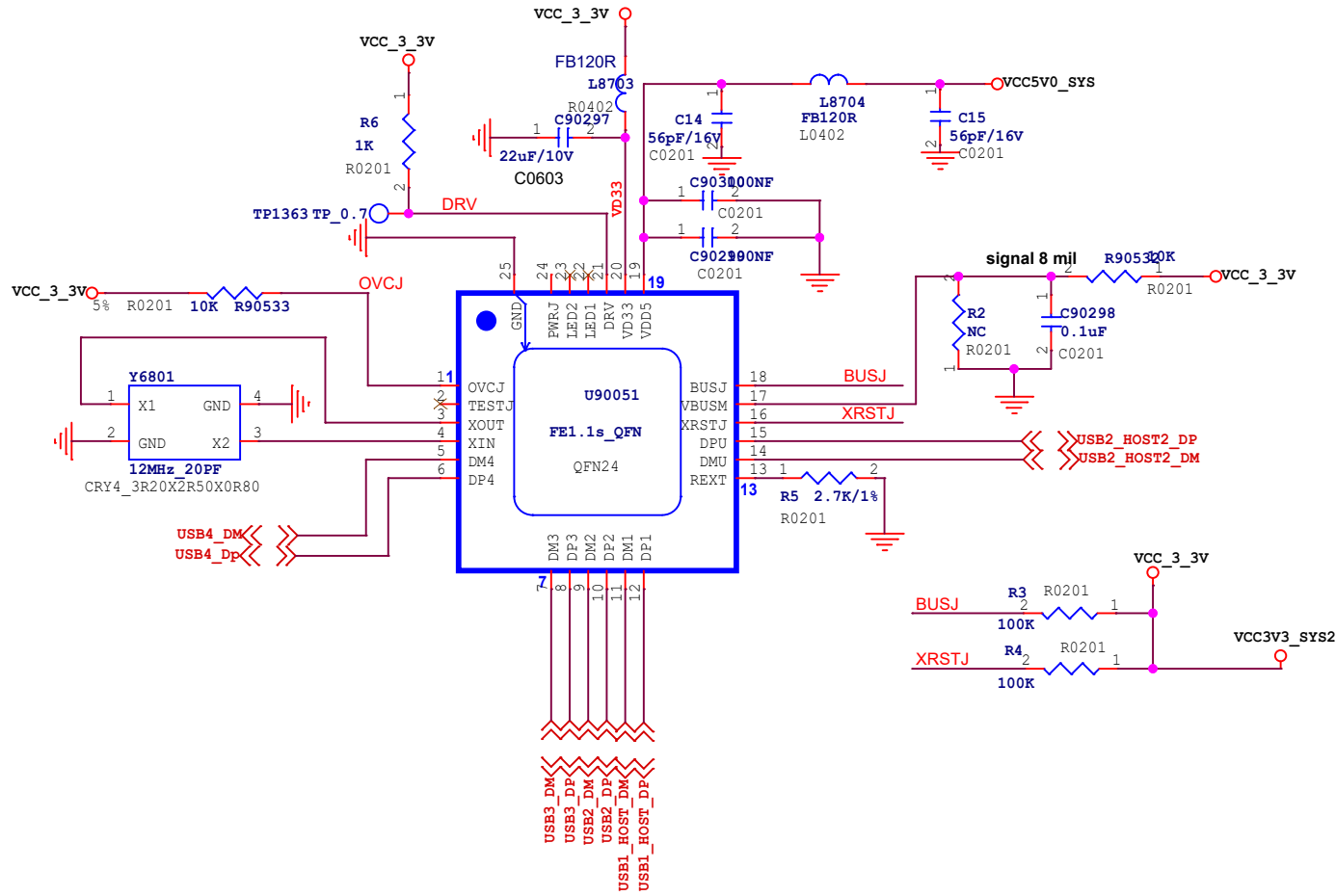
Size	Title: ROCK 3B	REV
A4	Page Name: 28.Audio-Headphone Port	1.51
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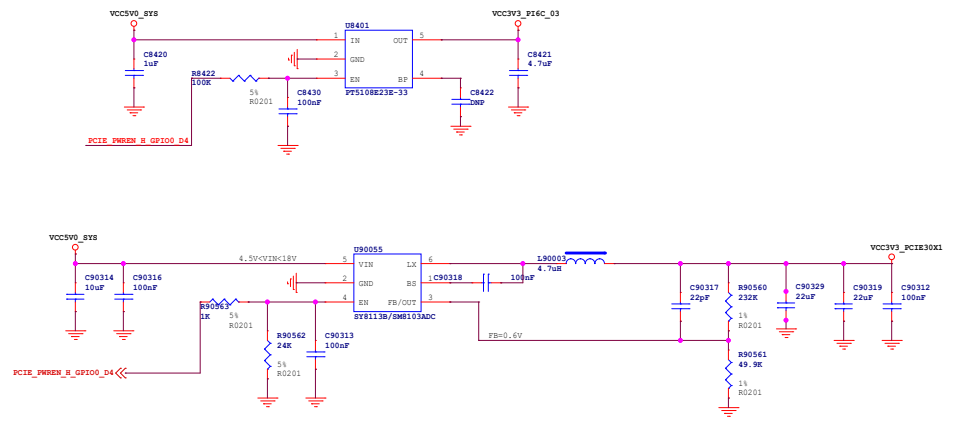
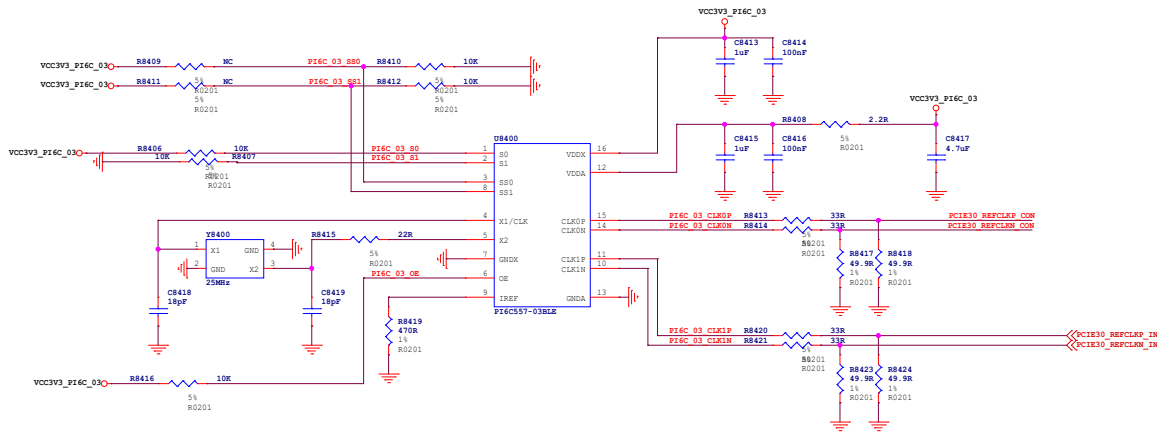
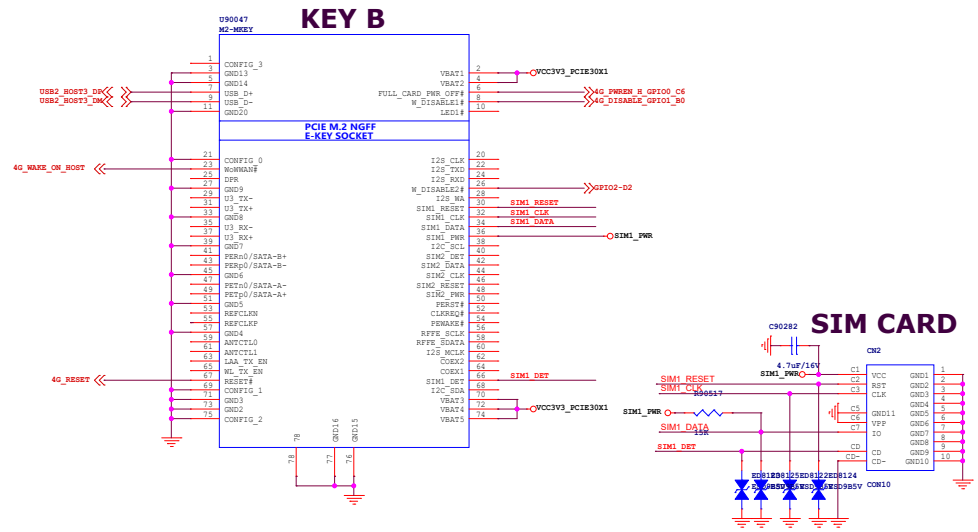
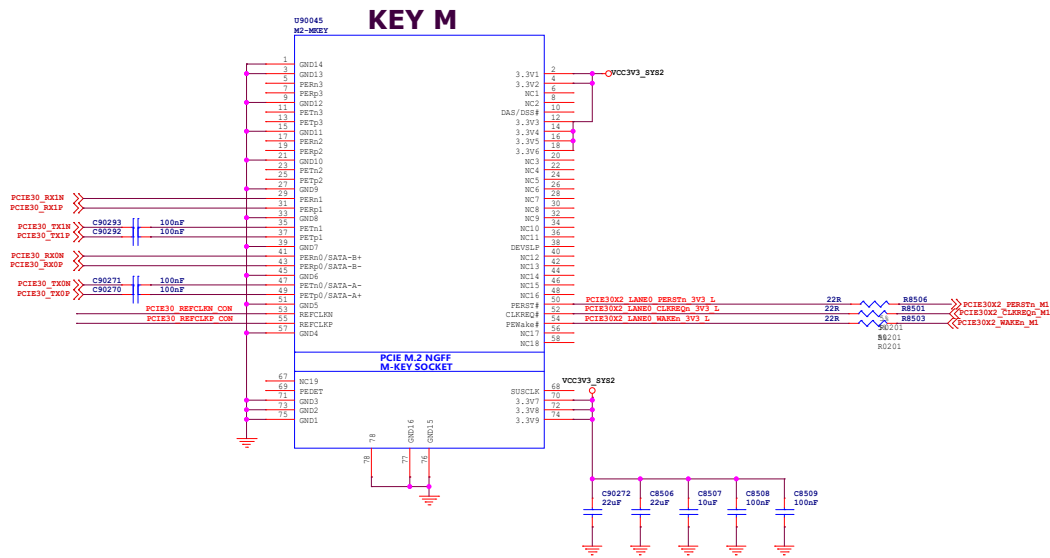


PowerOn/OFF_Key

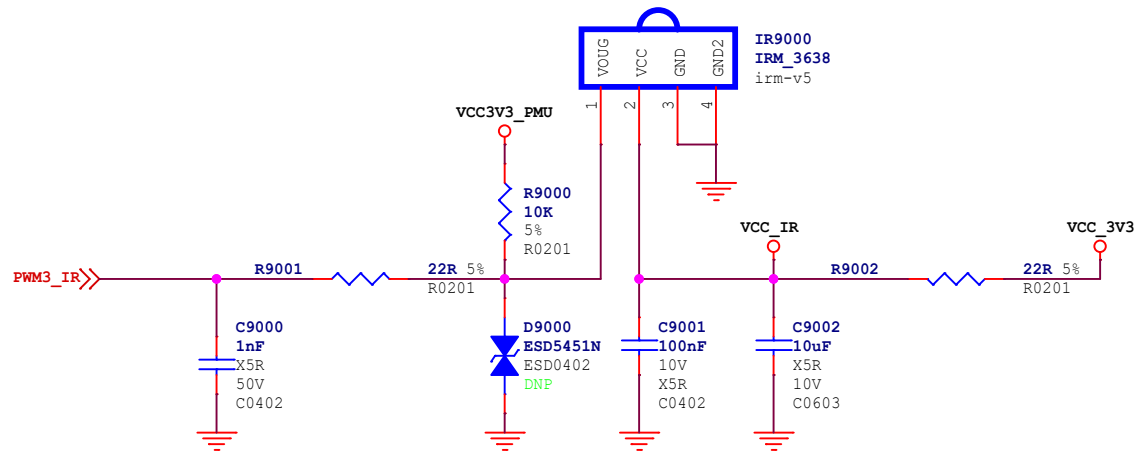


Size	Title: ROCK 3B	REV
A4	Page Name: 29.KEY Array/SARADC	1.51
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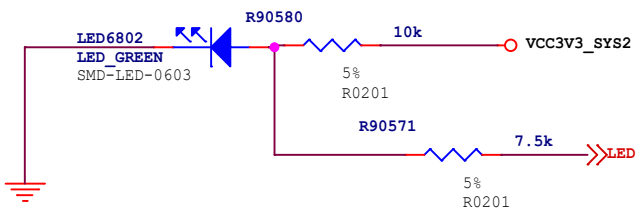
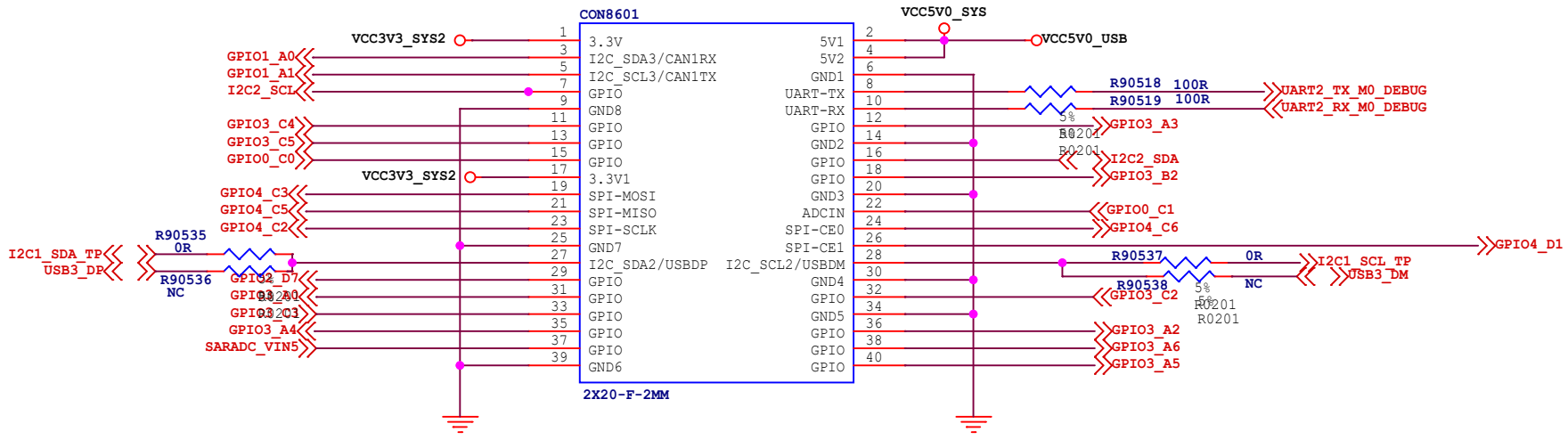


IR Receiver

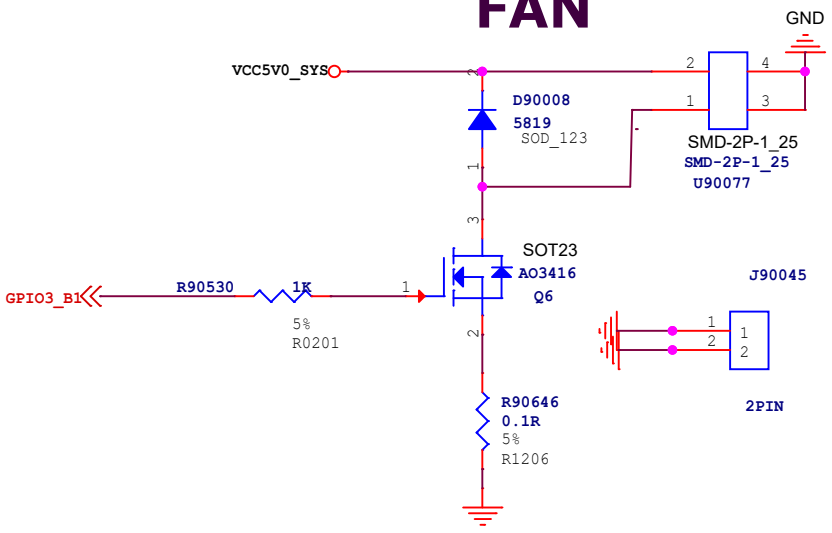


radxa

Size	Title: ROCK 3B	REV
A4	Page Name: 32.IR Receiver	1.51
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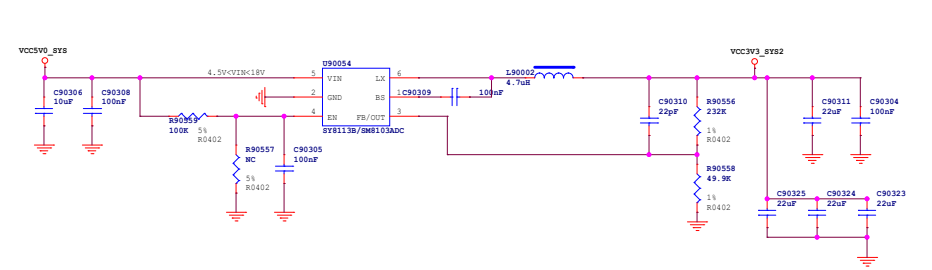
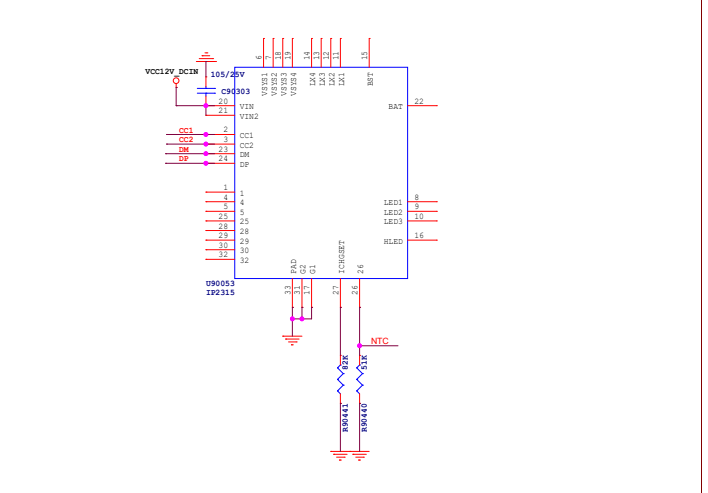
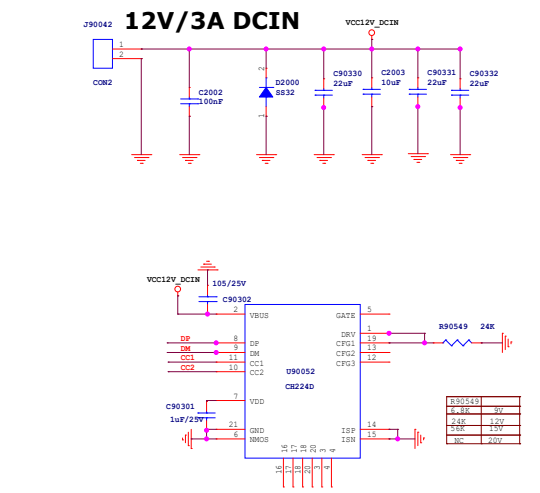
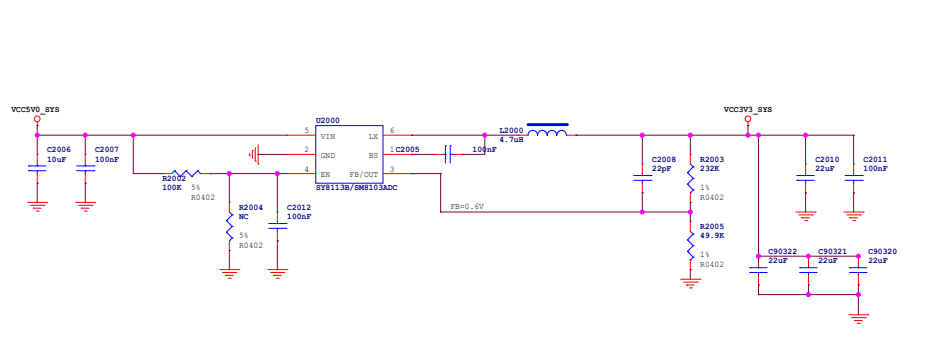
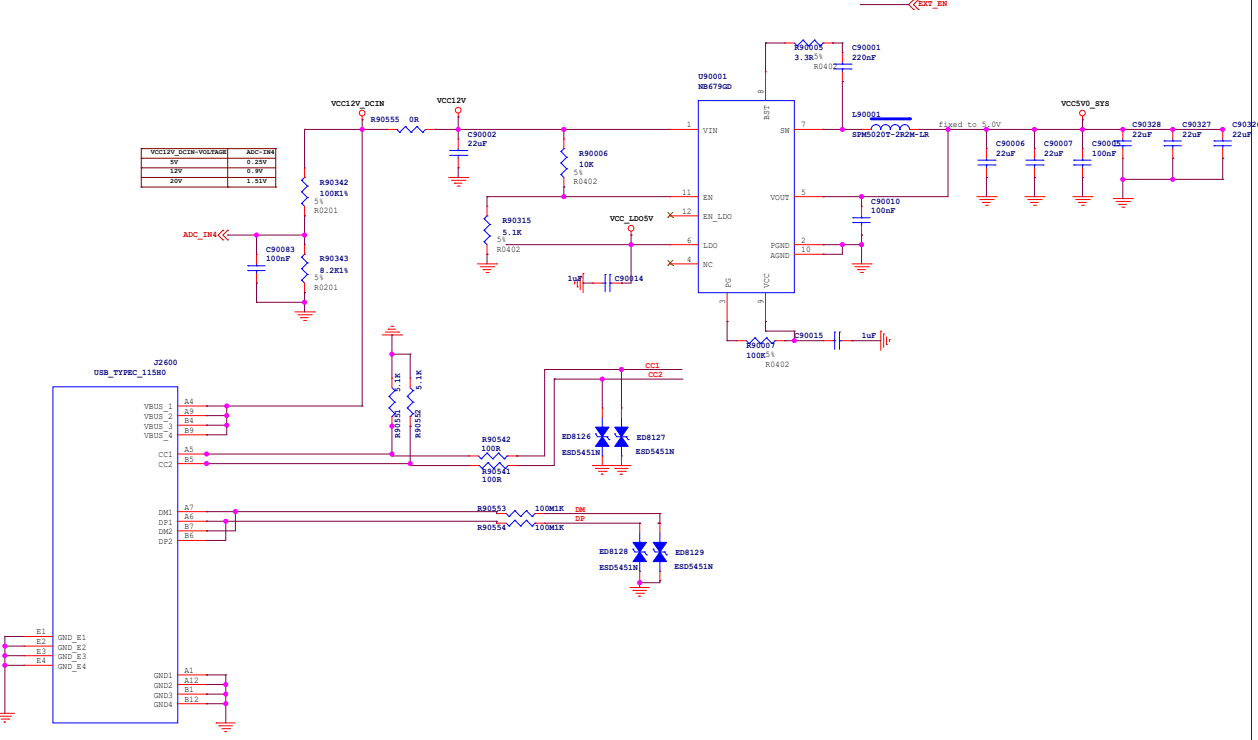


FAN

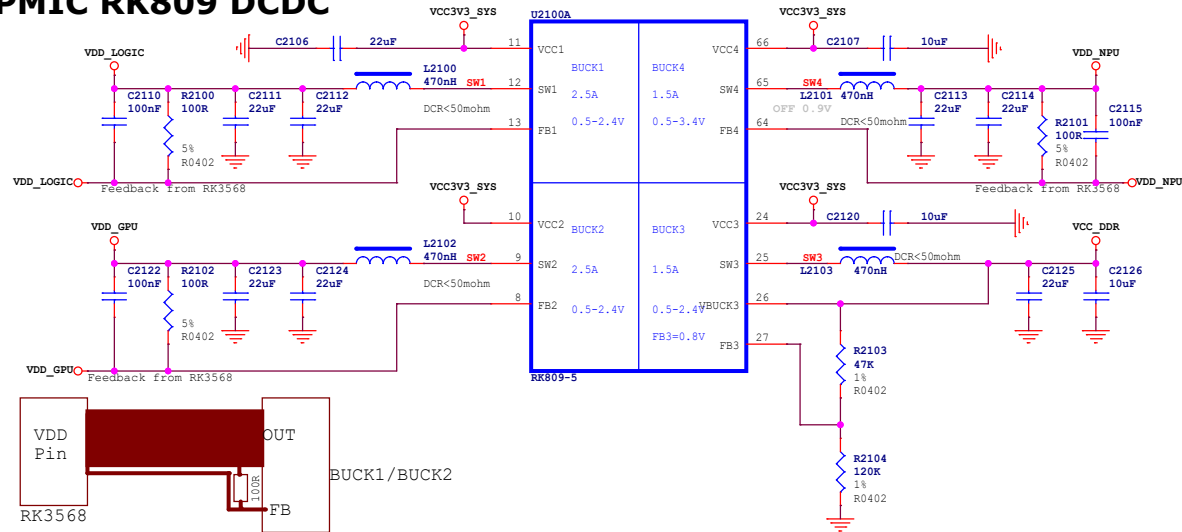


Size	Title:	ROCK 3B	REV
A4	Page Name:	33.CONNECTOR	1.51
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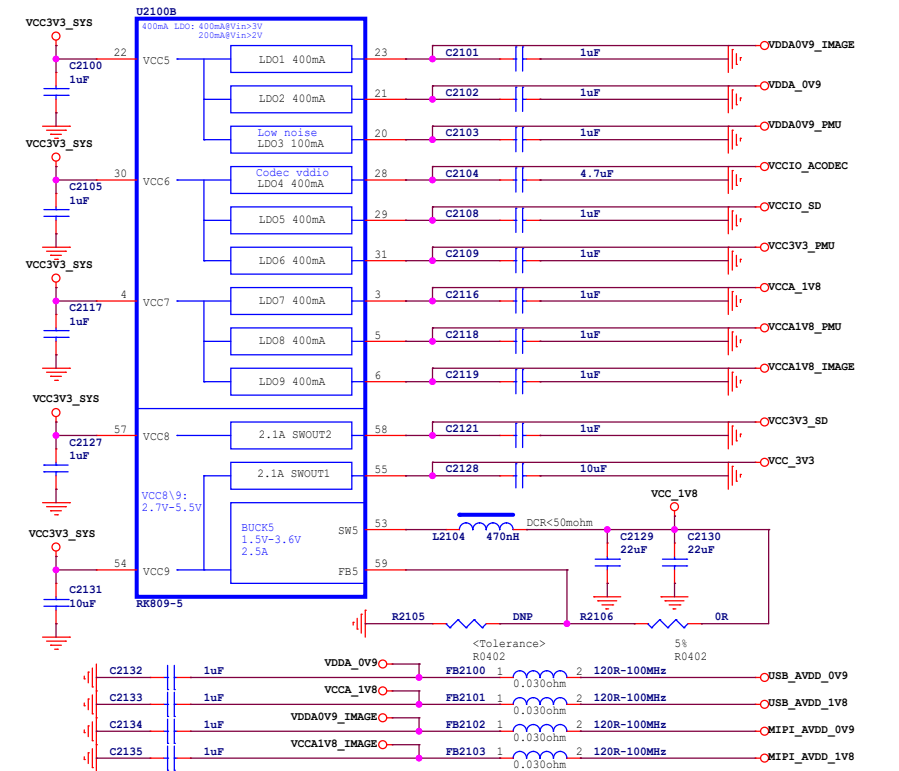
DC IN&SYSTEM Power



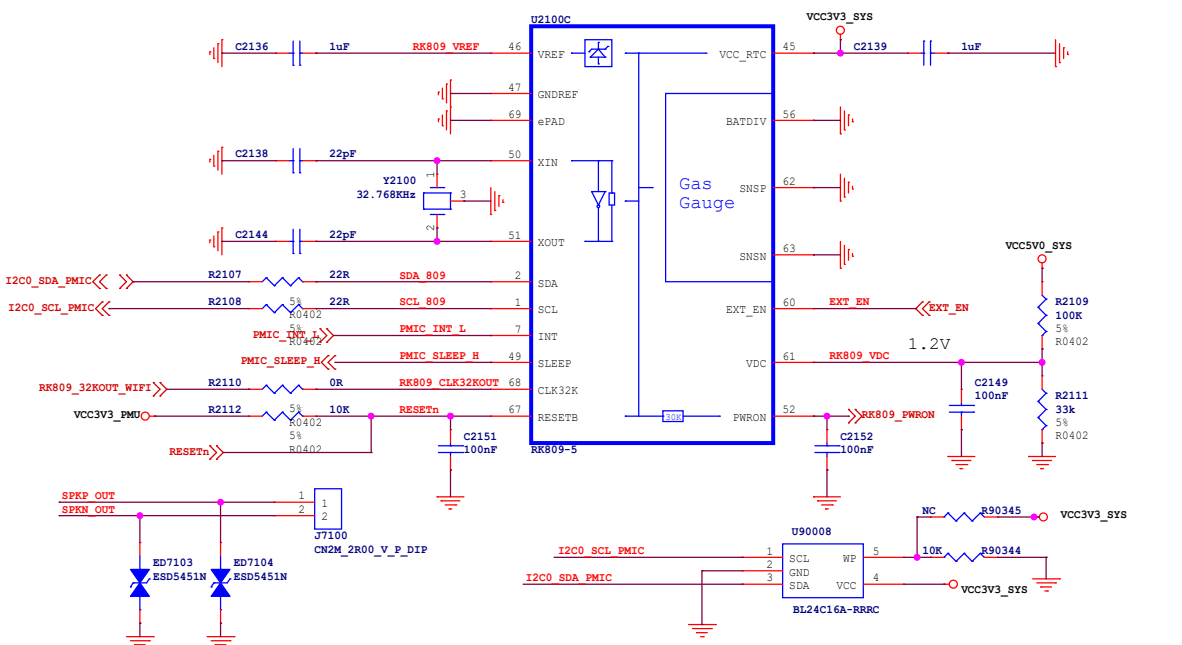
PMIC RK809 DCDC



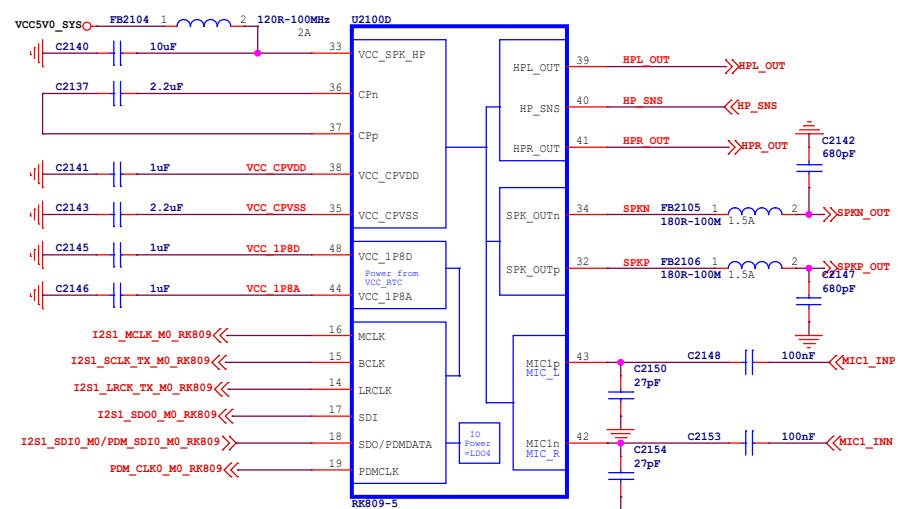
PMIC RK809 LDO



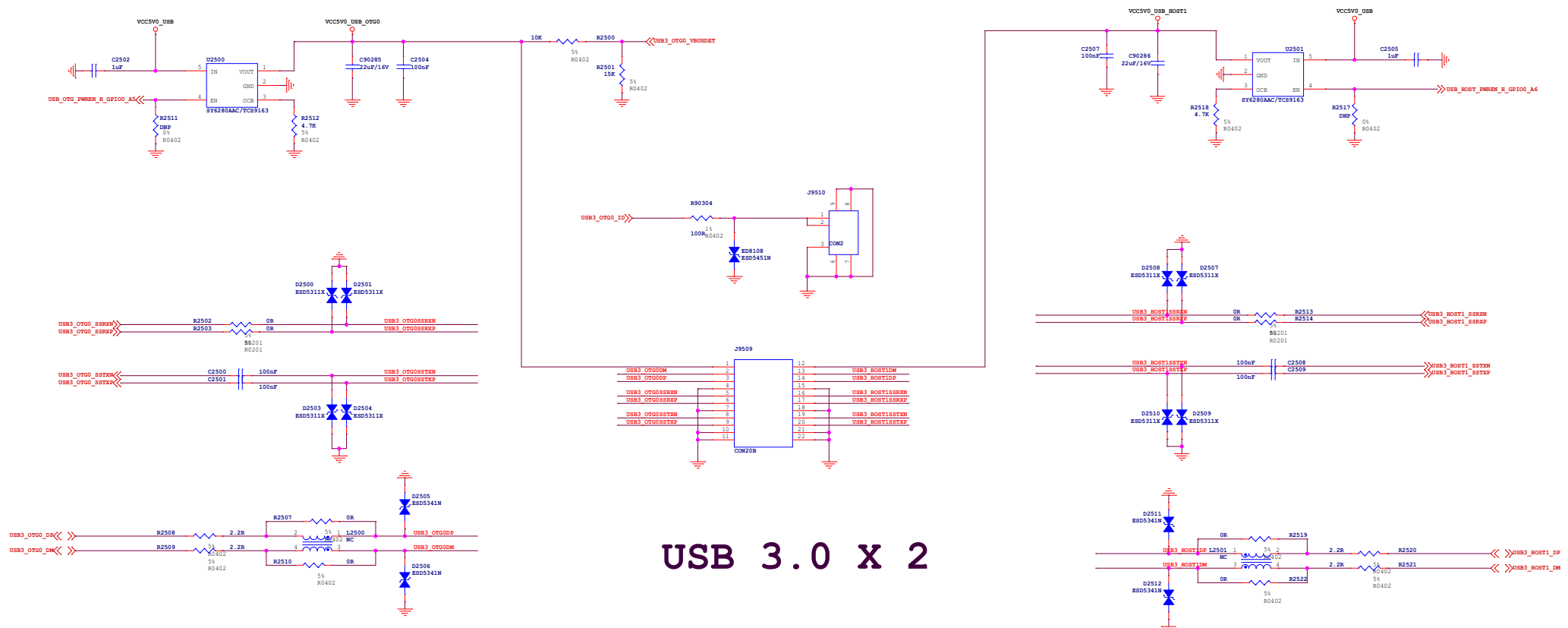
PMIC RK809 Management



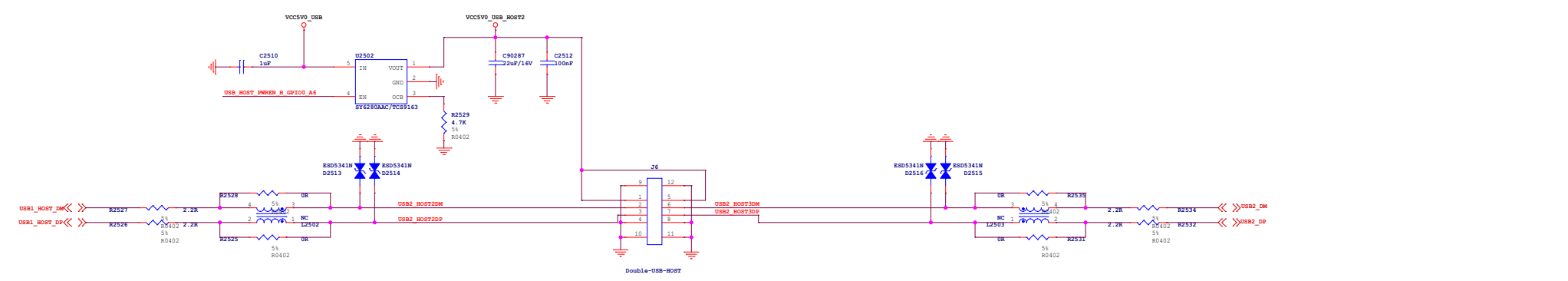
PMIC RK809 CODEC



Size	Title:	ROCK 3B	REV
A3	Page Name:	35.Power_PMIC	1.51
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USB 3.0 X 2



USB 2.0 X 2