



Radxa ROCK 3C

schematic

V1.4



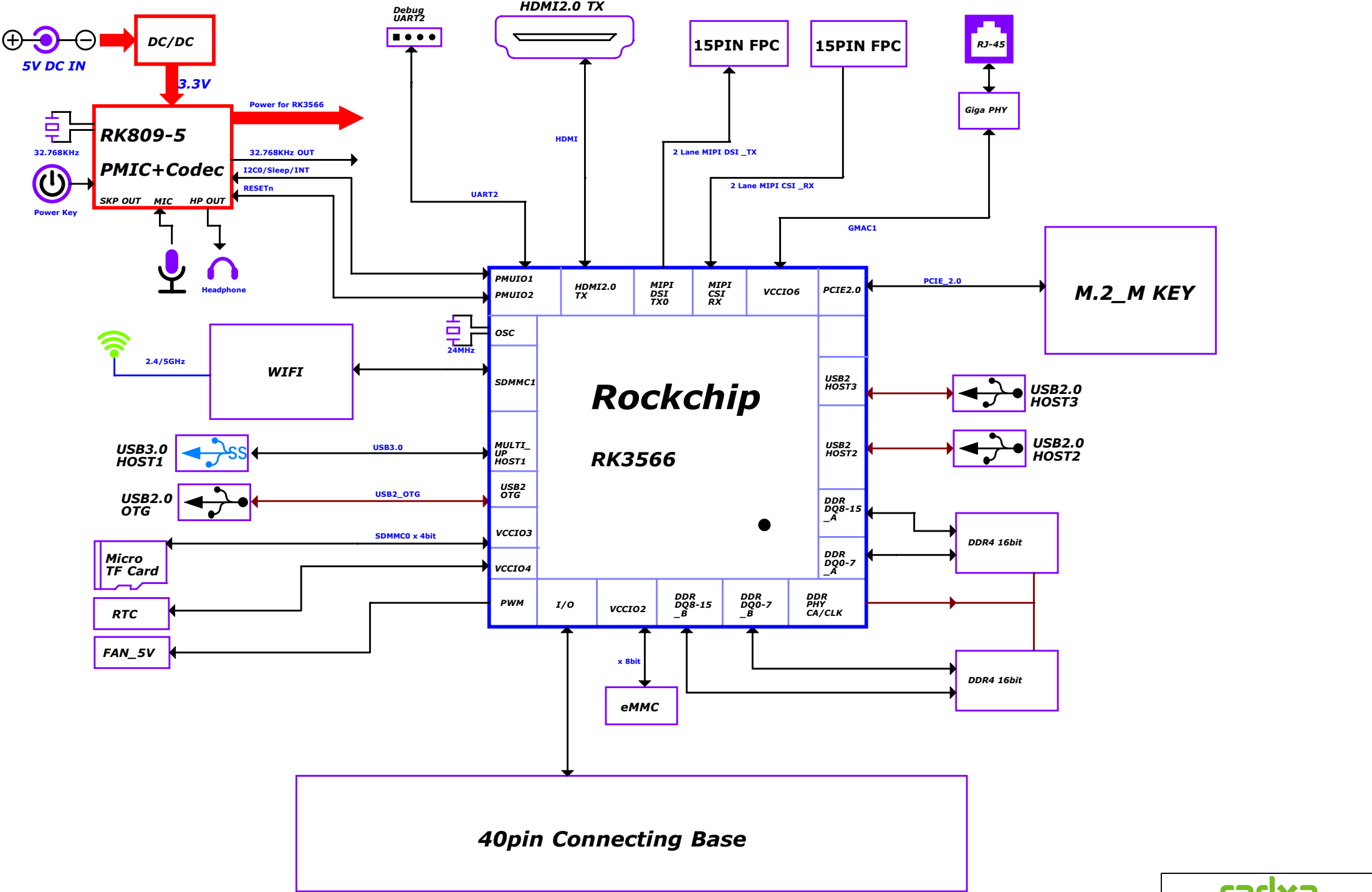
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- 29.Power_DC IN

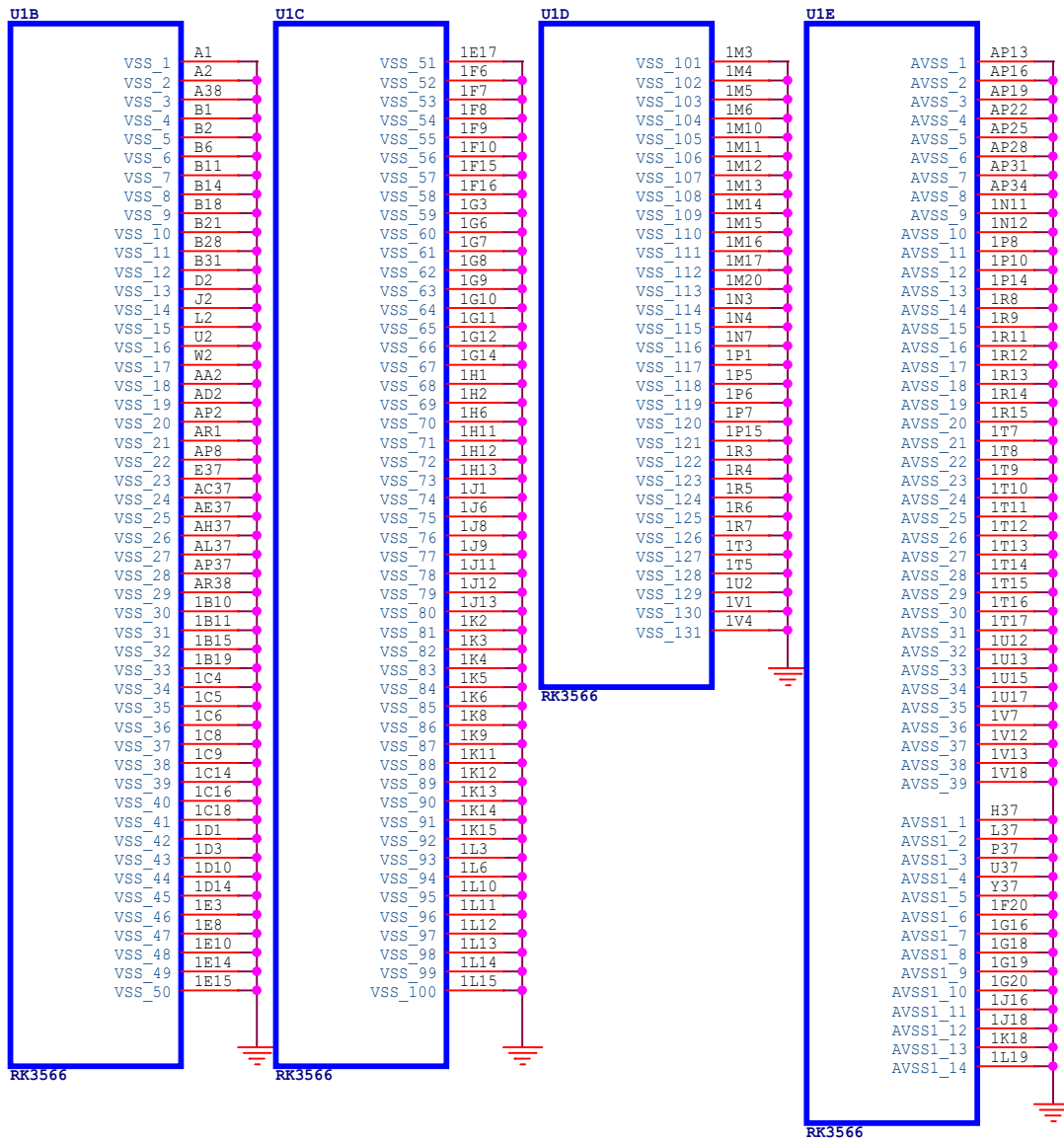
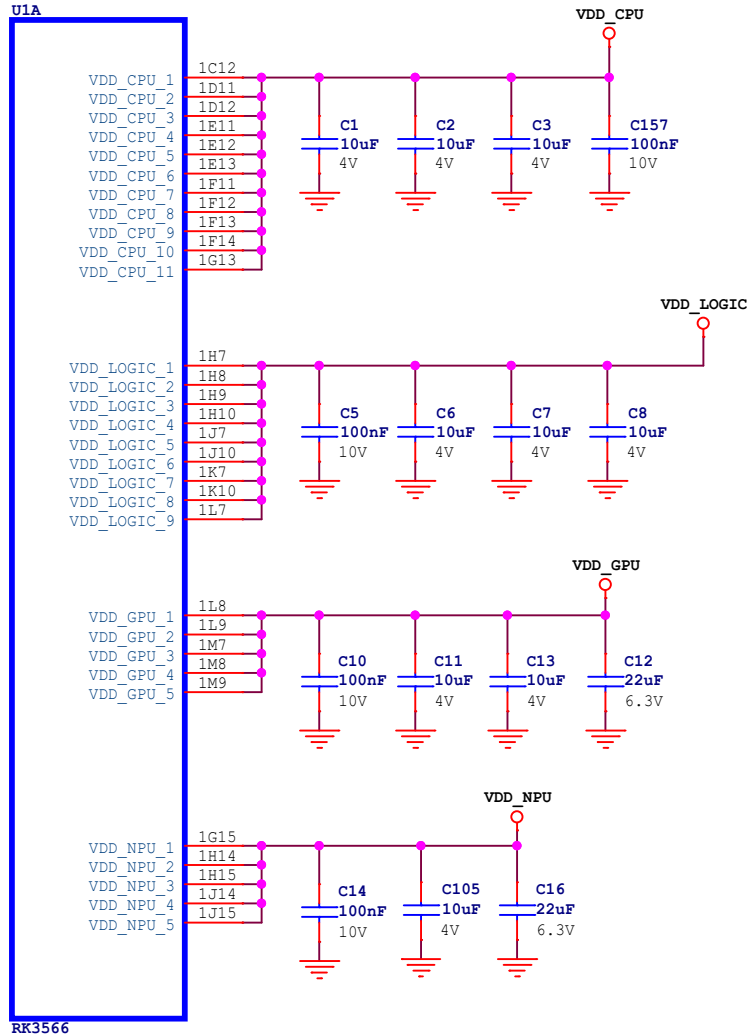


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ROCK 3C Ref Block Diagram



RK3566_ABCDE (Power&GND)

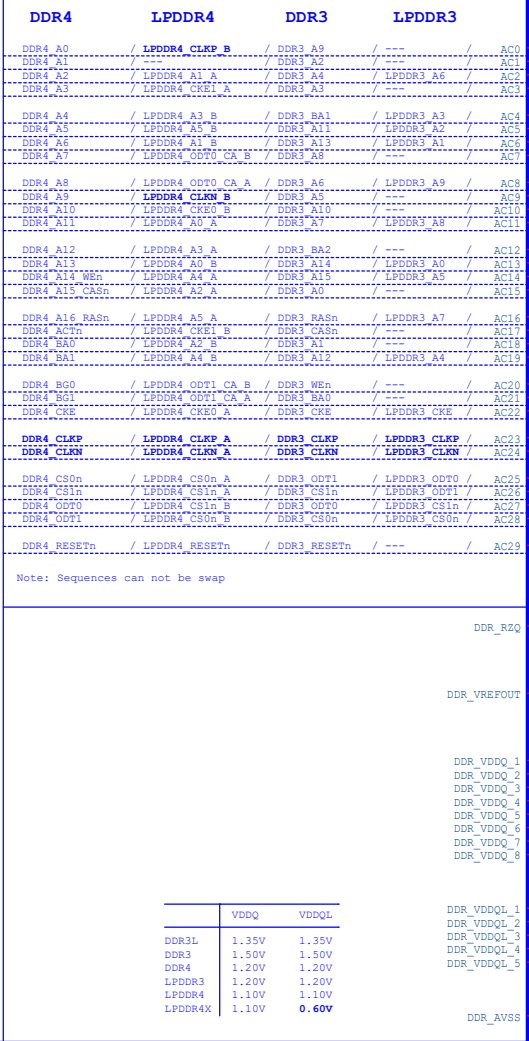


radxa

Size	Title: ROCK 3C	REV
A4	Page Name: RK3566_Power/GND	1.4
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RK3566_F (DDR PHY)

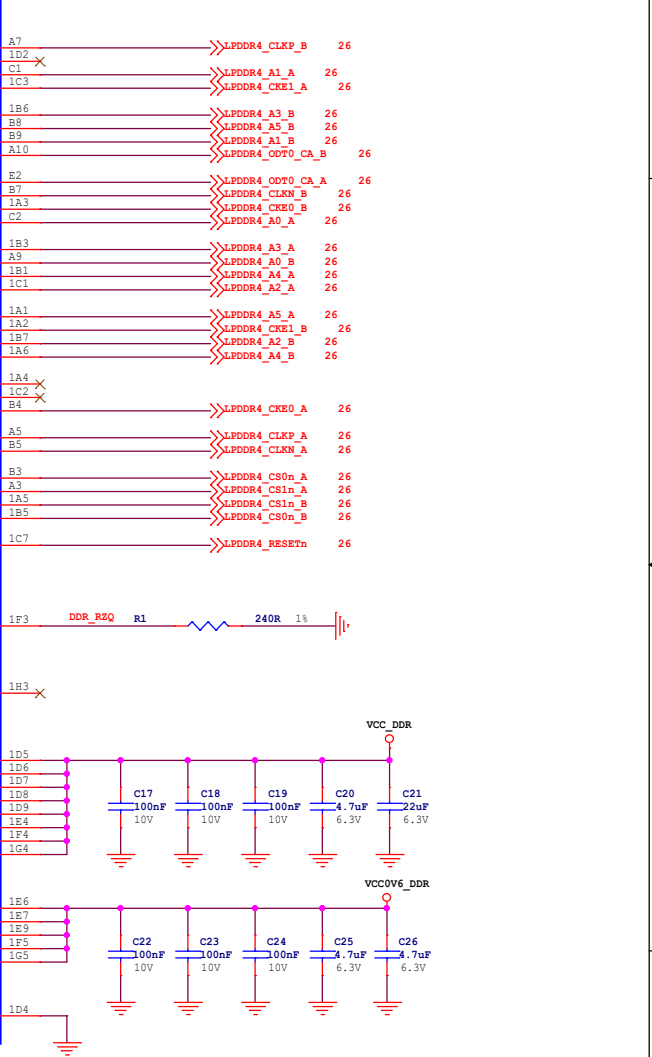
UIF



Note: Sequences can not be swap

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

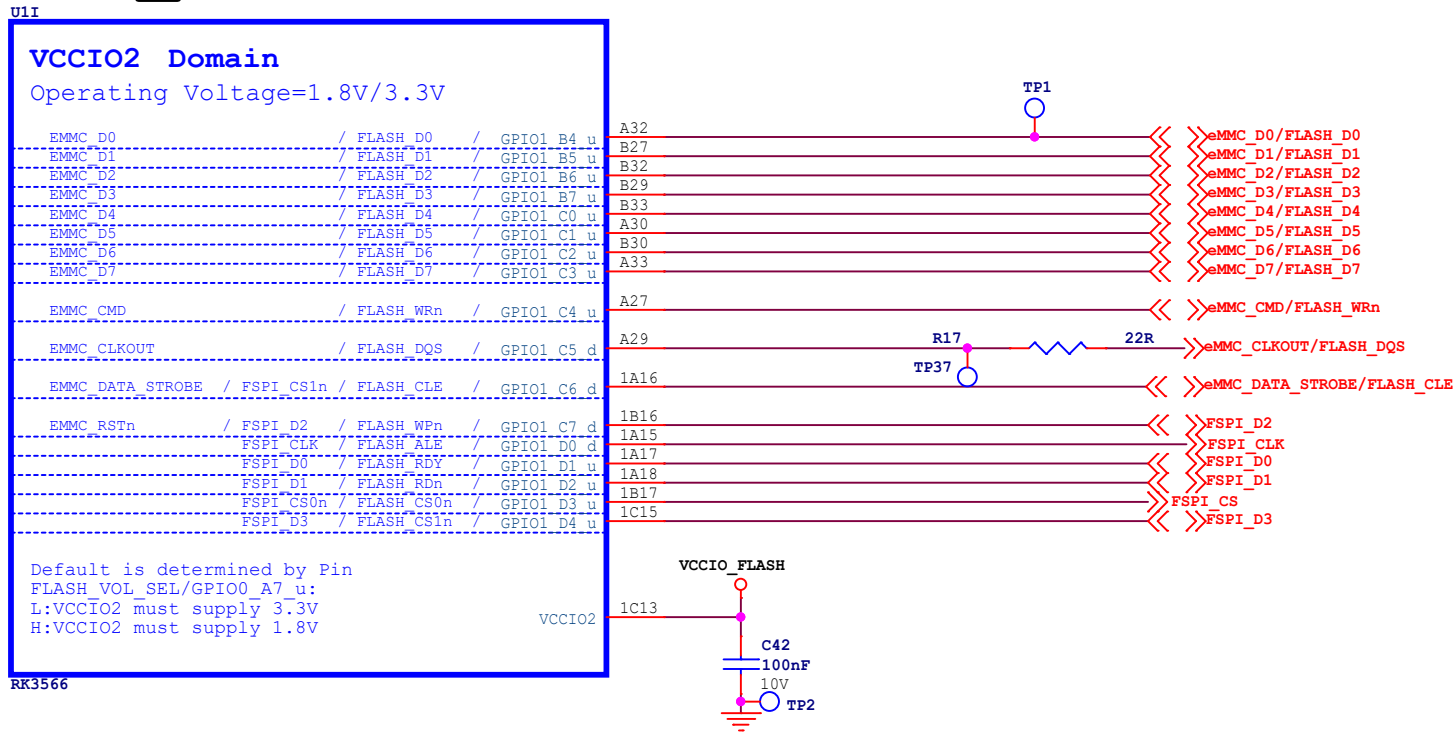
RK3566



	VDDQ	VDDQL
DDR3L	1.35V	1.35V
DDR3	1.50V	1.50V
DDR4	1.20V	1.20V
LPDDR3	1.20V	1.20V
LPDDR4	1.10V	1.10V
LPDDR4X	1.10V	0.60V

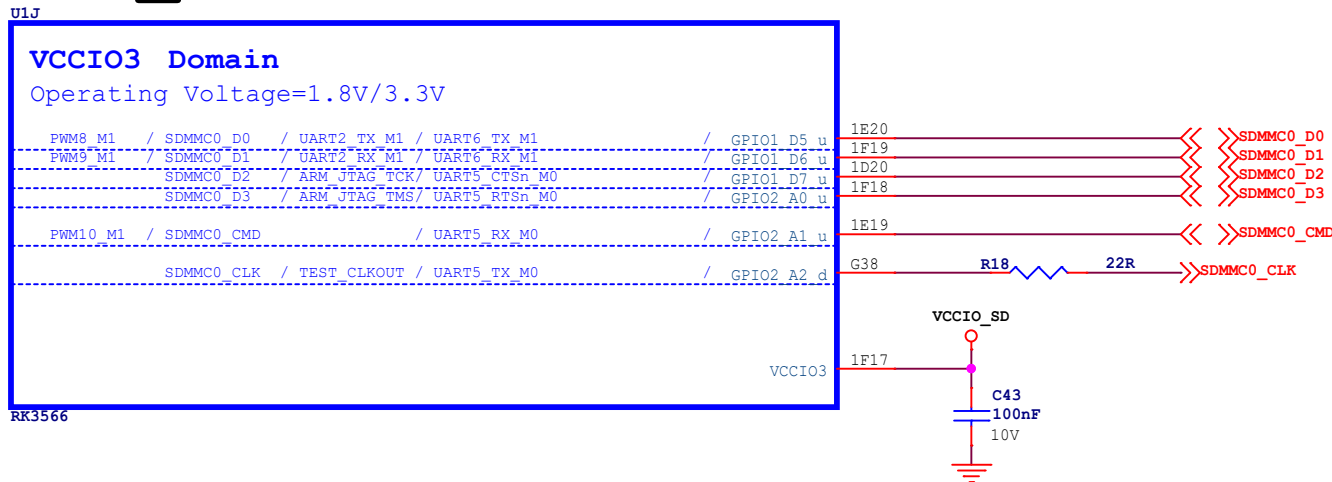


RK3566_I (VCCIO2 Domain)



RK3566

RK3566_J (VCCIO3 Domain)

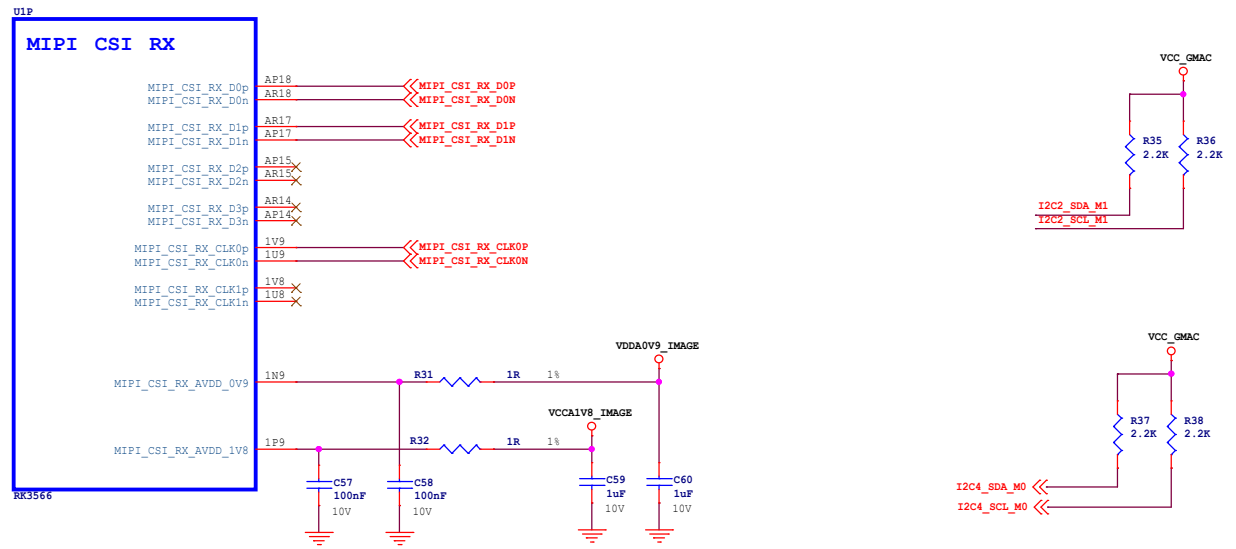


RK3566

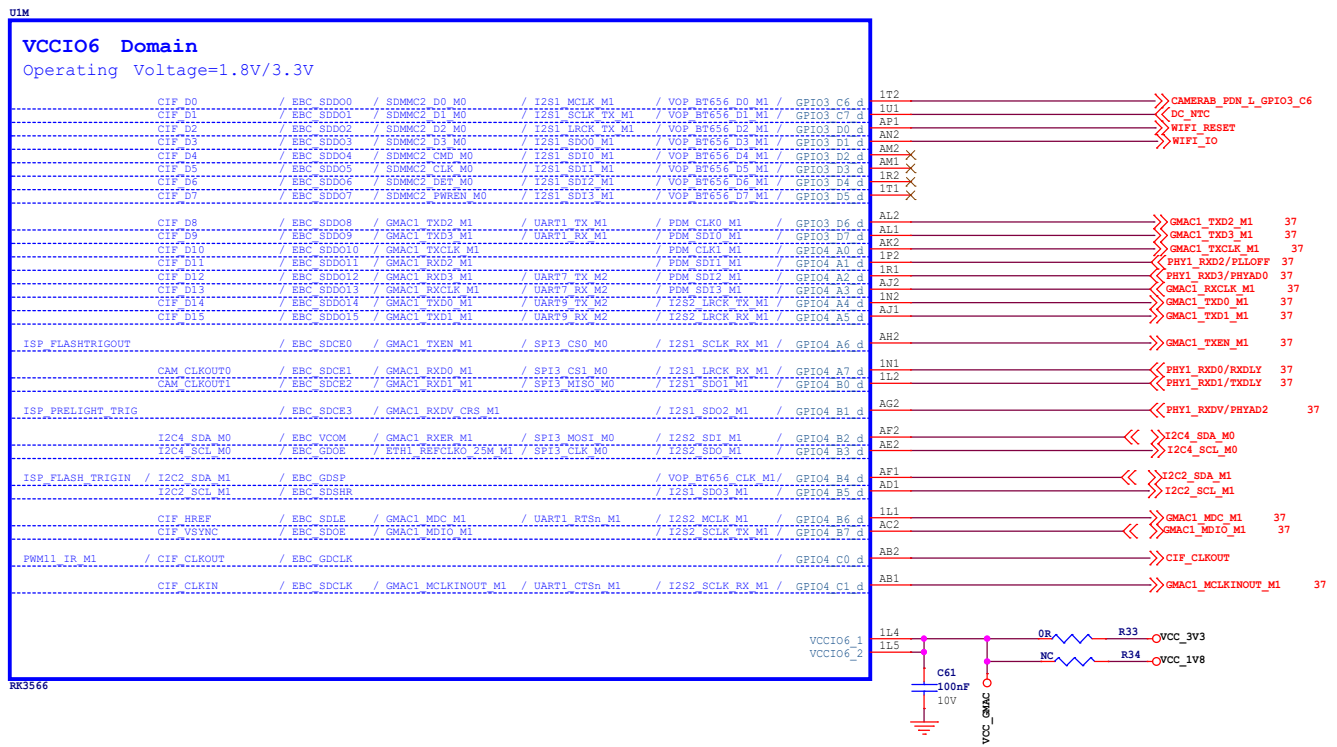


Size	Title:	ROCK 3C	REV
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RK3566_P (MIPI_CSI_RX)

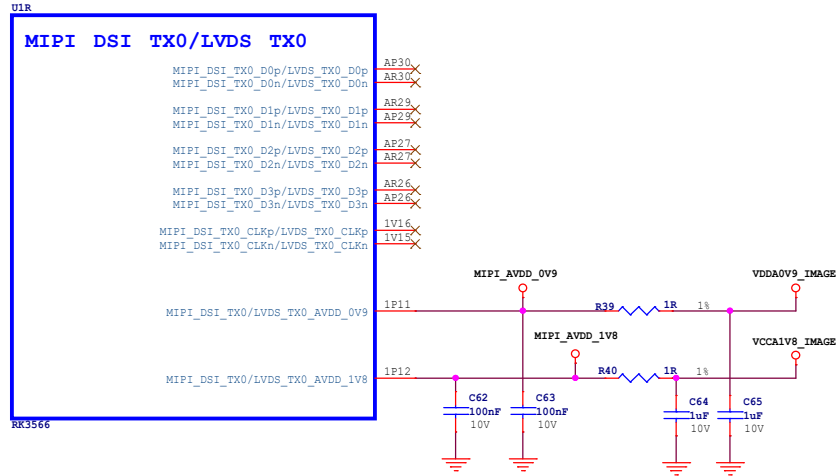


RK3566_M (VCCIO6 Domain)

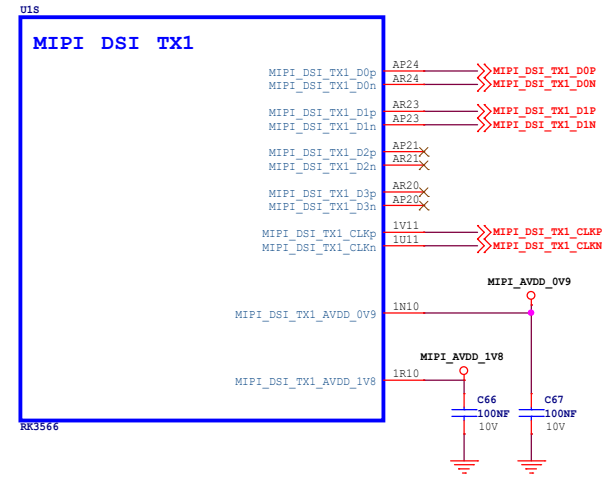


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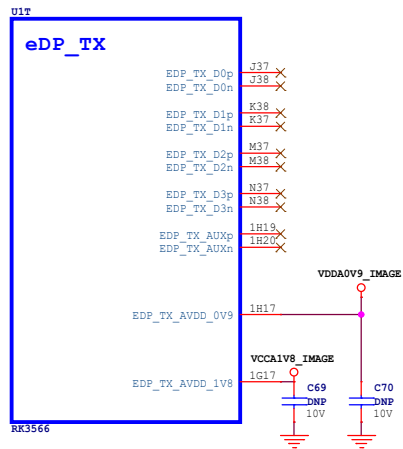
RK3566_R (MIPI_DSI_TX0/LVDS_TX0)



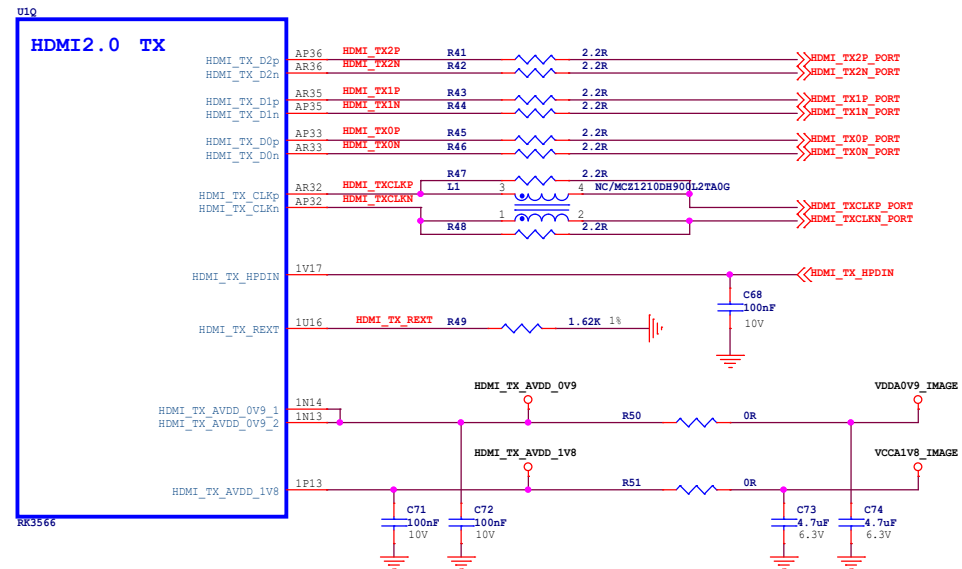
RK3566_S (MIPI_DSI_TX1/LVDS_TX1)



RK3566_T (eDP/DP TX)



RK3566_Q (HDMI2.0 TX)



RK3566_L (VCCIO5 Domain)

U1L

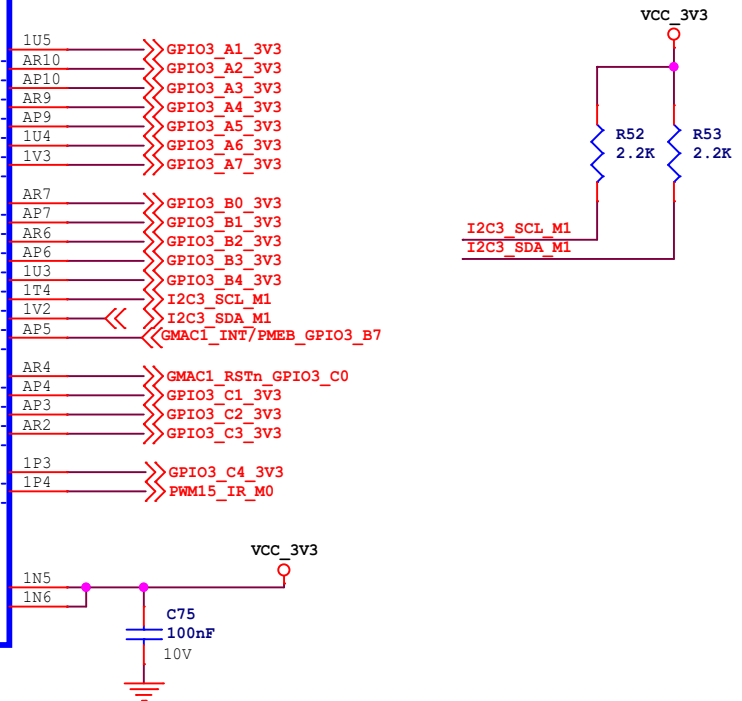
VCCIO5 Domain

Operating Voltage=1.8V/3.3V

VOP BT1120 D0	/ SPI1 CS0 M1		/ SDMMC2 D0 M1	/ GPIO3 A1 d	1U5	>> GPIO3_A1_3V3
VOP BT1120 D1		/ GMAC1 TXD2 M0	/ I2S3 MCLK M0	/ SDMMC2 D1 M1	AR10	>> GPIO3_A2_3V3
VOP BT1120 D2		/ GMAC1 TXD3 M0	/ I2S3 SCLK M0	/ SDMMC2 D2 M1	AP10	>> GPIO3_A3_3V3
VOP BT1120 D3		/ GMAC1 RXD2 M0	/ I2S3 LRCK M0	/ SDMMC2 D3 M1	AR9	>> GPIO3_A4_3V3
VOP BT1120 D4		/ GMAC1 RXD3 M0	/ I2S3 SDO M0	/ SDMMC2 D4 M1	AP9	>> GPIO3_A5_3V3
VOP BT1120 CLK		/ GMAC1 TXCLK M0	/ I2S3 SDI M0	/ SDMMC2 CLK M1	1U4	>> GPIO3_A6_3V3
VOP BT1120 D5		/ GMAC1 RXCLK M0	/ SDMMC2 DET M1	/ GPIO3 A7 d	1V3	>> GPIO3_A7_3V3
VOP BT1120 D6		/ ETH1 REFCLK0 25M M0		/ SDMMC2 PWREN M1	AR7	>> GPIO3_B0_3V3
PWM8 M0	/ VOP BT1120 D7		/ GMAC1 RXD0 M0	/ UART4 RX M1	AP7	>> GPIO3_B1_3V3
PWM9 M0	/ VOP BT1120 D8		/ GMAC1 RXD1 M0	/ UART4 TX M1	AR6	>> GPIO3_B2_3V3
VOP BT1120 D9	/ I2C5 SCL M0	/ GMAC1 RXDV CRS M0		/ PDM SDIO M2	AP6	>> GPIO3_B3_3V3
VOP BT1120 D10	/ I2C5 SDA M0	/ GMAC1 RXER M0		/ PDM SDI1 M2	1U3	>> GPIO3_B4_3V3
PWM10 M0	/ VOP BT1120 D11	/ I2C3 SCL M1	/ GMAC1 TXD0 M0		1T4	>> I2C3_SCL_M1
PWM11 IR M0	/ VOP BT1120 D12	/ I2C3 SDA M1	/ GMAC1 TXD1 M0		1V2	>> I2C3_SDA_M1
PWM12 M0		/ GMAC1 TXEN M0	/ UART3 TX M1	/ PDM SDI2 M2	AP5	>> GMAC1_INT/PMEB_GPIO3_B7
PWM13 M0		/ GMAC1 MCLKINOUT M0	/ UART3 RX M1	/ PDM SDI3 M2	AR4	>> GMAC1_RSTn GPIO3_C0
VOP BT1120 D13	/ SPI1 MOSI M1		/ PCIE20 PERSTn M1	/ I2S1 SDO2 M2	AP4	>> GPIO3_C1_3V3
VOP BT1120 D14	/ SPI1 MISO M1		/ UART5 TX M1	/ I2S1 SDO3 M2	AP3	>> GPIO3_C2_3V3
VOP BT1120 D15	/ SPI1 CLK M1		/ UART5 RX M1	/ I2S1 SCLK RX M2	AR2	>> GPIO3_C3_3V3
PWM14 M0	/ VOP PWM M1	/ GMAC1 MDC M0	/ UART7 TX M1	/ PDM CLK1 M2	1P3	>> GPIO3_C4_3V3
PWM15 IR M0	/ SPDIF TX M1	/ GMAC1 MDIO M0	/ UART7 RX M1	/ I2S1 LRCK RX M2	1P4	>> PWM15_IR_M0

RK3566

VCCIO5_1
VCCIO5_2



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A4	ROCK 3C	1.4
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RK3566_H (VCCIO1 Domain)

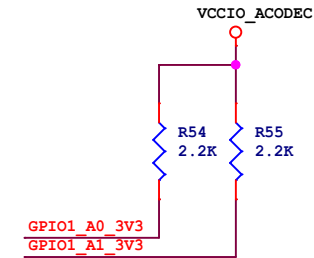
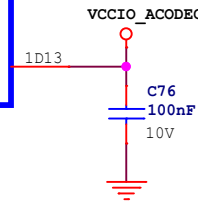
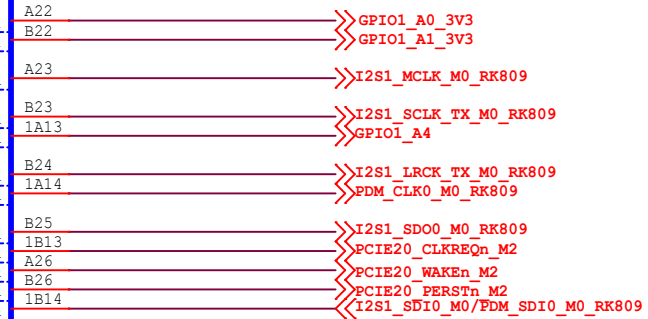
U1H

VCCIO1 Domain

Operating Voltage=1.8V/3.3V

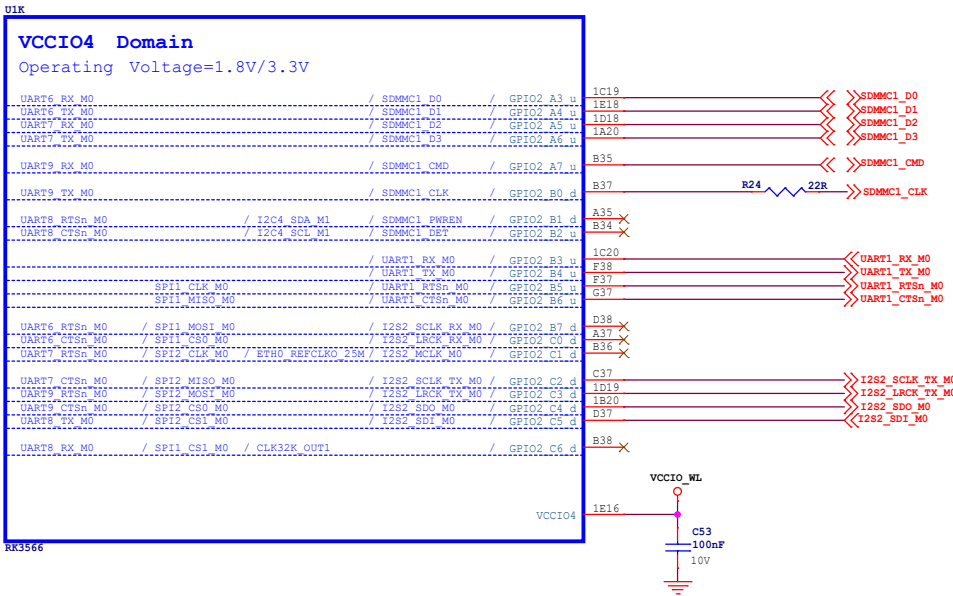
	/ I2C3 SDA M0	/ UART3 RX M0	/ AUDIOPWM LOUT p	/ GPIO1 A0 u
	/ I2C3 SCL M0	/ UART3 TX M0	/ AUDIOPWM LOUT n	/ GPIO1 A1 u
SCR_CLK	/ I2S1 MCLK M0	/ UART3 RTSn M0		/ GPIO1 A2 d
SCR_IO	/ I2S1 SCLK TX M0	/ UART3 CTSn M0		/ GPIO1 A3 d
	/ I2S1 SCLK RX M0	/ UART4 TX M0	/ PDM CLR1 M0	/ SPDIF TX M0
SCR_RST	/ I2S1 LRCK TX M0	/ UART4 RTSn M0		/ GPIO1 A5 d
	/ I2S1 LRCK RX M0	/ UART4 TX M0	/ PDM CLR0 M0	/ AUDIOPWM ROUT p
				/ GPIO1 A6 d
SCR_DET	/ I2S1 SDO0 M0	/ UART4 CTSn M0	/ AUDIOPWM ROUT n	/ GPIO1 A7 d
	/ I2S1 SDO1 M0	/ I2S1 SDI3 M0	/ PDM SDI3 M0	/ PCIE20 CLKREQn M2
	/ I2S1 SDO2 M0	/ I2S1 SDI2 M0	/ PDM SDI2 M0	/ PCIE20 WAKEn M2
	/ I2S1 SDO3 M0	/ I2S1 SDI1 M0	/ PDM SDI1 M0	/ PCIE20 PERSTn M2
		/ I2S1 SDI0 M0	/ PDM SDI0 M0	/ GPIO1 B2 d
				/ GPIO1 B3 d

RK3566

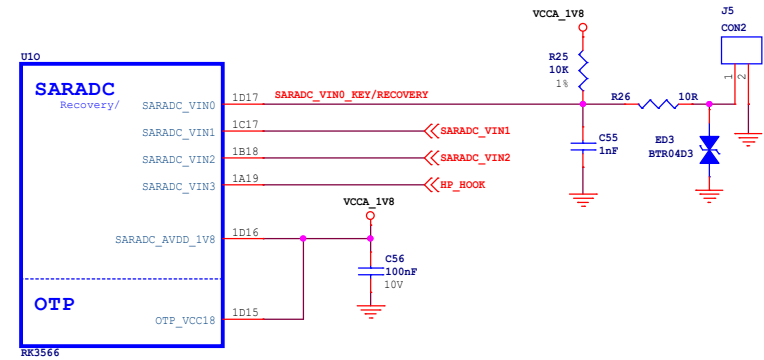


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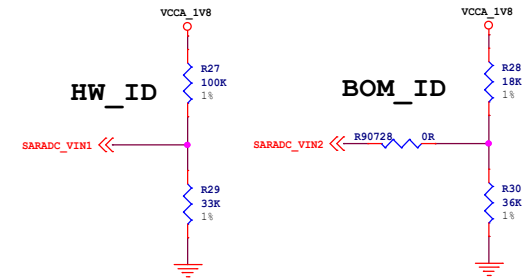
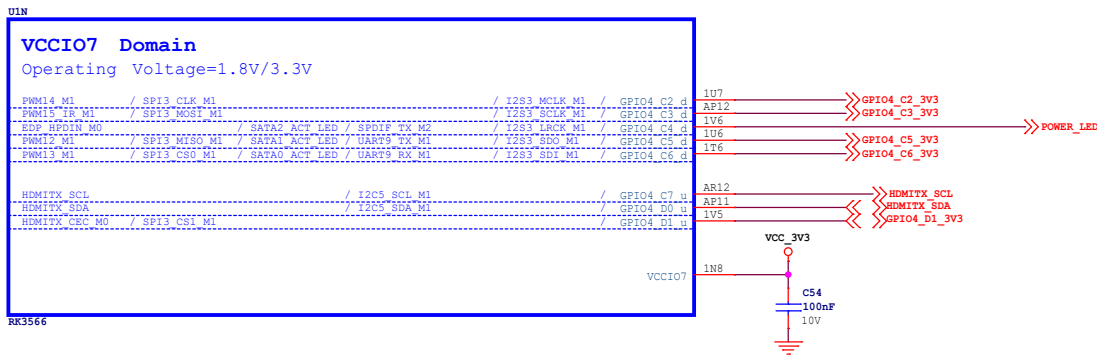
RK3566_K (VCCIO4 Domain)



RK3566_O (SARADC/OTP)

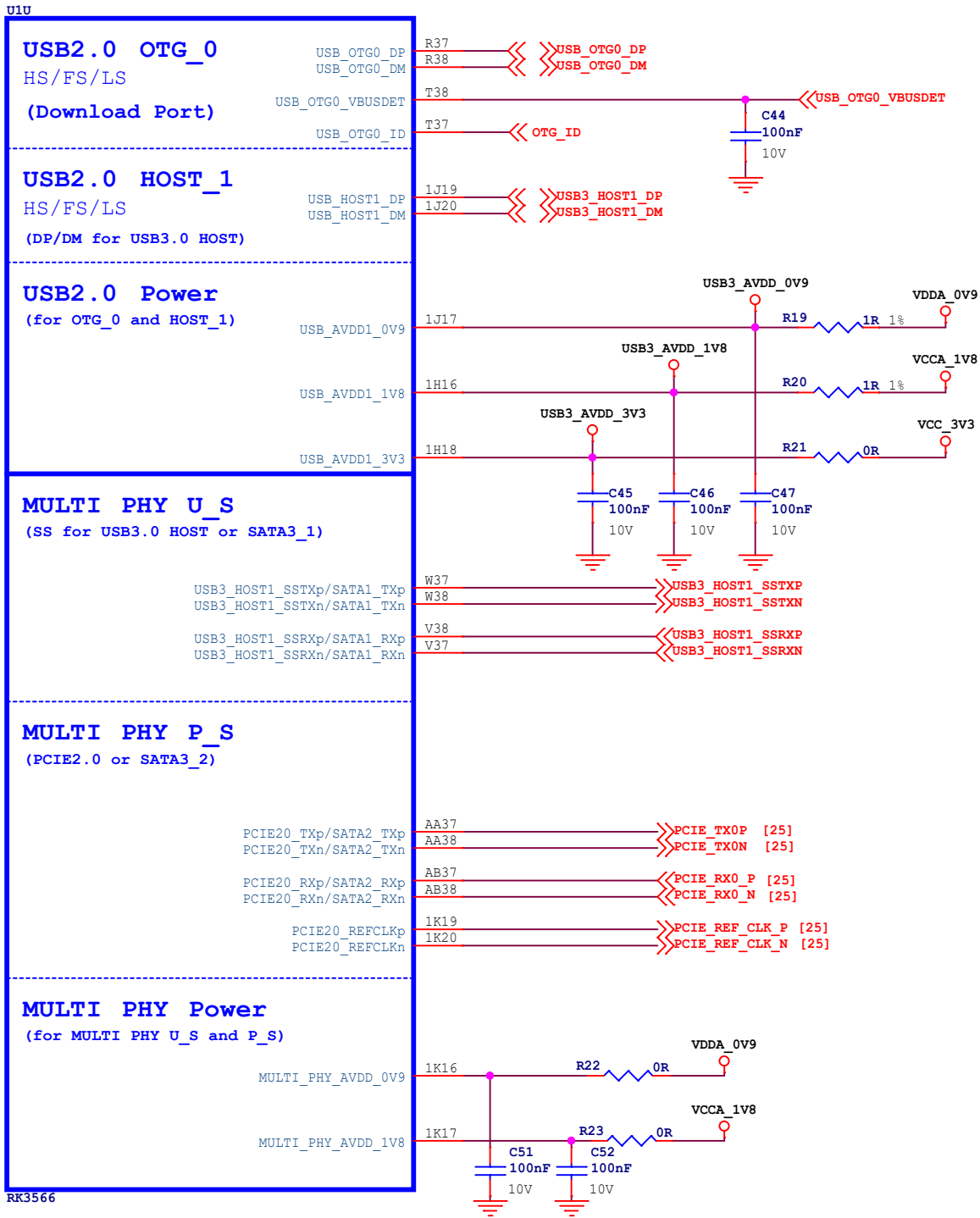


RK3566_N (VCCIO7 Domain)

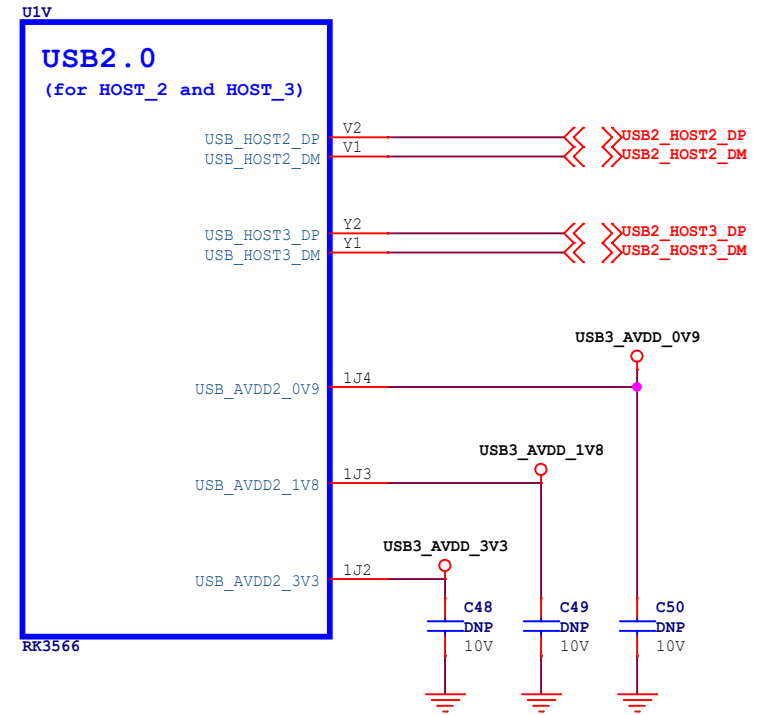


Size	Title:	ROCK 3C	REV
A3	Page Name:	RK3566_SARADC/GPIO	1.4
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RK3566_U (USB3.0/SATA/QSGMII/PCIe2.0 x1)

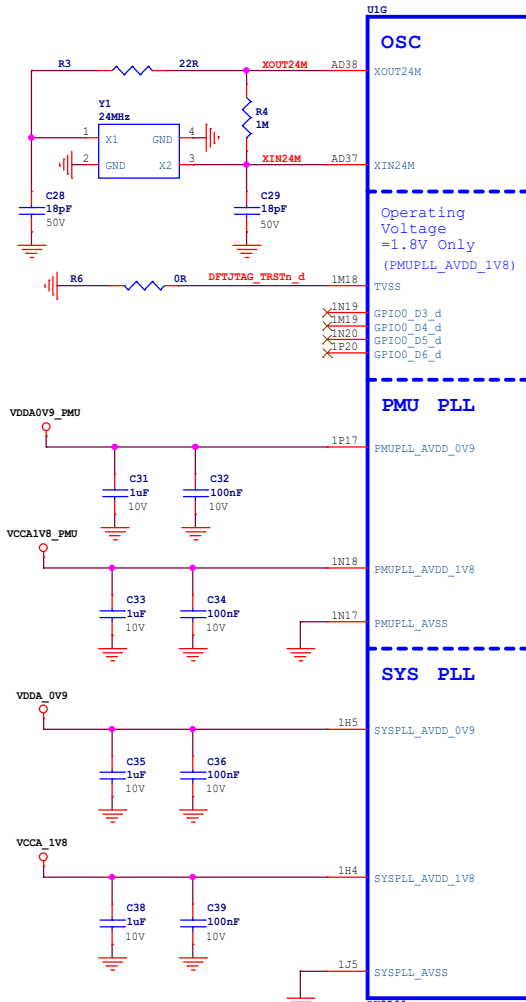


RK3566_V (USB2.0 HOST)



Size	Title:	ROCK 3C	REV
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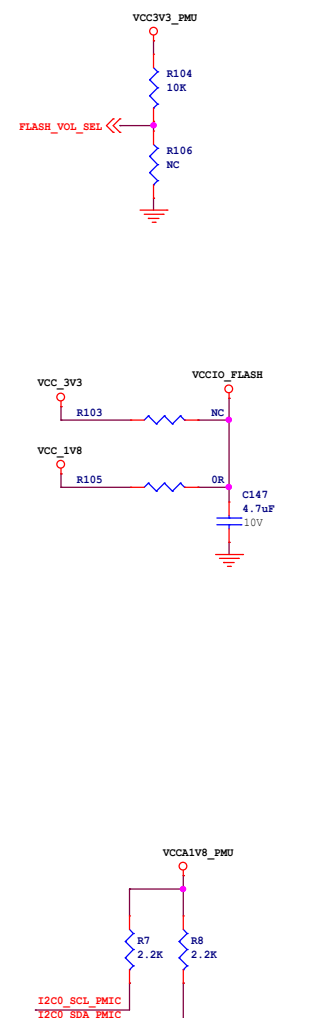
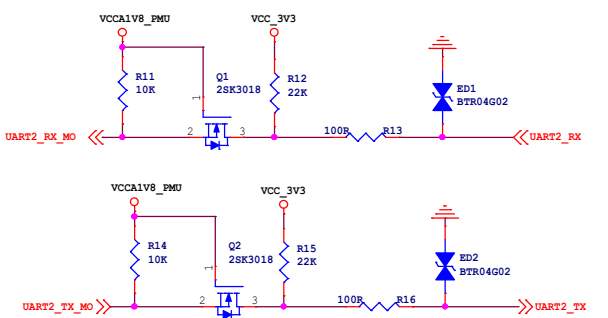
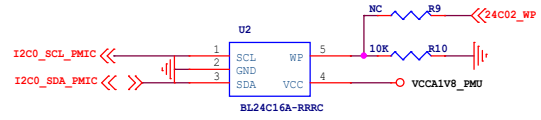
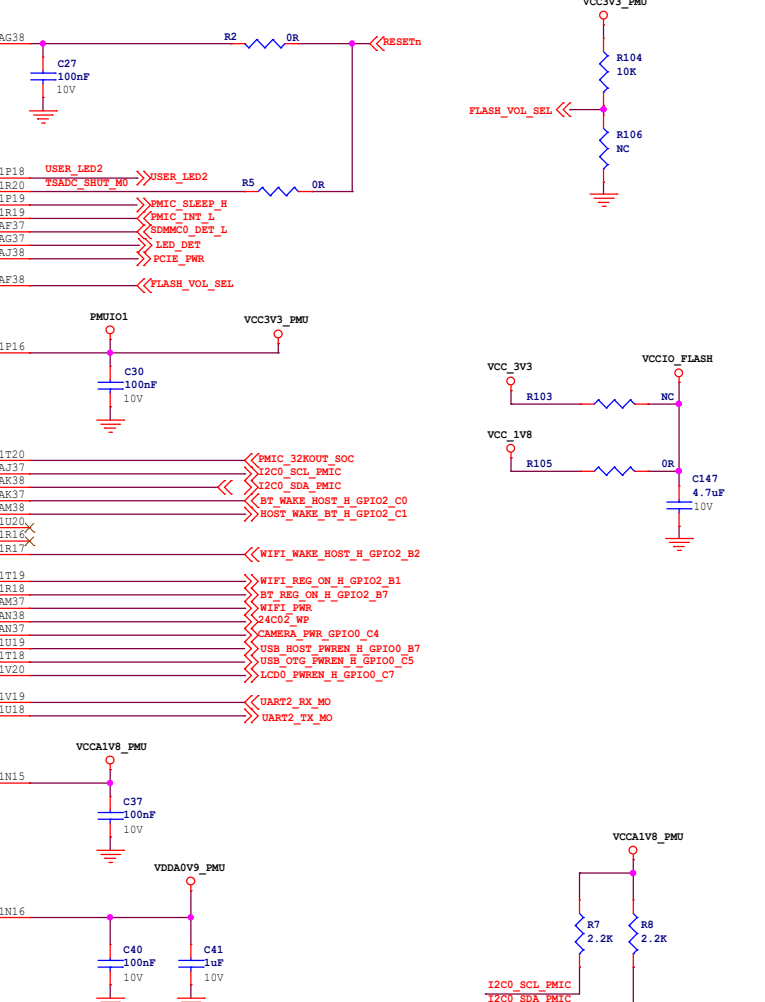
RK3566 (OSC/PLL/PMUIO1/2)



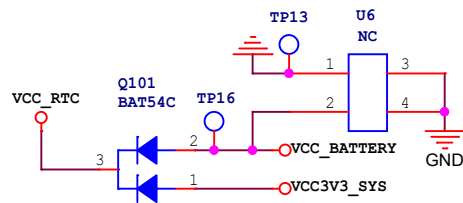
PMUIO1 Domain	
Operating Voltage=3.3V Only	
REFCLK_OUT	GPIO0 A0 H
TSADC_SHUT_OVG	GPIO0 A1 H
TSADC_SHUT_M0	GPIO0 A2 H
PMIC_SLEEP	GPIO0 A3 H
SIMMCO_DET	GPIO0 A4 H
SIMMCO_PWREN	GPIO0 A5 H
GPU_PWREN	GPIO0 A6 H
FLASH_VOL_SEL	GPIO0 A7 H

PMUIO2 Domain	
Operating Voltage=1.8V/3.3V	
CLK32K_IN	GPIO0 B0 H
I2C0_SCL	GPIO0 B1 H
I2C0_SDA	GPIO0 B2 H
I2C1_SCL	GPIO0 B3 H
I2C1_SDA	GPIO0 B4 H
I2C2_SCL_M0	GPIO0 B5 H
I2C2_SDA_M0	GPIO0 B6 H
PMU0_M0	GPIO0 B7 H
PMU1_M0	GPIO0 C0 H
PMU2_M0	GPIO0 C1 H
PMU3_IR	GPIO0 C2 H
PMU4	GPIO0 C3 H
PMU5	GPIO0 C4 H
PMU6	GPIO0 C5 H
PMU7_IR	GPIO0 C6 H
PMU0_M1	GPIO0 C7 H

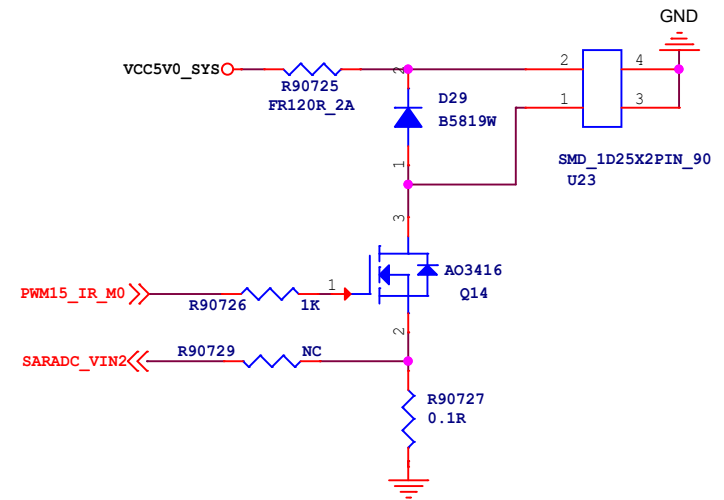
PMUIO1/2/OSC Domain Logic Power	
Operating Voltage=0.9V	
UART2_RX_M0	GPIO0 D0 H
UART2_TX_M0	GPIO0 D1 H



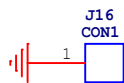
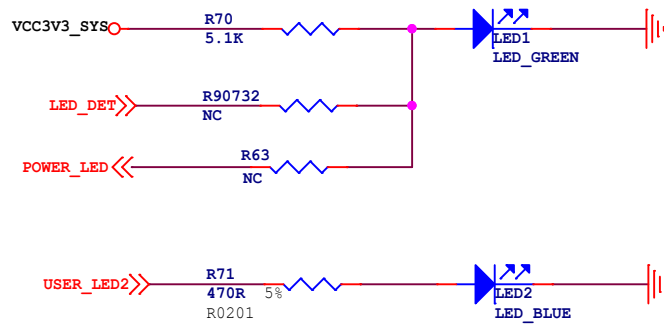
RTC



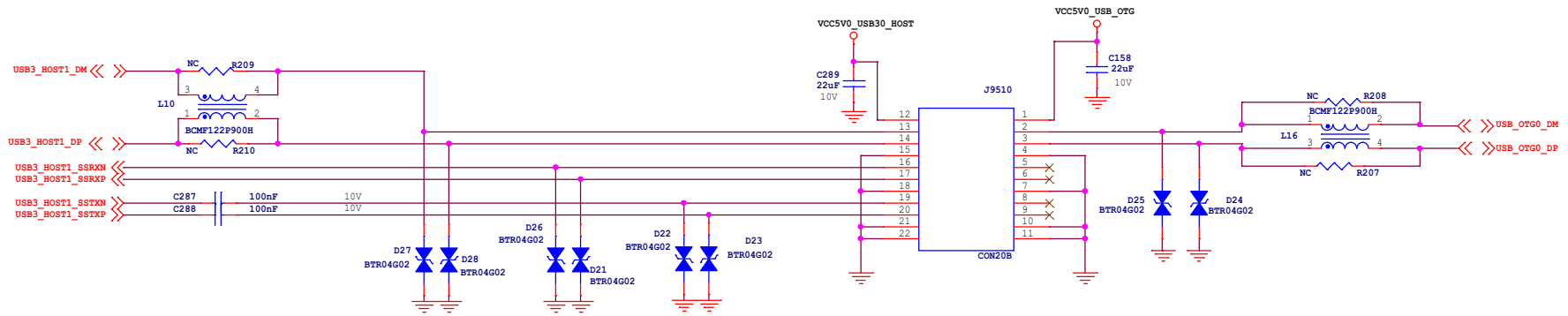
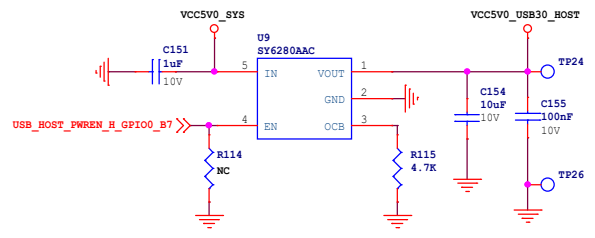
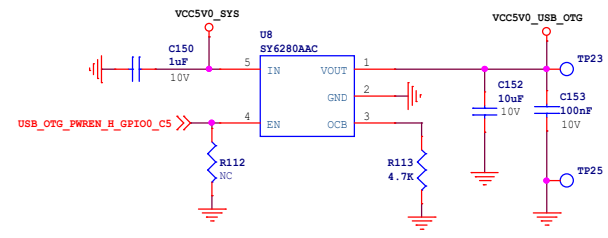
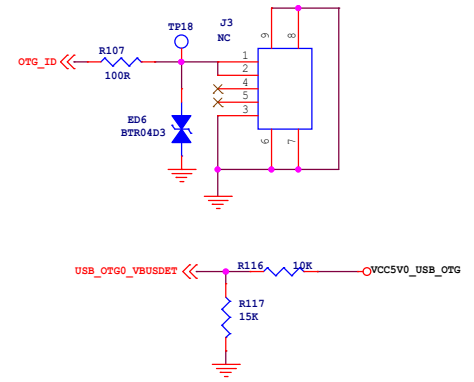
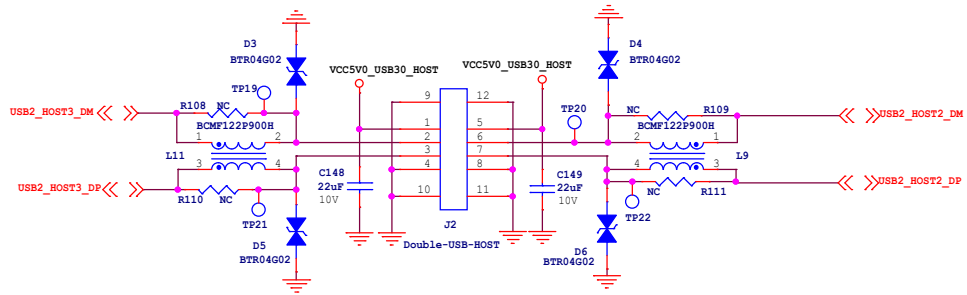
FAN

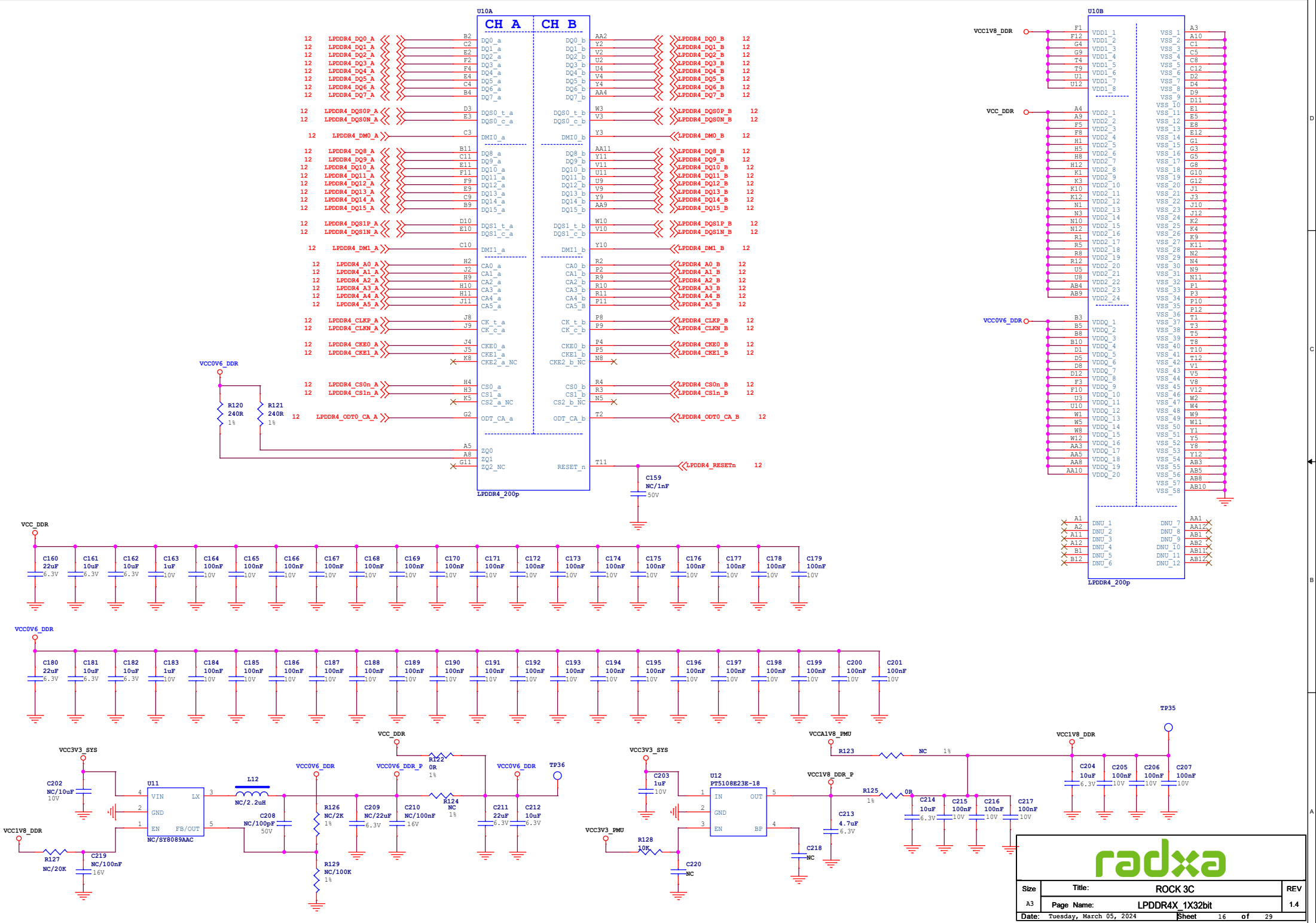


LED



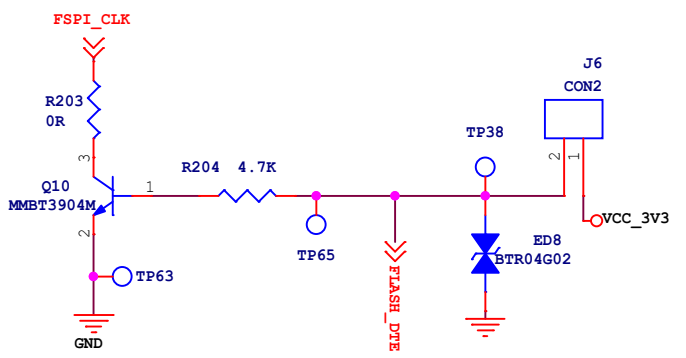
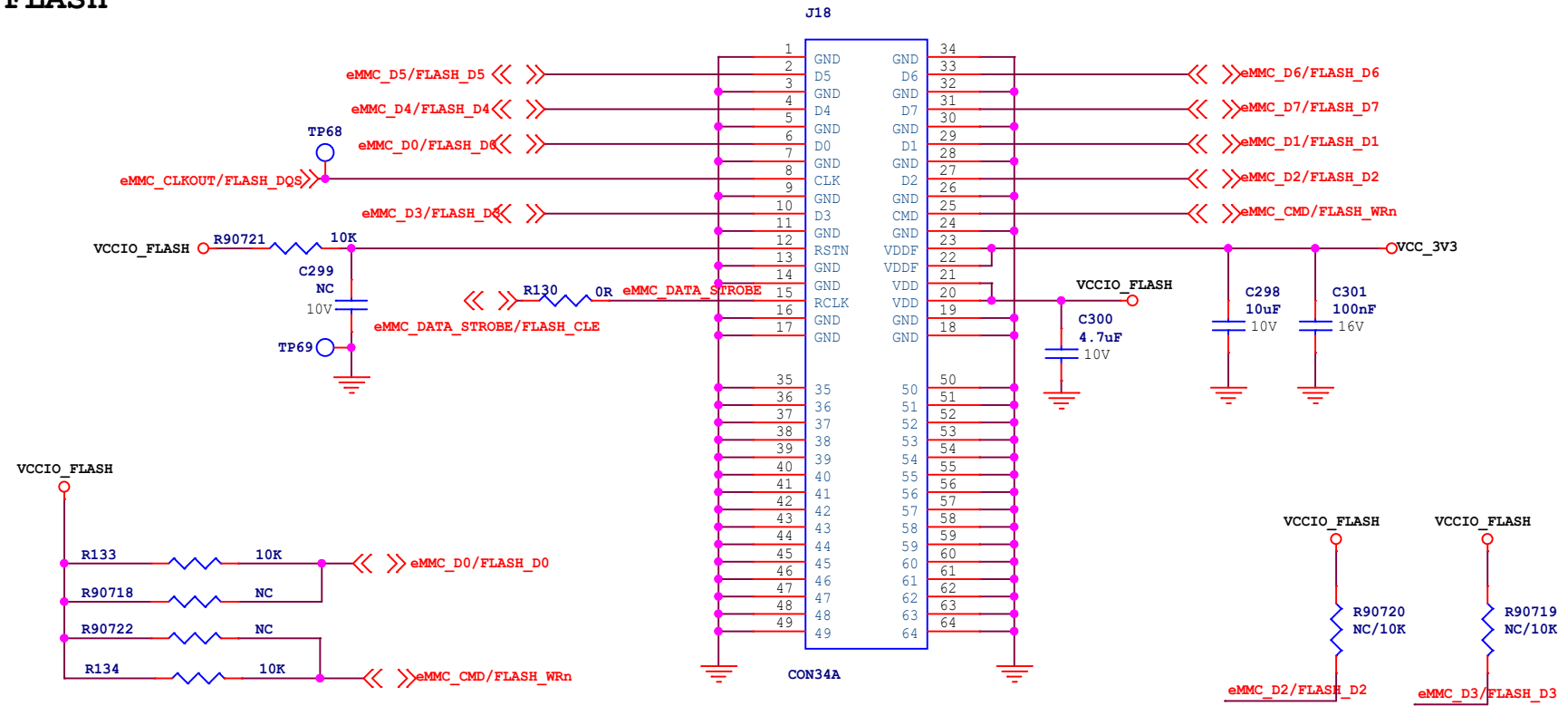
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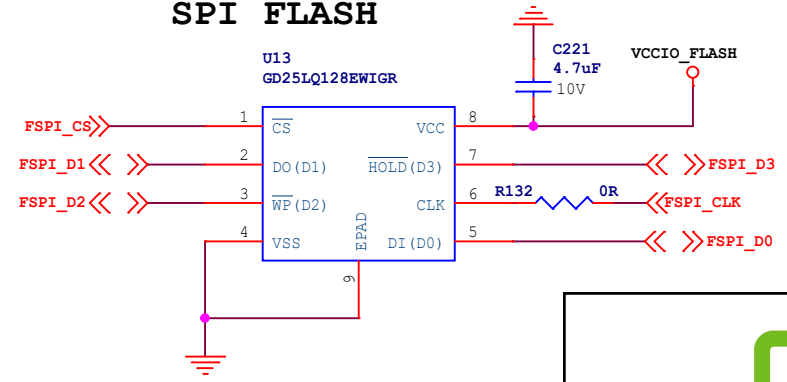


Size	Title:	ROCK 3C	REV
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EMMC FLASH

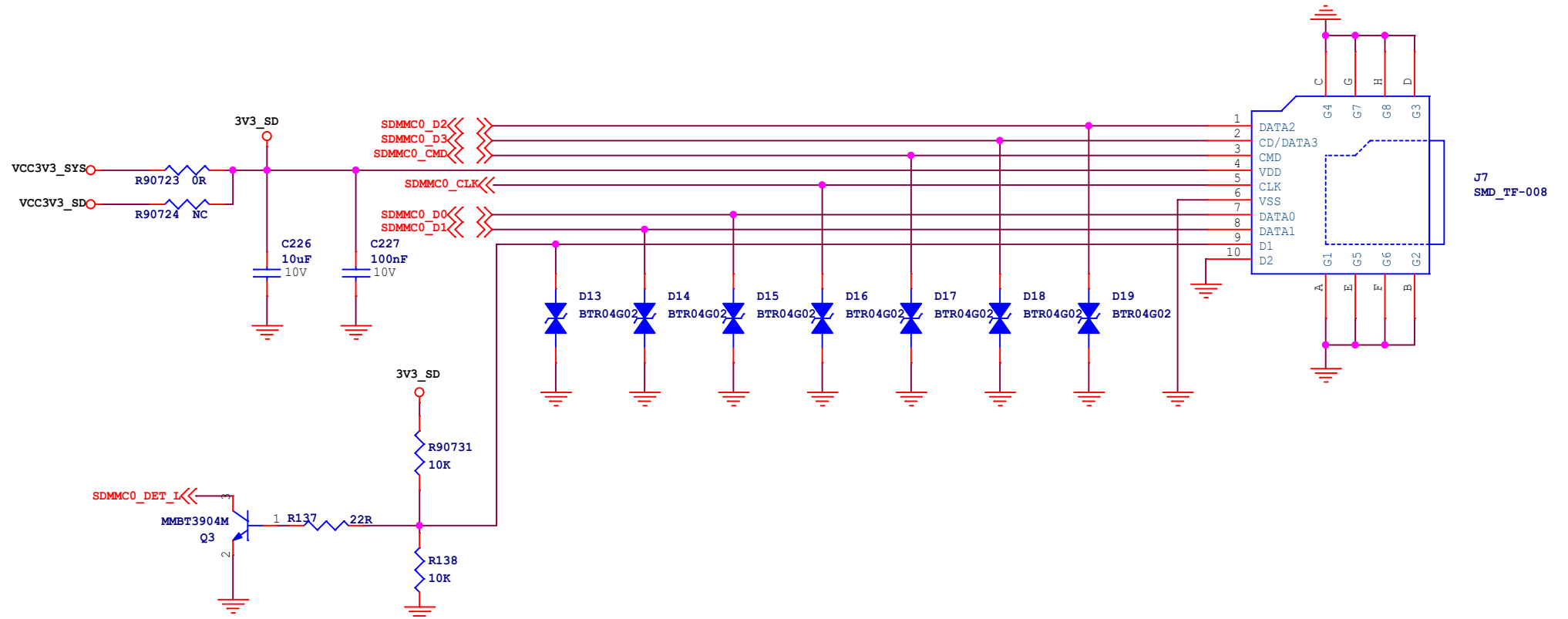


SPI FLASH



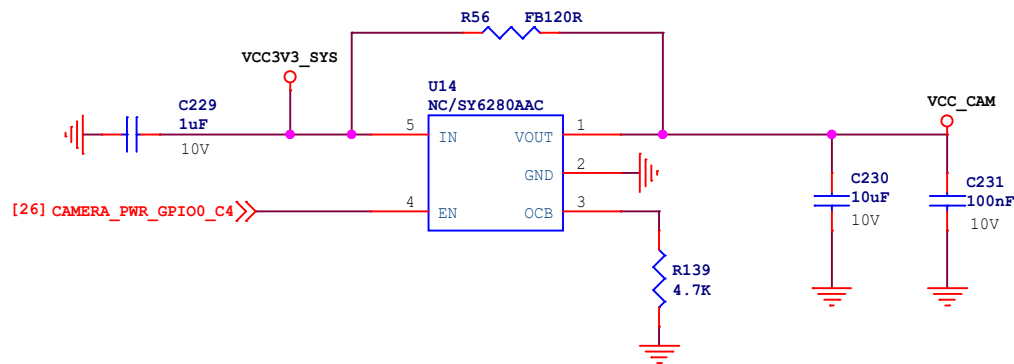
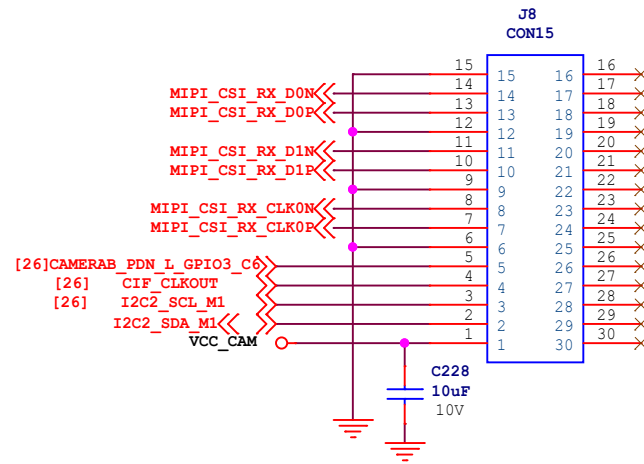
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A4	Page Name: SPI Flash/eMMC	1.4
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MicroSD Card

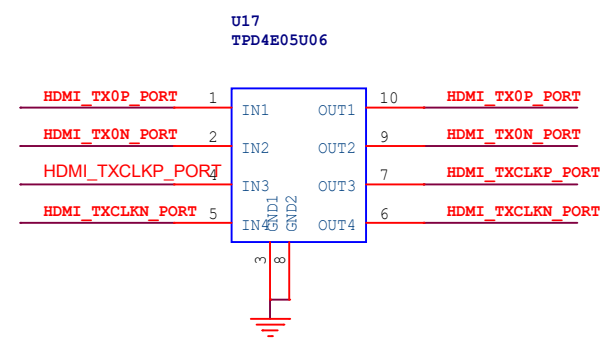
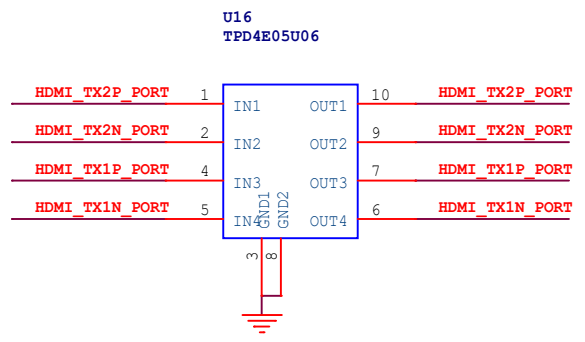
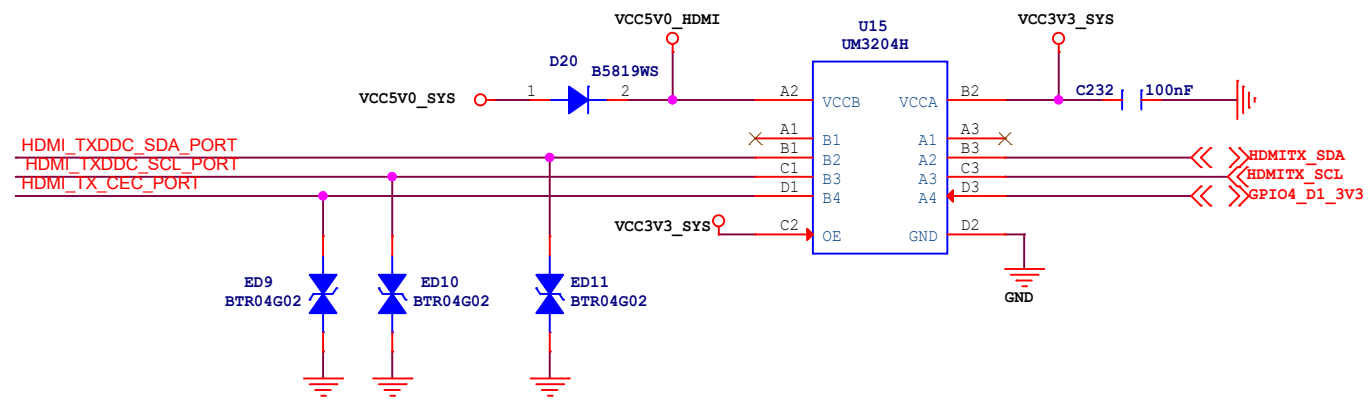


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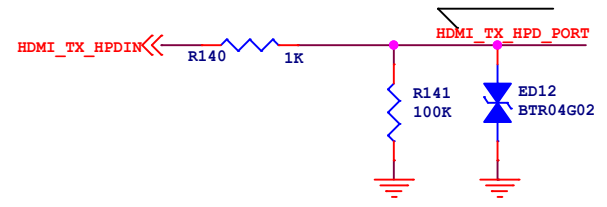
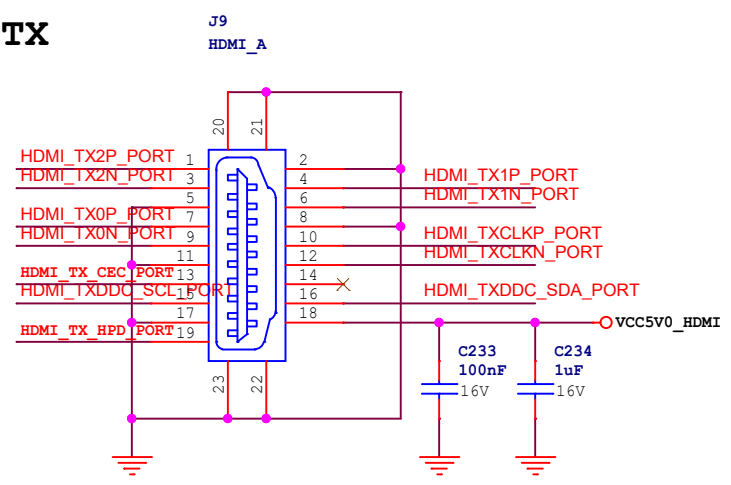
MIPI CSI




>>>HDMI_TX2P_PORT
 >>>HDMI_TX2N_PORT
 >>>HDMI_TX1P_PORT
 >>>HDMI_TX1N_PORT
 >>>HDMI_TX0P_PORT
 >>>HDMI_TX0N_PORT
 >>>HDMI_TXCLKP_PORT
 >>>HDMI_TXCLKN_PORT



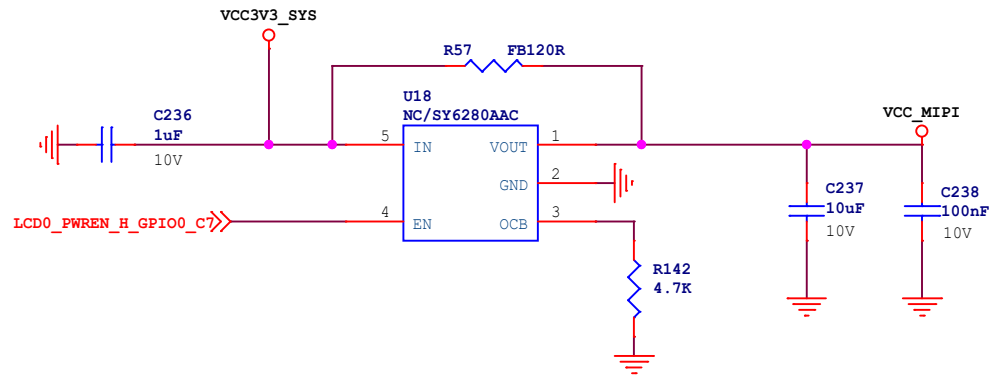
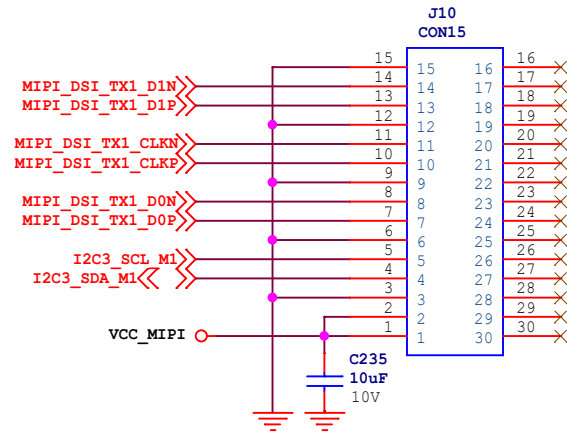
HDMI TX





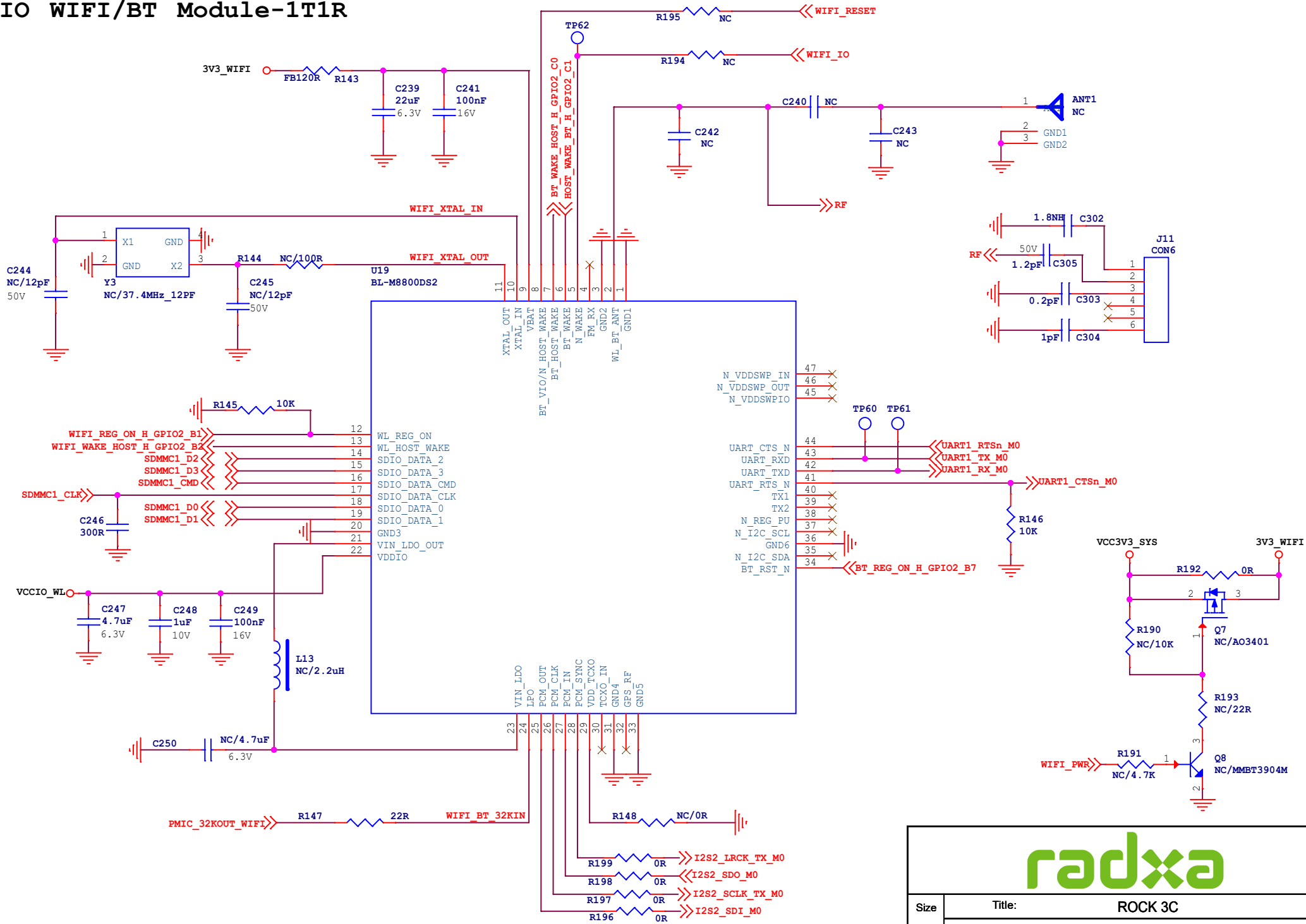
Size	Title: ROCK 3C	REV
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MIPI DSI



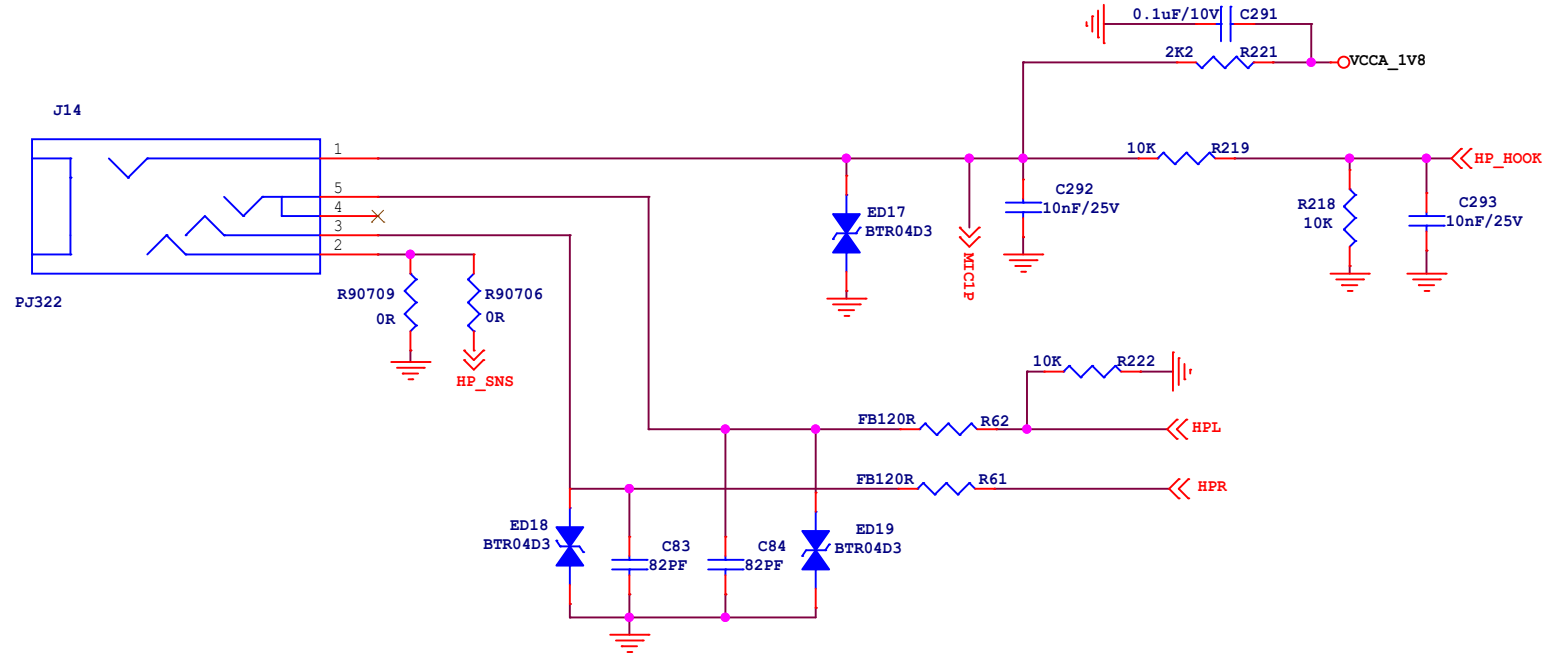
Size	Title: ROCK 3C	REV
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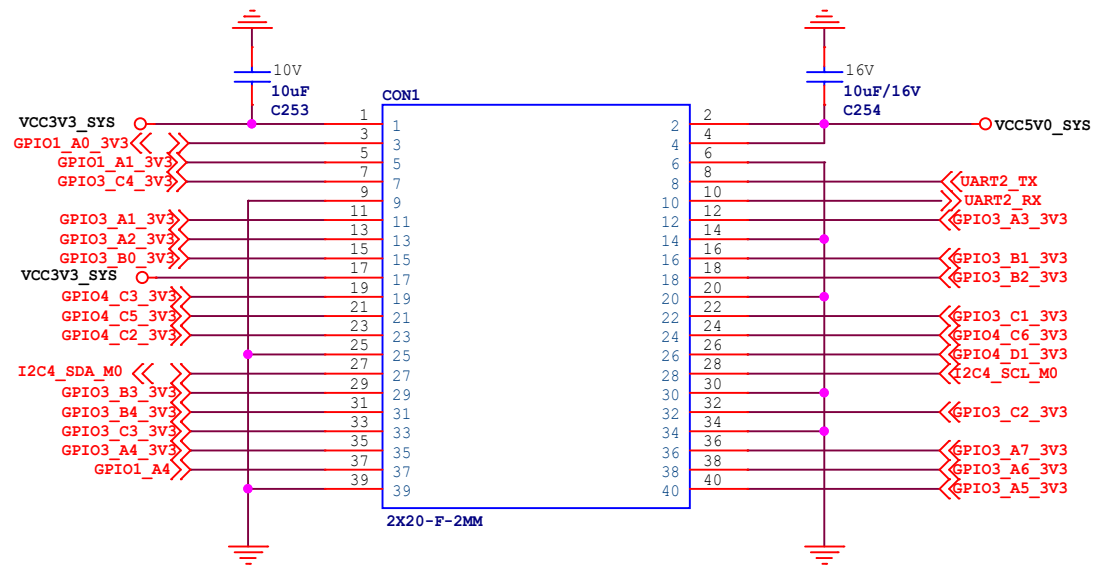


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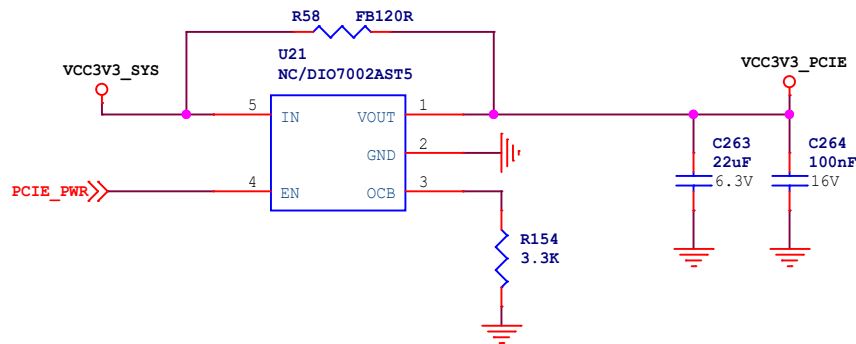
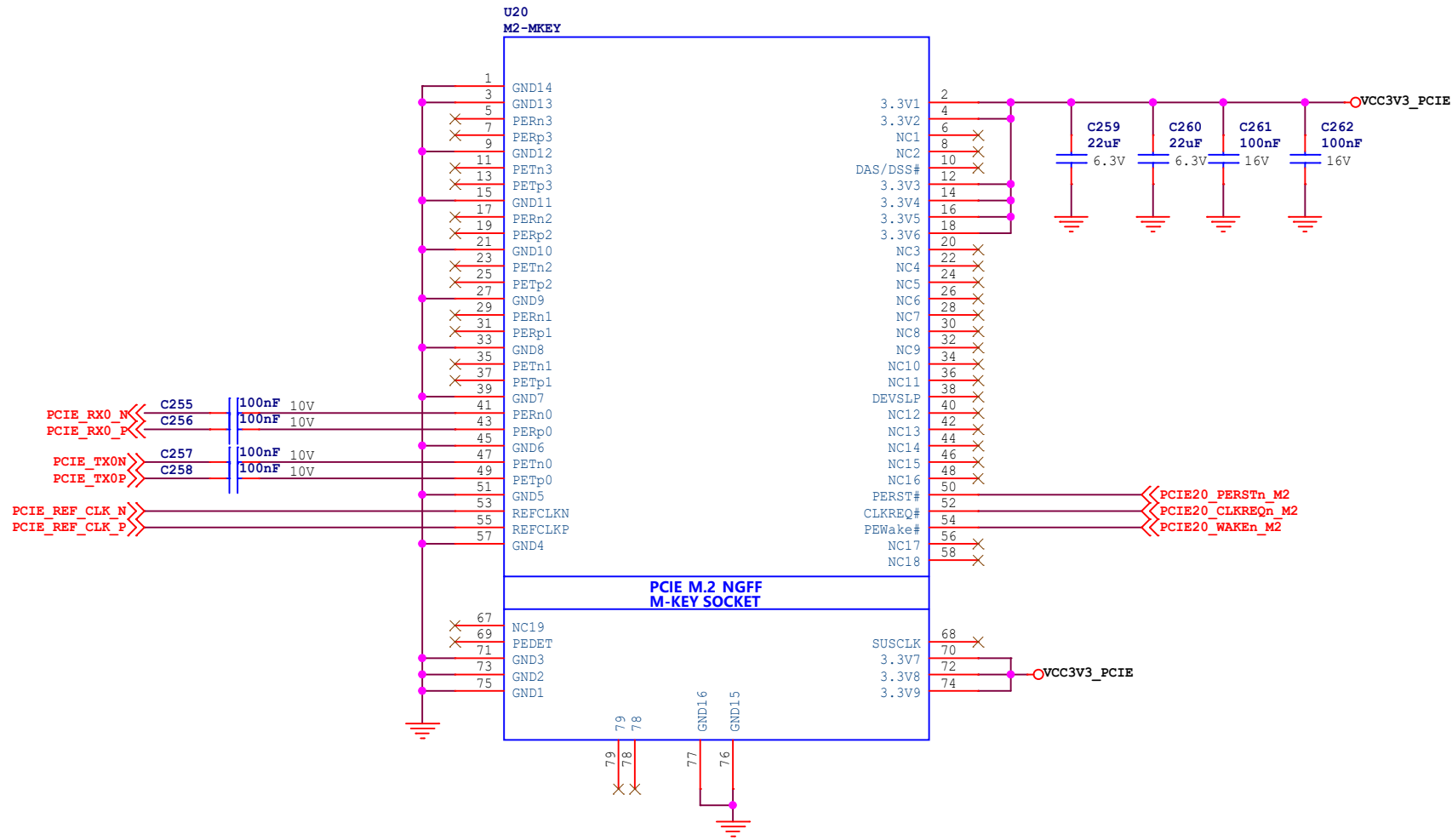


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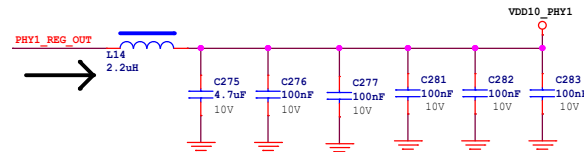
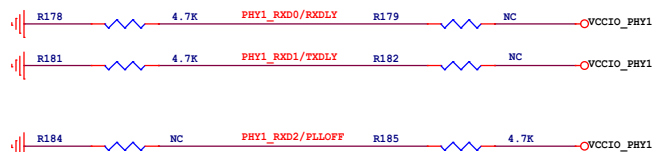
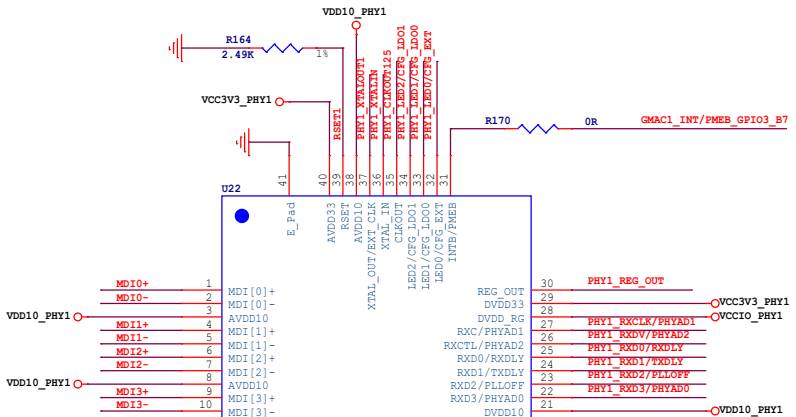
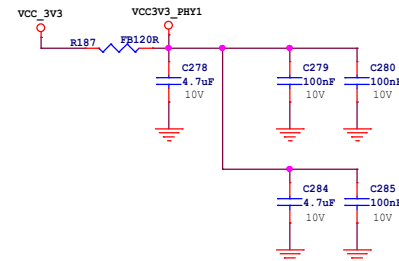
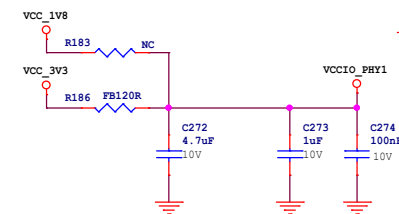
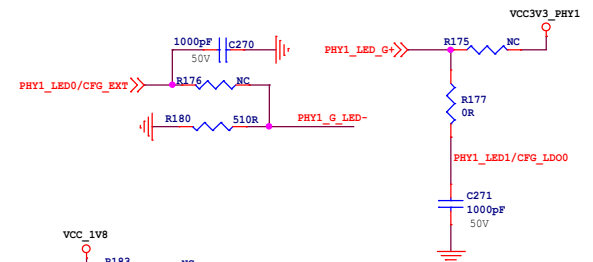
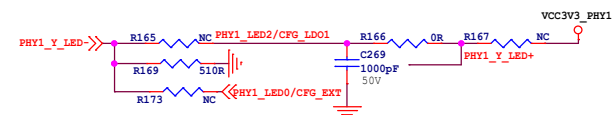
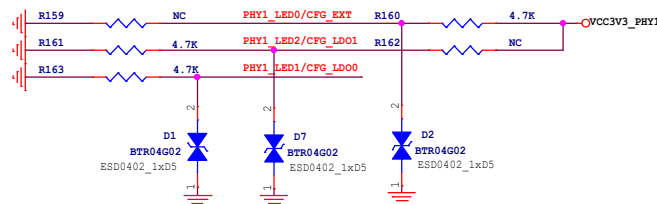
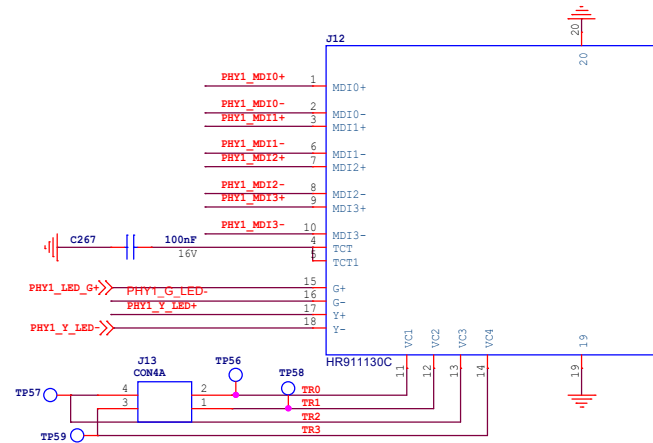
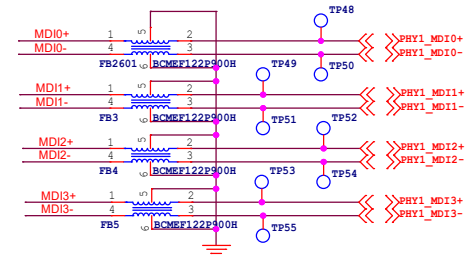
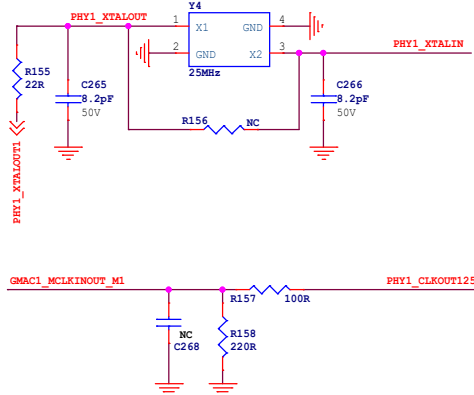
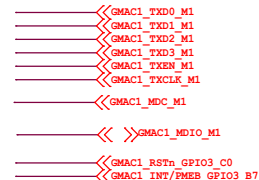
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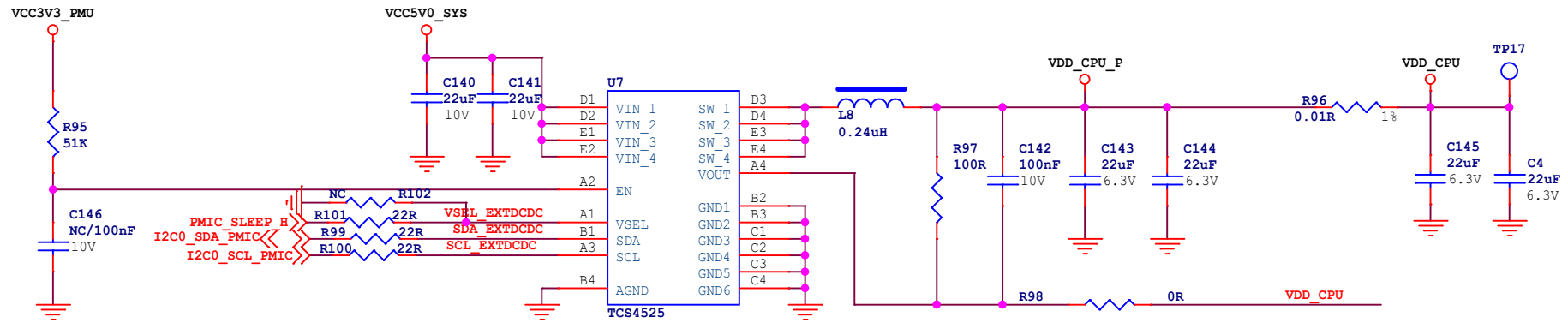
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RGMII



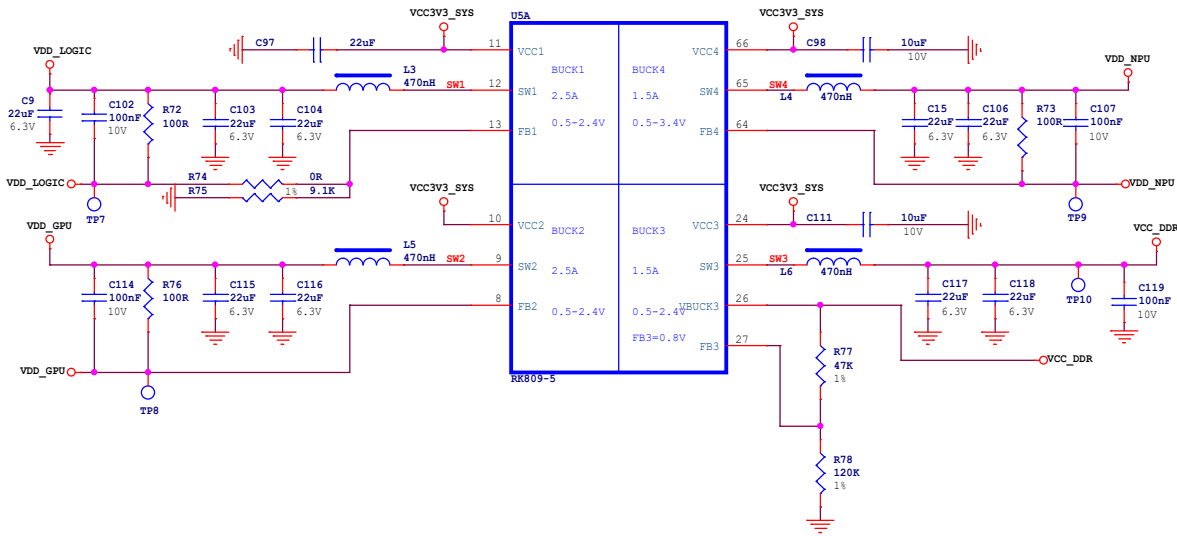
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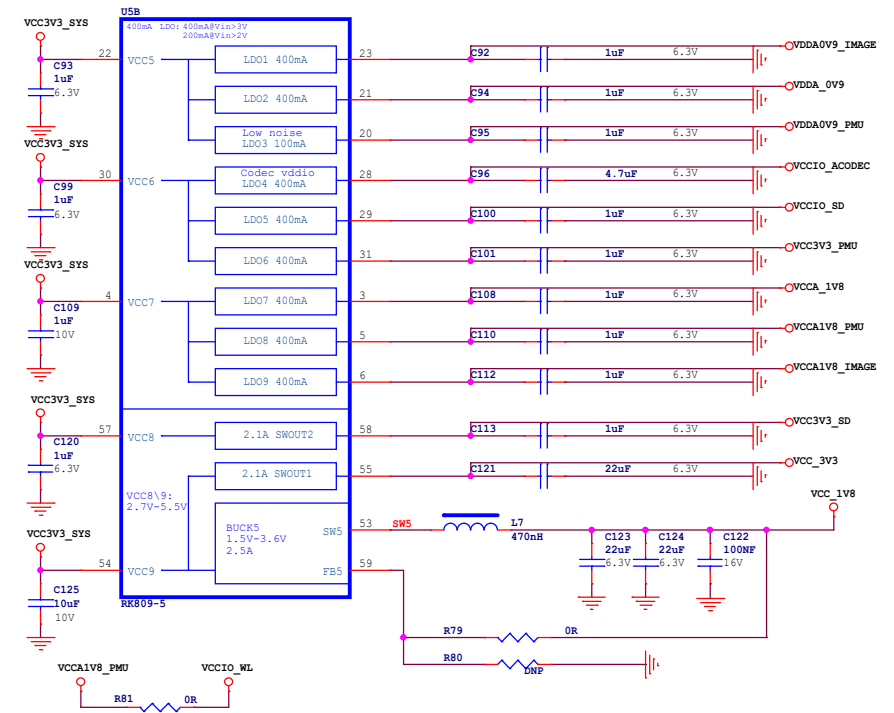


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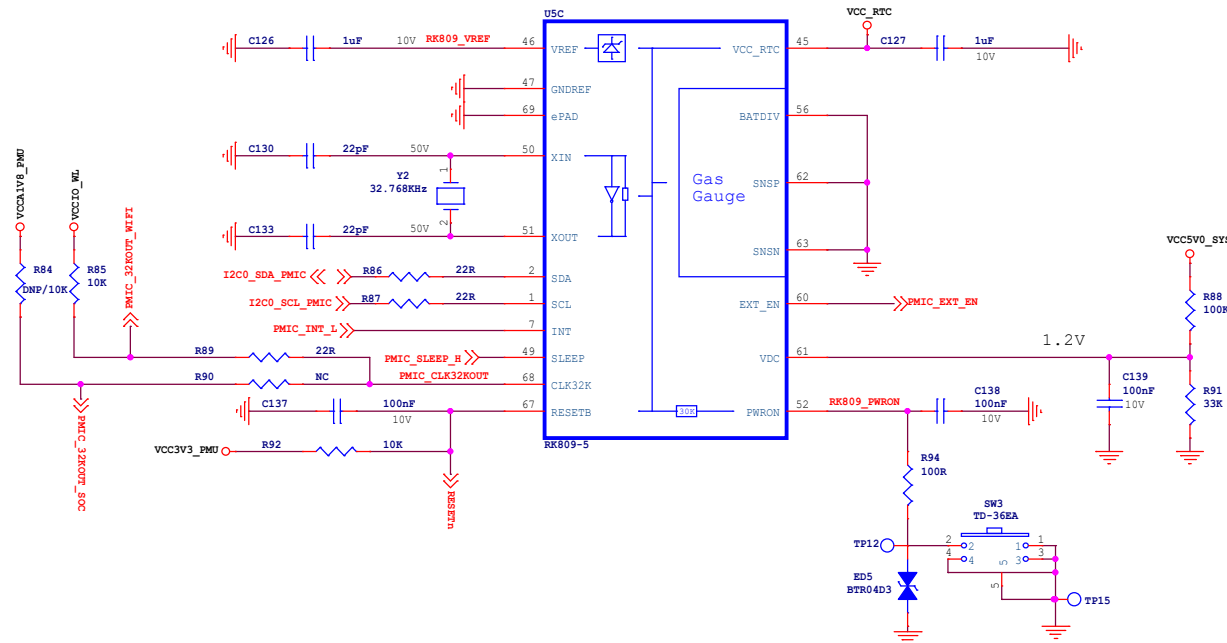
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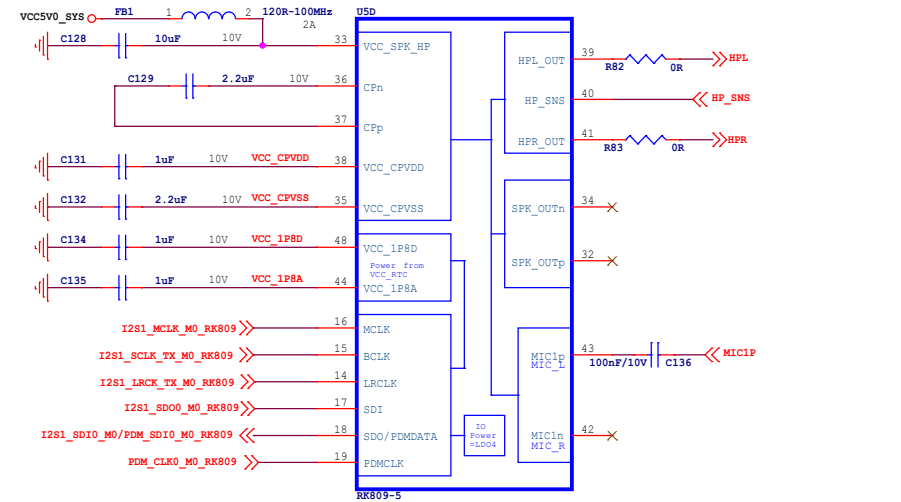
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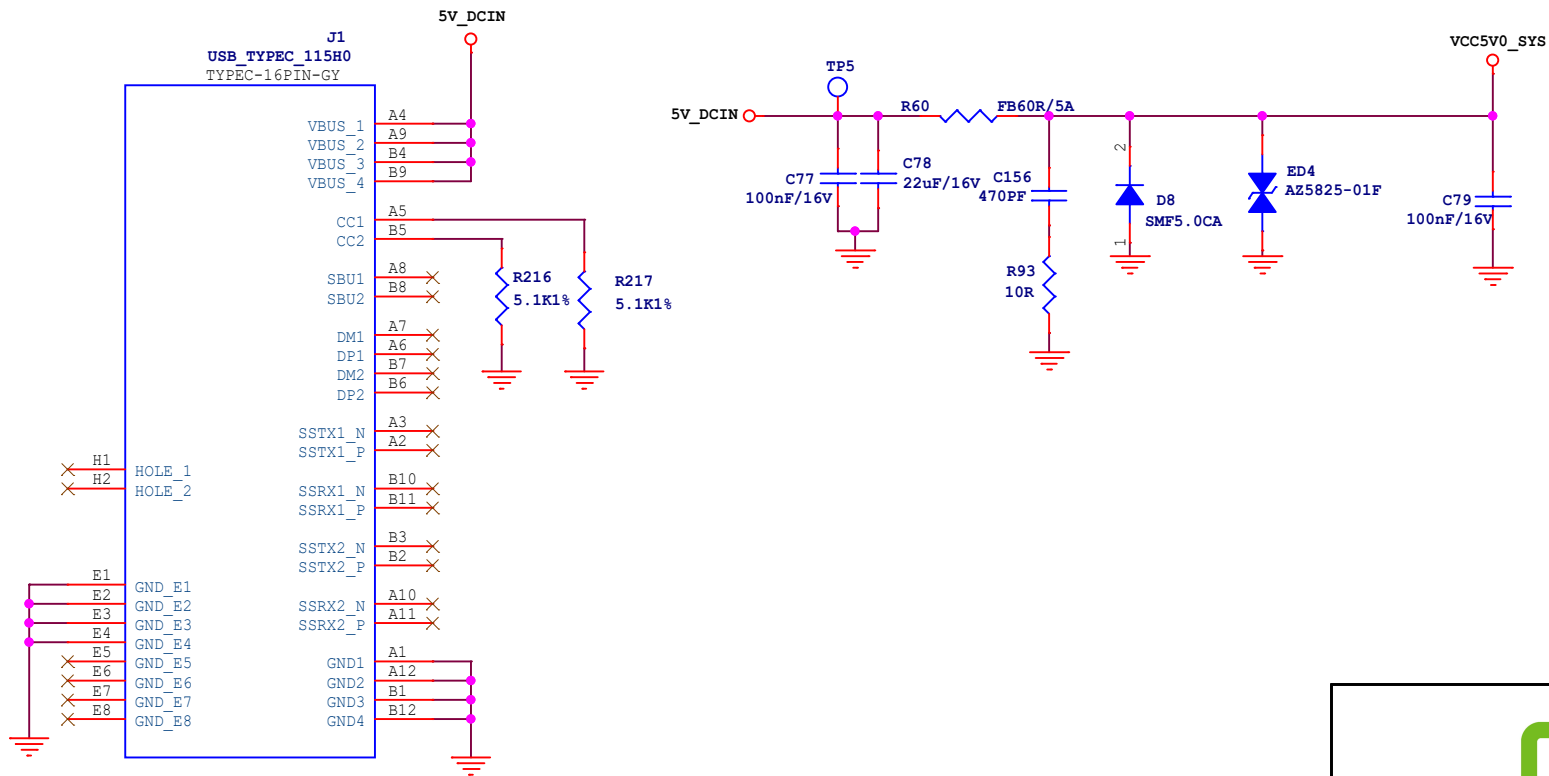
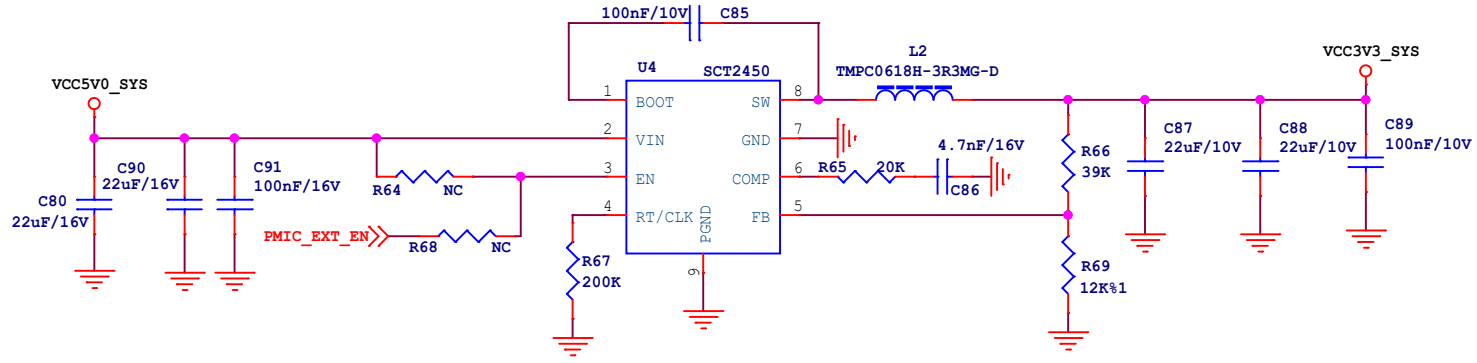
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PMIC RK809 CODEC



DC 5V IN



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