



Radxa ROCK 4D

Schematic

V1.12

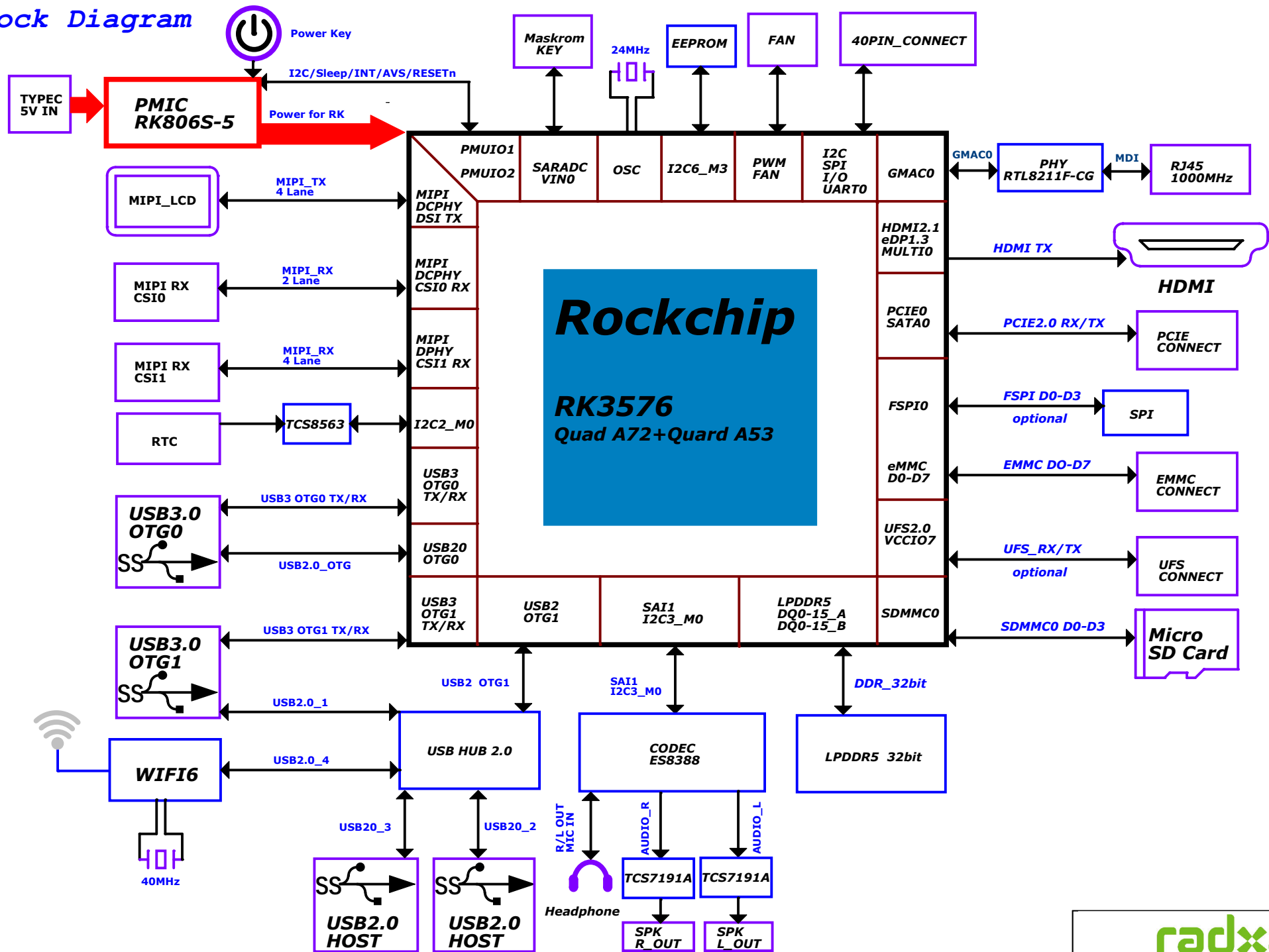
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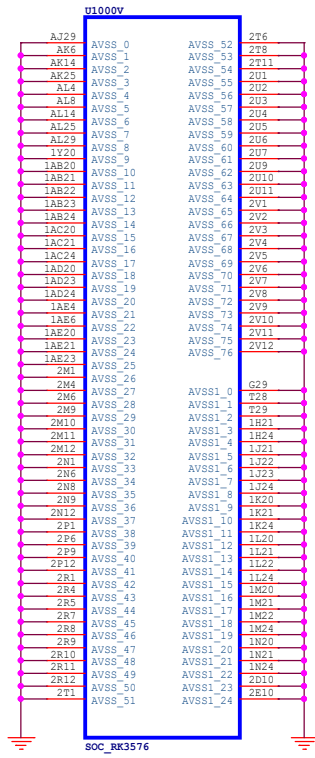
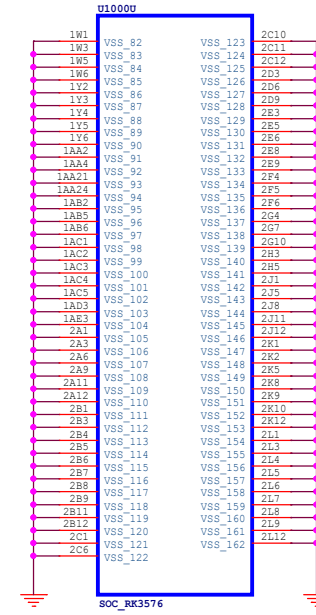
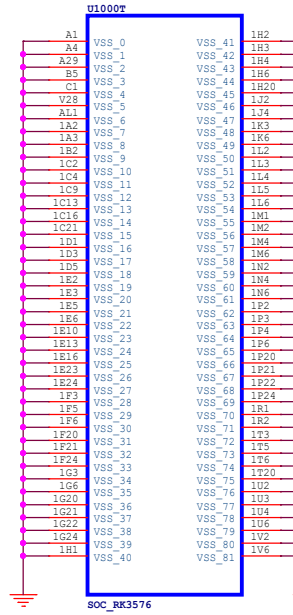
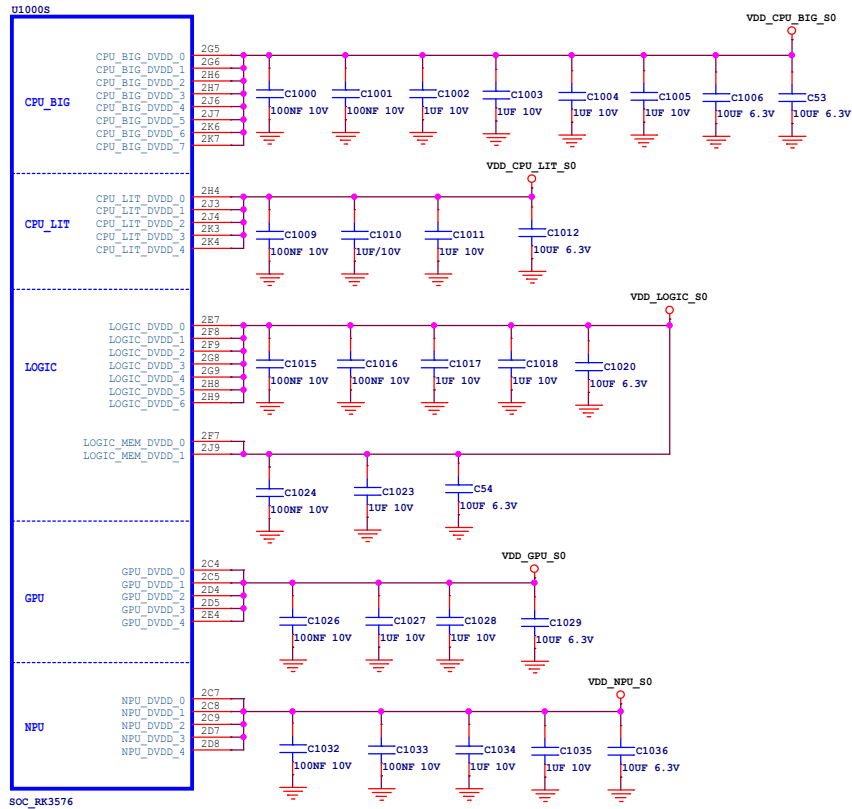
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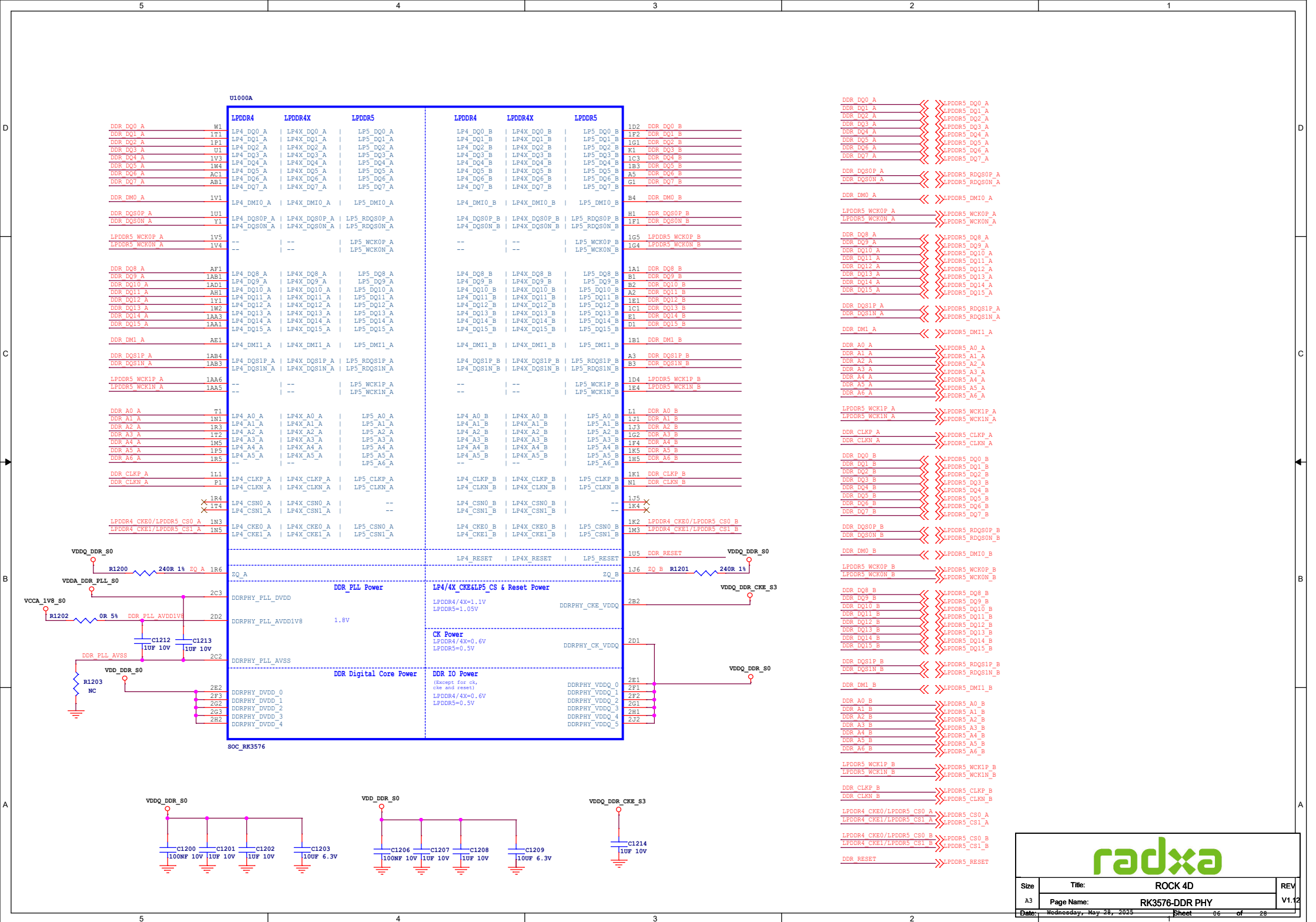


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Block Diagram





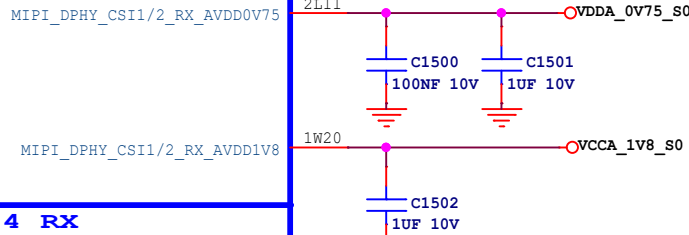


U1000P

MIPI DPHY CSI1/2 RX

MIPI V1.2/2.5Gbps

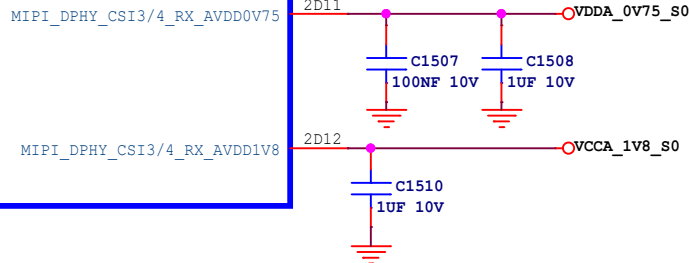
MIPI_DPHY_CSI1_RX_D0N		--	AE28	⟷	MIPI_DPHY_CSI1_RX_D0N
MIPI_DPHY_CSI1_RX_D0P		--	AE29	⟷	MIPI_DPHY_CSI1_RX_D0P
MIPI_DPHY_CSI1_RX_D1N		--	AF28	⟷	MIPI_DPHY_CSI1_RX_D1N
MIPI_DPHY_CSI1_RX_D1P		--	AF29	⟷	MIPI_DPHY_CSI1_RX_D1P
MIPI_DPHY_CSI1_RX_CLKN		--	1AC23	⟷	MIPI_DPHY_CSI1_RX_CLKN
MIPI_DPHY_CSI1_RX_CLKP		--	1AC22	⟷	MIPI_DPHY_CSI1_RX_CLKP
MIPI_DPHY_CSI1_RX_D2N		MIPI_DPHY_CSI2_RX_D0N	AG28	⟷	MIPI_DPHY_CSI1_RX_D2N
MIPI_DPHY_CSI1_RX_D2P		MIPI_DPHY_CSI2_RX_D0P	AG29	⟷	MIPI_DPHY_CSI1_RX_D2P
MIPI_DPHY_CSI1_RX_D3N		MIPI_DPHY_CSI2_RX_D1N	AH28	⟷	MIPI_DPHY_CSI1_RX_D3N
MIPI_DPHY_CSI1_RX_D3P		MIPI_DPHY_CSI2_RX_D1P	AH29	⟷	MIPI_DPHY_CSI1_RX_D3P
--		MIPI_DPHY_CSI2_RX_CLKN	1AD22	⟷	MIPI_DPHY_CSI2_RX_CLKN
--		MIPI_DPHY_CSI2_RX_CLKP	1AD21	⟷	MIPI_DPHY_CSI2_RX_CLKP



MIPI DPHY CSI3/4 RX

MIPI V1.2/2.5Gbps

MIPI_DPHY_CSI3_RX_D0N		--	H29	✗	
MIPI_DPHY_CSI3_RX_D0P		--	H28	✗	
MIPI_DPHY_CSI3_RX_D1N		--	J29	✗	
MIPI_DPHY_CSI3_RX_D1P		--	J28	✗	
MIPI_DPHY_CSI3_RX_CLKN		--	1H23	✗	
MIPI_DPHY_CSI3_RX_CLKP		--	1H22	✗	
MIPI_DPHY_CSI3_RX_D2N		MIPI_DPHY_CSI4_RX_D0N	K29	✗	
MIPI_DPHY_CSI3_RX_D2P		MIPI_DPHY_CSI4_RX_D0P	K28	✗	
MIPI_DPHY_CSI3_RX_D3N		MIPI_DPHY_CSI4_RX_D1N	L29	✗	
MIPI_DPHY_CSI3_RX_D3P		MIPI_DPHY_CSI4_RX_D1P	L28	✗	
--		MIPI_DPHY_CSI4_RX_CLKN	1K23	✗	
--		MIPI_DPHY_CSI4_RX_CLKP	1K22	✗	



SOC_RK3576

U1000O

MIPI DCPHY DSI TX

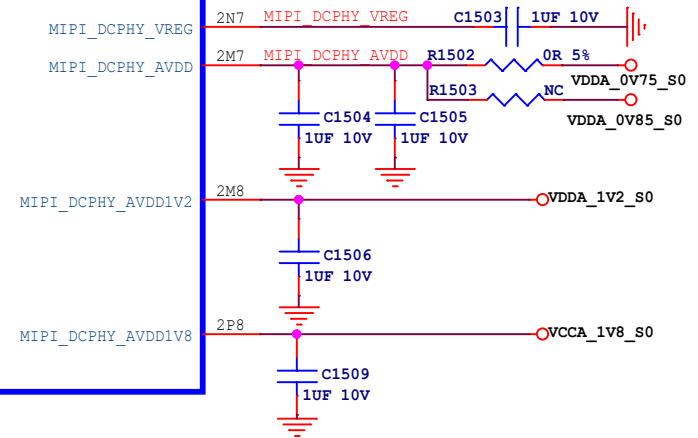
D-PHY:V2.0 2.5Gbps/Lane
C-PHY:V1.1 1.7Gsps/Trio

MIPI_DPHY_DSI_TX_D0N		MIPI_CPHY_DSI_TX_TRIO0_A	AK15	⟷	MIPI_DPHY_DSI_TX_D0N
MIPI_DPHY_DSI_TX_D0P		MIPI_CPHY_DSI_TX_TRIO0_B	AL15	⟷	MIPI_DPHY_DSI_TX_D0P
MIPI_DPHY_DSI_TX_D1N		MIPI_CPHY_DSI_TX_TRIO0_C	AK16	⟷	MIPI_DPHY_DSI_TX_D1N
MIPI_DPHY_DSI_TX_D1P		MIPI_CPHY_DSI_TX_TRIO1_A	AL16	⟷	MIPI_DPHY_DSI_TX_D1P
MIPI_DPHY_DSI_TX_CLKN		MIPI_CPHY_DSI_TX_TRIO1_B	AK17	⟷	MIPI_DPHY_DSI_TX_CLKN
MIPI_DPHY_DSI_TX_D2P		MIPI_CPHY_DSI_TX_TRIO1_C	AL17	⟷	MIPI_DPHY_DSI_TX_CLKP
MIPI_DPHY_DSI_TX_D2N		MIPI_CPHY_DSI_TX_TRIO2_A	AK18	⟷	MIPI_DPHY_DSI_TX_D2N
MIPI_DPHY_DSI_TX_D2P		MIPI_CPHY_DSI_TX_TRIO2_B	AL18	⟷	MIPI_DPHY_DSI_TX_D2P
MIPI_DPHY_DSI_TX_D3N		MIPI_CPHY_DSI_TX_TRIO2_C	AK19	⟷	MIPI_DPHY_DSI_TX_D3N
MIPI_DPHY_DSI_TX_D3P		NO_USE	AL19	⟷	MIPI_DPHY_DSI_TX_D3P

MIPI DCPHY CSI RX

D-PHY:V2.0 4.5Gbps/Lane
C-PHY:V1.1 2.5Gsps/Trio

MIPI_DPHY_CSI0_RX_D0N		MIPI_CPHY_CSI_RX_TRIO0_A	AL20	⟷	MIPI_DPHY_CSI0_RX_D0N
MIPI_DPHY_CSI0_RX_D0P		MIPI_CPHY_CSI_RX_TRIO0_B	AK20	⟷	MIPI_DPHY_CSI0_RX_D0P
MIPI_DPHY_CSI0_RX_D1N		MIPI_CPHY_CSI_RX_TRIO0_C	AL21	⟷	MIPI_DPHY_CSI0_RX_D1N
MIPI_DPHY_CSI0_RX_D1P		MIPI_CPHY_CSI_RX_TRIO1_A	AK21	⟷	MIPI_DPHY_CSI0_RX_D1P
MIPI_DPHY_CSI0_RX_CLKN		MIPI_CPHY_CSI_RX_TRIO1_B	AL22	⟷	MIPI_DPHY_CSI0_RX_CLKON
MIPI_DPHY_CSI0_RX_CLKP		MIPI_CPHY_CSI_RX_TRIO1_C	AK22	⟷	MIPI_DPHY_CSI0_RX_CLKOP
MIPI_DPHY_CSI0_RX_D2N		MIPI_CPHY_CSI_RX_TRIO2_A	AL23	✗	
MIPI_DPHY_CSI0_RX_D2P		MIPI_CPHY_CSI_RX_TRIO2_B	AK23	✗	
MIPI_DPHY_CSI0_RX_D3N		MIPI_CPHY_CSI_RX_TRIO2_C	AL24	✗	
MIPI_DPHY_CSI0_RX_D3P		NO_USE	AK24	✗	



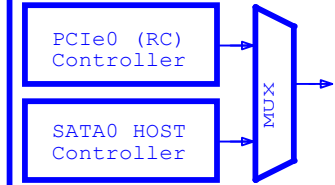
SOC_RK3576

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PCIE0/SATA0 Combo PHY0



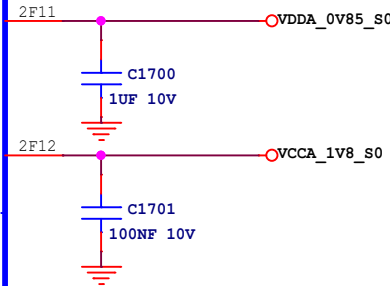
PCIE0:Gen1/Gen2
SATA0:Gen1/Gen2/Gen3

PCIE0_REFCLKP		--	
PCIE0_REFCLKN		--	
PCIE0_TXP		SATA0_TXP	
PCIE0_TXN		SATA0_TXN	
PCIE0_RXP		SATA0_RXP	
PCIE0_RXN		SATA0_RXN	

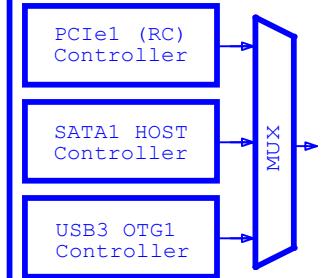
PCIE0_SATA0_AVDD0V85

PCIE0_SATA0_AVDD1V8

1N22	→	PCIE0_SOC_REFCLKP
1N23	→	PCIE0_SOC_REFCLKN
P29	→	PCIE0_SOC_TXP
P28	→	PCIE0_SOC_TXN
R28	→	PCIE0_SOC_RXP
R29	→	PCIE0_SOC_RXN



PCIE1/SATA1/USB3_OTG1 Combo PHY1



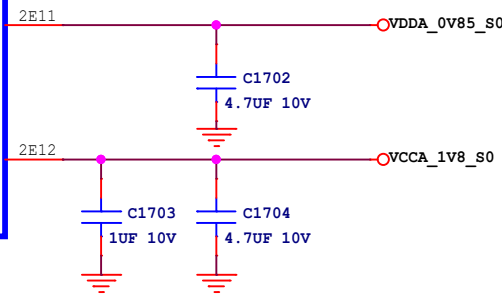
PCIE1:Gen1/Gen2
SATA1:Gen1/Gen2/Gen3
USB :USB3.2 Gen1x1 OTG1

PCIE1_REFCLKP		--	
PCIE1_REFCLKN		--	
PCIE1_TXP		SATA1_TXP	USB3_OTG1_SSTXP
PCIE1_TXN		SATA1_TXN	USB3_OTG1_SSTXN
PCIE1_RXP		SATA1_RXP	USB3_OTG1_SSRXP
PCIE1_RXN		SATA1_RXN	USB3_OTG1_SSRXN

PCIE1_SATA1_USB3_OTG1_AVDD0V85

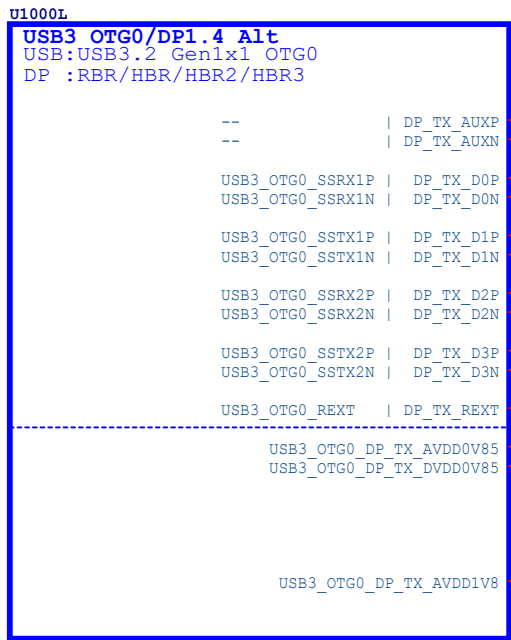
PCIE1_SATA1_USB3_OTG1_AVDD1V8

1L23	→	
1M23	→	
N28	→	USB3_OTG1_SSTXP
N29	→	USB3_OTG1_SSTXN
M28	→	USB3_OTG1_SSRXP
M29	→	USB3_OTG1_SSRXN

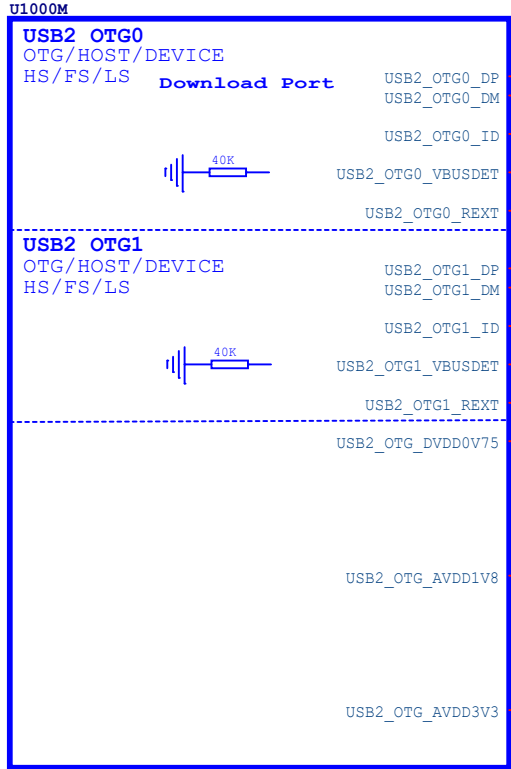


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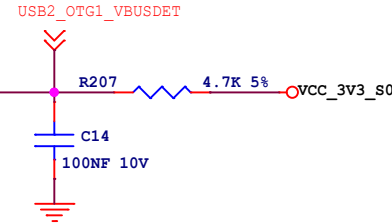
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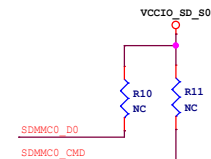
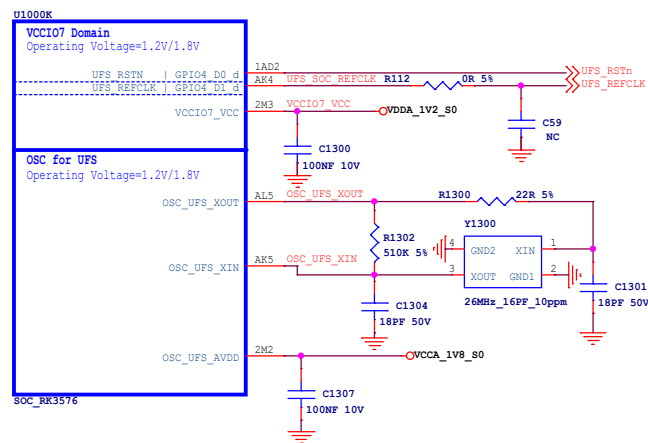


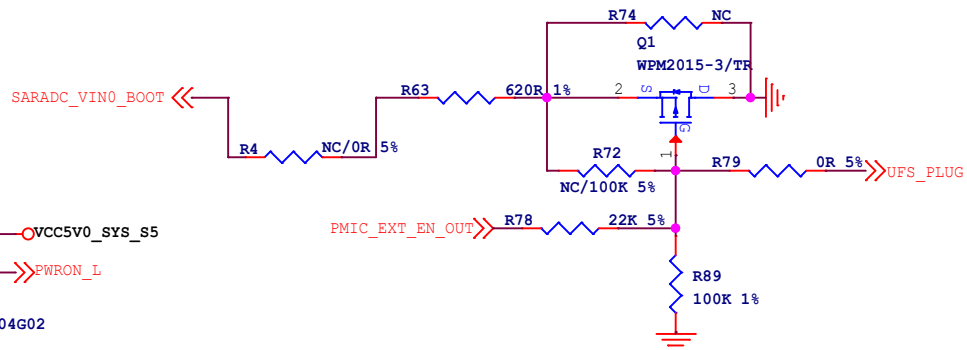
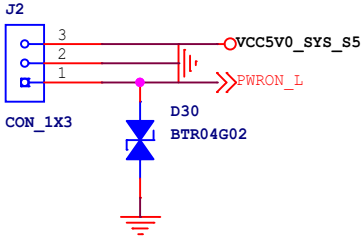
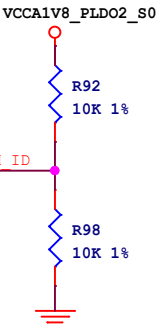
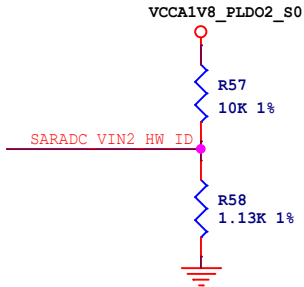
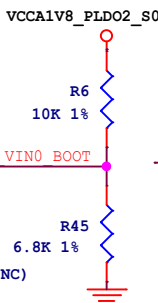
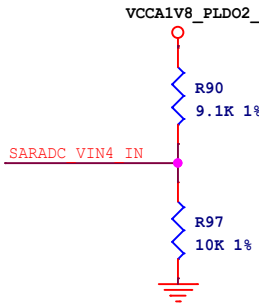
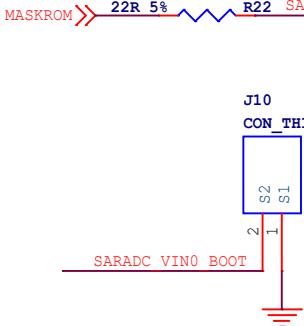
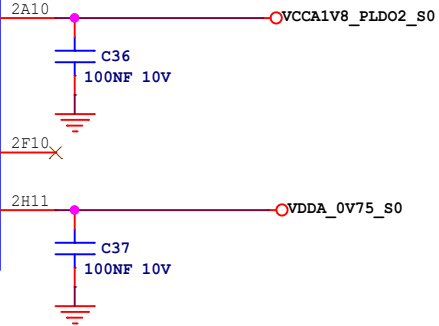
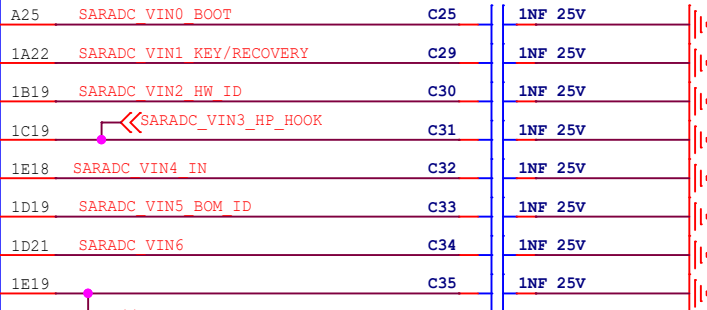
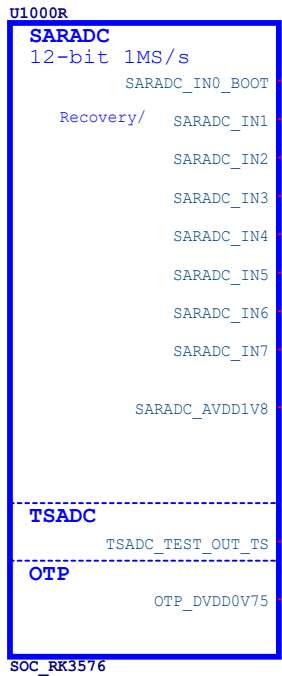
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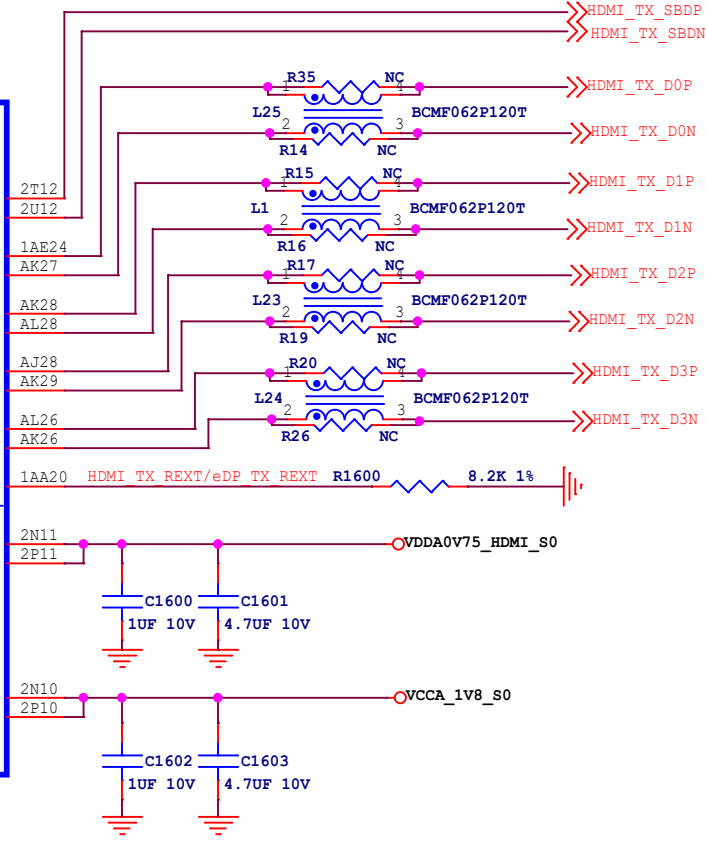
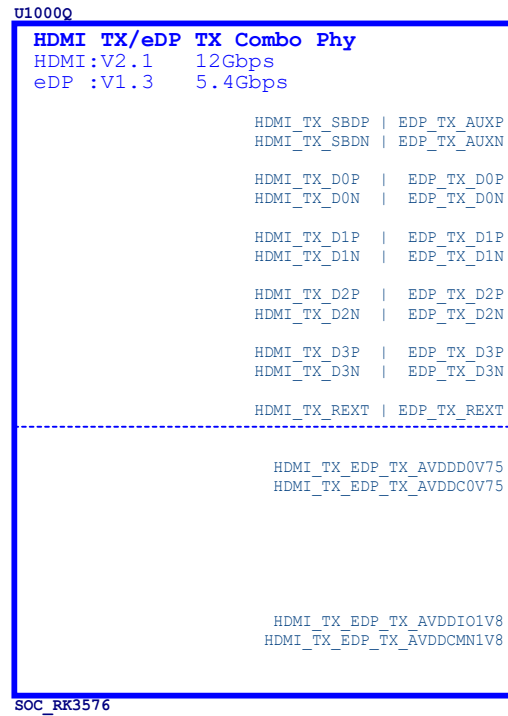
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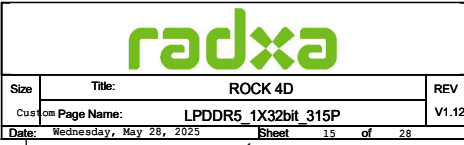
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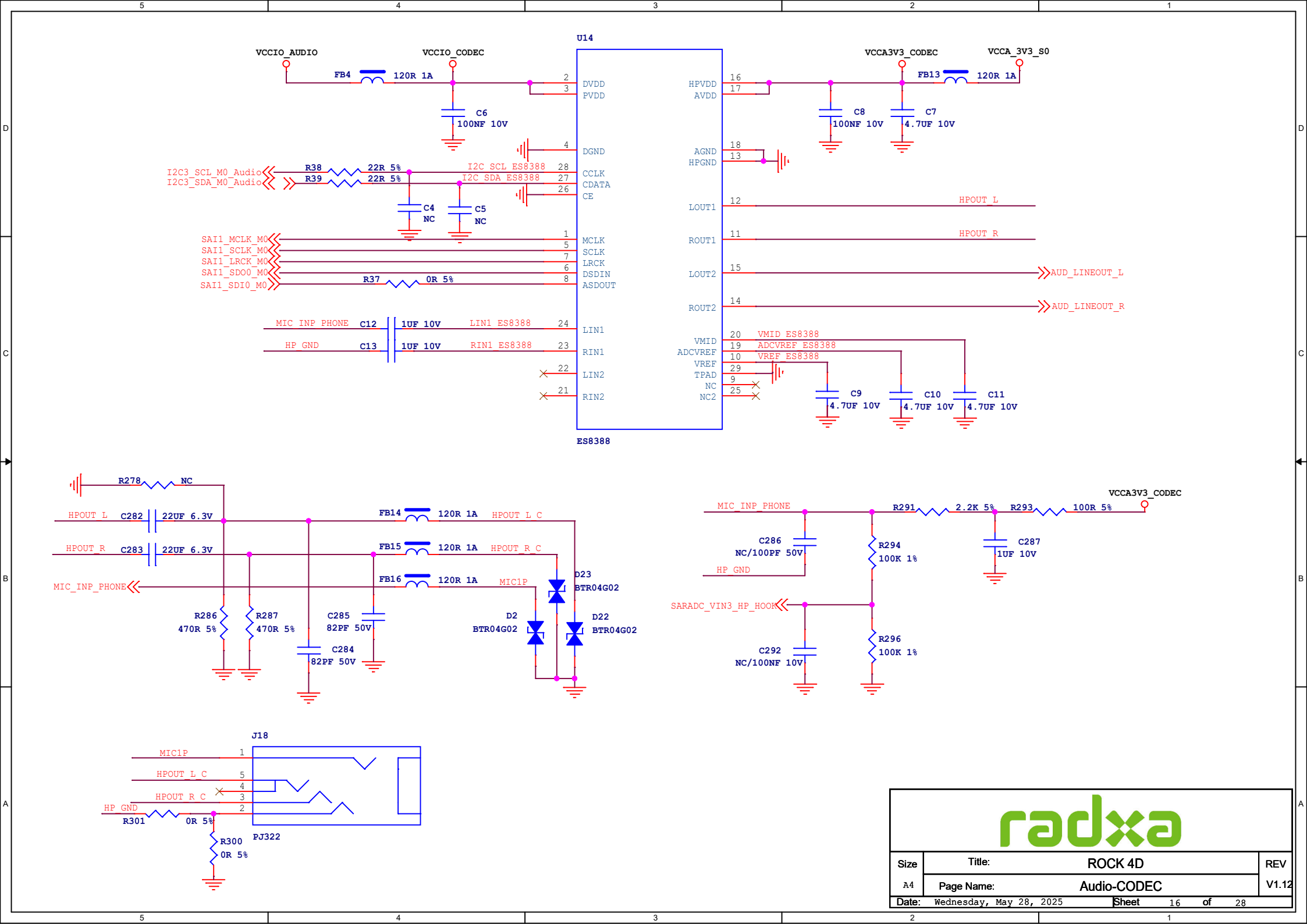


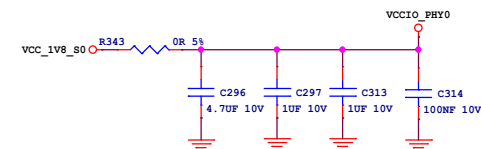
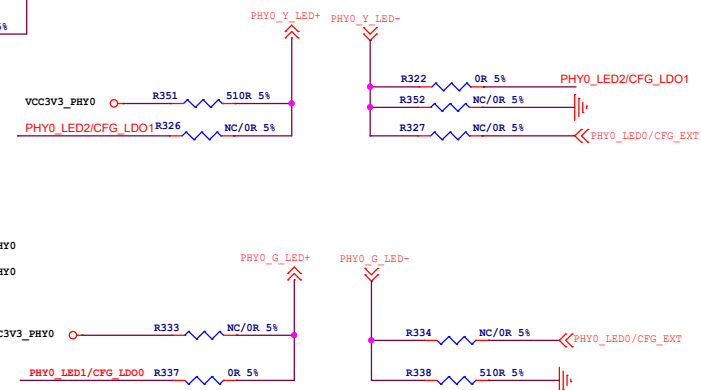
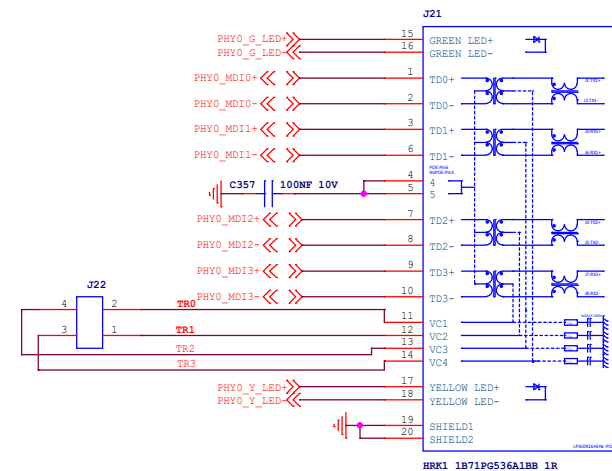


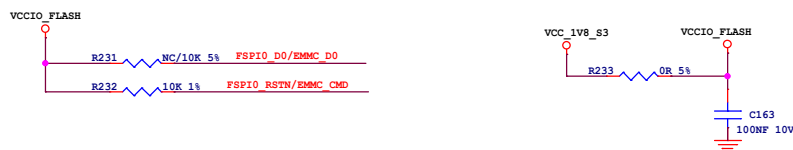
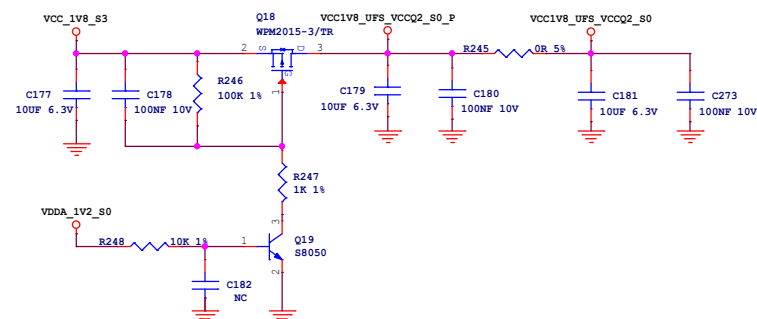
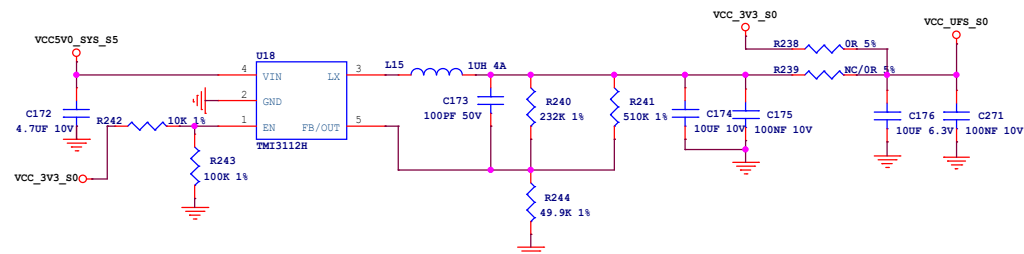
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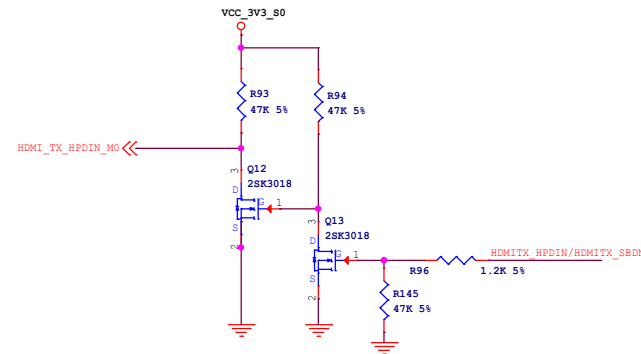
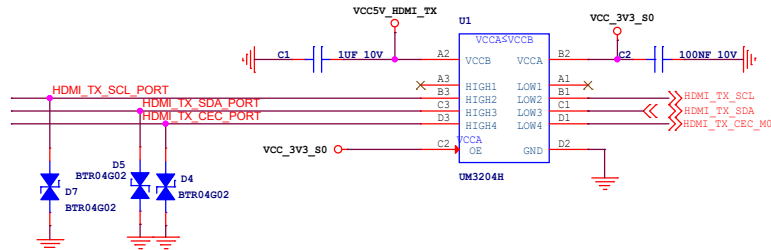
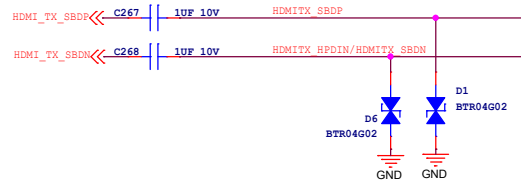
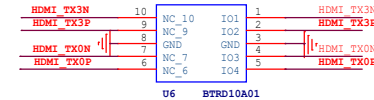
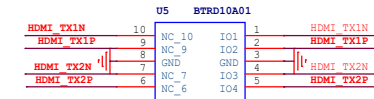
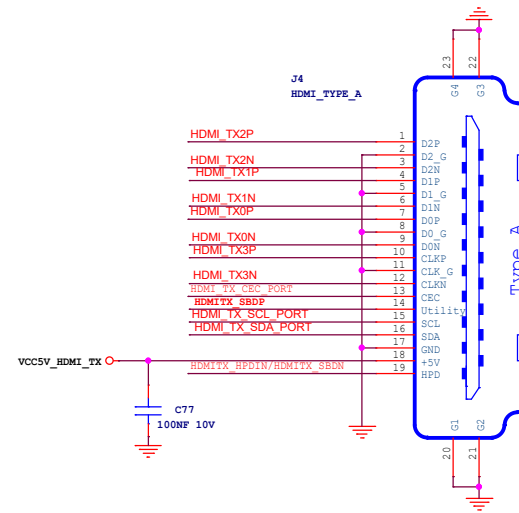
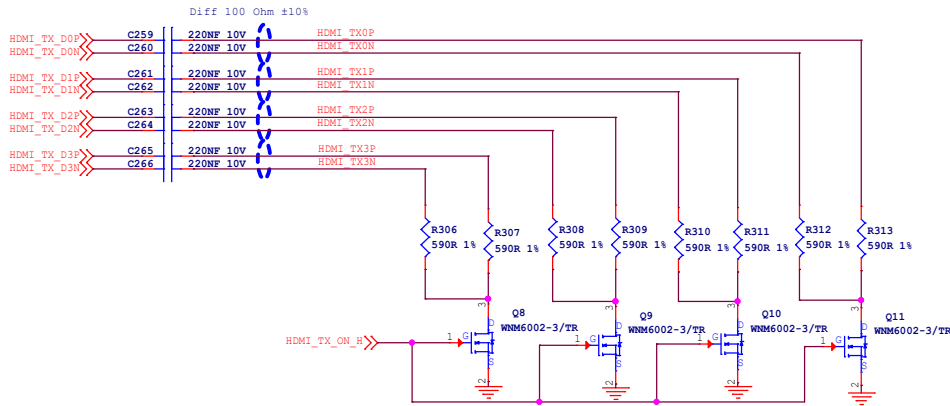




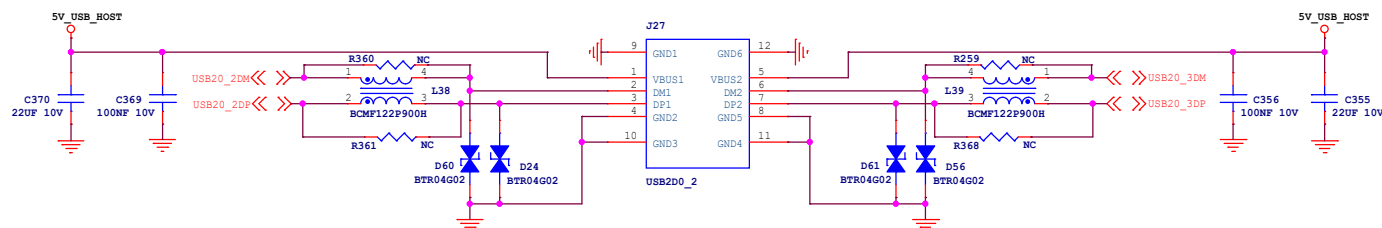
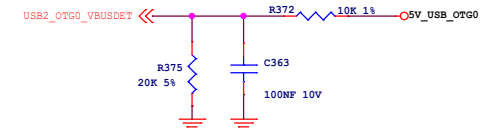
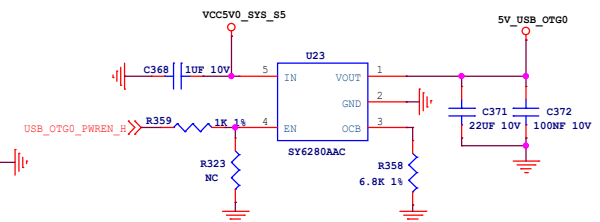
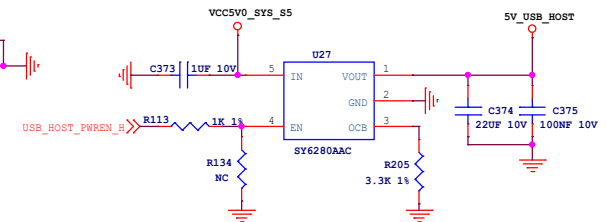


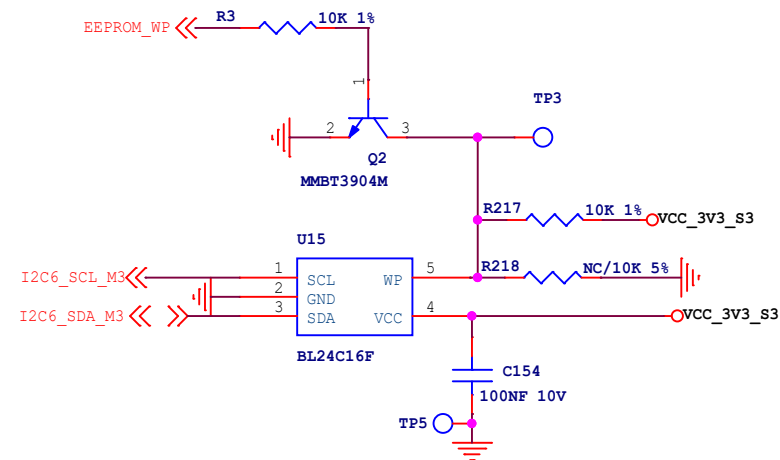
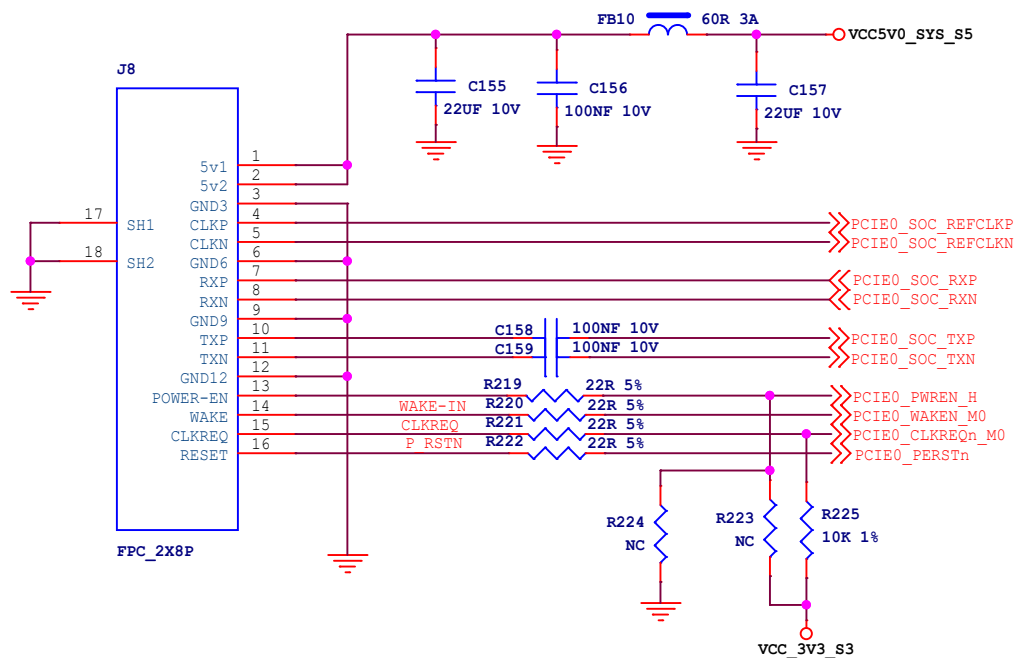
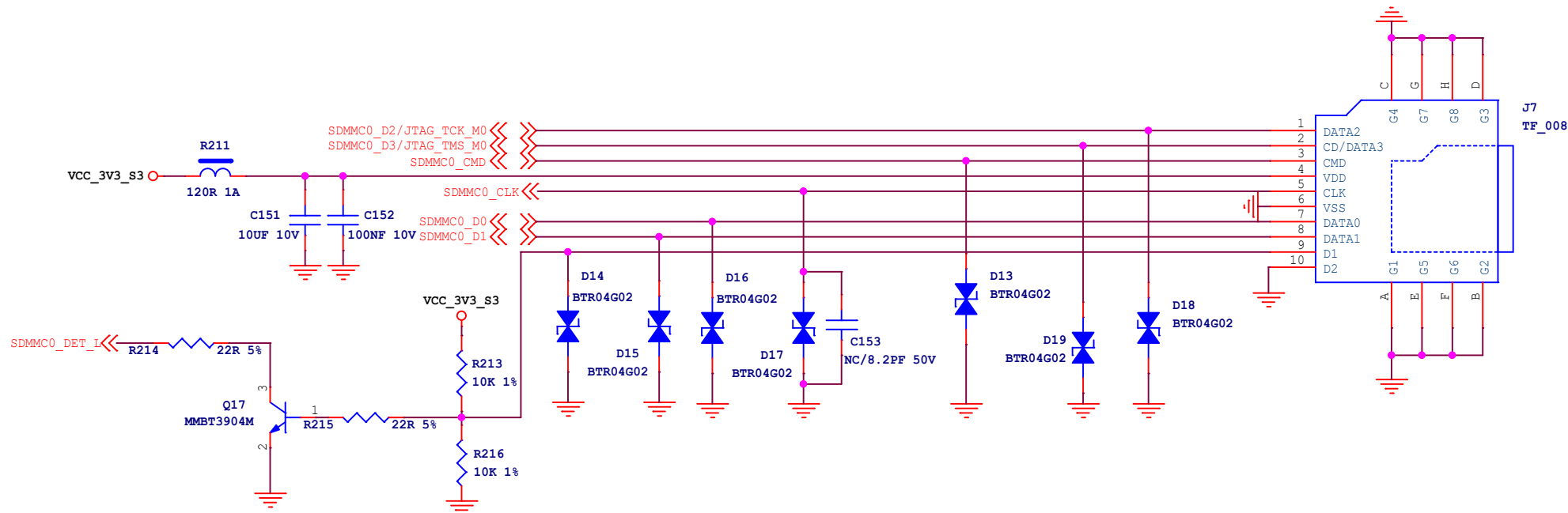


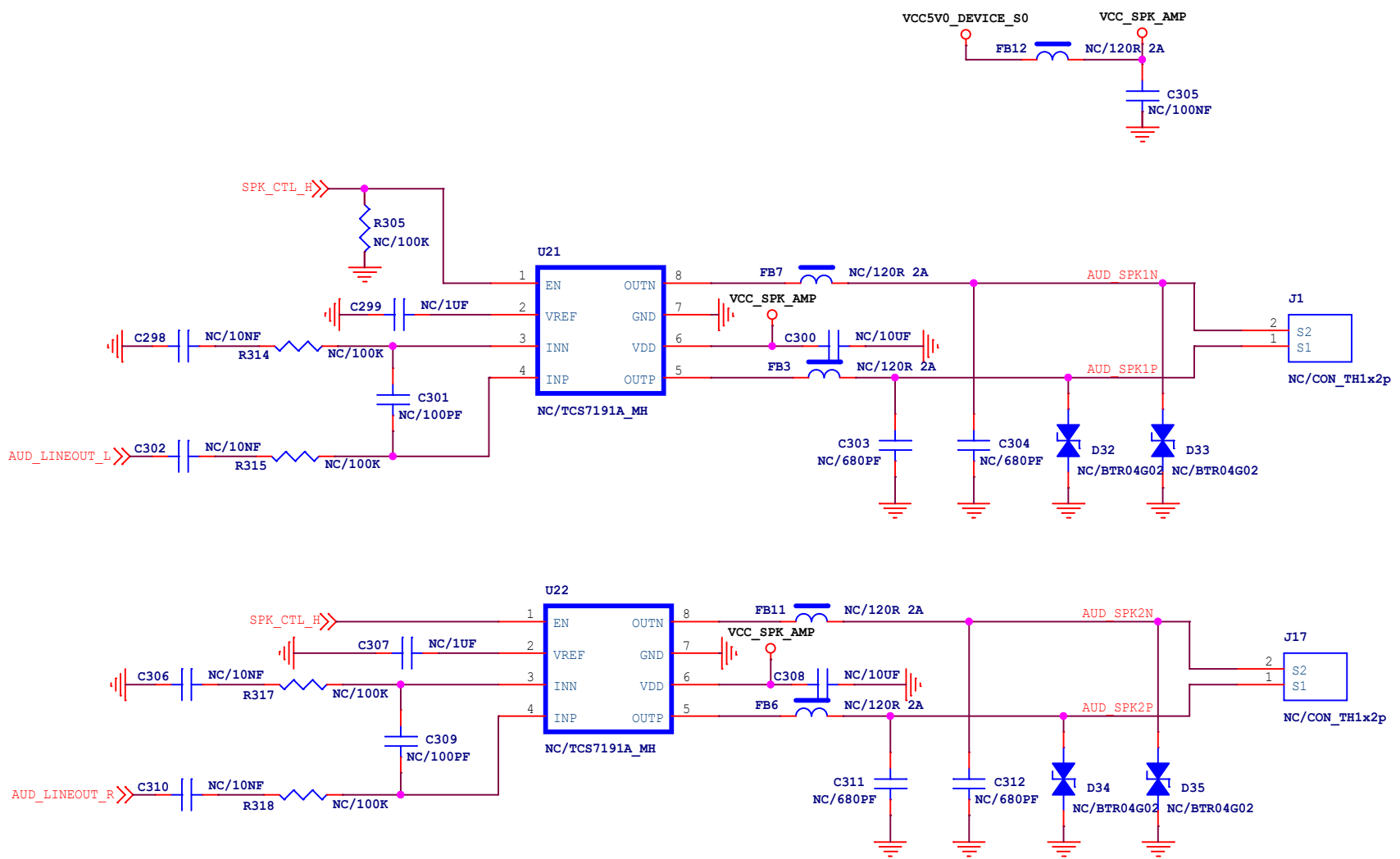


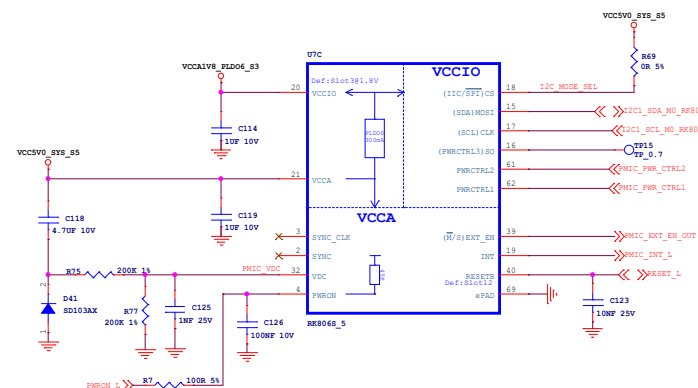
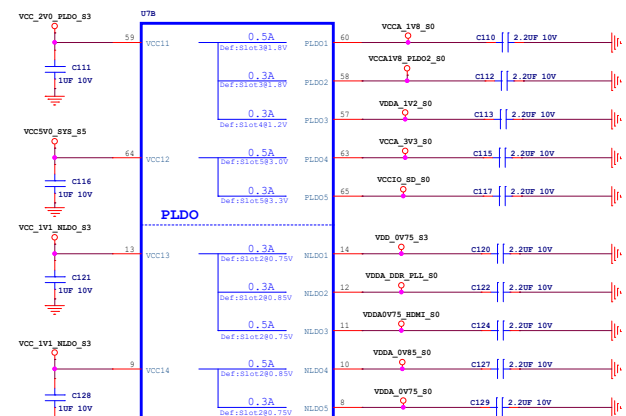
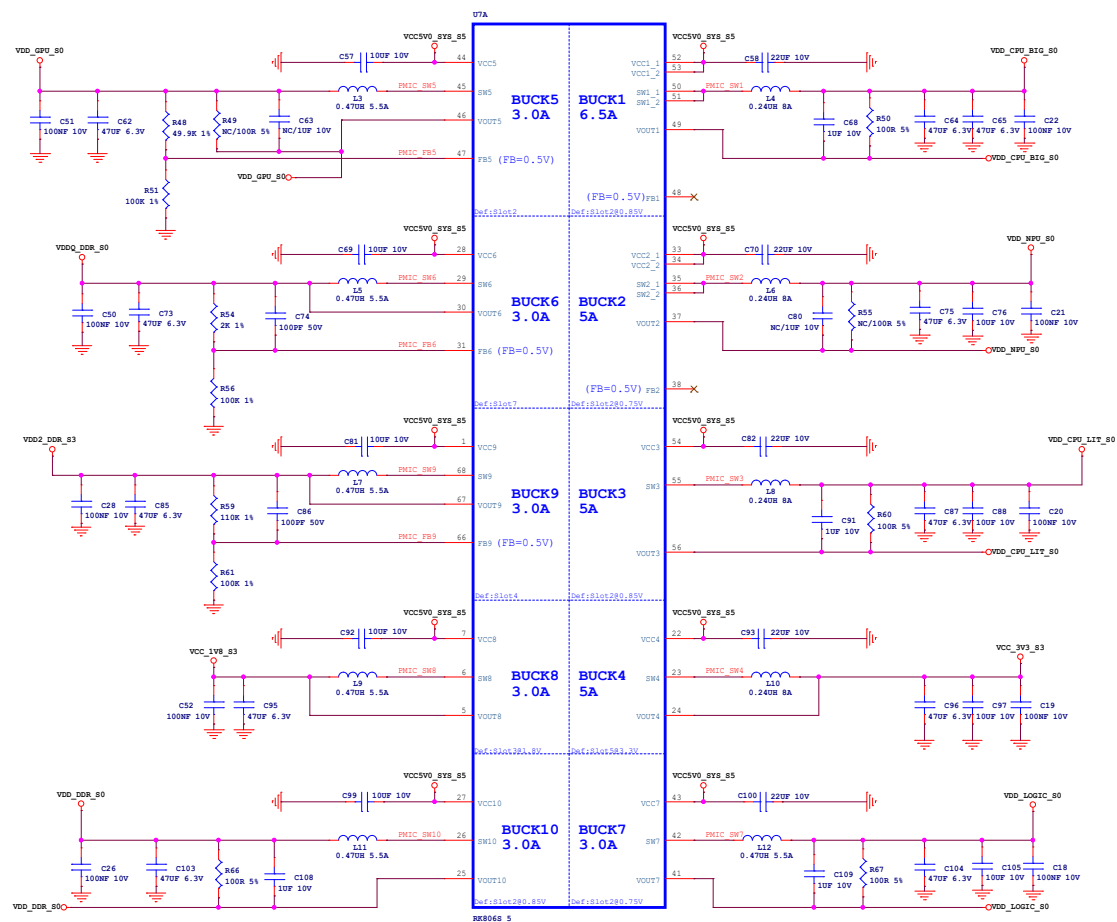


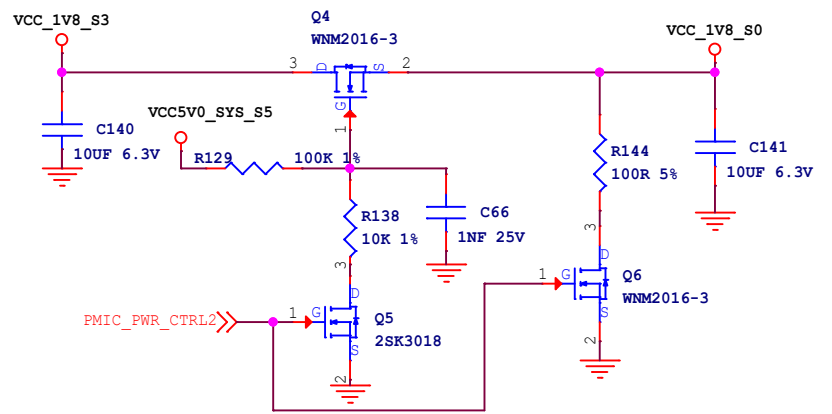
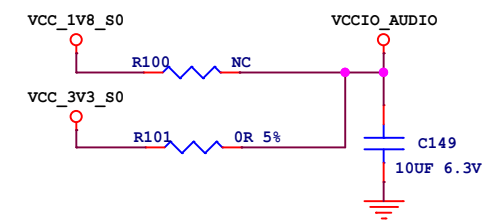
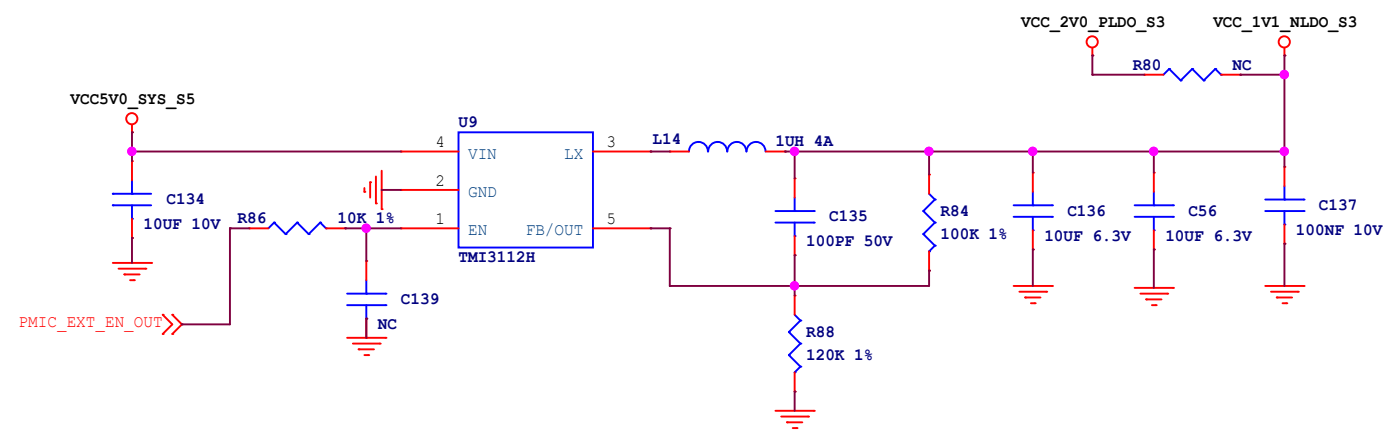
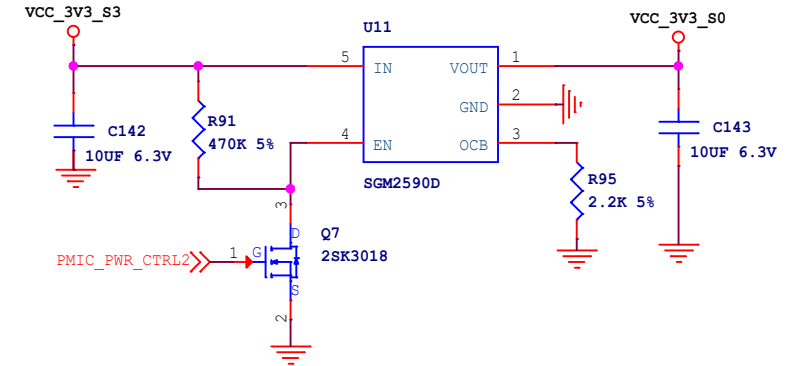
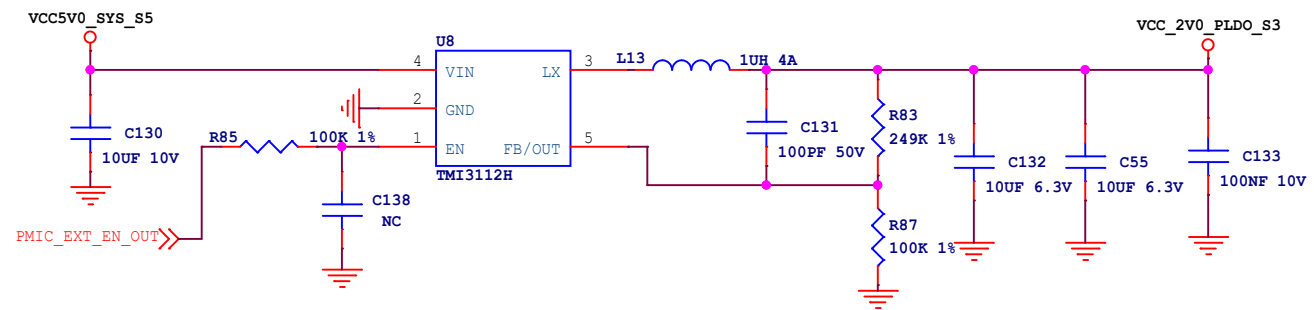
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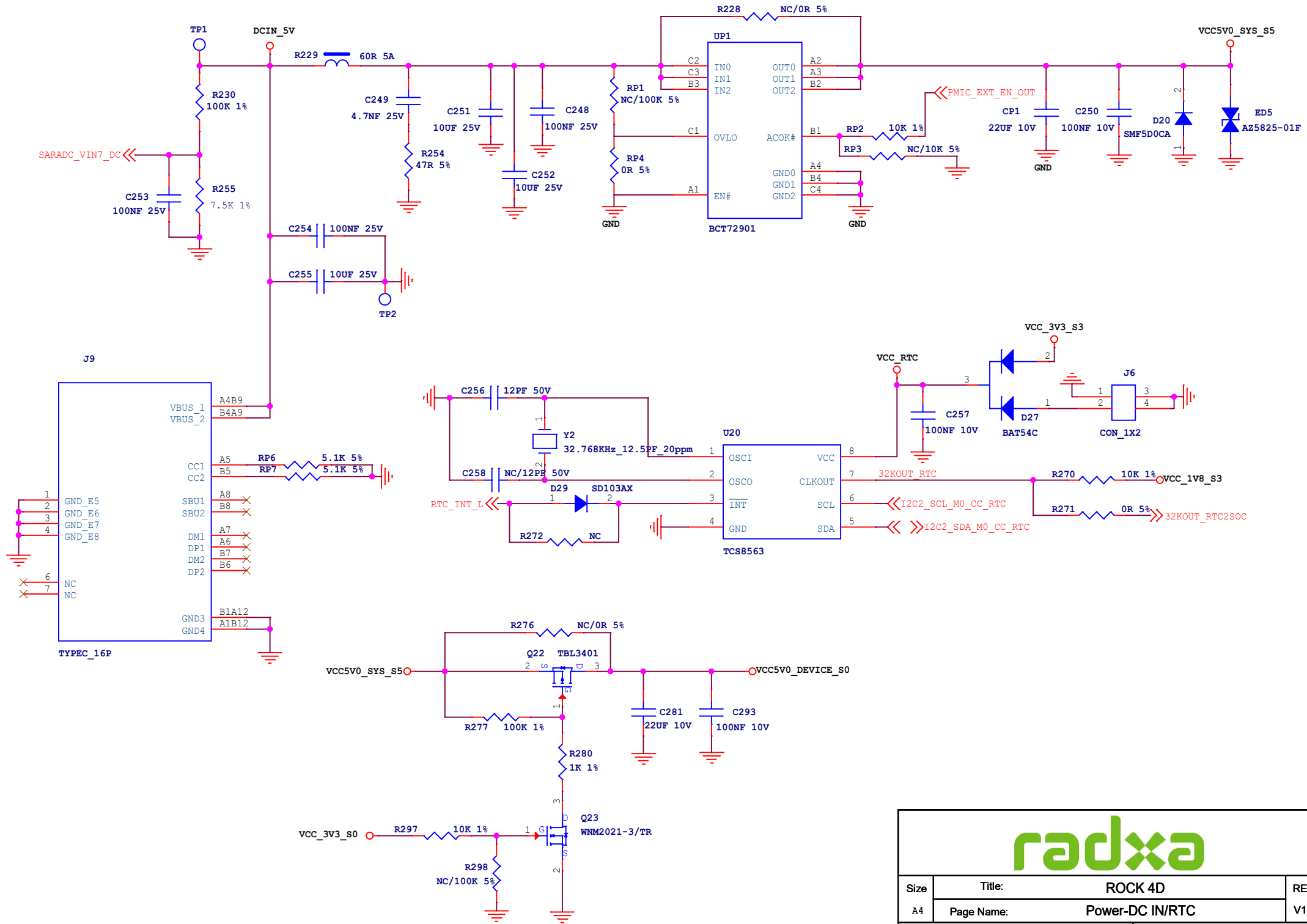












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