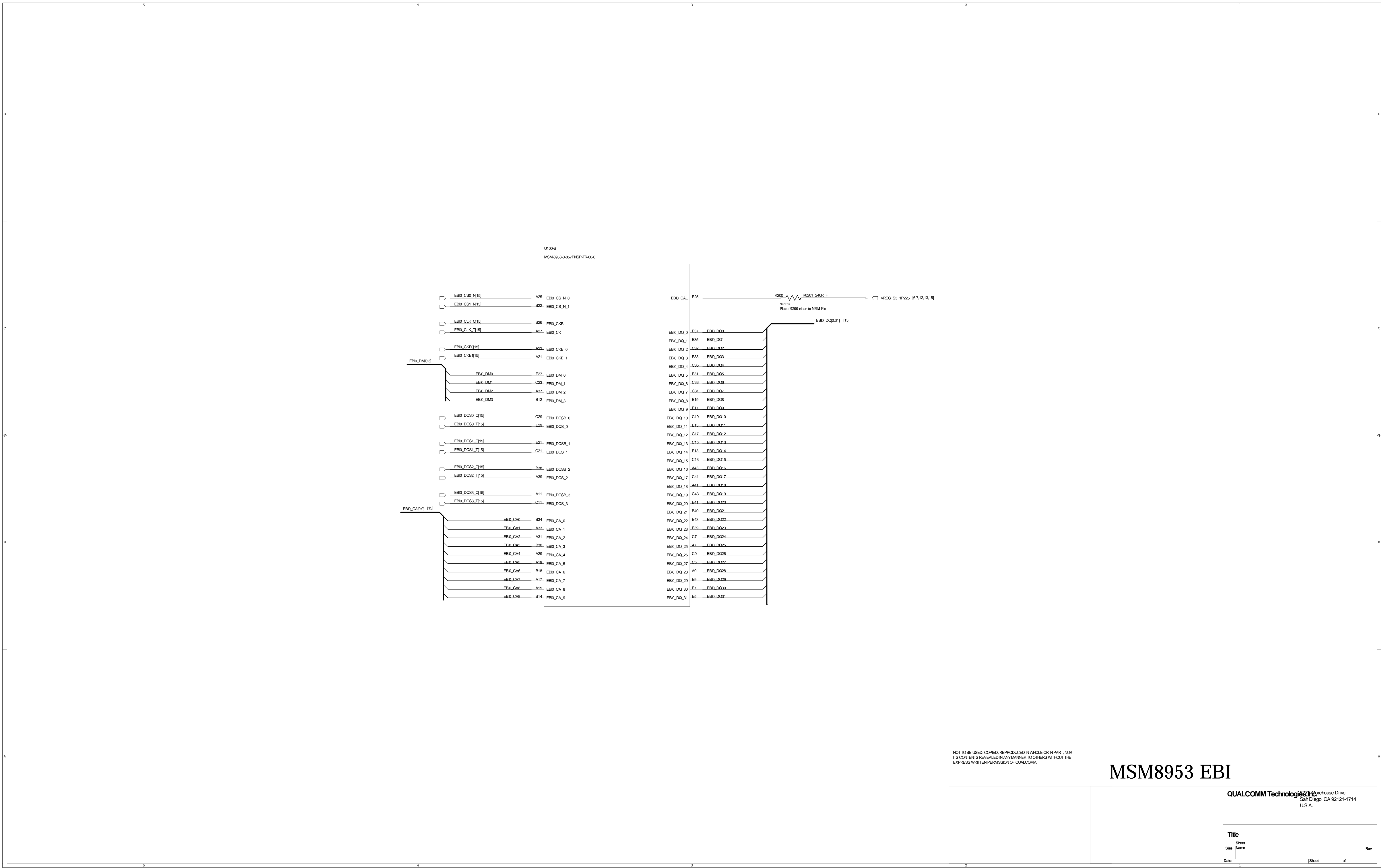


MSM8953 Control

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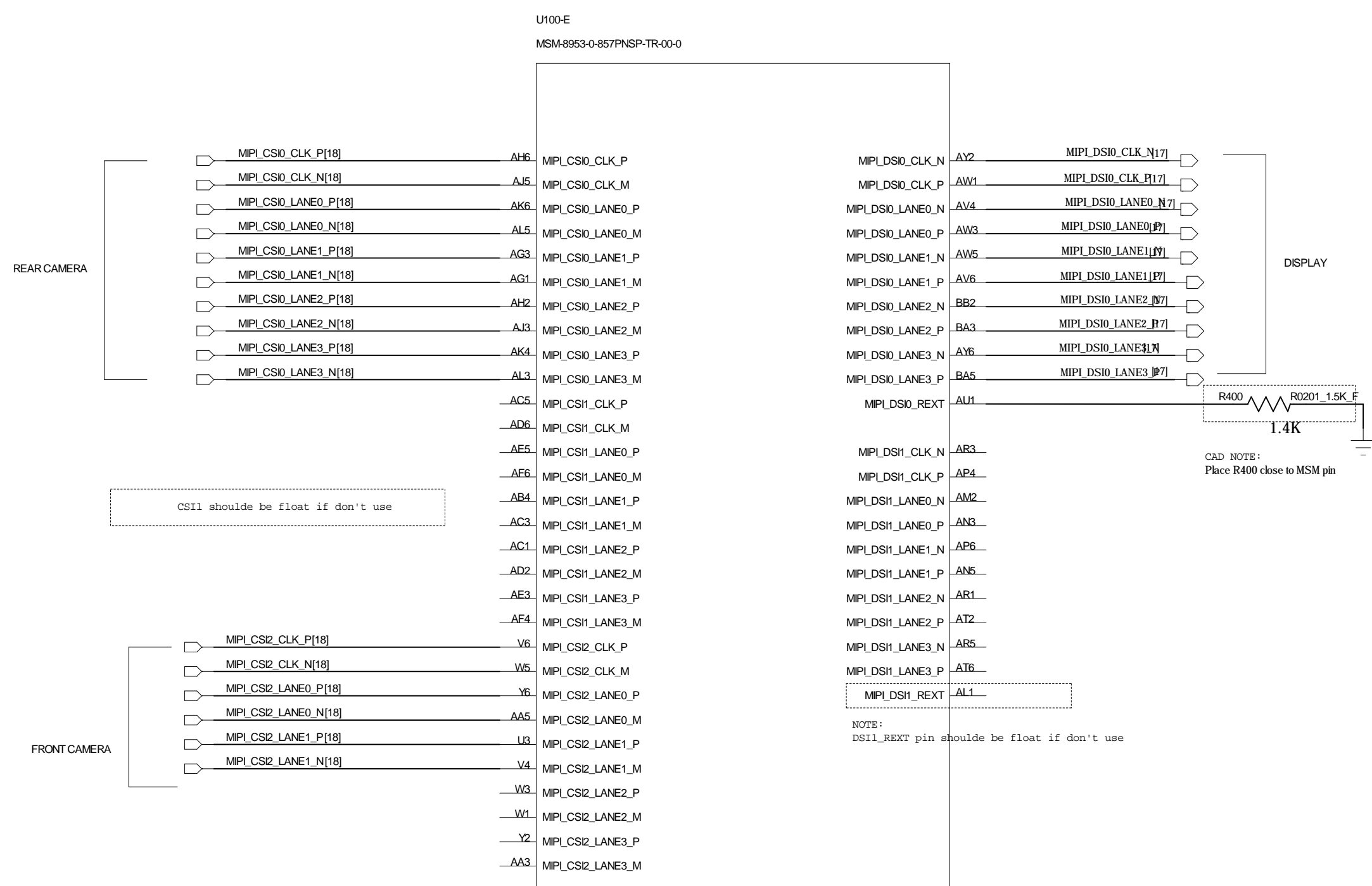


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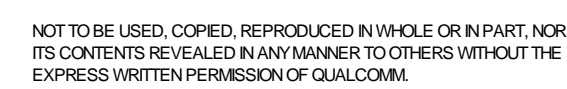


CSI Pin Name	CSI DPHY 4-lane	CSI DPHY 2+1 Mode	CSI CPHY 3Phase Mode
CSI0_3PHASE_PIN0	CSI0_CLKP	CSI0_2LANE_CLKP	NC
CSI0_3PHASE_PIN1	CSI0_CLKN	CSI0_2LANE_CLKN	CSI0_TRI0_A
CSI0_3PHASE_PIN2	CSI0_DP0	CSI0_2LANE_DP0	CSI0_TRI0_B
CSI0_3PHASE_PIN3	CSI0_DN0	CSI0_2LANE_DN0	CSI0_TRI0_C
CSI0_3PHASE_PIN4	CSI0_DP1	CSI0_2LANE_DP1	CSI0_TRI1_A
CSI0_3PHASE_PIN5	CSI0_DN1	CSI0_2LANE_DN1	CSI0_TRI1_B
CSI0_3PHASE_PIN6	CSI0_DP2	CSI0_1LANE_DP0	CSI0_TRI1_C
CSI0_3PHASE_PIN7	CSI0_DN2	CSI0_1LANE_DN0	CSI0_TRI2_A
CSI0_3PHASE_PIN8	CSI0_DP3	CSI0_1LANE_CLKP	CSI0_TRI2_B
CSI0_3PHASE_PIN9	CSI0_DN3	CSI0_1LANE_CLKN	CSI0_TRI2_C
CSI1_3PHASE_PIN1	CSI1_CLKP	CSI1_2LANE_CLKP	CSI1_TRI0_A
CSI1_3PHASE_PIN2	CSI1_CLKN	CSI1_2LANE_CLKN	CSI1_TRI0_B
CSI1_3PHASE_PIN3	CSI1_DP0	CSI1_2LANE_DP0	CSI1_TRI0_C
CSI1_3PHASE_PIN4	CSI1_DN0	CSI1_2LANE_DN0	CSI1_TRI1_A
CSI1_3PHASE_PIN5	CSI1_DP1	CSI1_2LANE_DP1	CSI1_TRI1_B
CSI1_3PHASE_PIN6	CSI1_DN1	CSI1_2LANE_DN1	CSI1_TRI1_C
CSI1_3PHASE_PIN7	CSI1_DP2	CSI1_1LANE_DP0	CSI1_TRI2_A
CSI1_3PHASE_PIN8	CSI1_DN2	CSI1_1LANE_DN0	CSI1_TRI2_B
CSI1_3PHASE_PIN9	CSI1_DP3	CSI1_1LANE_CLKP	CSI1_TRI2_C
CSI2_3PHASE_PIN1	CSI2_CLKP	CSI2_2LANE_CLKP	CSI2_TRI0_A
CSI2_3PHASE_PIN2	CSI2_CLKN	CSI2_2LANE_CLKN	CSI2_TRI0_B
CSI2_3PHASE_PIN3	CSI2_DP0	CSI2_2LANE_DP0	CSI2_TRI0_C
CSI2_3PHASE_PIN4	CSI2_DN0	CSI2_2LANE_DN0	CSI2_TRI1_A
CSI2_3PHASE_PIN5	CSI2_DP1	CSI2_2LANE_DP1	CSI2_TRI1_B
CSI2_3PHASE_PIN6	CSI2_DN1	CSI2_2LANE_DN1	CSI2_TRI1_C
CSI2_3PHASE_PIN7	CSI2_DP2	CSI2_1LANE_DP0	CSI2_TRI2_A
CSI2_3PHASE_PIN8	CSI2_DN2	CSI2_1LANE_DN0	CSI2_TRI2_B
CSI2_3PHASE_PIN9	CSI2_DP3	CSI2_1LANE_CLKP	CSI2_TRI2_C

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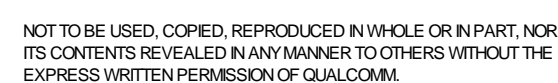
MSM8953 MIPI

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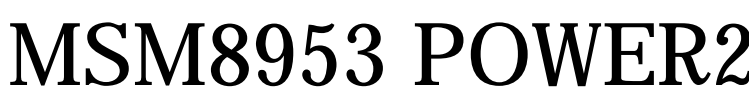
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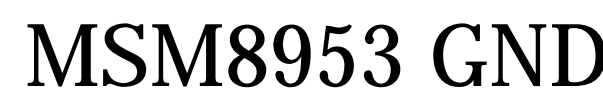
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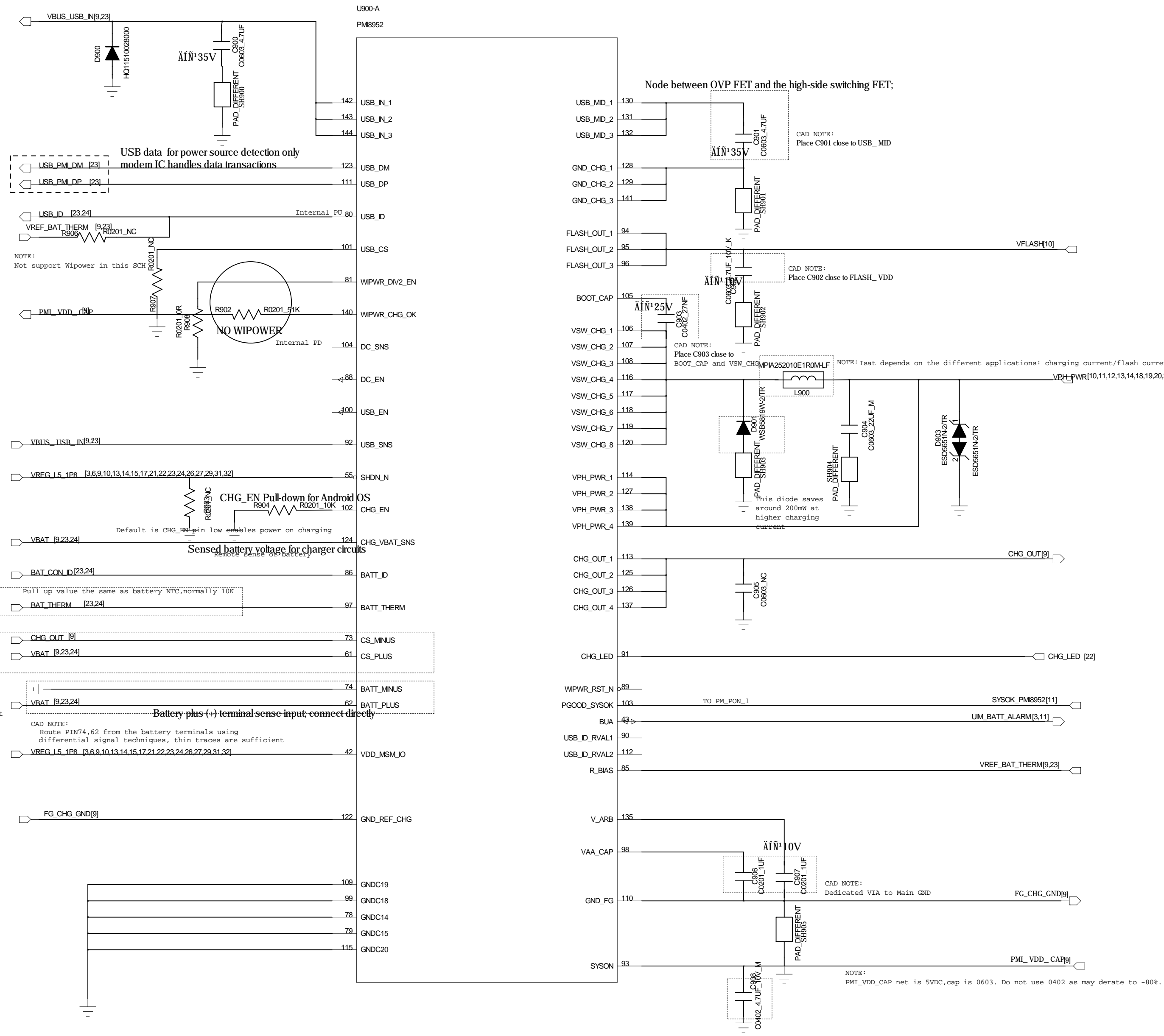
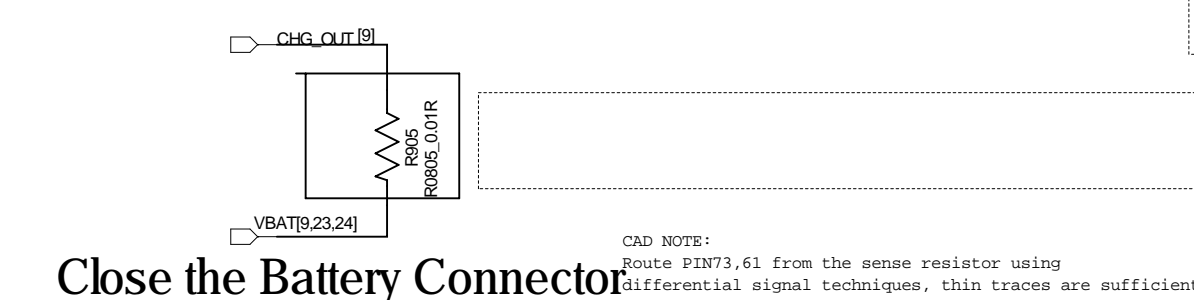


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Pin #	Connection on device without WiPower	Connection on device with WiPower
CHG_DP	Pull up to VDD_OVP with 10kOhm	Push PNT CHG_DP
CHG_DM	Pull down to GND with 10kOhm	Push PNT CHG_DM
DPID	No Connect	10kOhm pull down to gnd
DPID	For protection "charging" connector to 250V	For protection "charging" connector to 250V

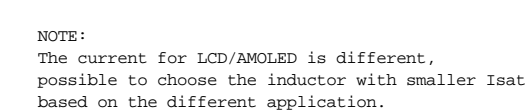
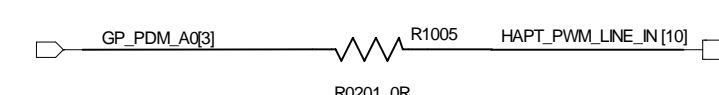


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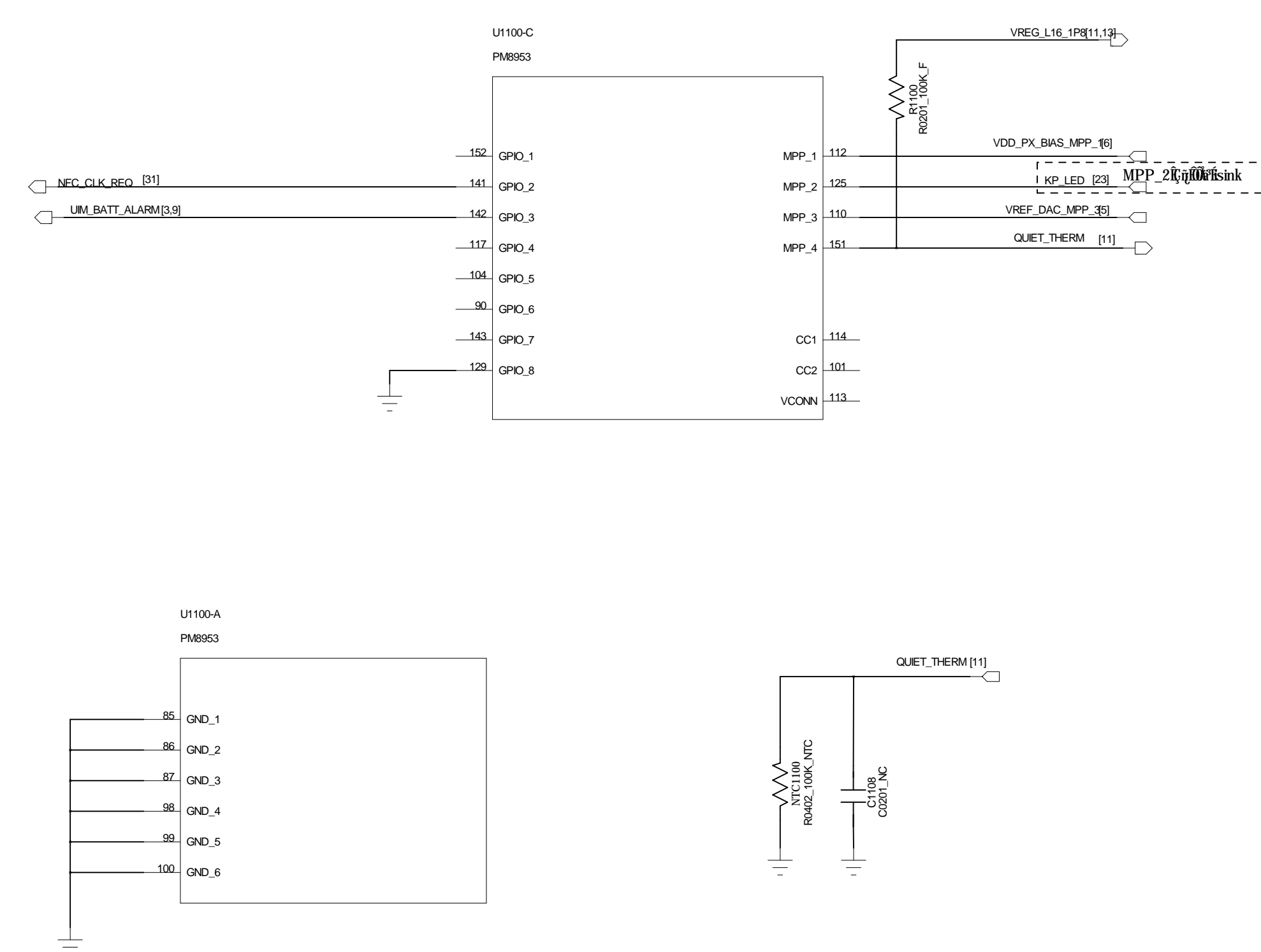
PMI8952 Charger

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Rev	Rev	Rev

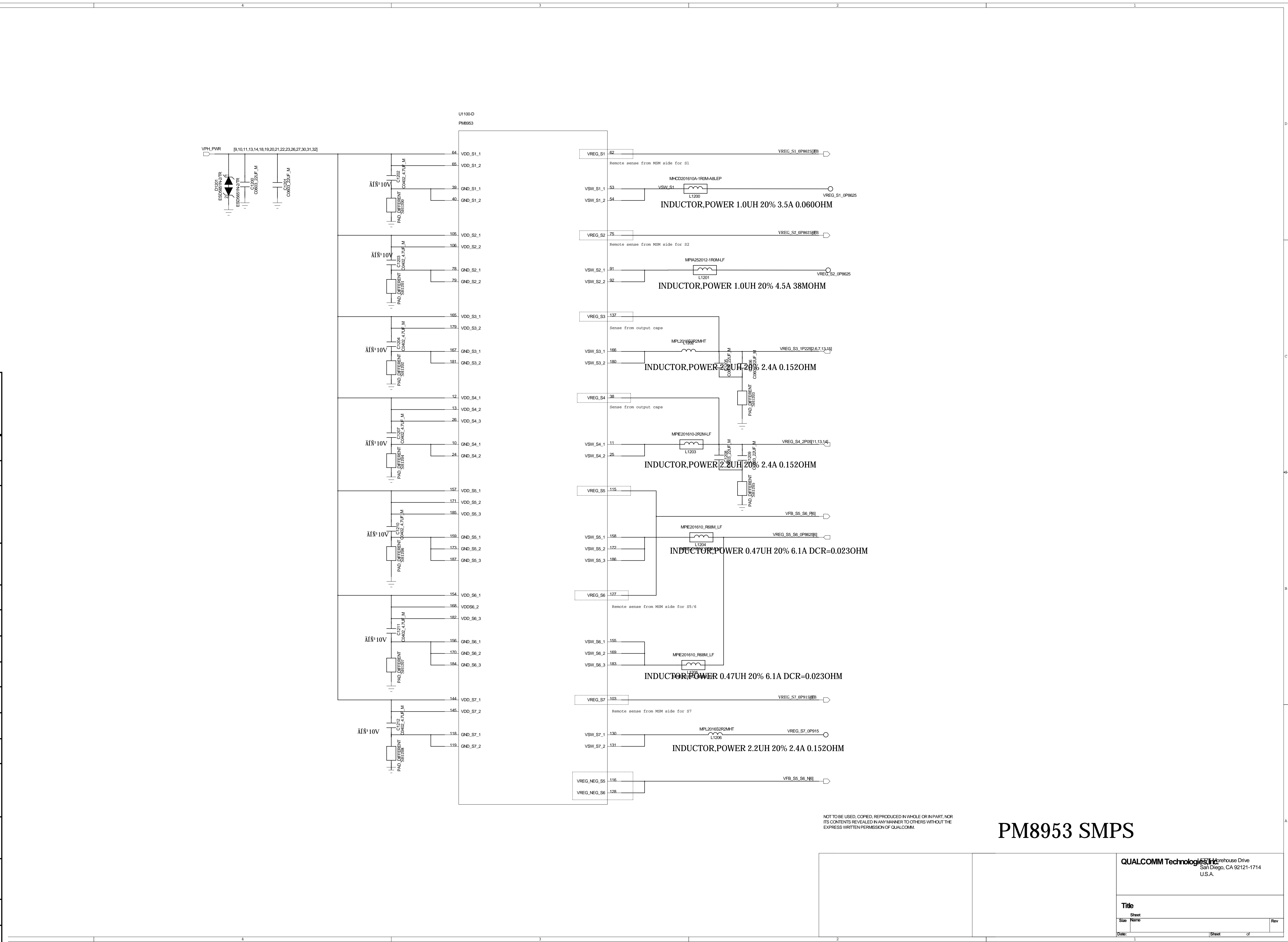


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Expected use (MSM8953)
MSM modem
MSM core and graphics
LPDDR2 and LPDDR3, MIPI CSI, and DSI. Low-voltage LDOs (1, 2, 3, and 23)
High-voltage LDOs (4, 5, 6, 7, 16, 19 RFCLK, and XO)
MSM applications processor
MSM applications processor
MSM VDD memory rail (VDDMX)
RFICs
Camera: digital
MSM DSI PLL and USB
RFICs and GPS eLNA
Most digital I/Os, MSM pad groups 3 and 7, LPDDR, and eMMC
MSM QFPROM, camera, touchscreen, display, and sensors
MSM analog, USB and PLLs, WCN XO, and PM baseband clock driver
eMMC
WCN



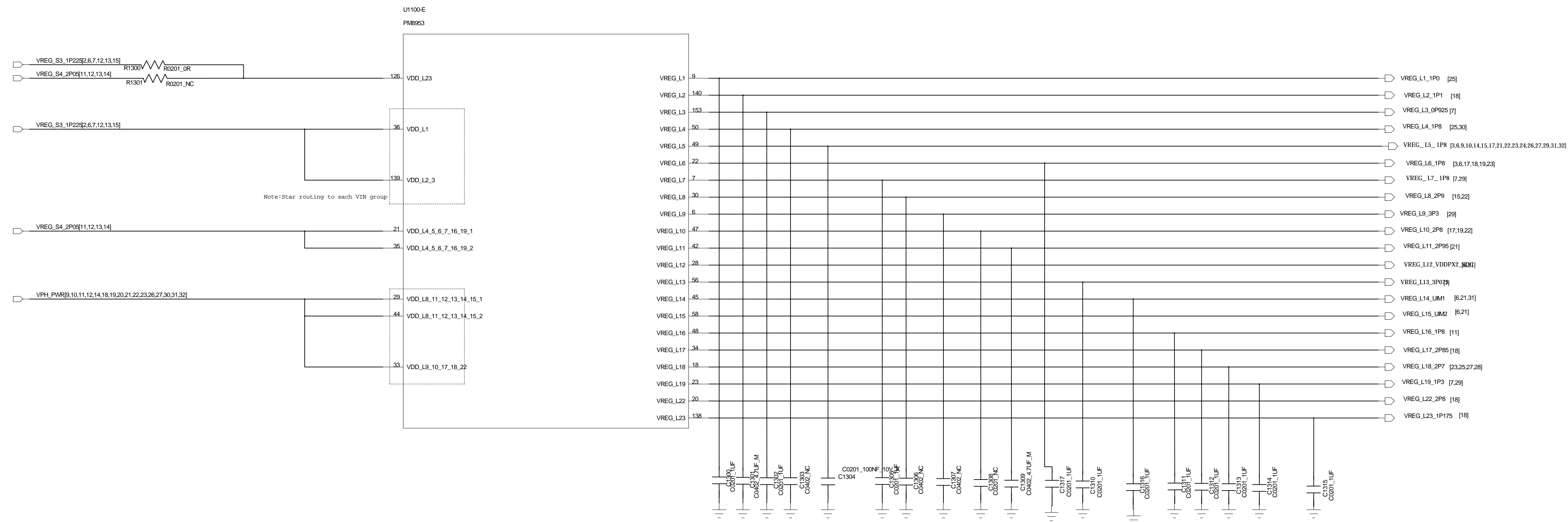


Table 3-7 PM8953 regulators and their intended uses (cont.)

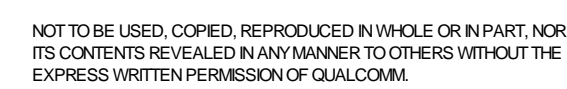
Function	Circuit type	Default voltage (V) ¹	Specified range (V) ² (MSM8953)	Programmable range (V)	Rated current (mA)	Default on	Expected use (MSM8953)
L12 ³	PMOS LDO	2.950	1.800/2.950	1.750–3.3375	50	Y	MSM pad group 2
L13	PMOS LDO	3.125	3.125	1.750–3.3375	150	Y	MSM USB and PMIC and external codec audio
L14 ⁴	PMOS LDO	1.800	1.800/3	1.750–3.3375	50	N	MSM pad group 5, dual-voltage UIM1, and NFC
L15 ⁴	PMOS LDO	1.800	1.800/3	1.750–3.3375	50	N	MSM pad group 6 and dual-voltage UIM2
L16	PMOS LDO	1.800	1.800	1.750–3.3375	5	N	PMIC HKADC
L17	PMOS LDO	2.850	2.850	1.750–3.3375	300	N	Camera and display
L18	PMOS LDO	2.700	2.700	1.750–3.3375	150	N	QTI RF front-end
L19	NMOS LDO	1.350	1.350	0.375–1.5375	600	N	MSM analog, WCN, and WGR
L20	Low-noise LDO	1.74	1.74	1.74–3.3375	5	Y	PMIC XO circuits
L21	Low-noise LDO	1.74	1.74	1.74–3.3375	5	Y	PMIC RF clock buffers
L22	PMOS LDO	2.800	2.800	1.750–3.3375	150	N	Camera: analog
L23	NMOS LDO	1.15	1.15	0.375–1.5375	600	N	Camera: digital

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PM8953 LDO

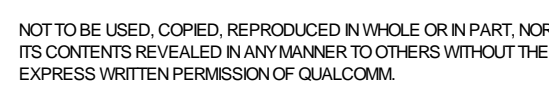
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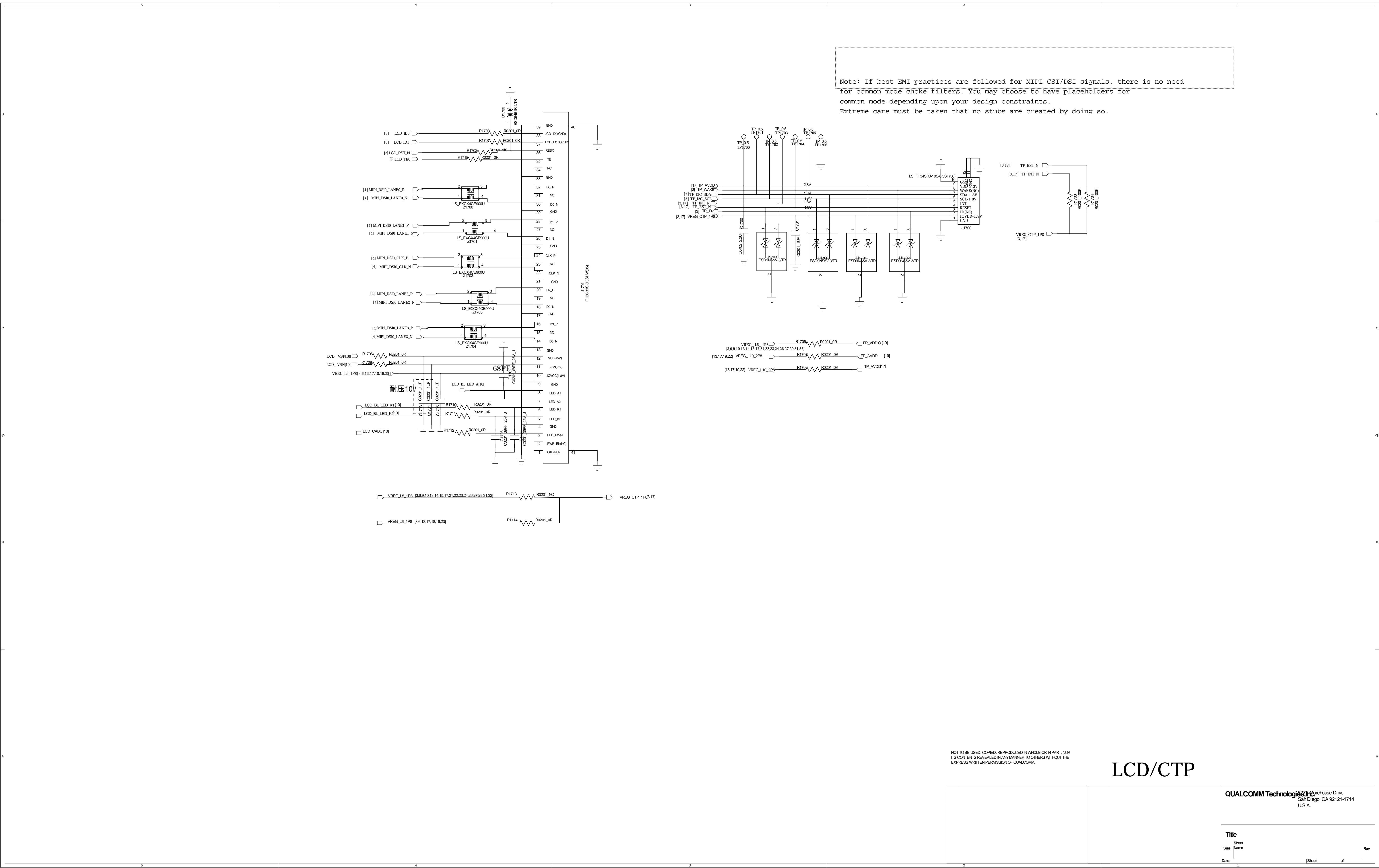
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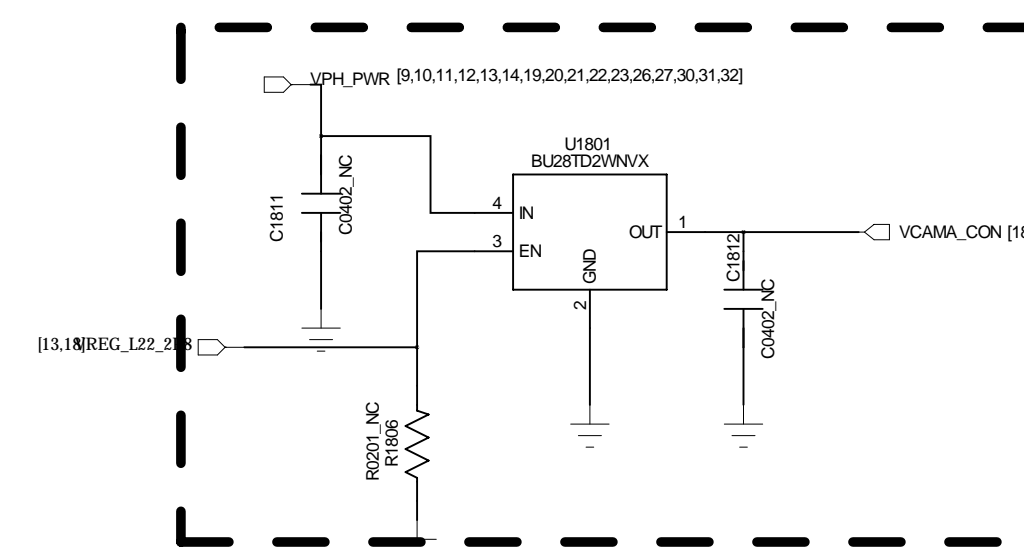
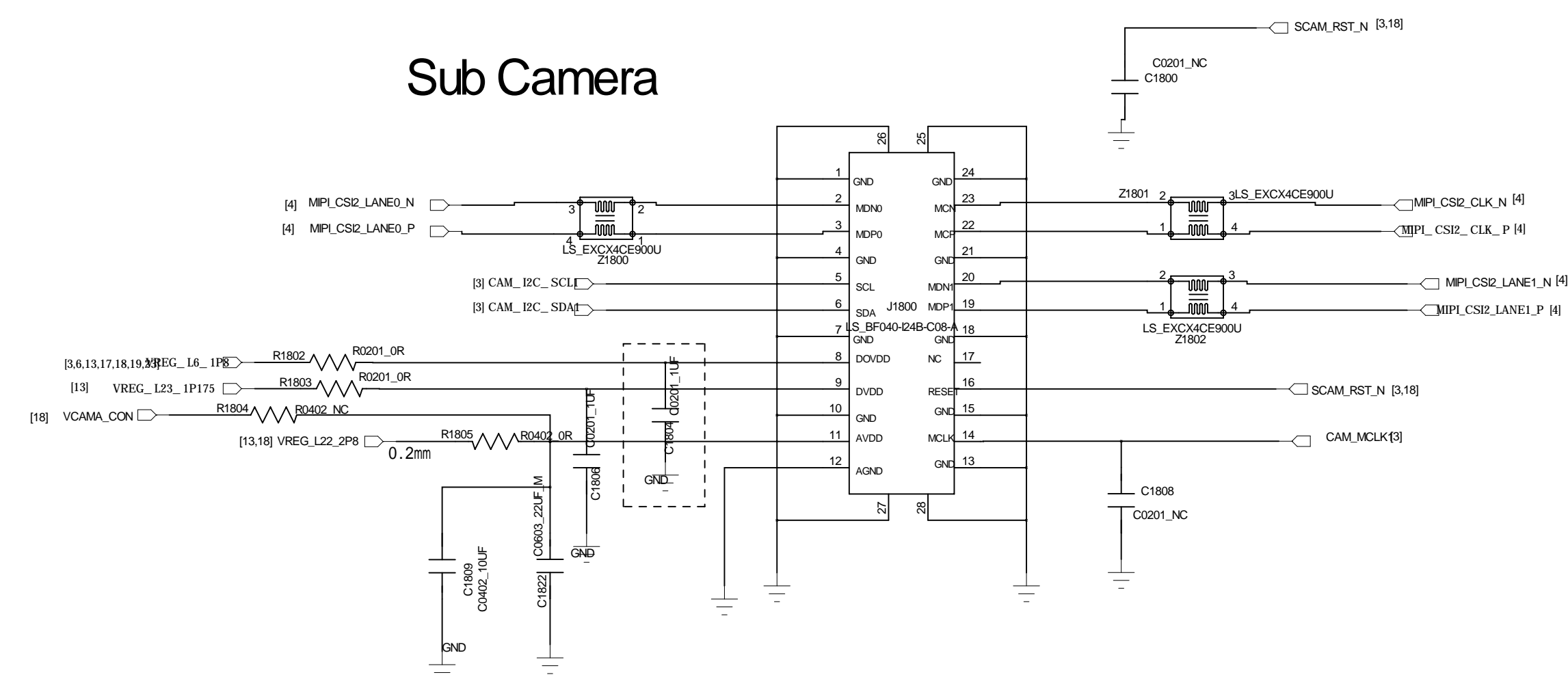
WCD9326 CODEC

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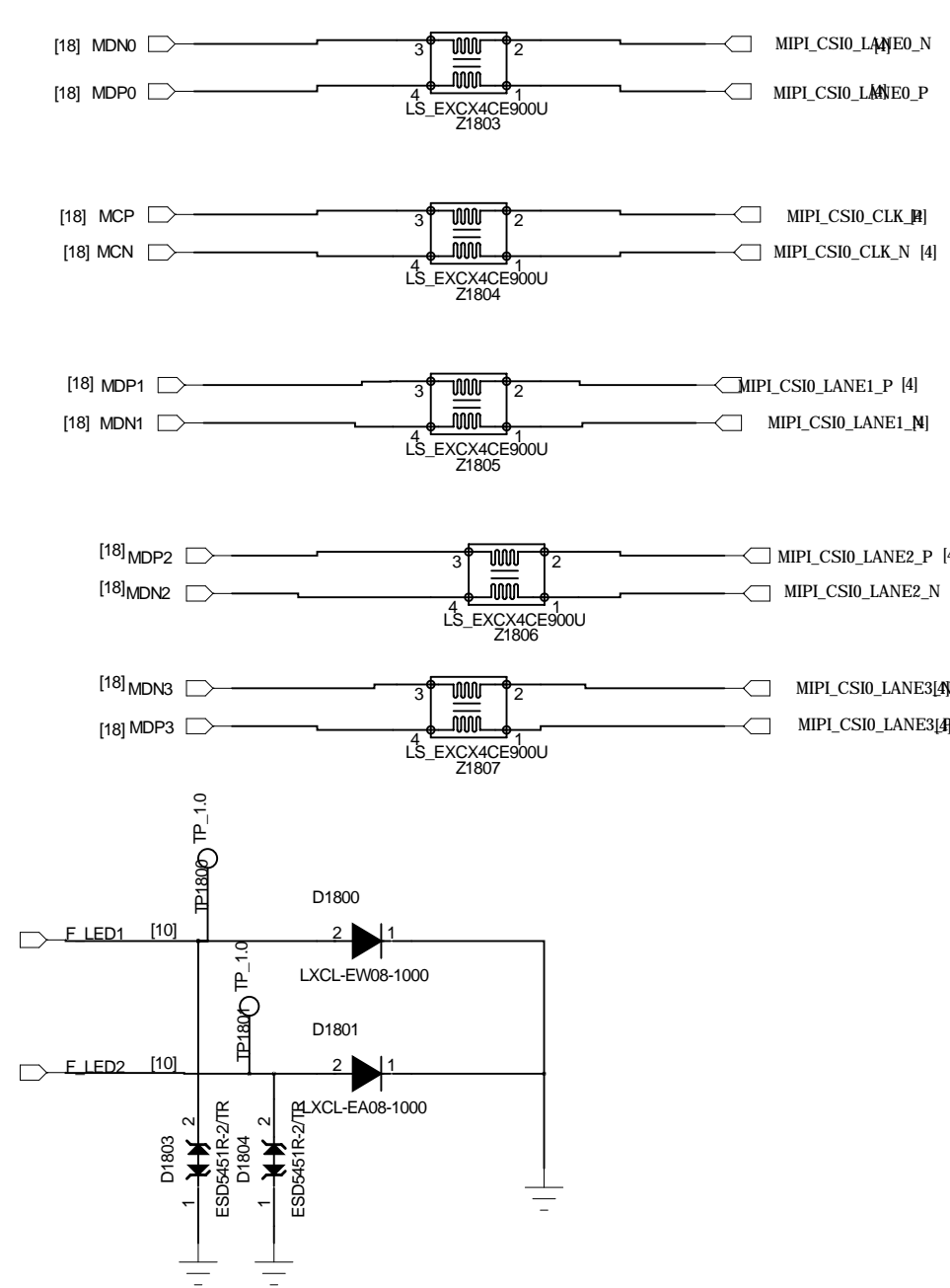
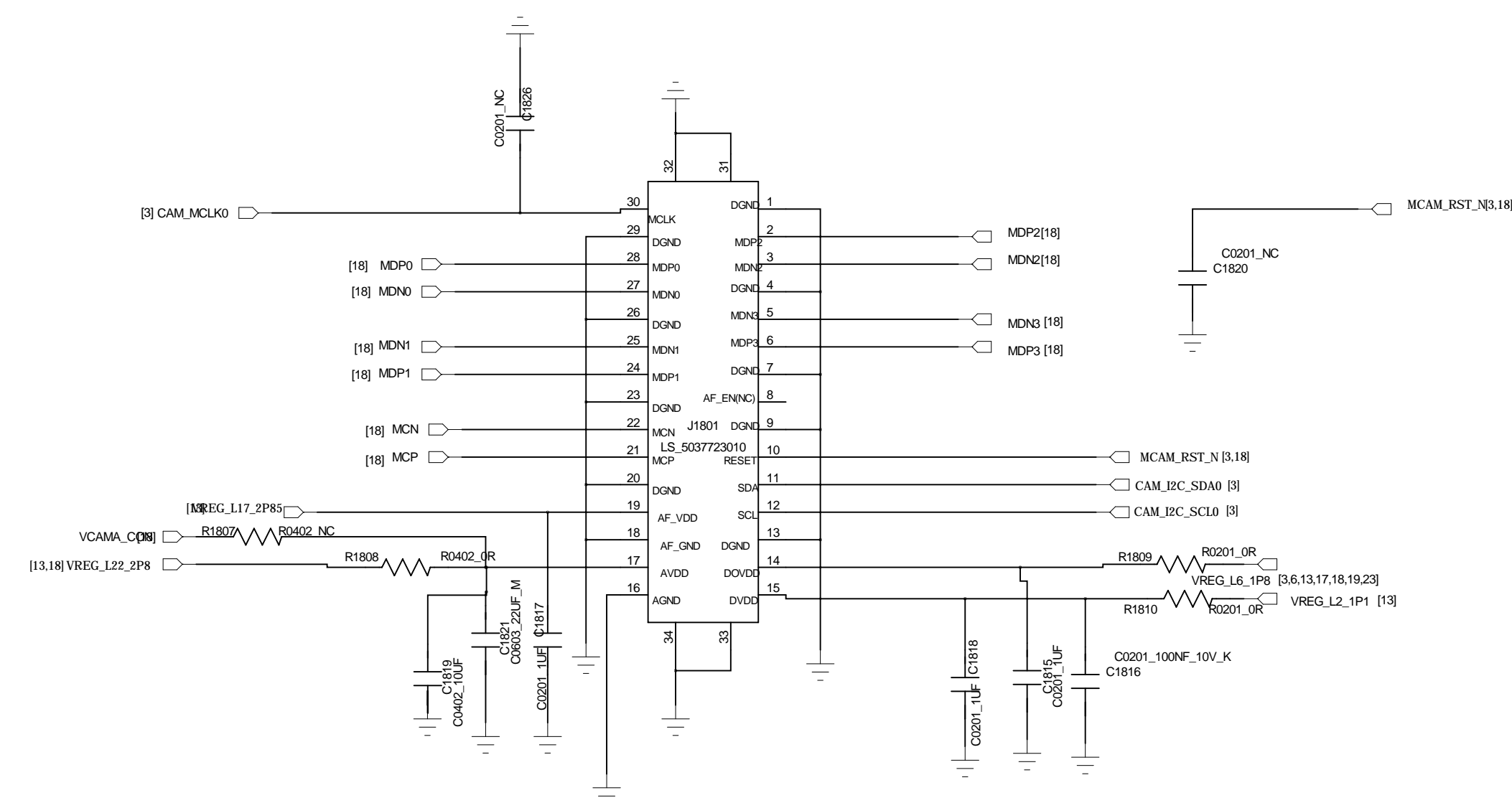
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Sub Camera



Main CAMERA



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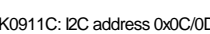
Camera/Flash

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VANA and VDIG and VIF may rise in any order

```
Sensor I2C addr:x020
Driver IC I2C addr:0xE4
```

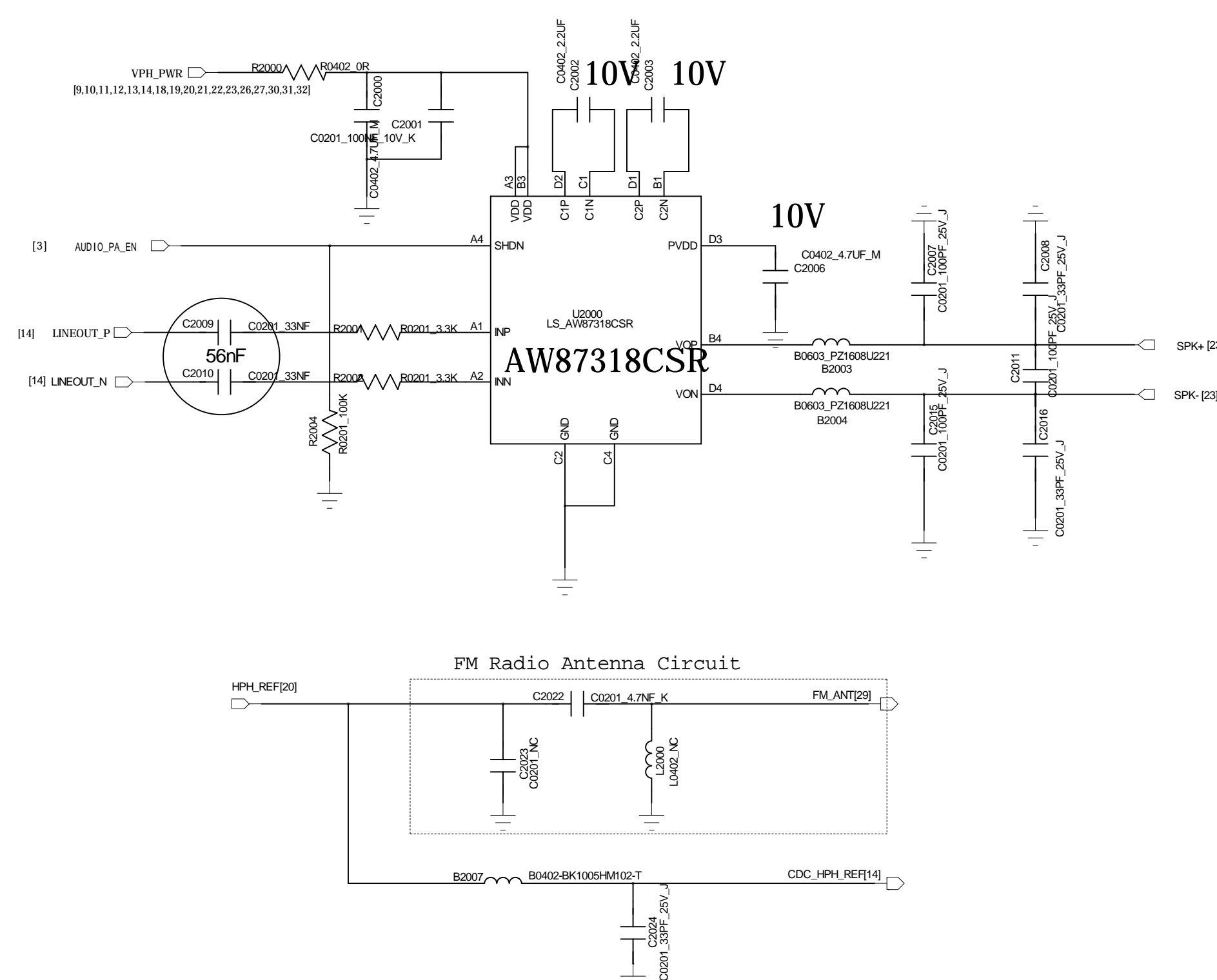
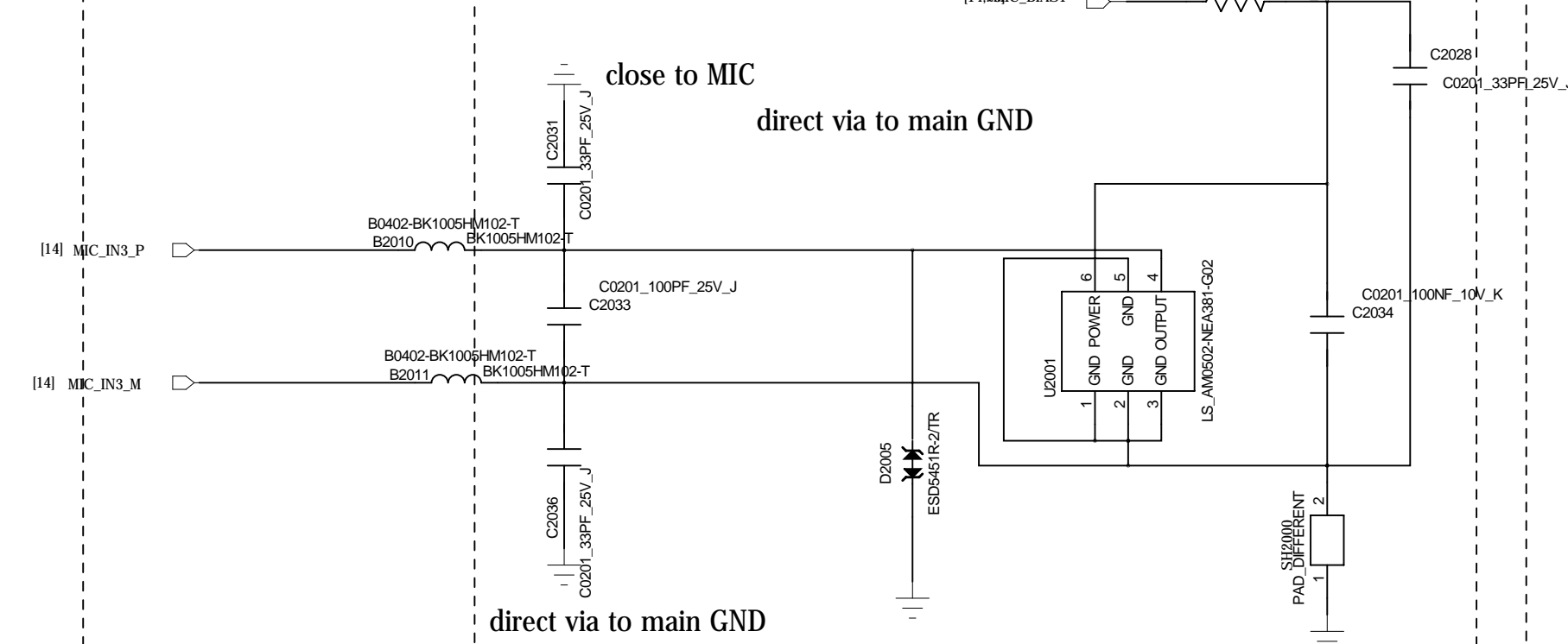
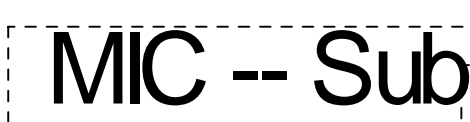
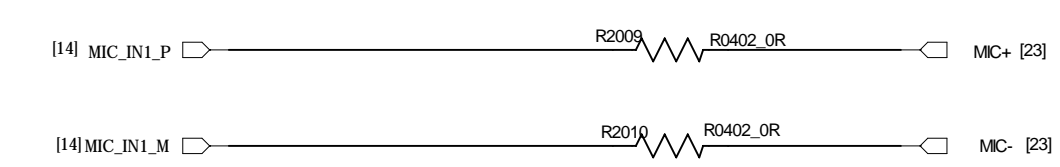
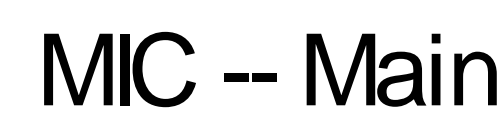
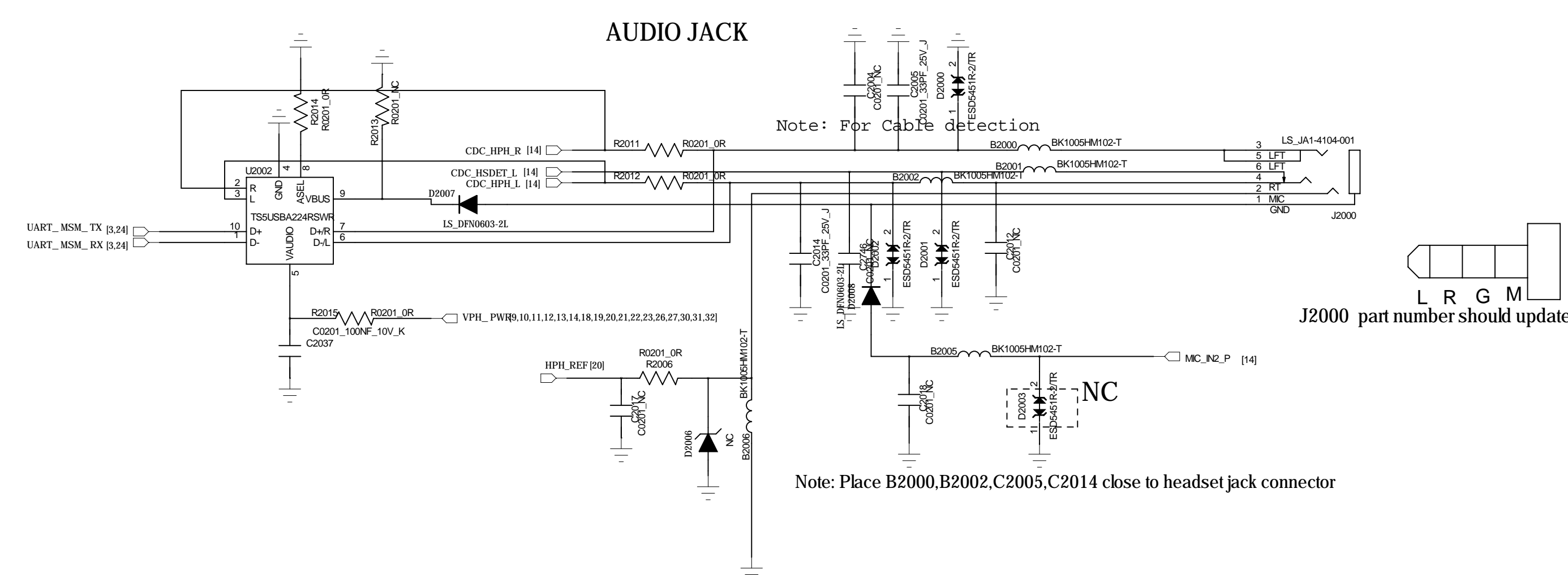



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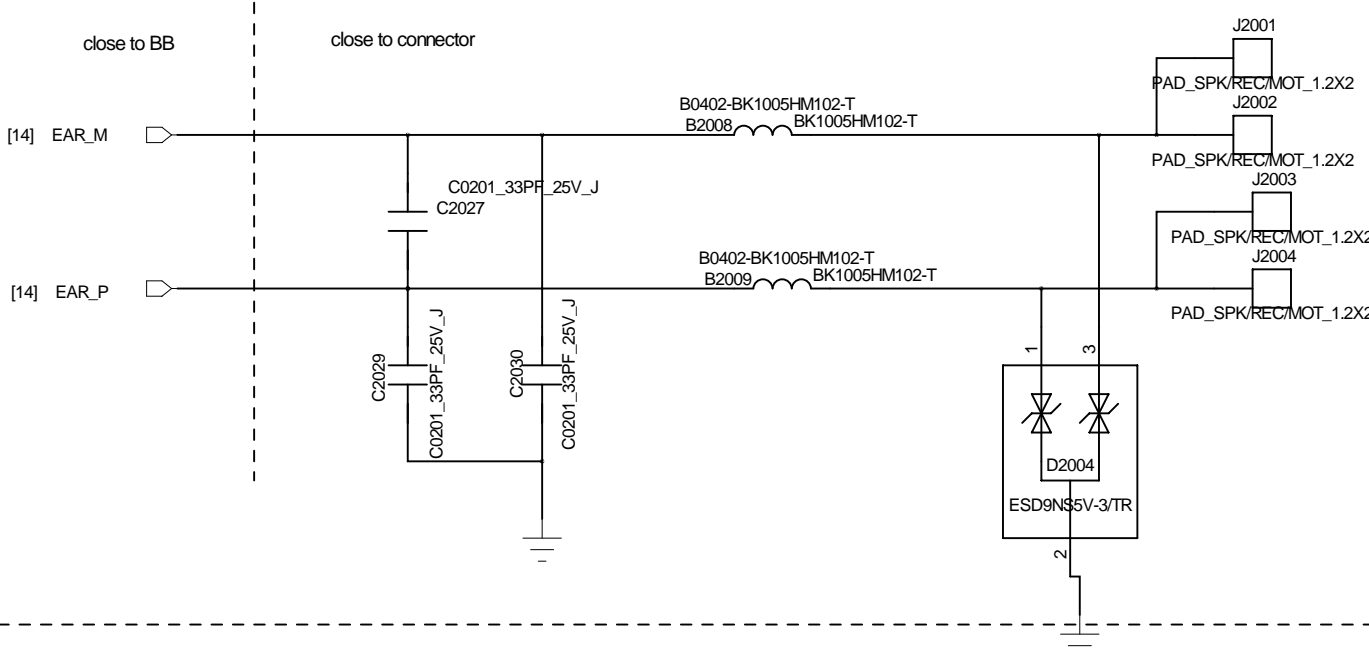
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Note: Ferrite beads and their corresponding bypass capacitors on CDC_HPH_L_P, CDC_HPH_L_M and CDC_HPH_REF are needed to reduce noise generated by audio/FM concurrency

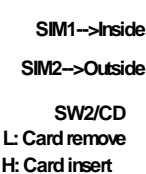


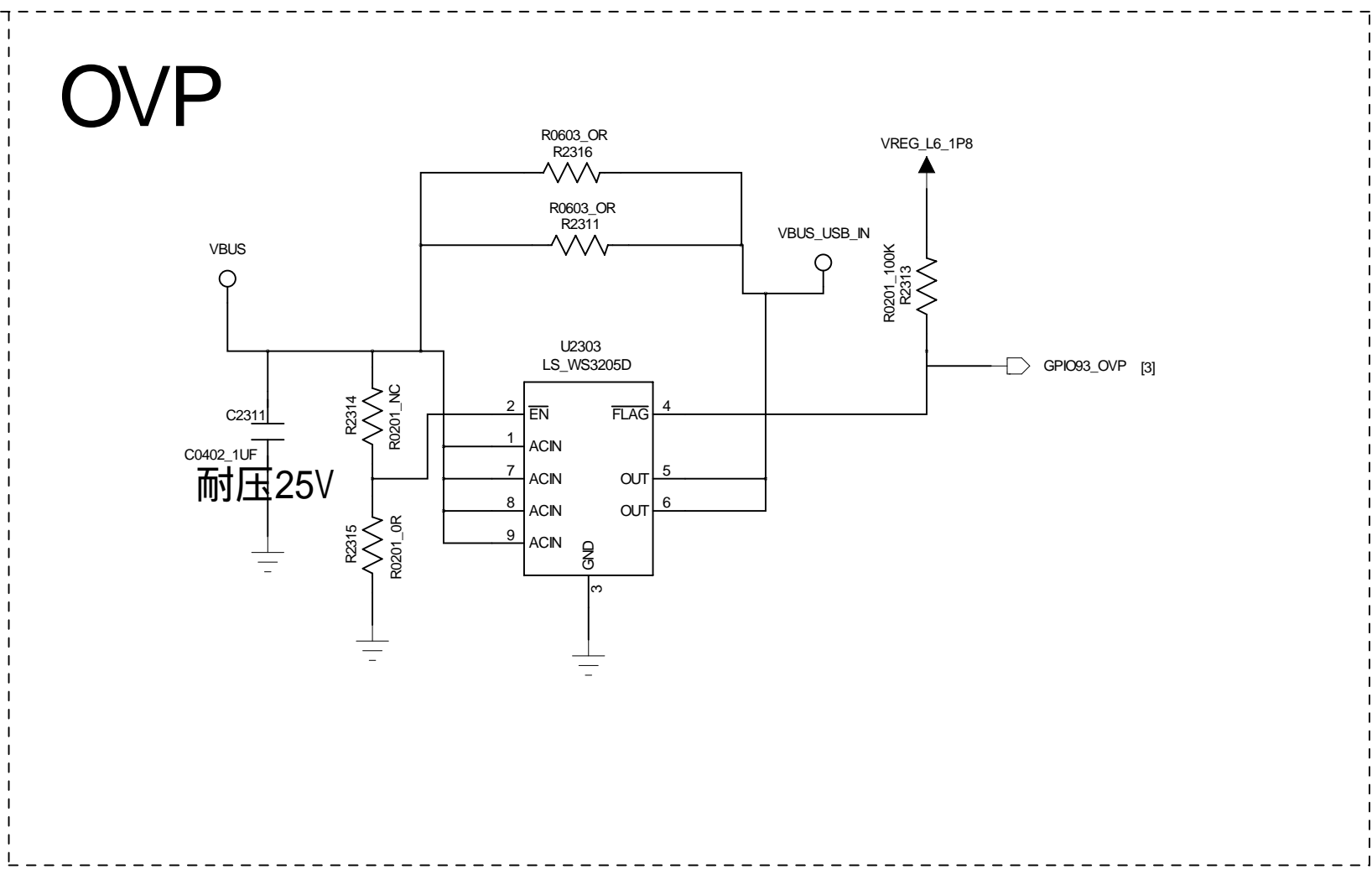
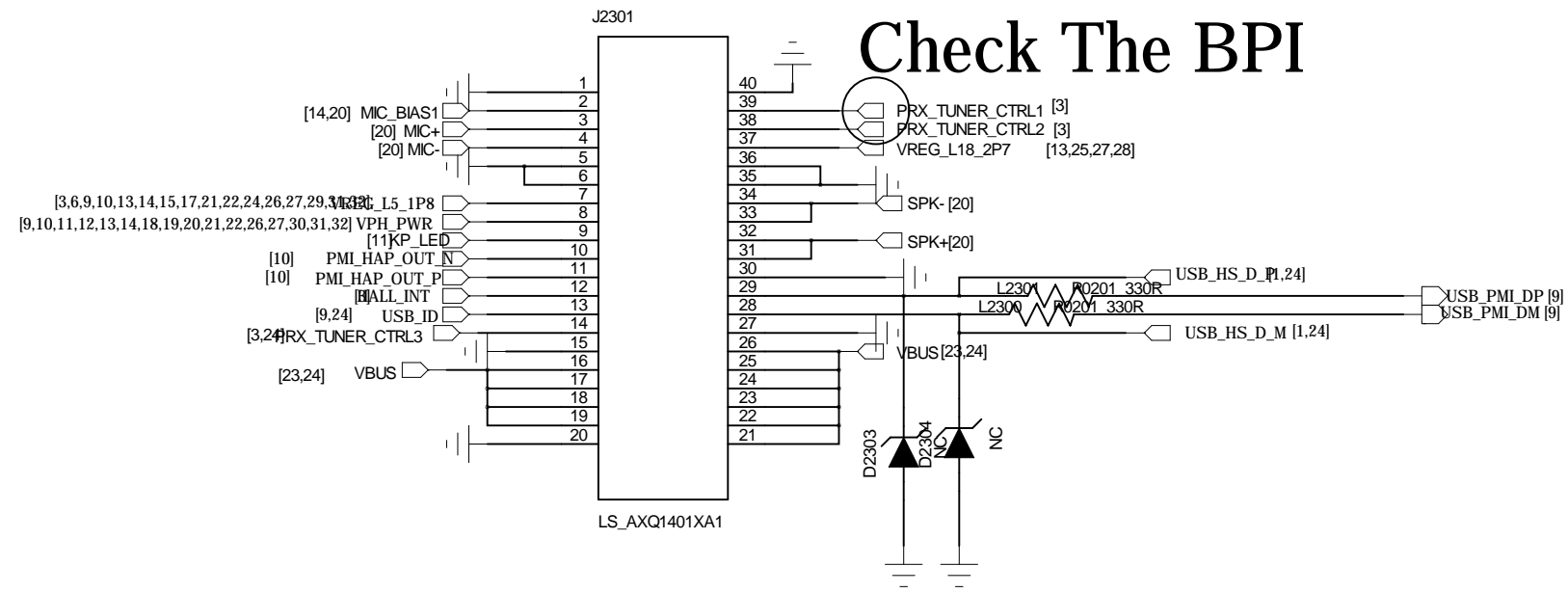
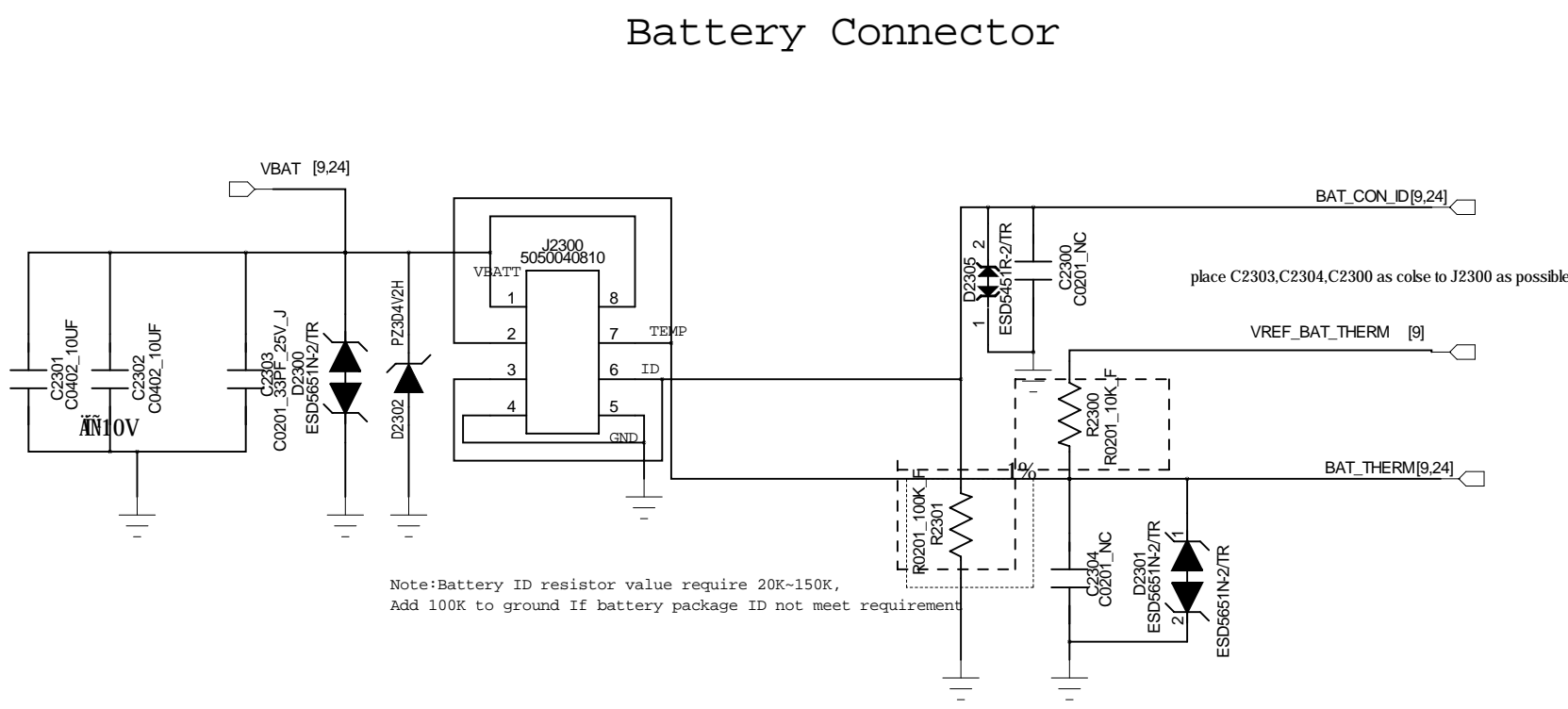
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Audio Interface



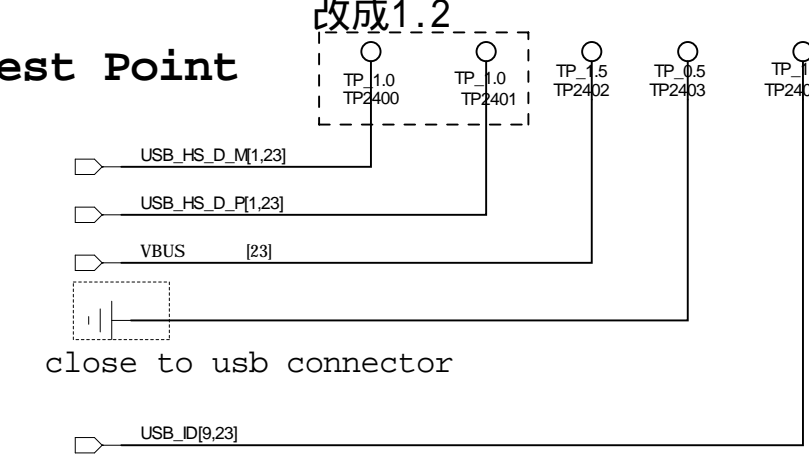
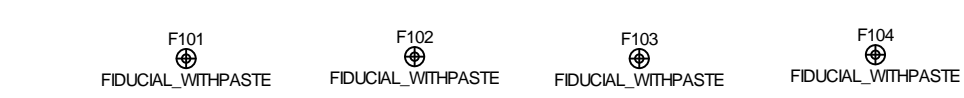


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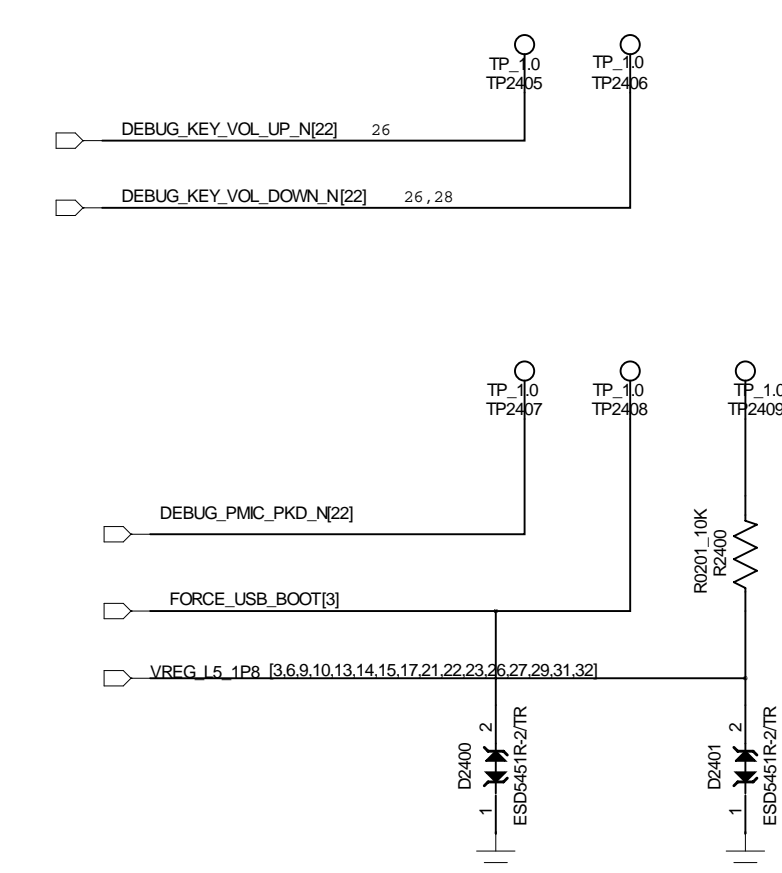
Connector(USB/Sub-board)

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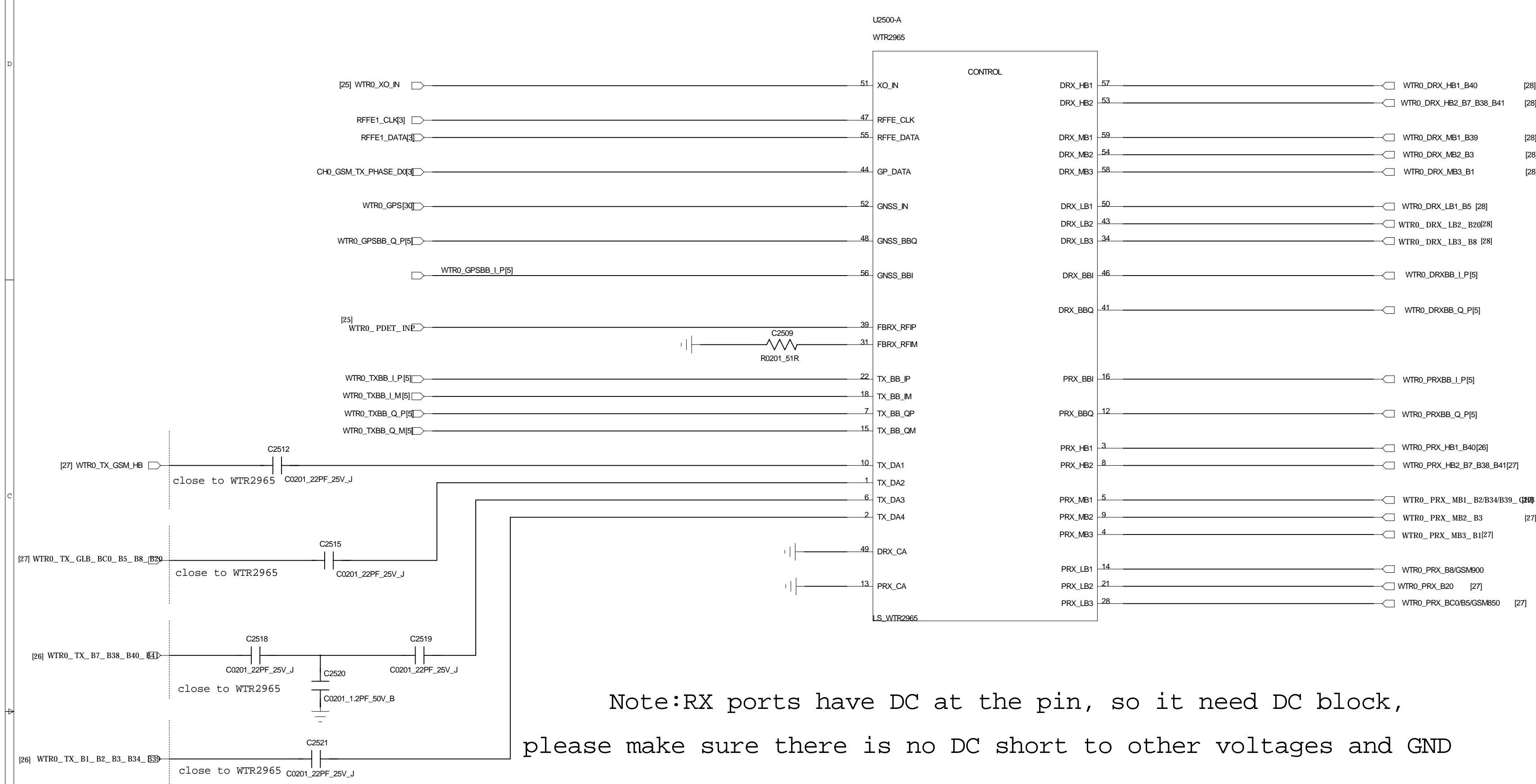
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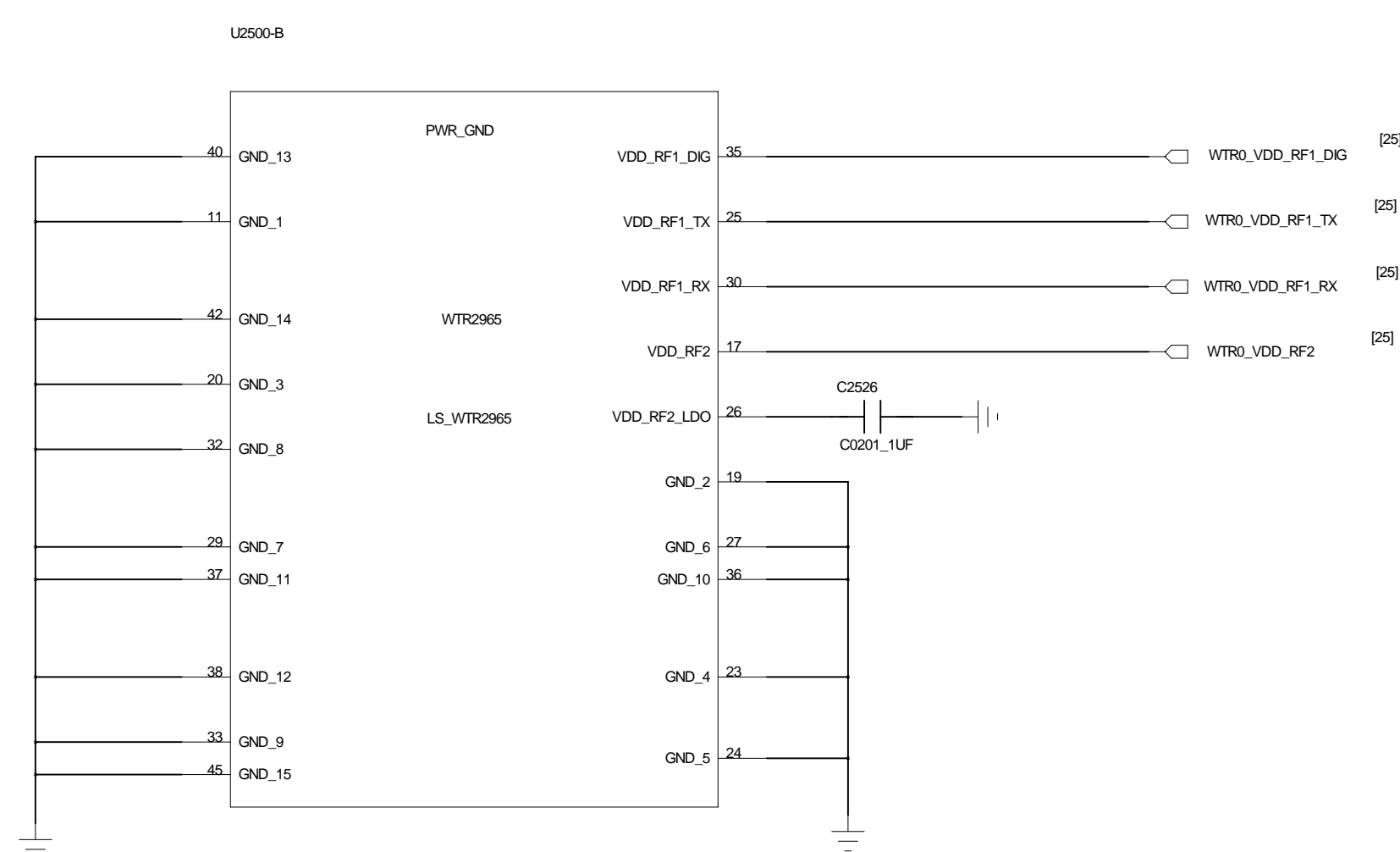
WTR 2965_A



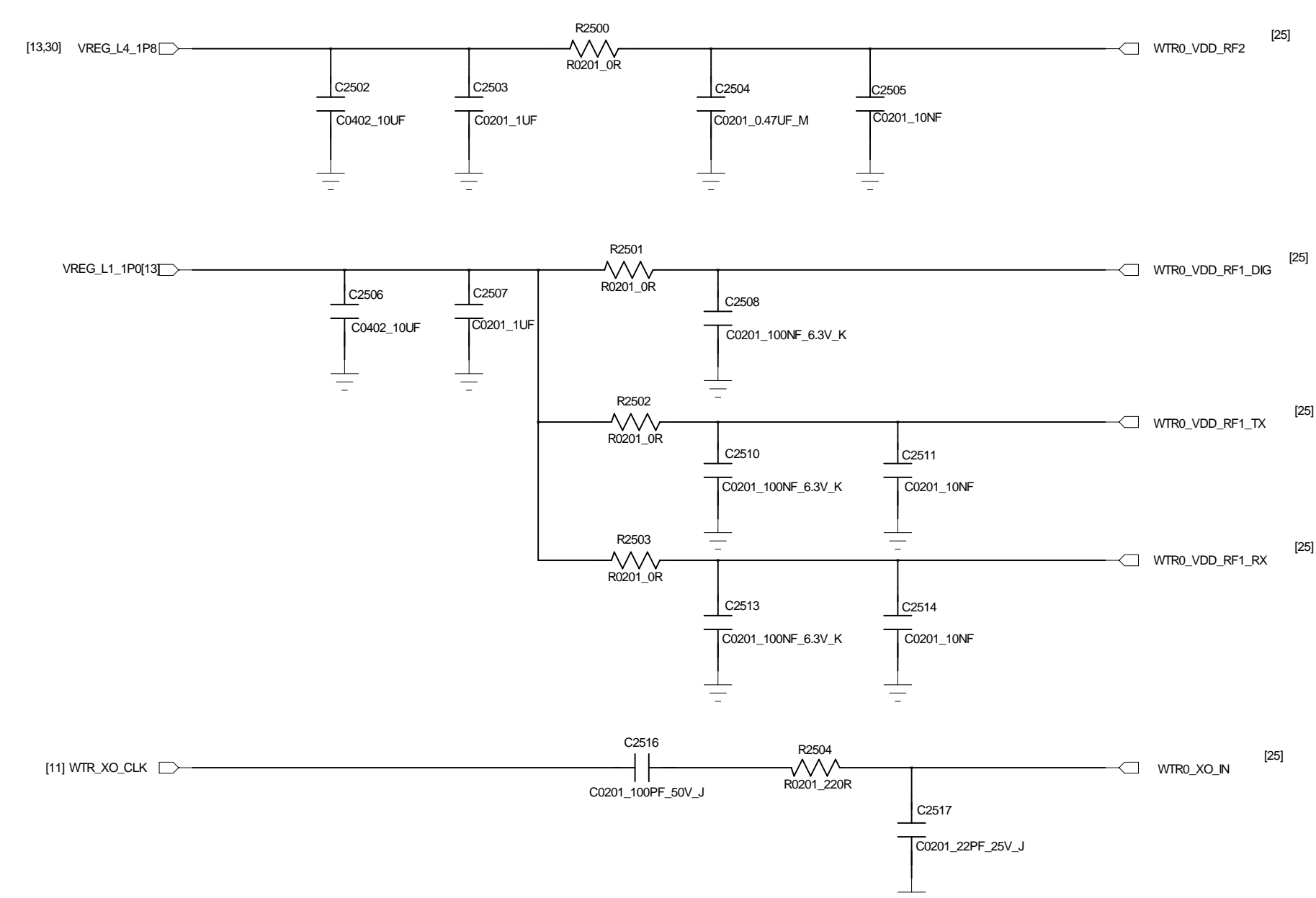
Note:RX ports have DC at the pin, so it need DC block,
please make sure there is no DC short to other voltages and GND

DA1 GSM1800_TD1900/34/39
DA2 GSM850/900_W B5/B8_LTE B5/8/20_BC0
DA3_B7/38/40/41
DA4_B1/2/3

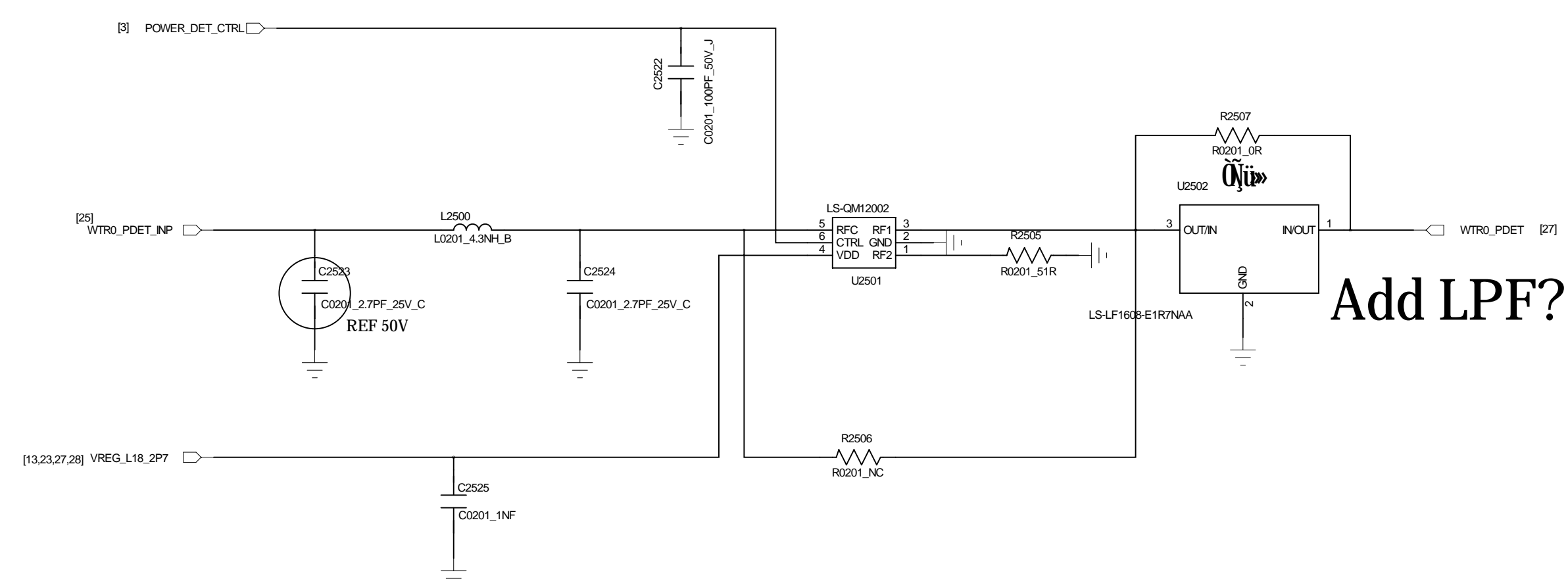
WTR 2965_B



WTR 2965 Power



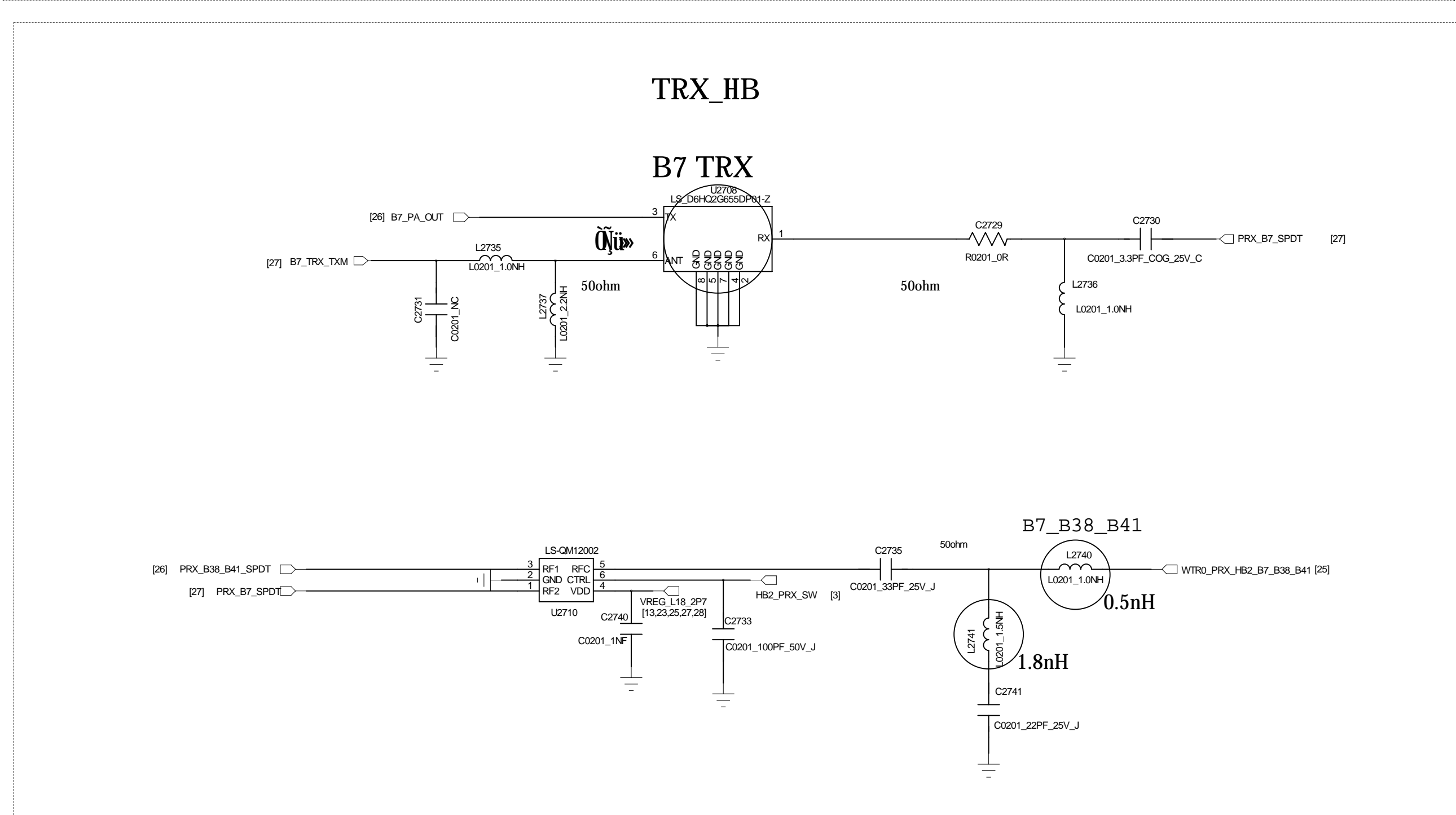
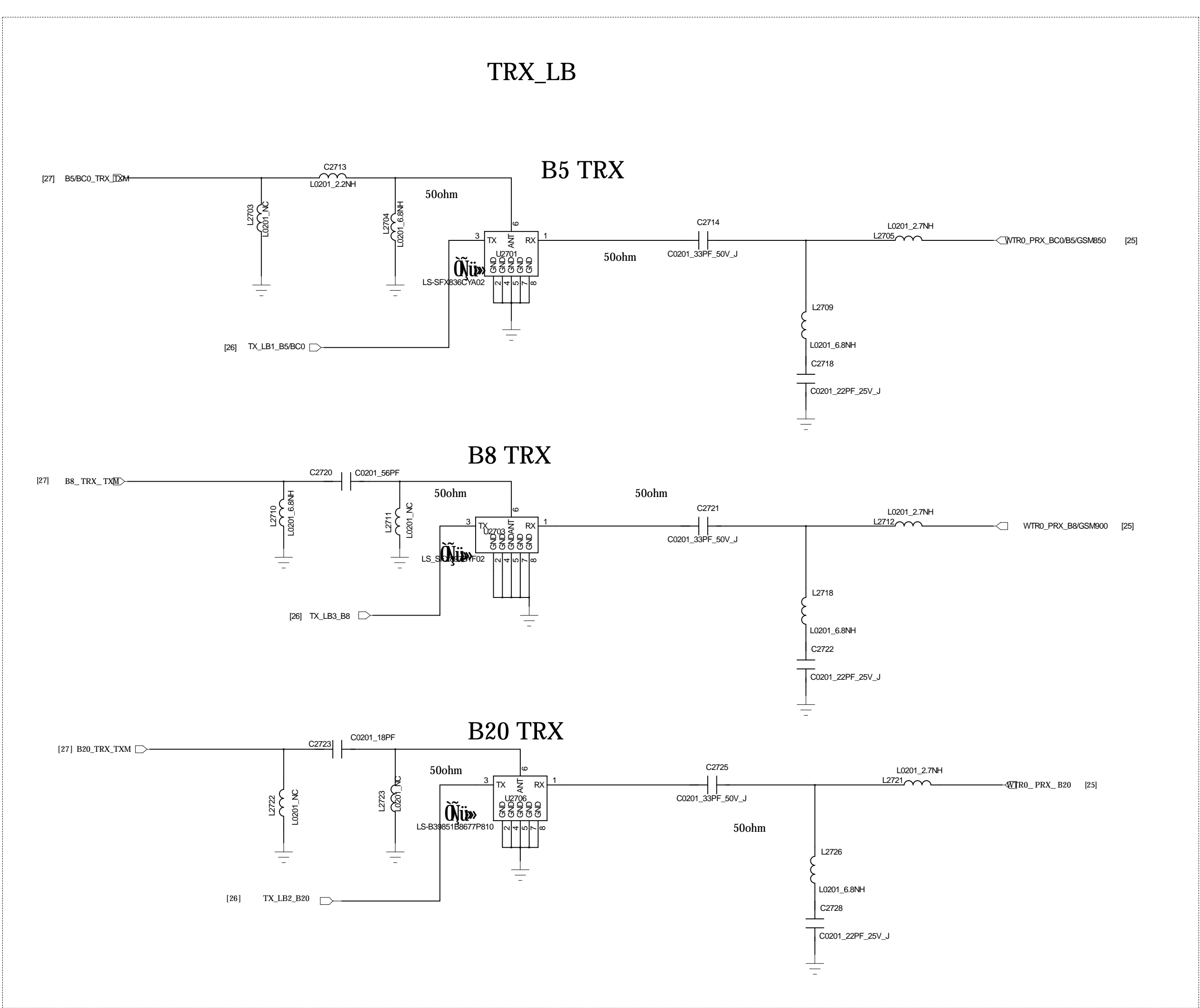
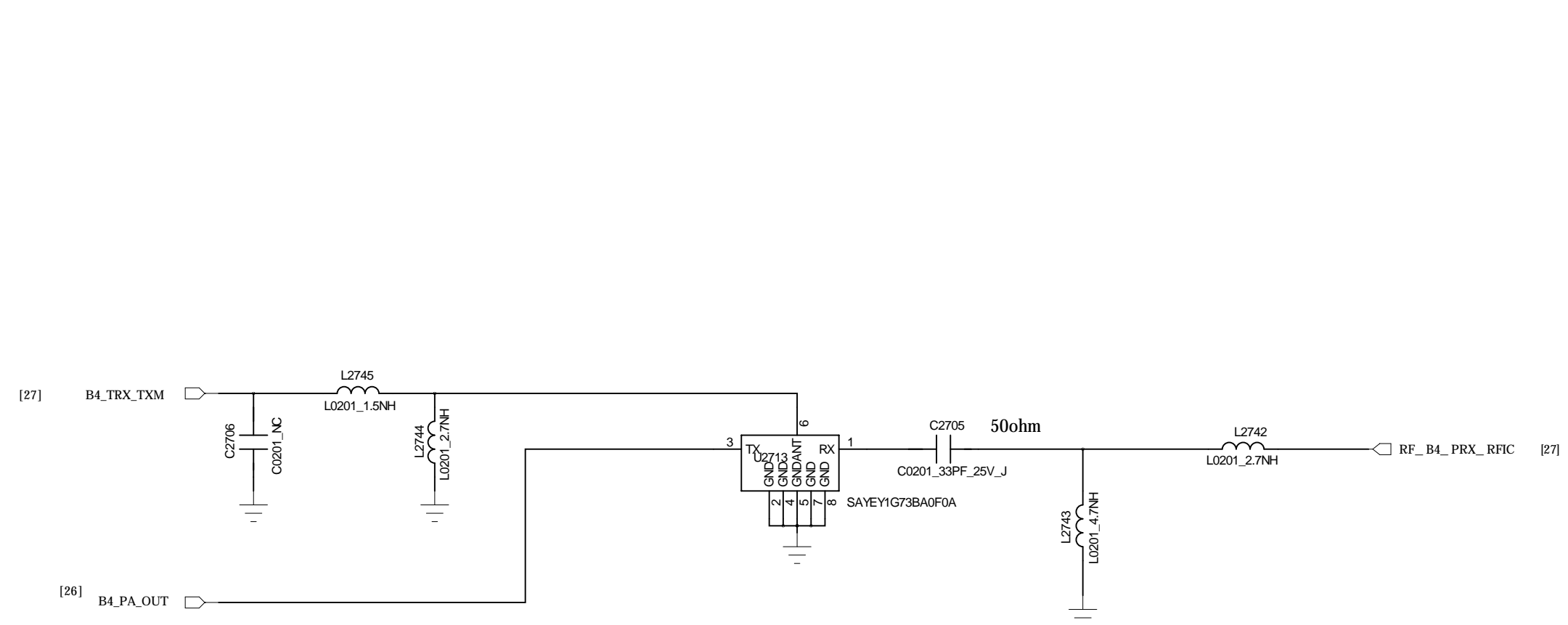
WTR 2965 Power_DET

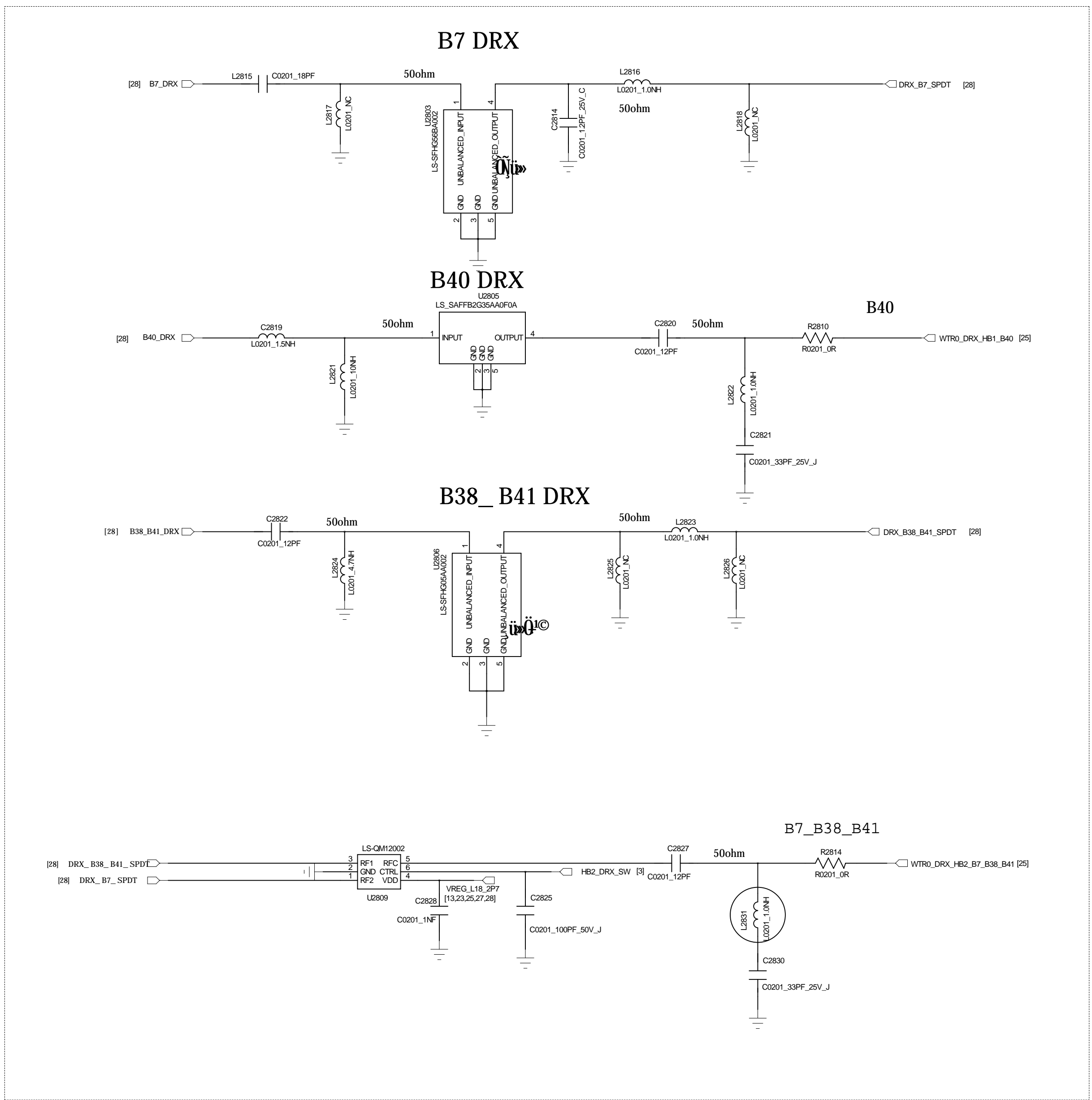


Add LPF?

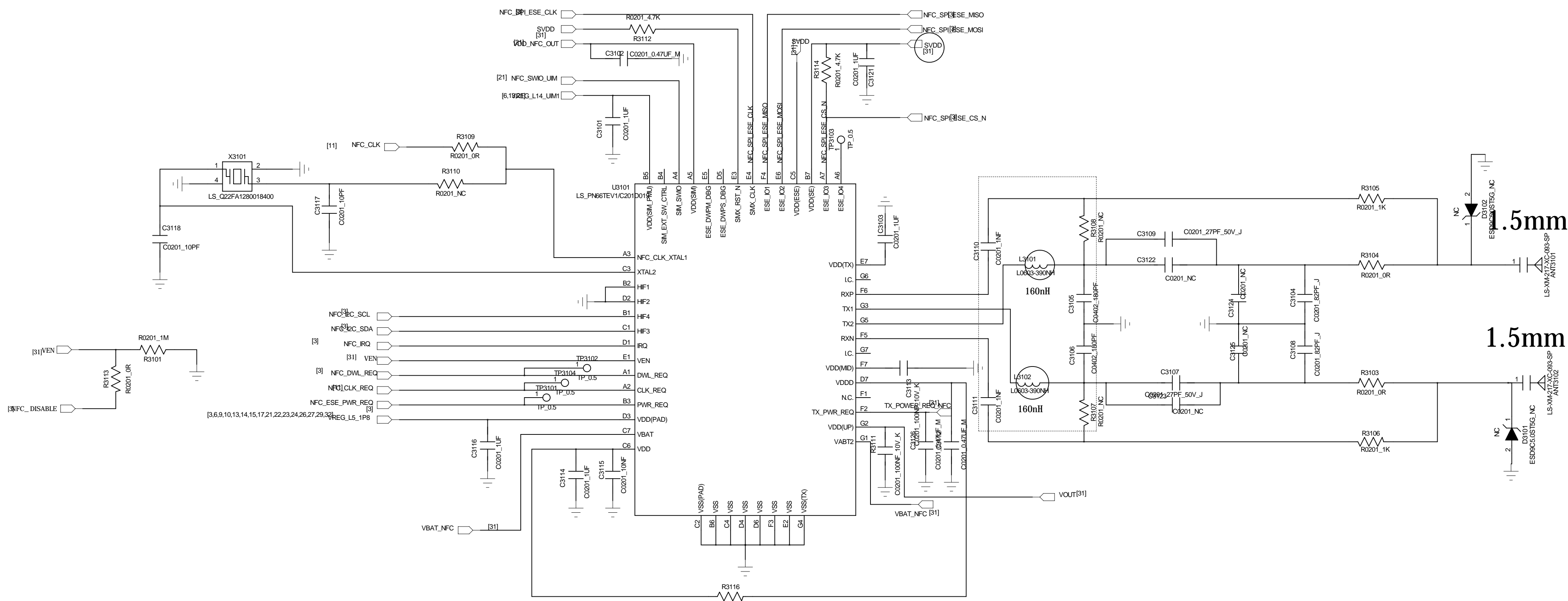
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WTR 2965_0



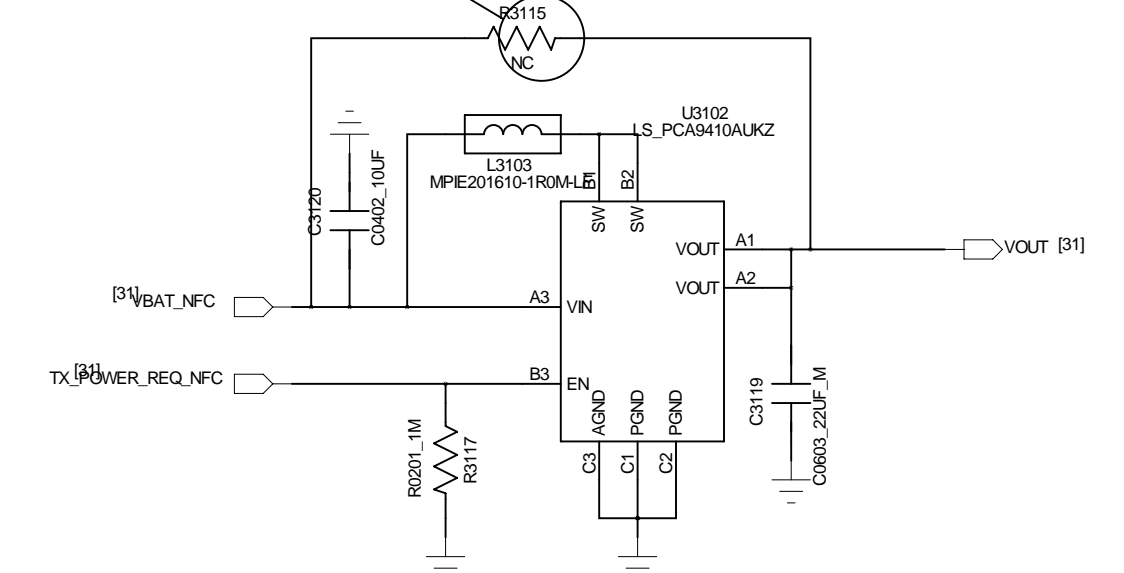


NFC



FOR PN65T

Boost



Need to check Value of CAP and IND

Change list

38	DNI R0702	can be DNI for MSM with right efuse
39	change R1301 to PMR10EZPFU10L0	for SMT
40	change L3501 to 3.9nH	Update RF Matching
41	change C3606 to NC Change L3504 to 15nH	Update RF Matching
42	Change R3104 to 3nH; change C3109 to 1pf	Update Ant matching

46	Change C2106 to 68PF(Size:0402)	For GSM_LB LCD_ON desense
47	Change C2001 to 22PF Change R2405 and R2403 to BLM15EG221SN1	For LTE_B3 DRX LCD_ON desense
48	add R1543 for PM8953 OPT_1	Reserve the option
49	add TP2001	for easier debug for audio issues
50	Change L3608 to 1.5NH,R3606 to 1NH	Update RF Matching for LTE_B1/3
51	change L1603 from TFM201610ALC-1R0MQAA to TFM201610ALC-1R0MTAA	TDK only have TFM201610ALC-1R0MTAA in 2016
52	change R1542 to DNI, change R1522 to 0ohm	DVT board use PM8953 2.0
53	update connectivity/RF part category information	update connectivity/RF part category information
54	Delete MPP_2 PA_THERM1	Delete MPP_2 PA_THERM1
55	change C5032,C5031 from 100pF to 56pF hange C5034,C5035 from 220pF to 82pF change C5056,C5057 from 12pF to 10pF change R5012,R5011 from DNI to 1k change R5015,R5016 from 1.1k to DNI	Update NFC matching
56	change C1502 to 0.1uF	PMIC requirement
57	Change L3602 to 8.2PF	Update RF Matching for LTE_B1