

Xiaomi Redmi Y3 Schematic Diagram

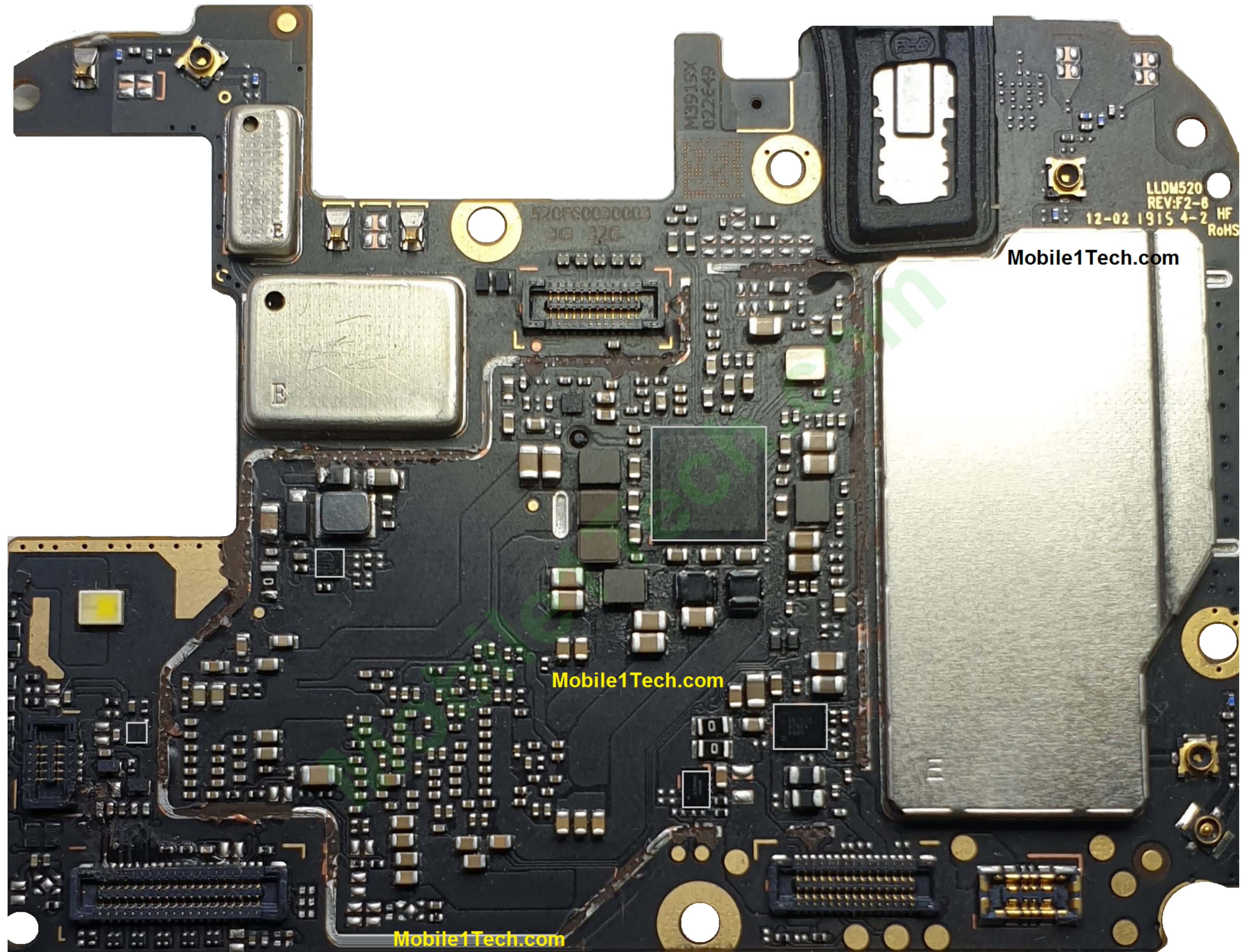


Xiaomi
Smartphone

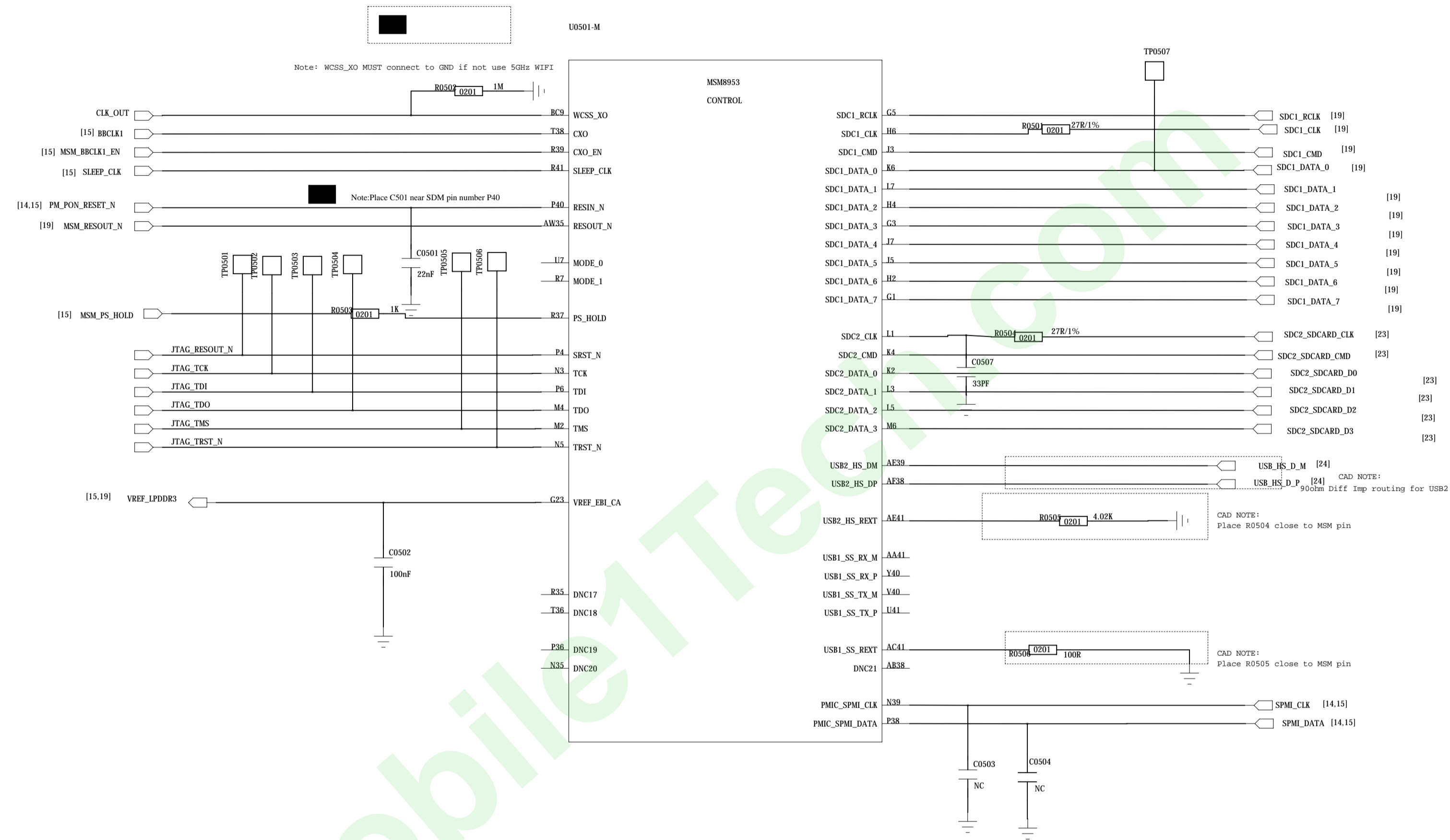
Schematic

Diagram

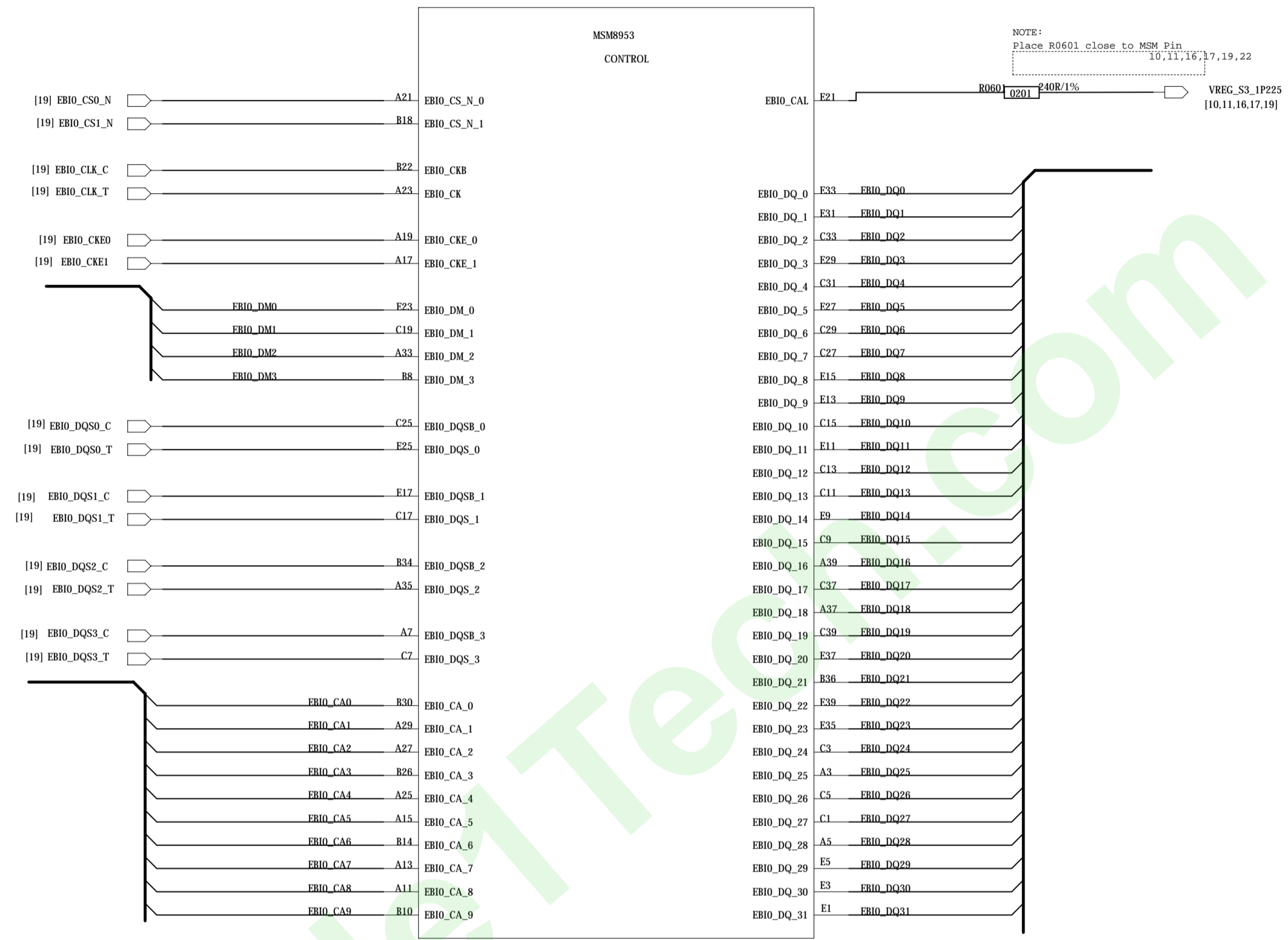


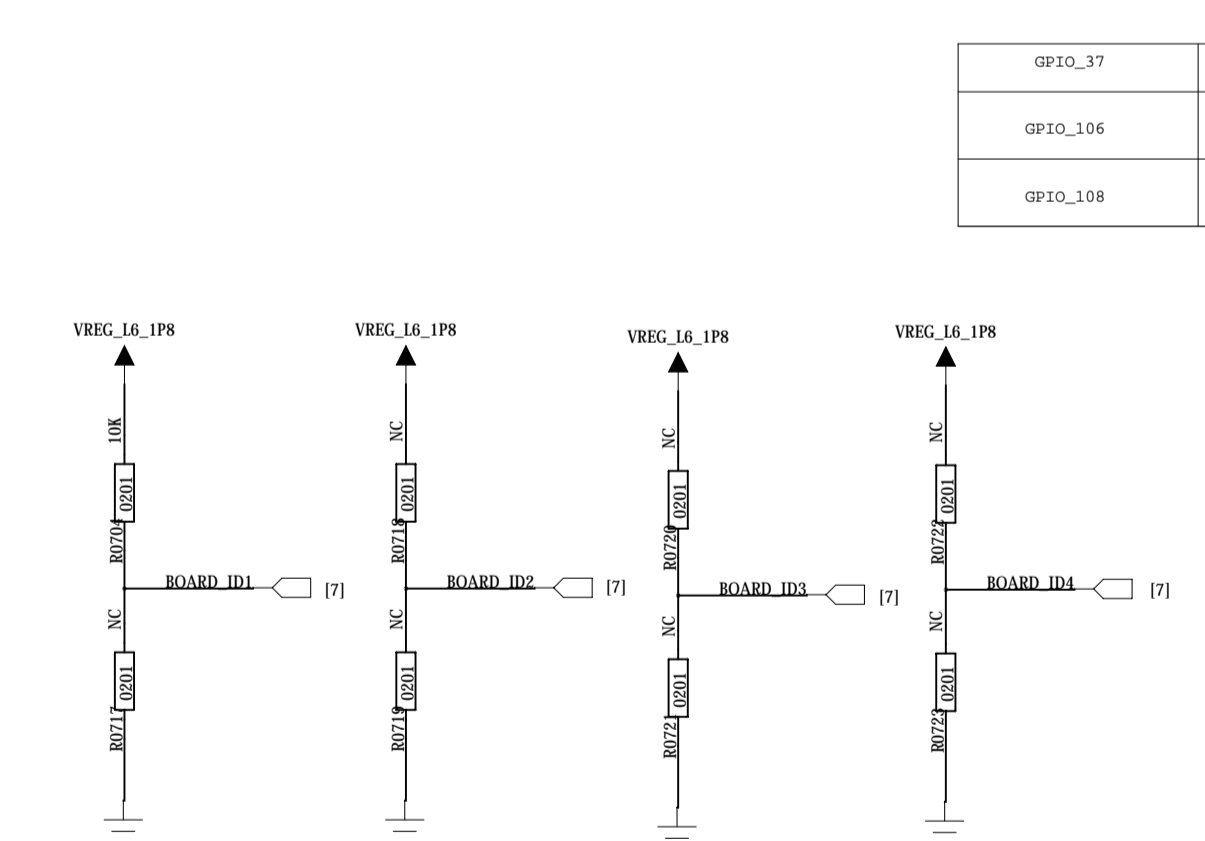
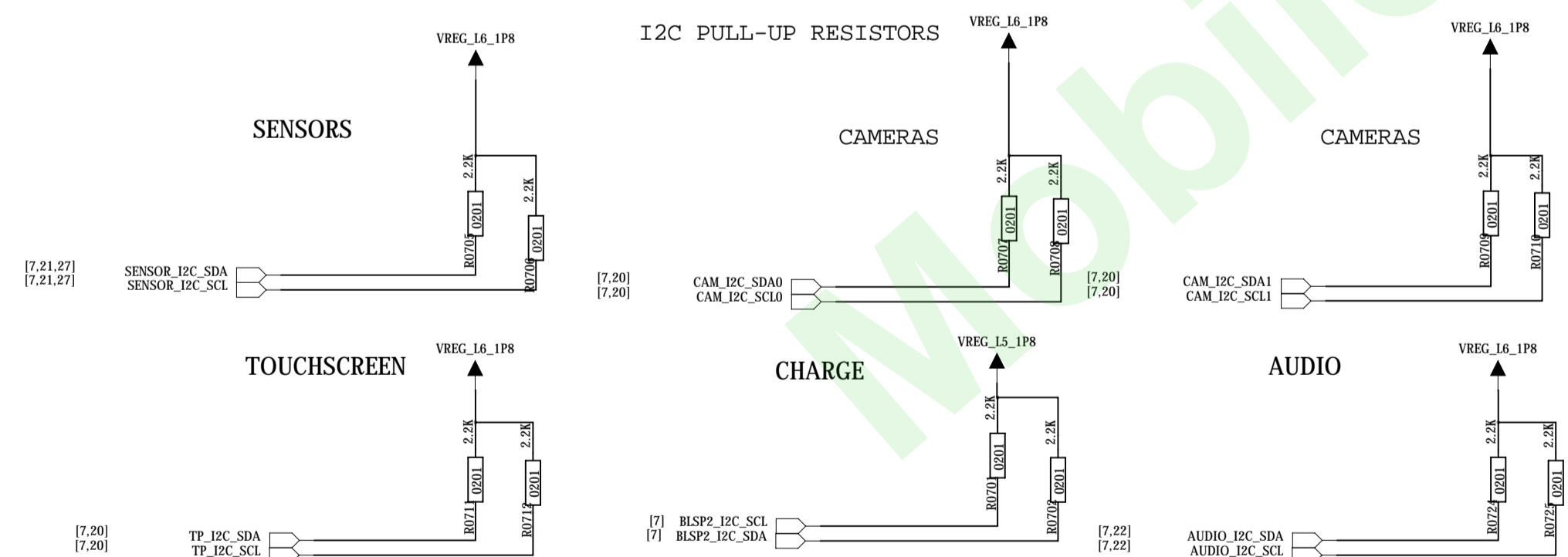
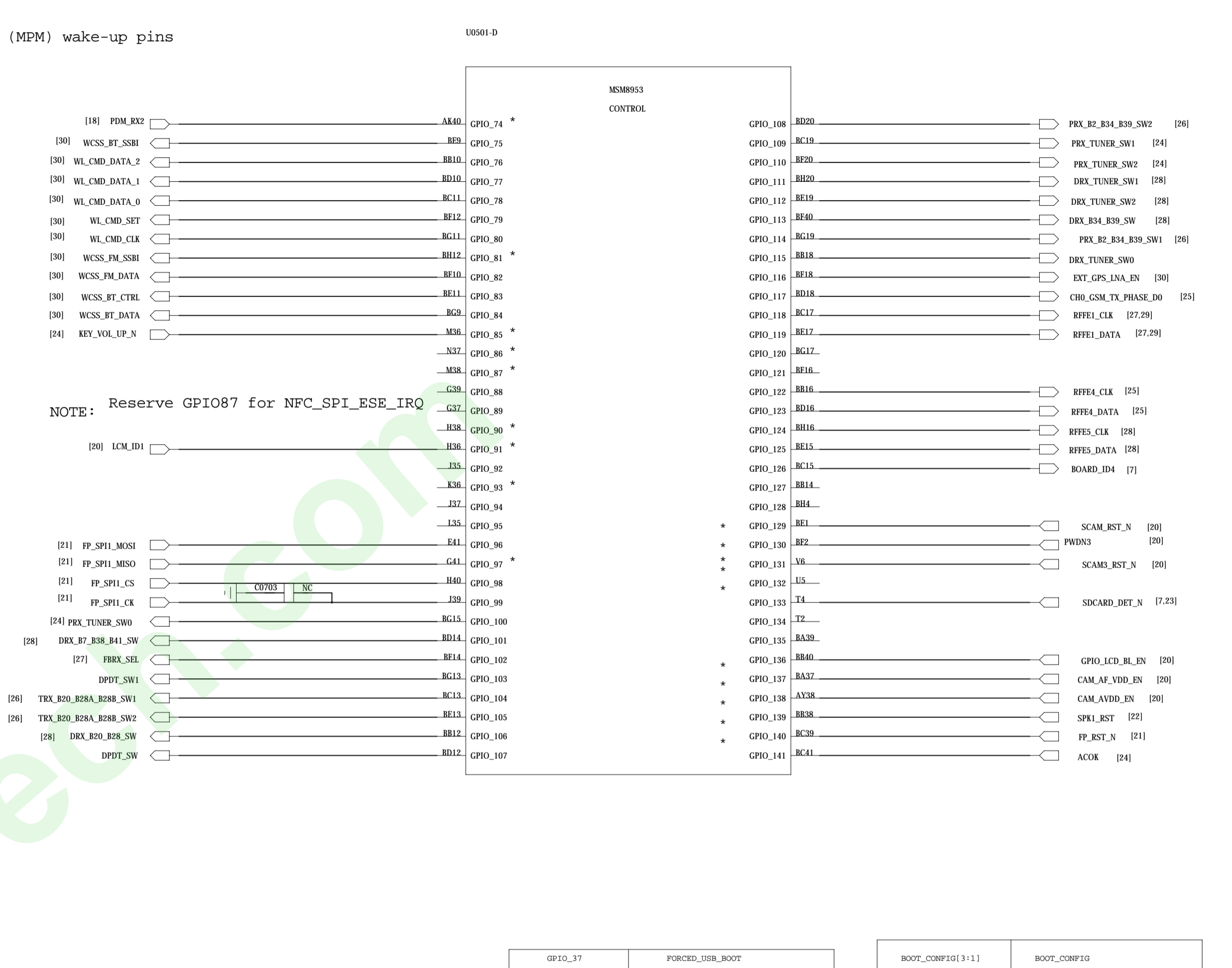
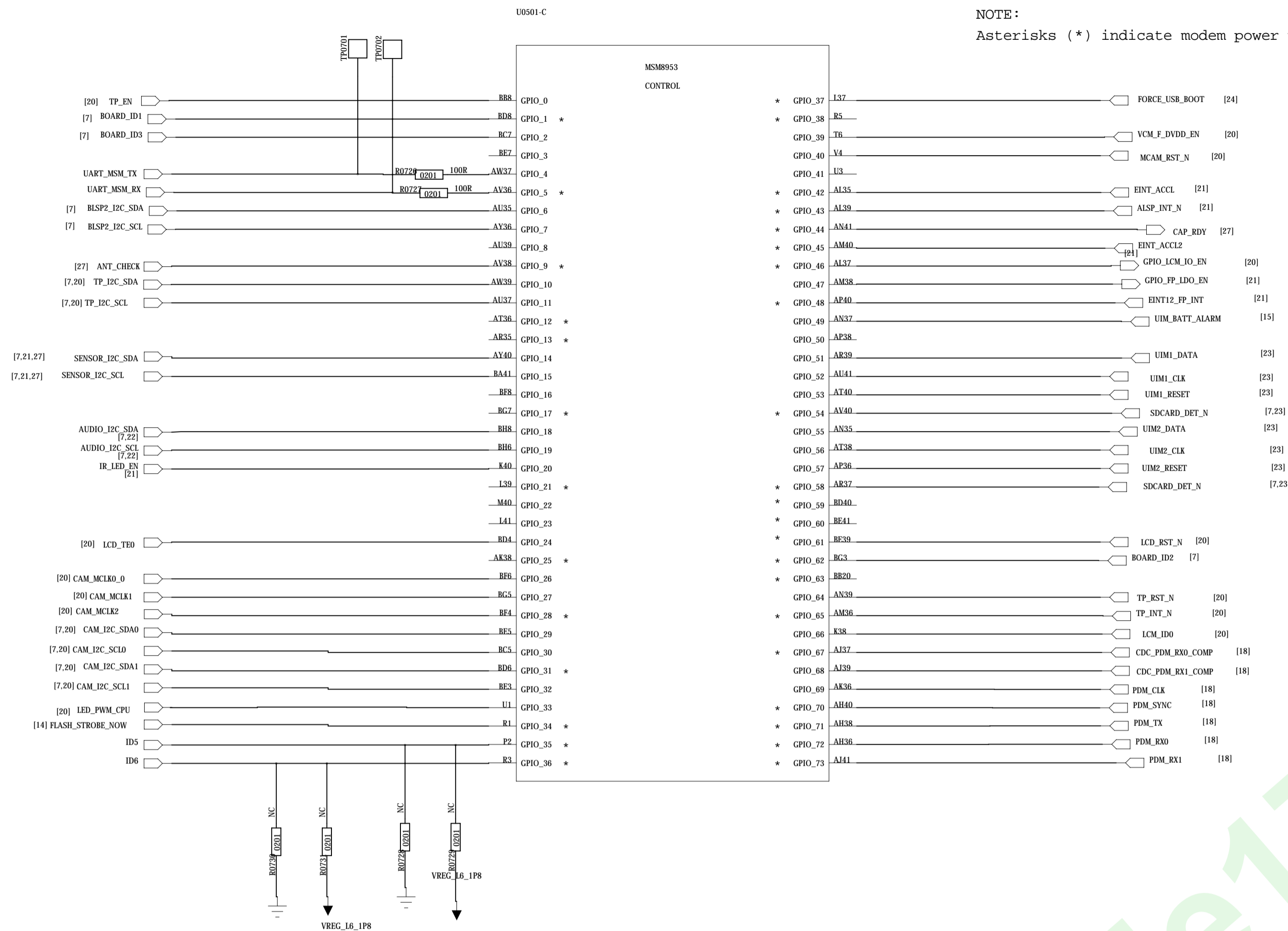


Xiaomi Redmi Y3 /PCB:LLDM520



U0501-B





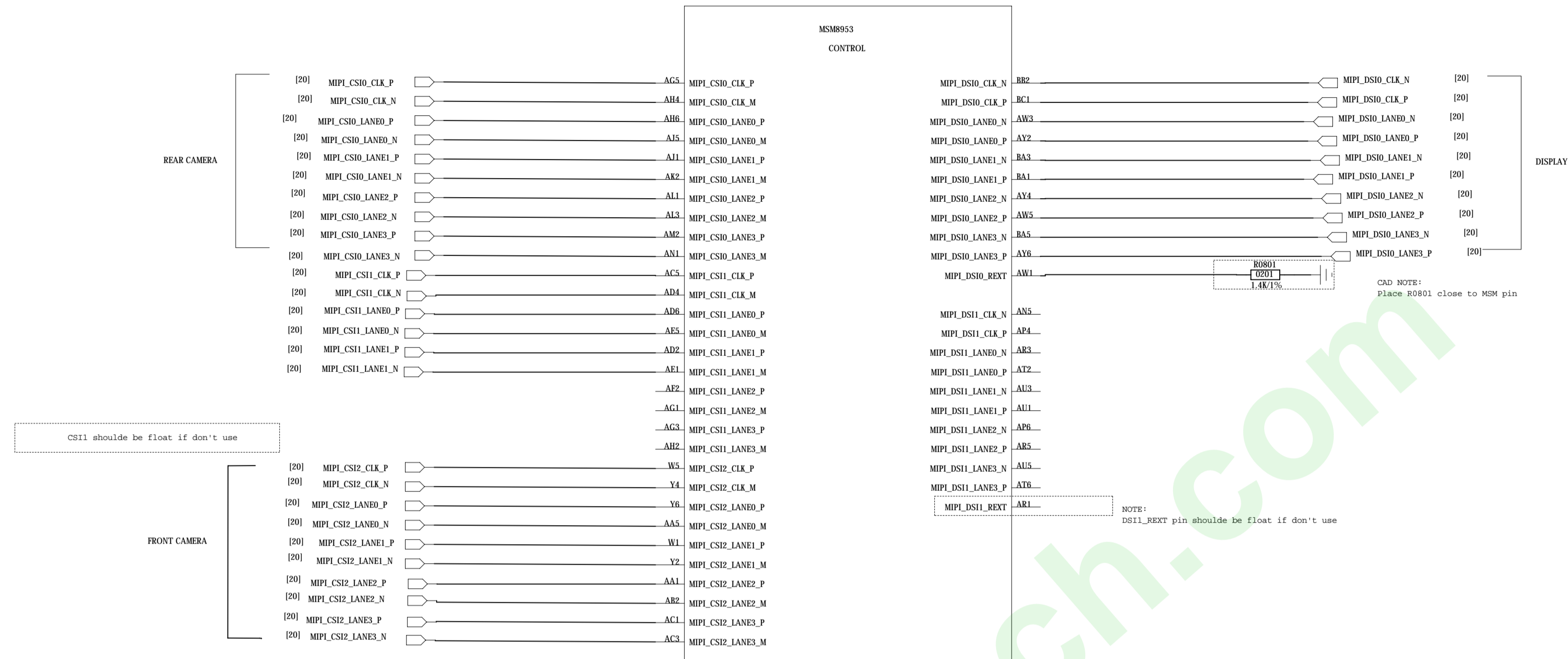
GPIO_37	FORCED_USB_BOOT
GPIO_106	MDMG_DISABLE
GPIO_108	APPS_BOOT_FROM_ROM

BOOT_CONFIG[3:1]	BOOT_CONFIG
0b000	SDC1 -> SDC2 -> USB2.0
0b001	SDC2 -> SDC1 -> USB2.0
0b010	SDC1 -> USB2.0
0b011	USB2.0

Default Boot Config (0b000) is SDC1(eMMC)

NOTE:
Ensure SW sets these GPIOs (Sensor, CTP and Camera I2C bus) to input pull down when the peripherals are powered off to eliminate leakage.

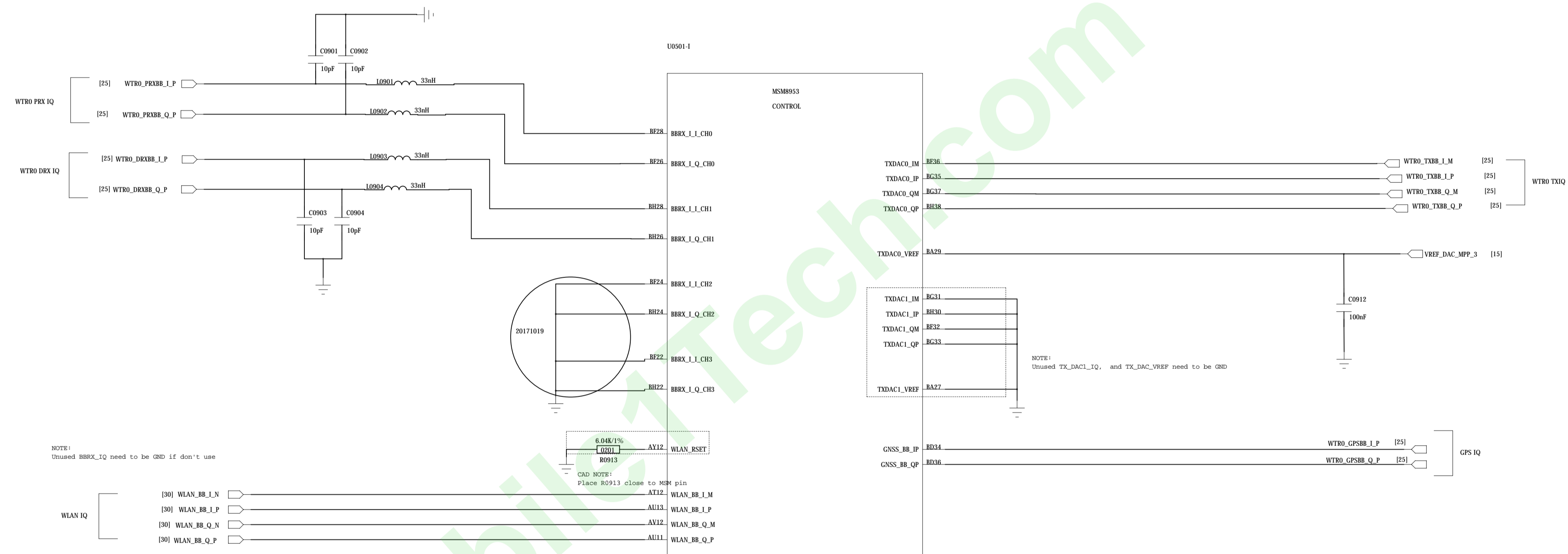
U0501-E

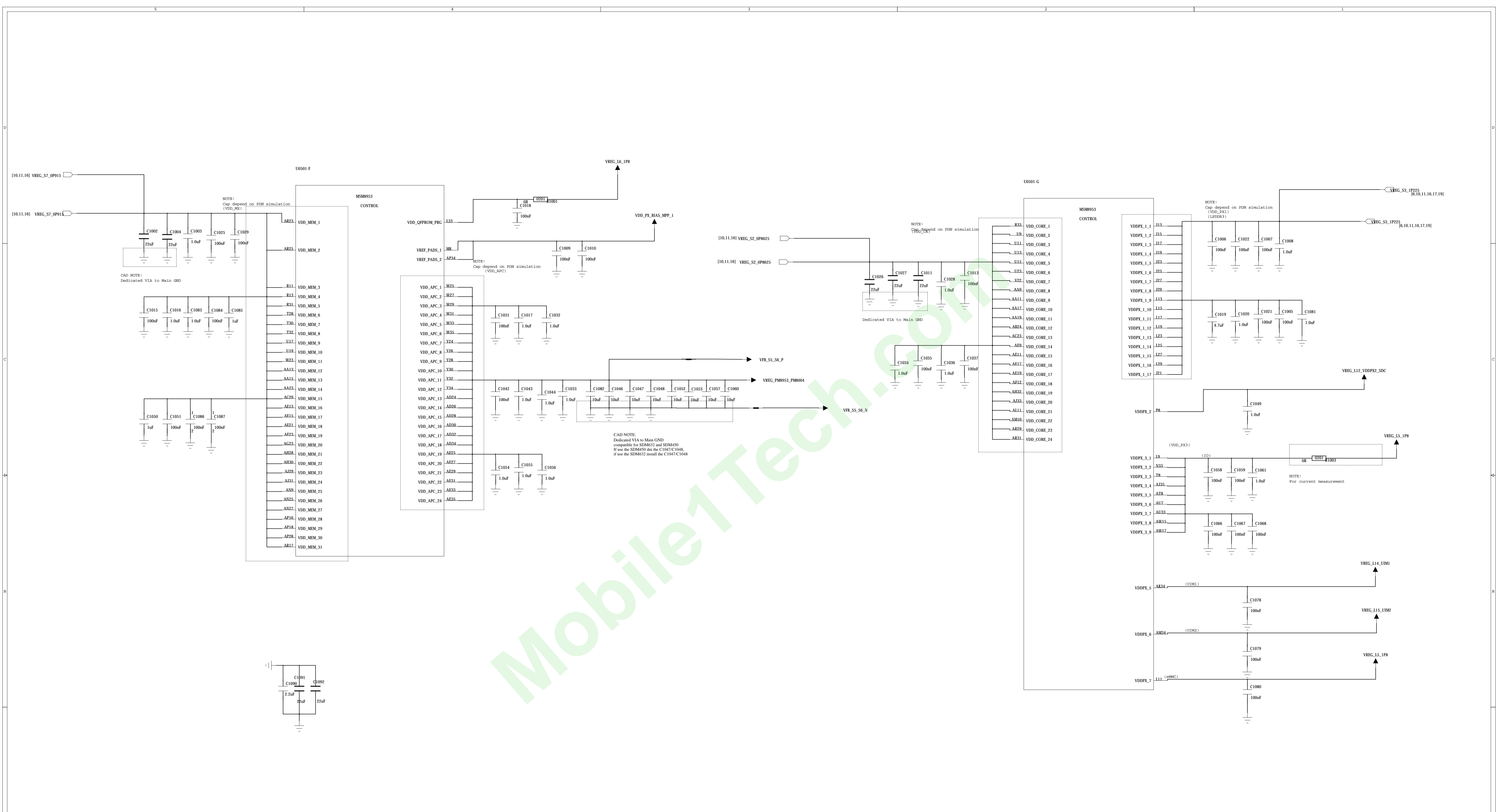


CSI Pin Name	CSI DPHY 4-lane	CSI DPHY 2+1 Mode	CSI CPHY 3Phase Mode
CSI0_3PHASE_PIN0	CSI0_CLKP	CSI0_2LANE_CLKP	NC
CSI0_3PHASE_PIN1	CSI0_CLKN	CSI0_2LANE_CLKN	CSI0_TRI0_A
CSI0_3PHASE_PIN2	CSI0_DP0	CSI0_2LANE_DP0	CSI0_TRI0_B
CSI0_3PHASE_PIN3	CSI0_DN0	CSI0_2LANE_DN0	CSI0_TRI0_C
CSI0_3PHASE_PIN4	CSI0_DP1	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_2LANE_CLKN	CSI0_TRI2_C
CSI1_3PHASE_PIN1	CSI1_CLKN	CSI1_2LANE_CLKN	CSI1_TRI0_A
CSI1_3PHASE_PIN2	CSI1_DP0	CSI1_2LANE_DP0	CSI1_TRI0_B
CSI1_3PHASE_PIN3	CSI1_DN0	CSI1_2LANE_DN0	CSI1_TRI0_C
CSI1_3PHASE_PIN4	CSI1_DP1	CSI1_2LANE_DP1	CSI1_TRI1_A
CSI1_3PHASE_PIN5	CSI1_DN1	CSI1_2LANE_DN1	CSI1_TRI1_B
CSI1_3PHASE_PIN6	CSI1_DP2	CSI1_1LANE_DP0	CSI1_TRI1_C
CSI1_3PHASE_PIN7	CSI1_DN2	CSI1_1LANE_DN0	CSI1_TRI2_A
CSI1_3PHASE_PIN8	CSI1_DP3	CSI1_1LANE_CLKP	CSI1_TRI2_B
CSI1_3PHASE_PIN9	CSI1_DN3	CSI1_2LANE_CLKN	CSI1_TRI2_C
CSI2_3PHASE_PIN1	CSI2_CLKN	CSI2_2LANE_CLKN	CSI2_TRI0_A
CSI2_3PHASE_PIN2	CSI2_DP0	CSI2_2LANE_DP0	CSI2_TRI0_B
CSI2_3PHASE_PIN3	CSI2_DN0	CSI2_2LANE_DN0	CSI2_TRI0_C
CSI2_3PHASE_PIN4	CSI2_DP1	CSI2_2LANE_DP1	CSI2_TRI1_A
CSI2_3PHASE_PIN5	CSI2_DN1	CSI2_2LANE_DN1	CSI2_TRI1_B
CSI2_3PHASE_PIN6	CSI2_DP2	CSI2_1LANE_DP0	CSI2_TRI1_C
CSI2_3PHASE_PIN7	CSI2_DN2	CSI2_1LANE_DN0	CSI2_TRI2_A
CSI2_3PHASE_PIN8	CSI2_DP3	CSI2_1LANE_CLKP	CSI2_TRI2_B
CSI2_3PHASE_PIN9	CSI2_DN3	CSI2_1LANE_CLKN	CSI2_TRI2_C

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MSM8953 MIPI





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MSM8953 POWER1

CAD NOTE:
About star route from PMIC output Cap:

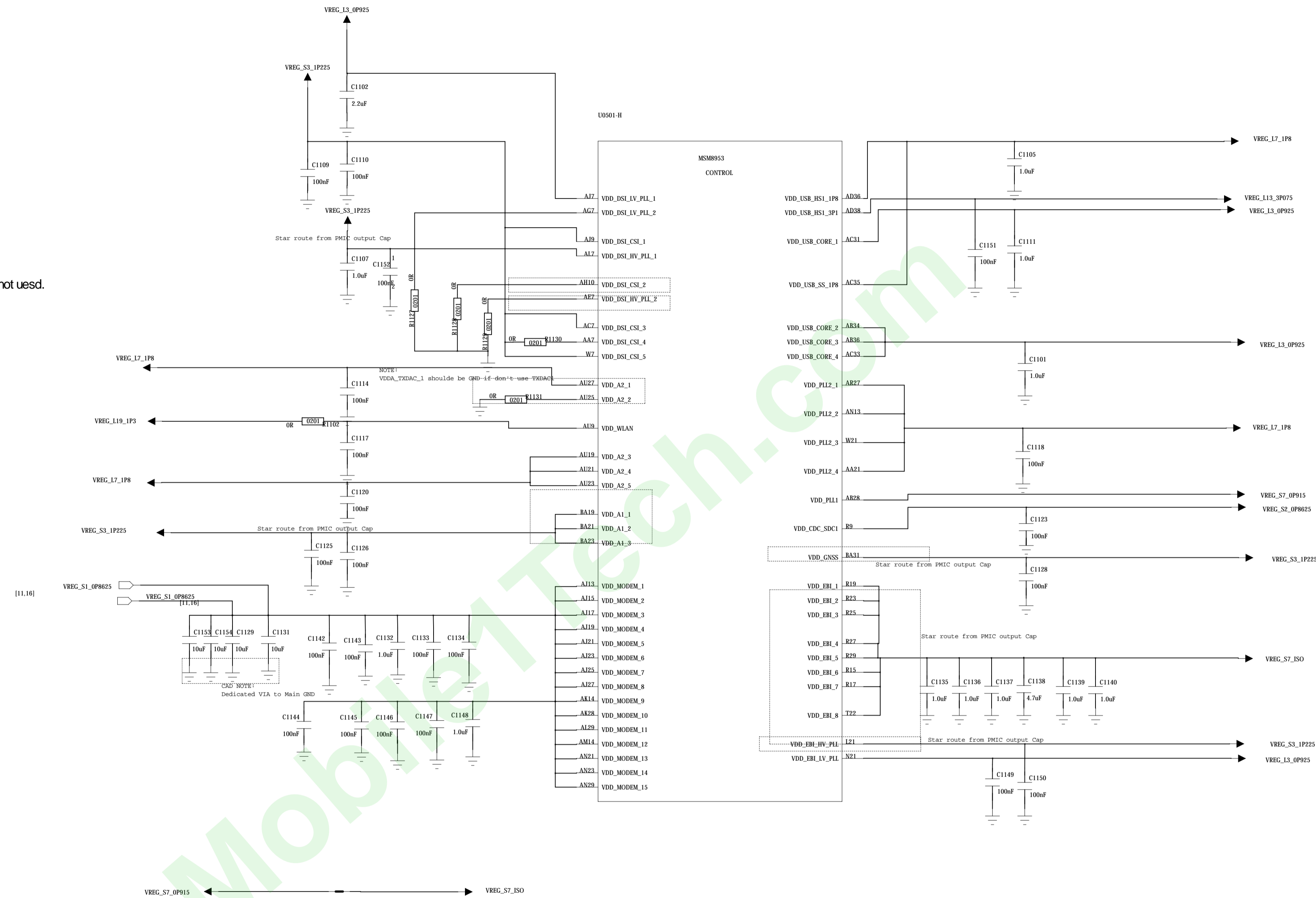
Note: Connect SDM pins (AG7, AH10 and AE7) to GND if DSI1 is not used.

Note: Respective Camera pins can be left open if not used.

Float AC7 pin if CAM0 not used

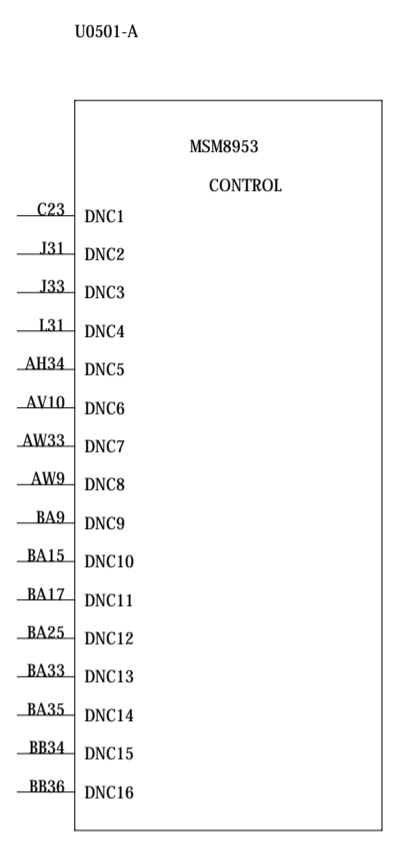
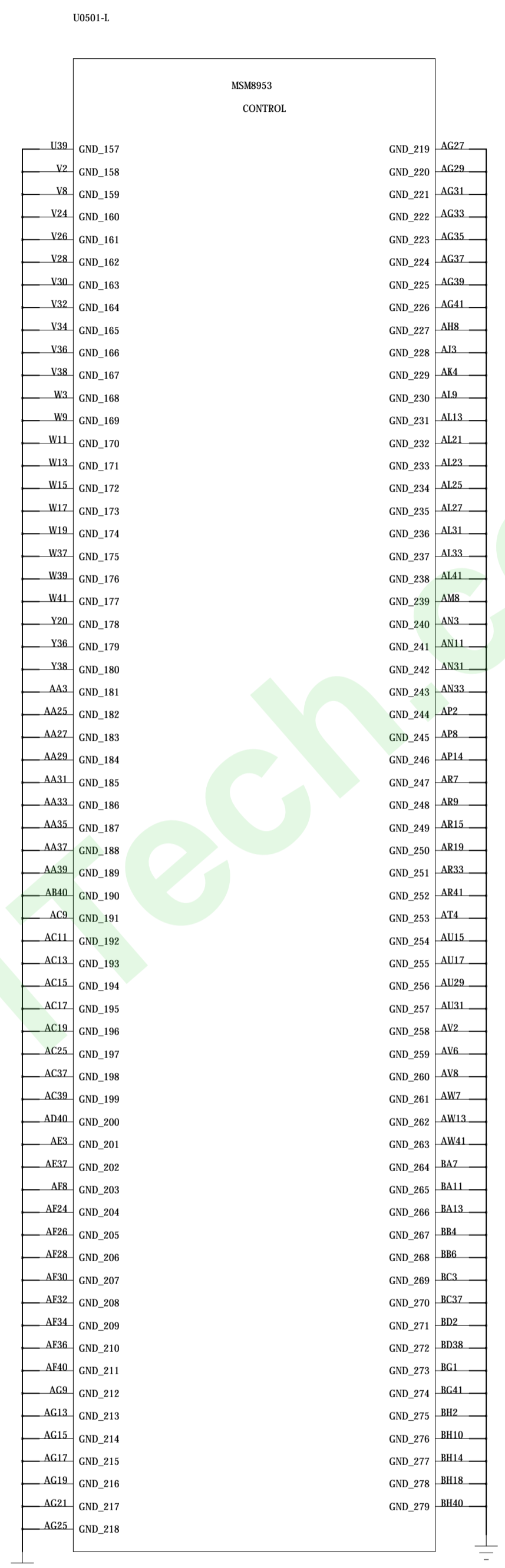
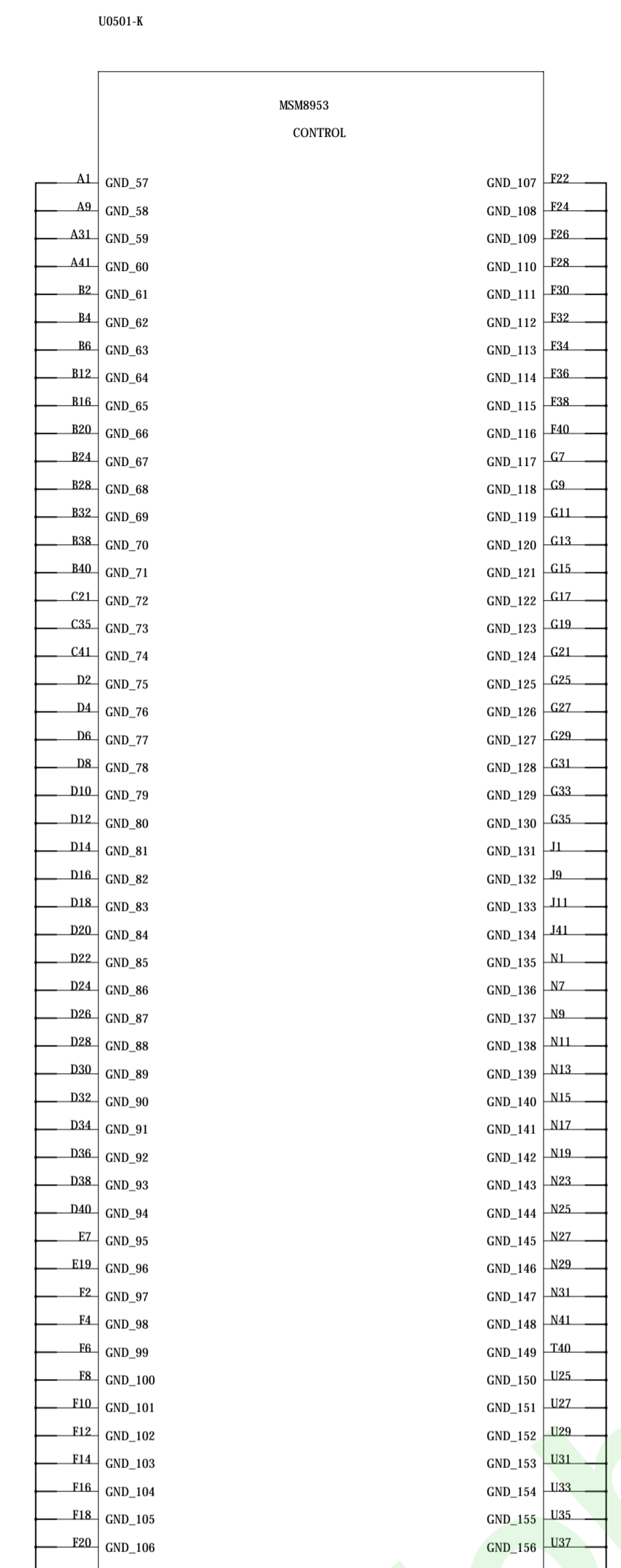
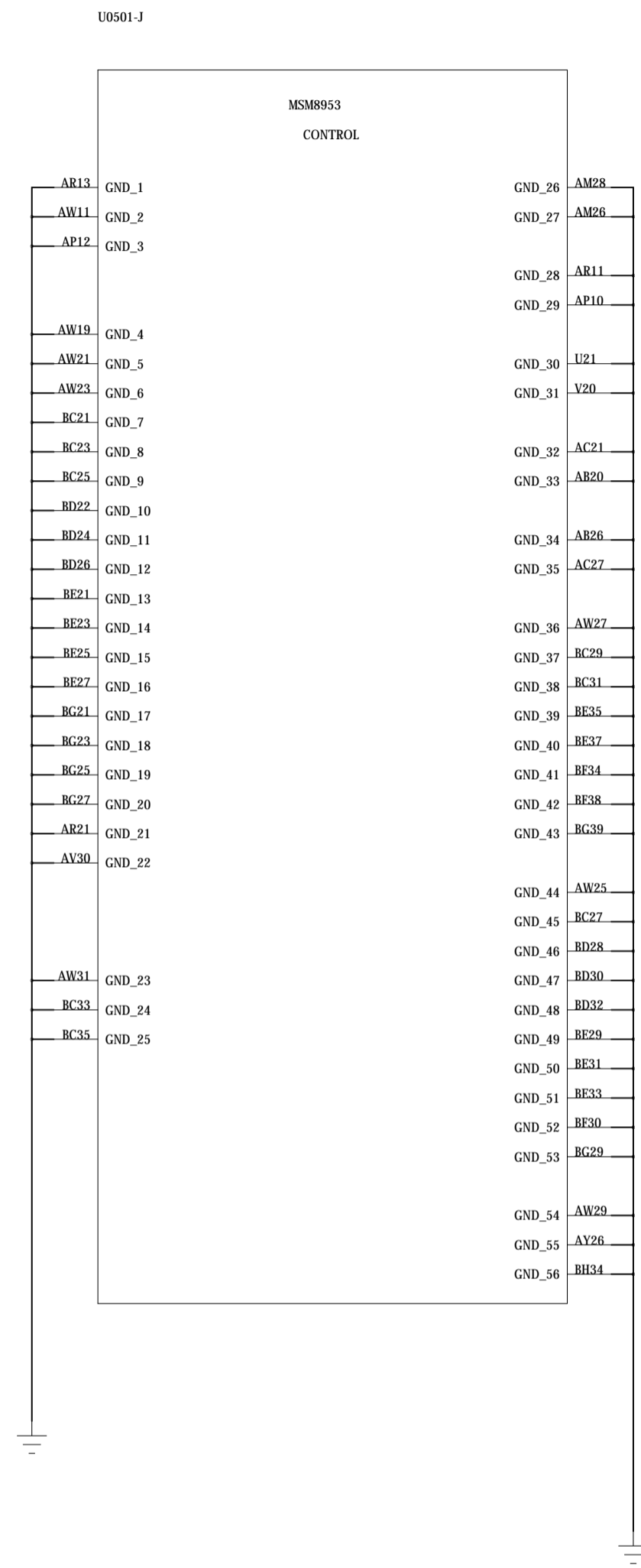
Float AA7 pin if CAM1 not used

Float W7 pin if CAM2 not used



MSM8953 POWER2

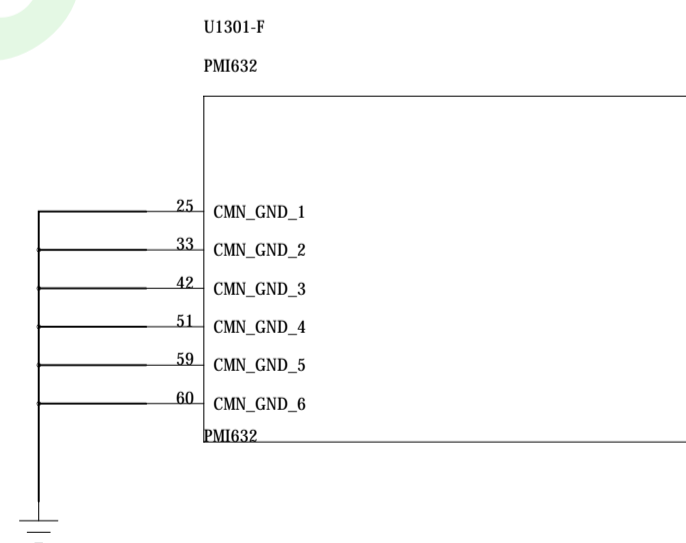
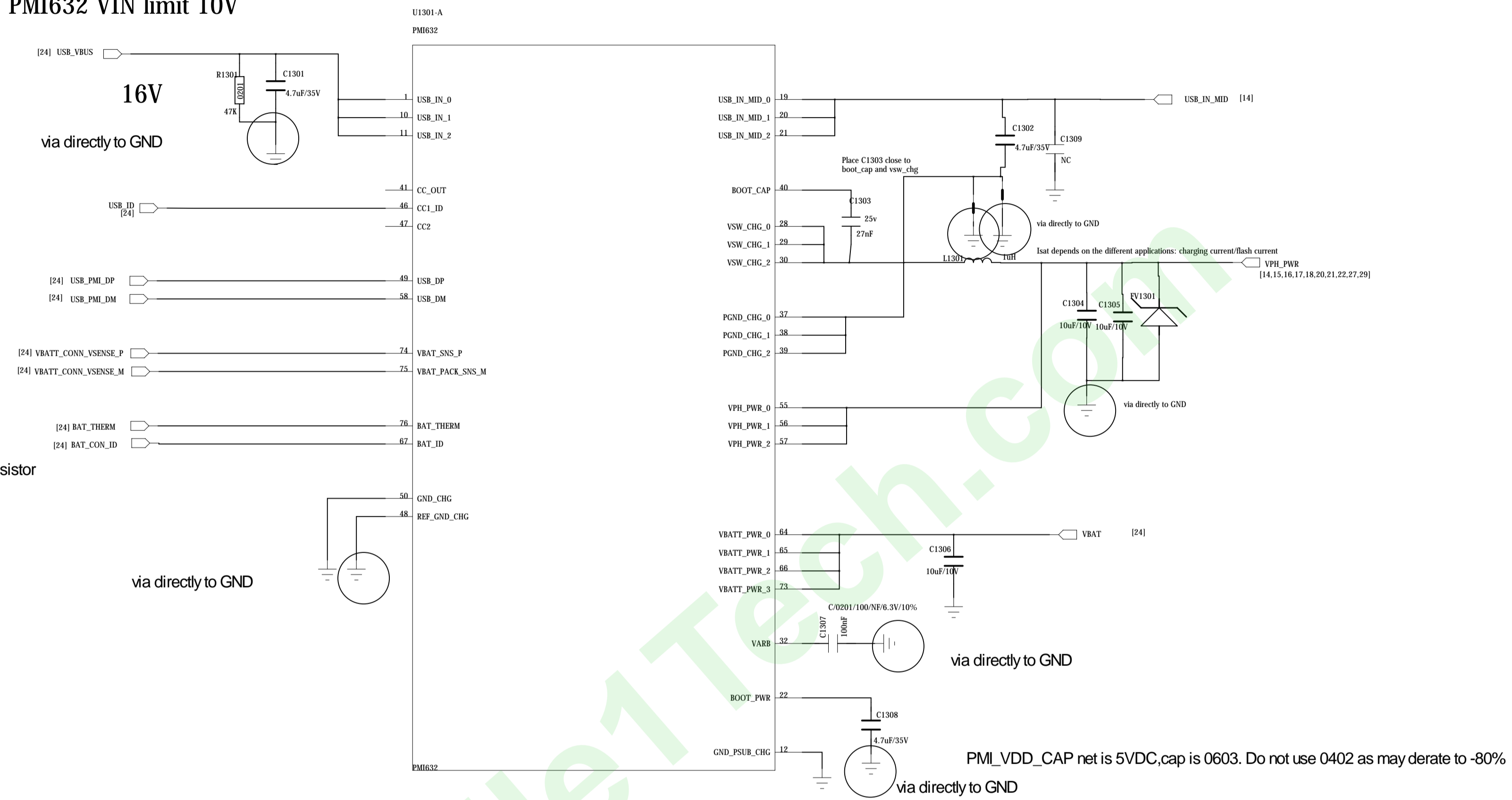
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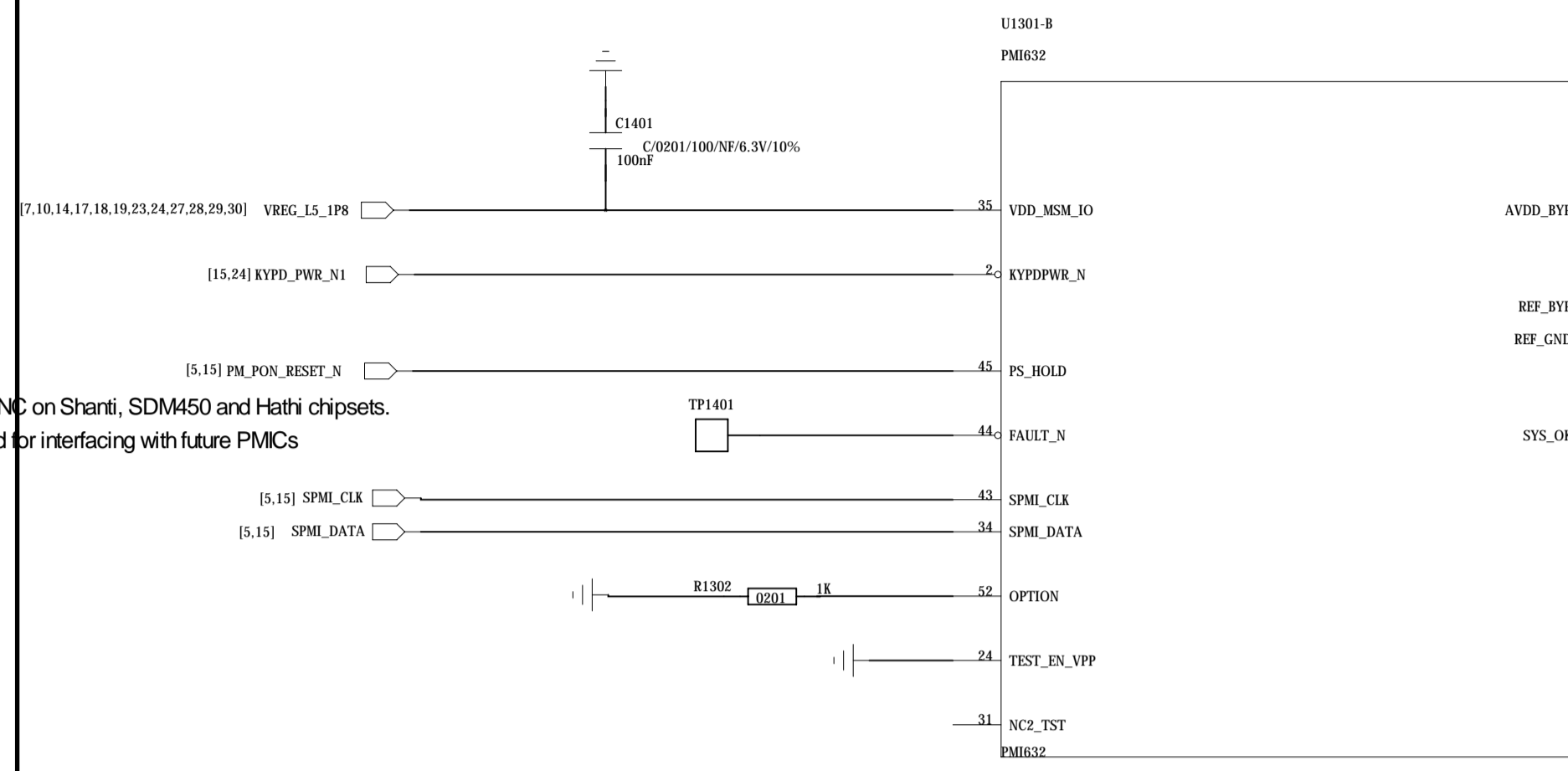


Use C1301= 4.7uF for Single Charging Config
 Use C1301 = 2.2uF for Parallel Charging Config

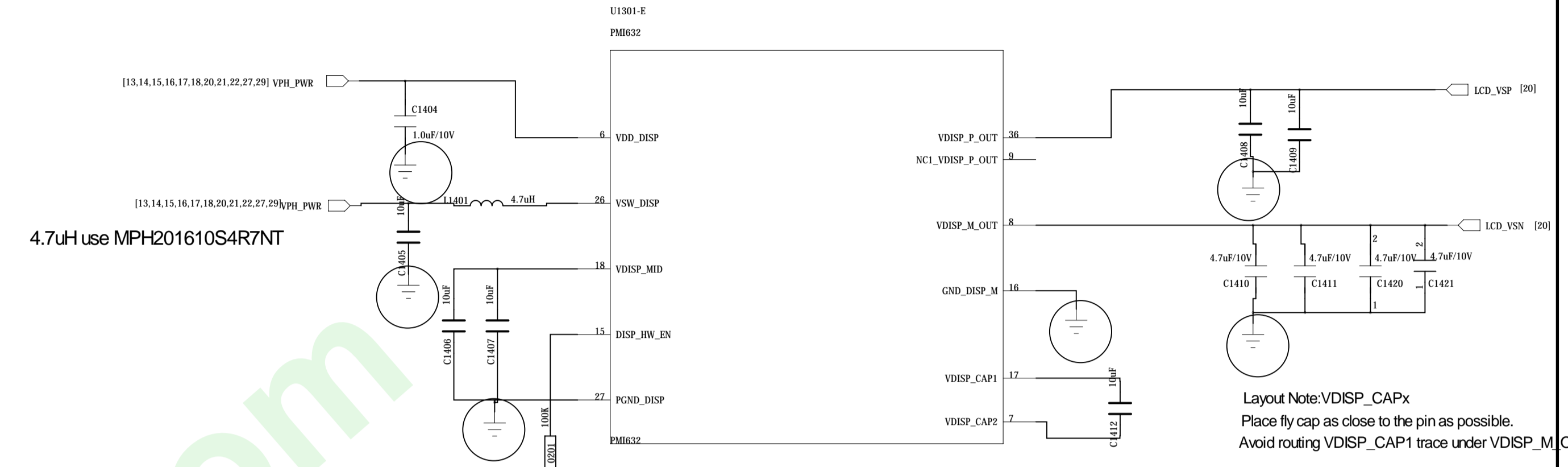
PMI632 VIN limit 10V

BAT_THERM have the internal pull-up resistor
 The pull up options are 30K,100K,400K





AVDD_BYP should be routed away from noisy traces
 Trace from pin to cap and ONE dedicated via from cap to main grounding plane.
 Dedicated trace from REF_BYP REF_GND to cap
 REF_BYP and REF_GND should be routed away from noisy trace

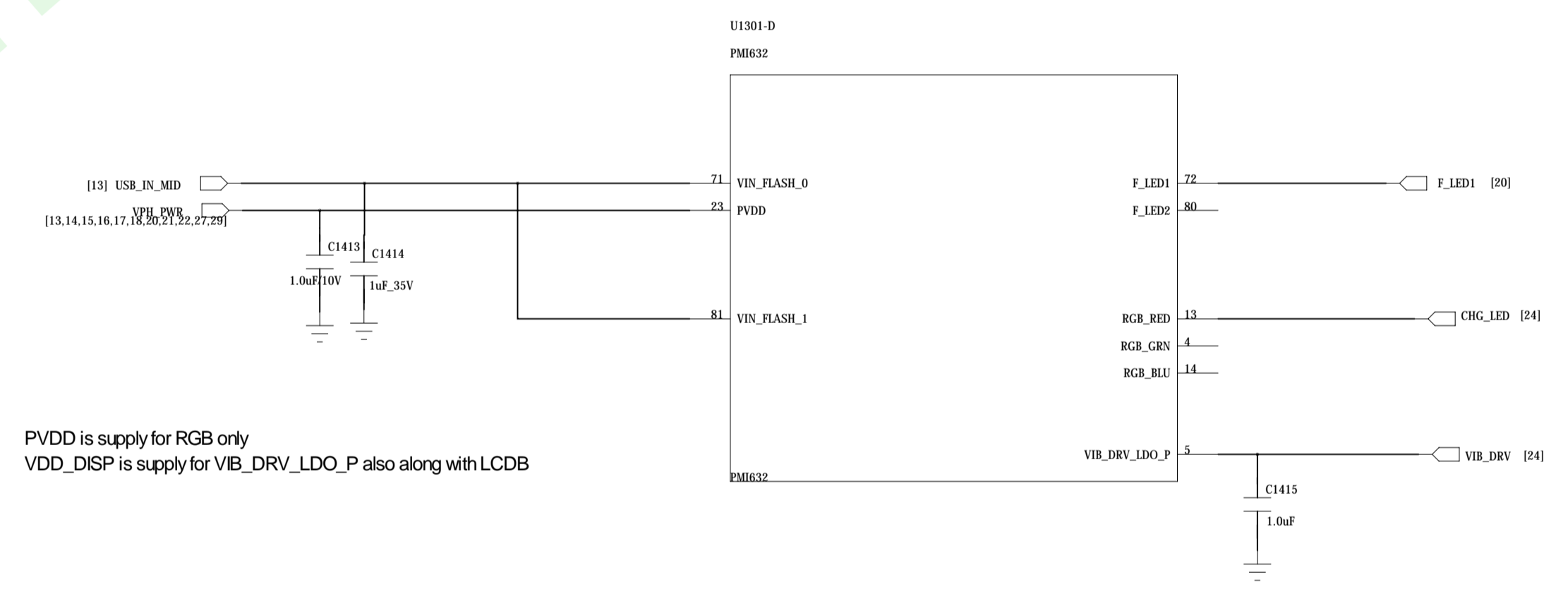
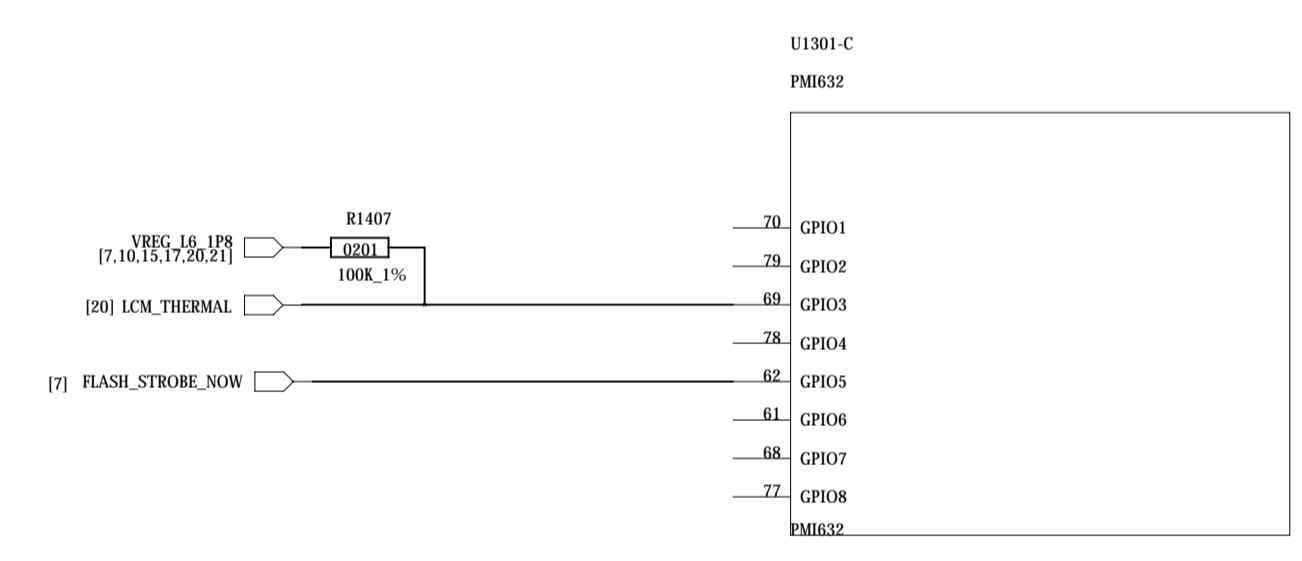


4.7uH use MPH201610S4R7NT

Layout Note: DISP_HW_EN
 This signal is used for "Display Tap to Wake"
 If unused in HW, this pin should be connected to GND
 Bench DC - Connect to a DIO for testability

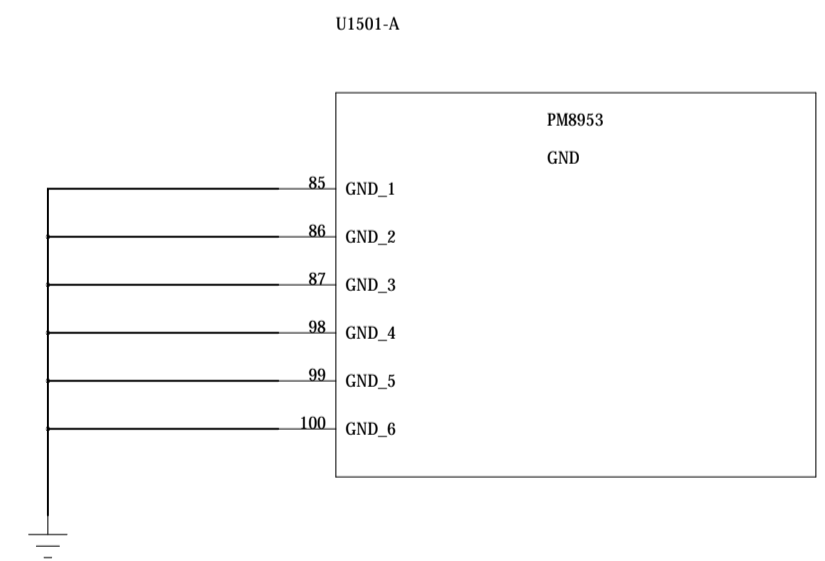
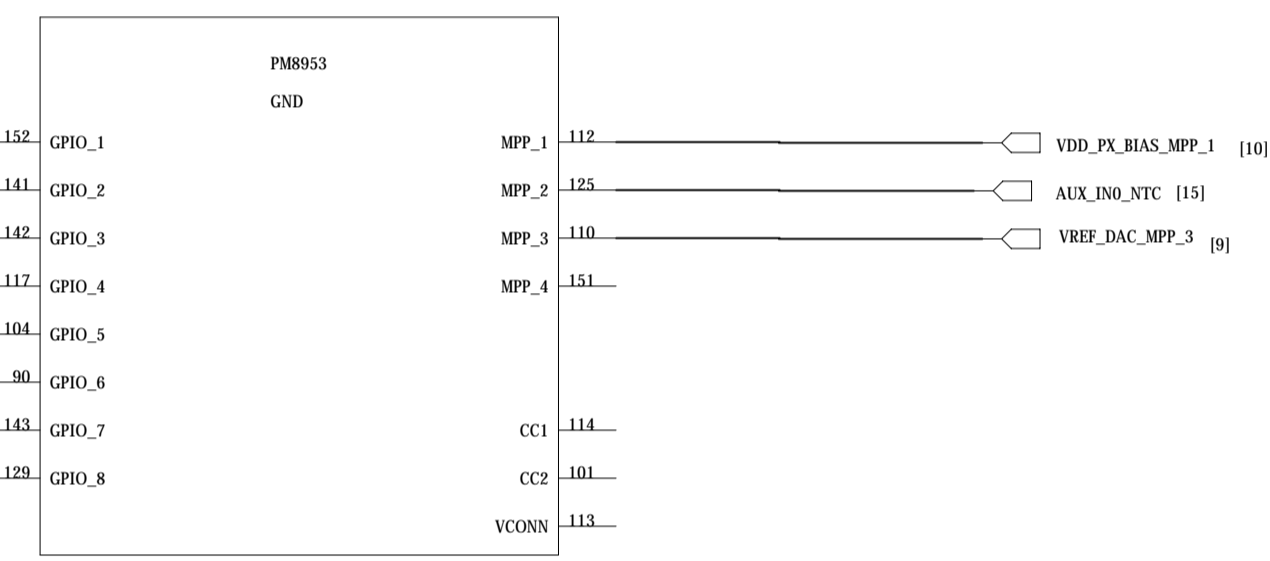
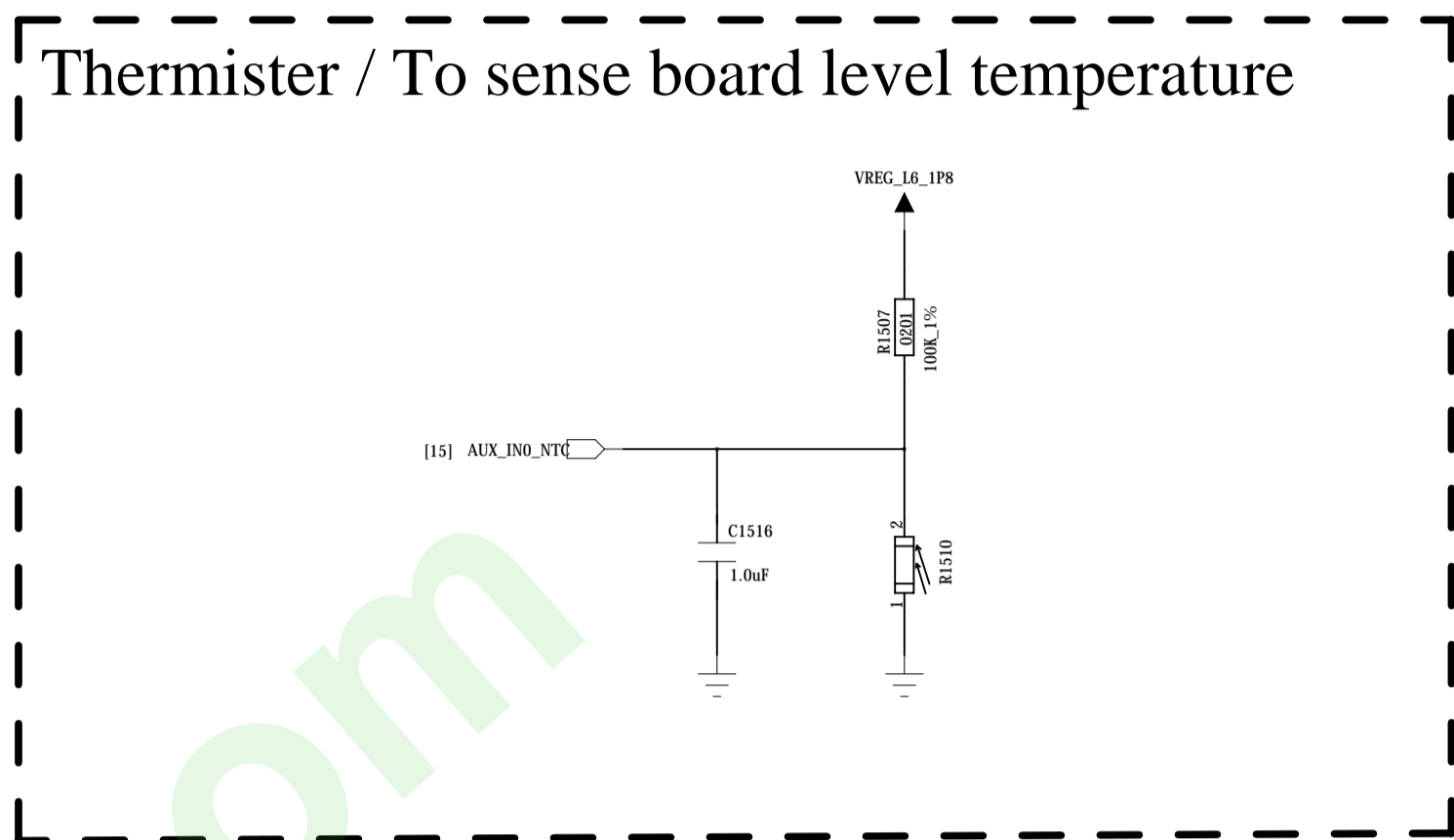
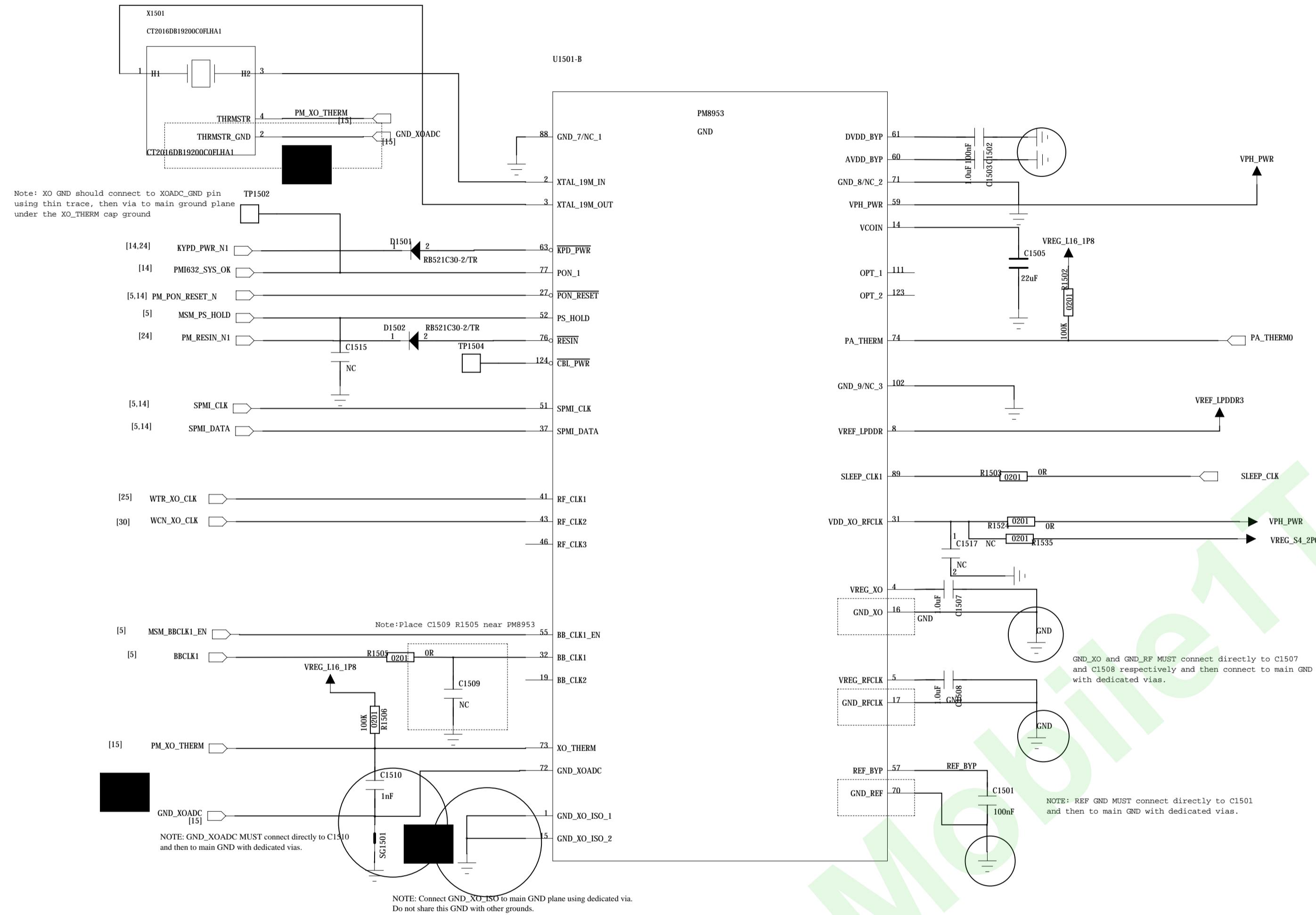
Layout Note: VDISP_CAPx
 Place fly cap as close to the pin as possible.
 Avoid routing VDISP_CAP1 trace under VDISP_M_OUT.

OPTION	PON Configuration	PD Resistance
1	SPM,uUSB	1K
2	I2C,uUSB	22K
7	I2C,TypeC	510K
	SPM,TypeC	1M



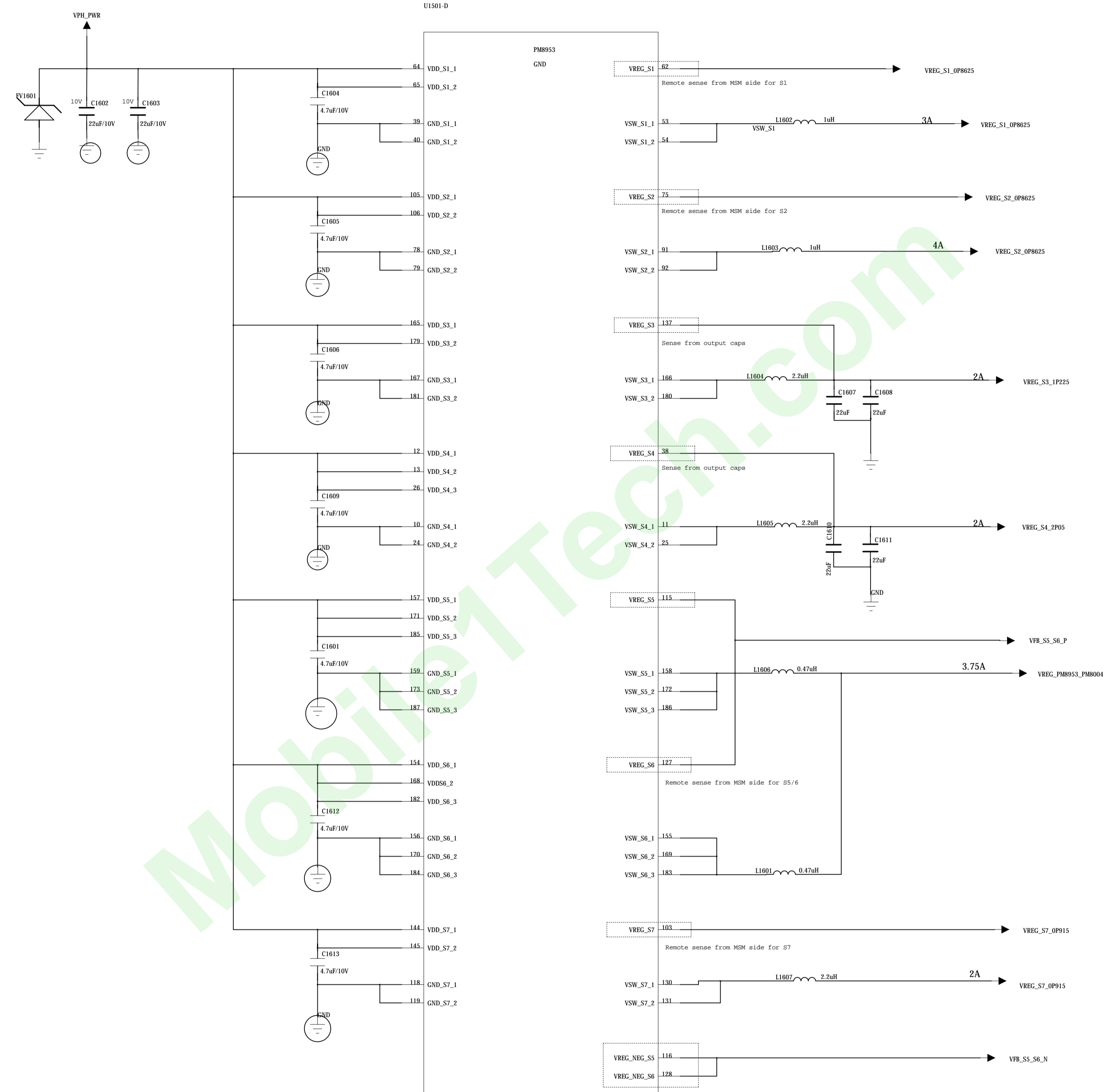
PVDD is supply for RGB only
 VDD_DISP is supply for VIB_DRV_LDO_P also along with LCDB

Thermister / To sense board level temperature



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PM8953 Control/Interface



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PM8953 SMPS

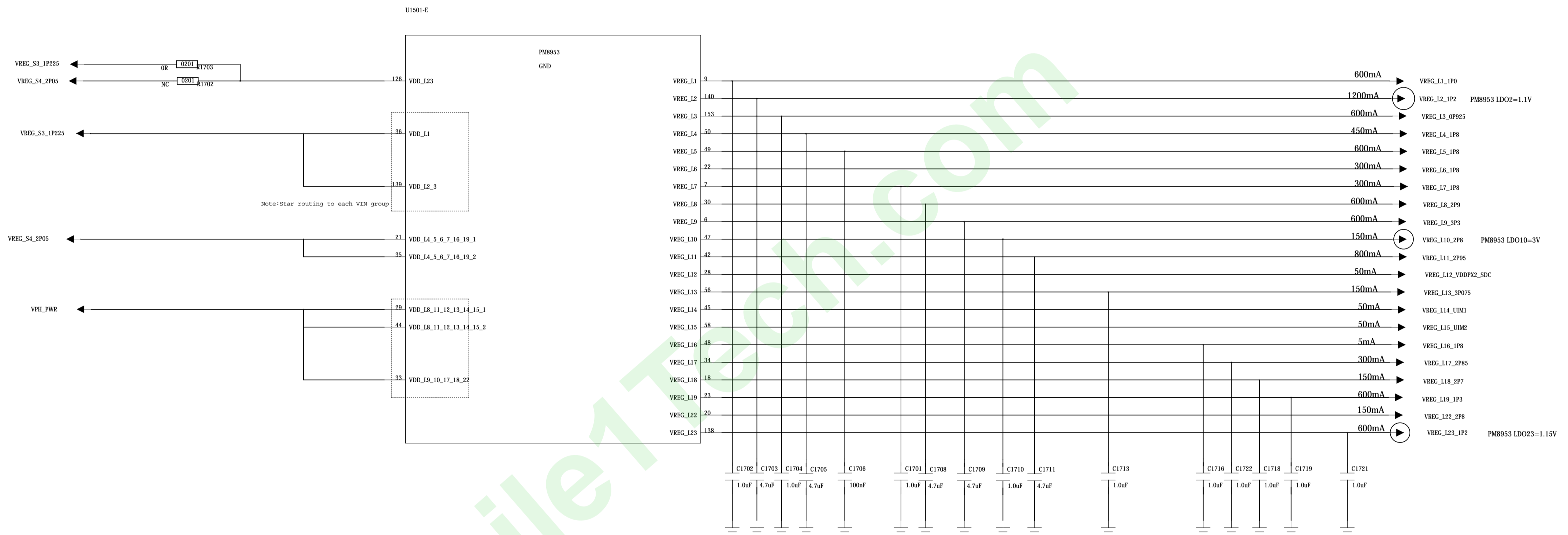


Table 3-7 PM8953 regulators and their

Function	Circuit type	Default
S1	SMPS	
S2	SMPS	
S3	SMPS	
S4	SMPS	
S5	SMPS	
S6	SMPS	
S7	SMPS	
L1	NMOS LDO	
L2	NMOS LDO	
L3	NMOS LDO	
L4	PMOS LDO	
L5 ⁴	PMOS LDO	
L6	PMOS LDO	
L7	PMOS LDO	
L8	PMOS LDO	
L9	PMOS LDO	$V_{out} = V_{in} - V_{drop}$
L10	PMOS LDO	
L11 ⁵	PMOS LDO	

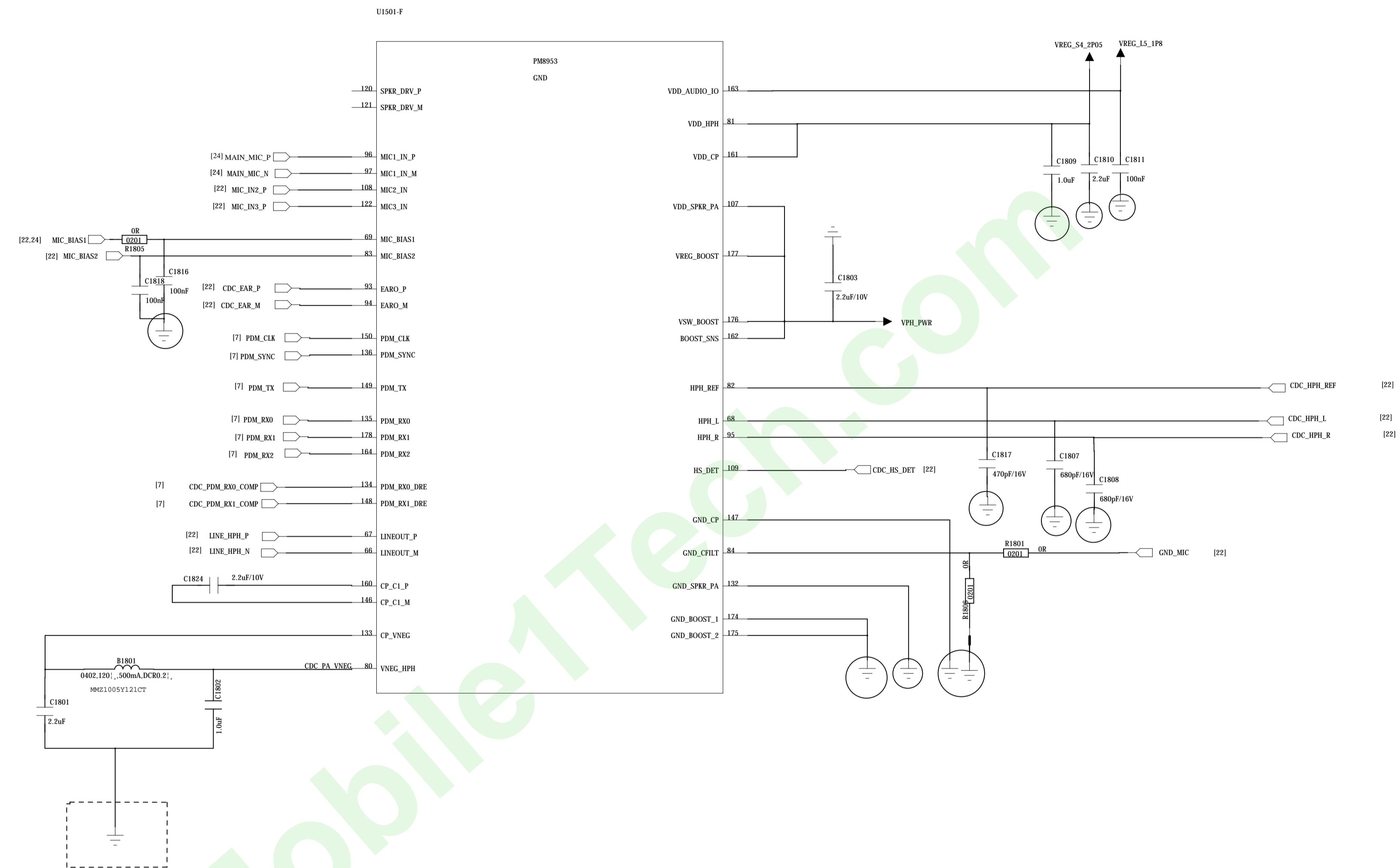
Table 3-7 PM8953 regulators and their

Function	Circuit type	Default
L12 ⁴	PMOS LDO	
L13	PMOS LDO	
L14 ⁵	PMOS LDO	
L15 ⁵	PMOS LDO	
L16	PMOS LDO	
L17	PMOS LDO	
L18	PMOS LDO	
L19	NMOS LDO	
L20	Low-noise LDO	
L21	Low-noise LDO	
L22	PMOS LDO	
L23	NMOS LDO	

⁴ All regulators have default output voltages.

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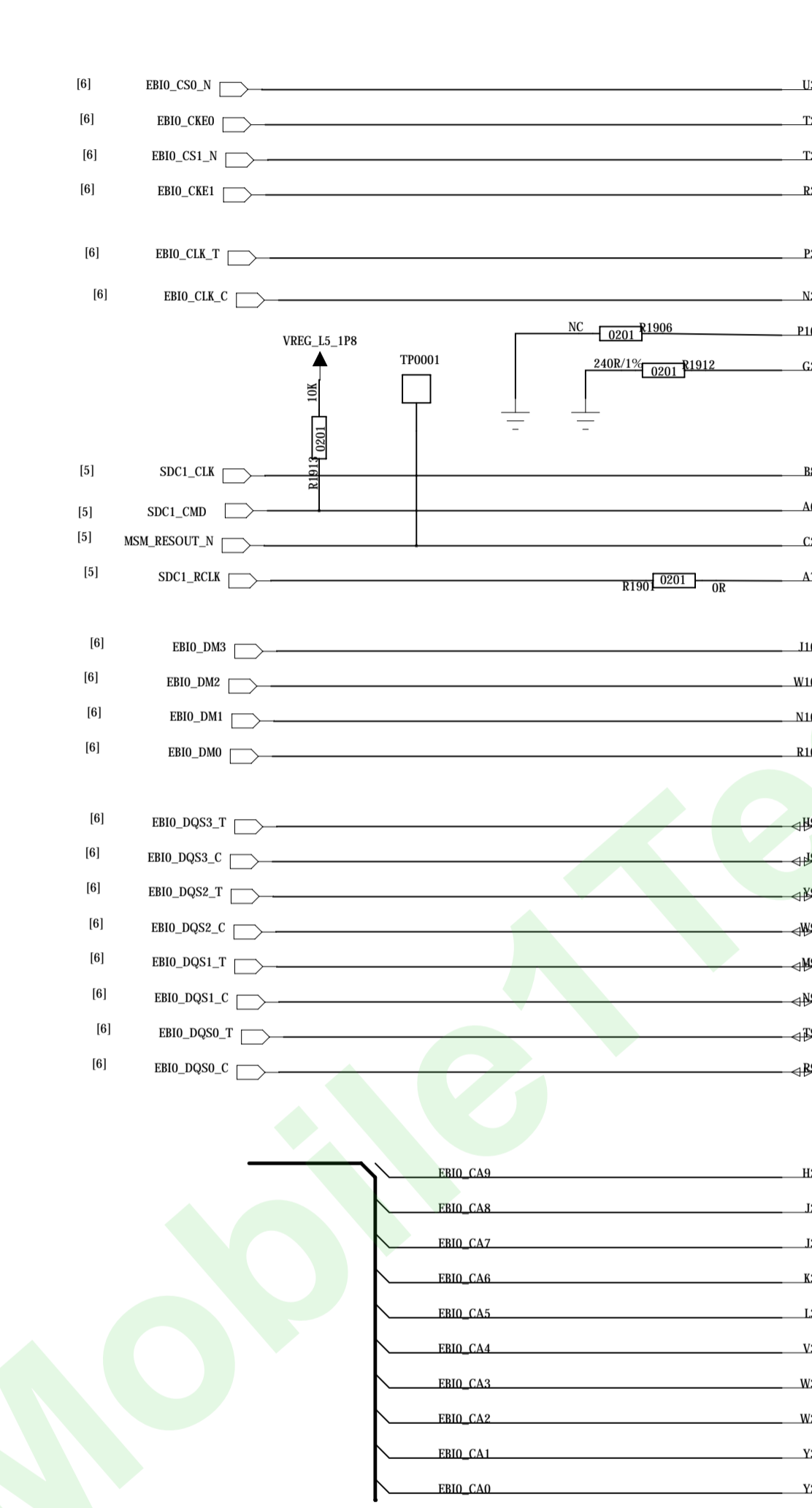
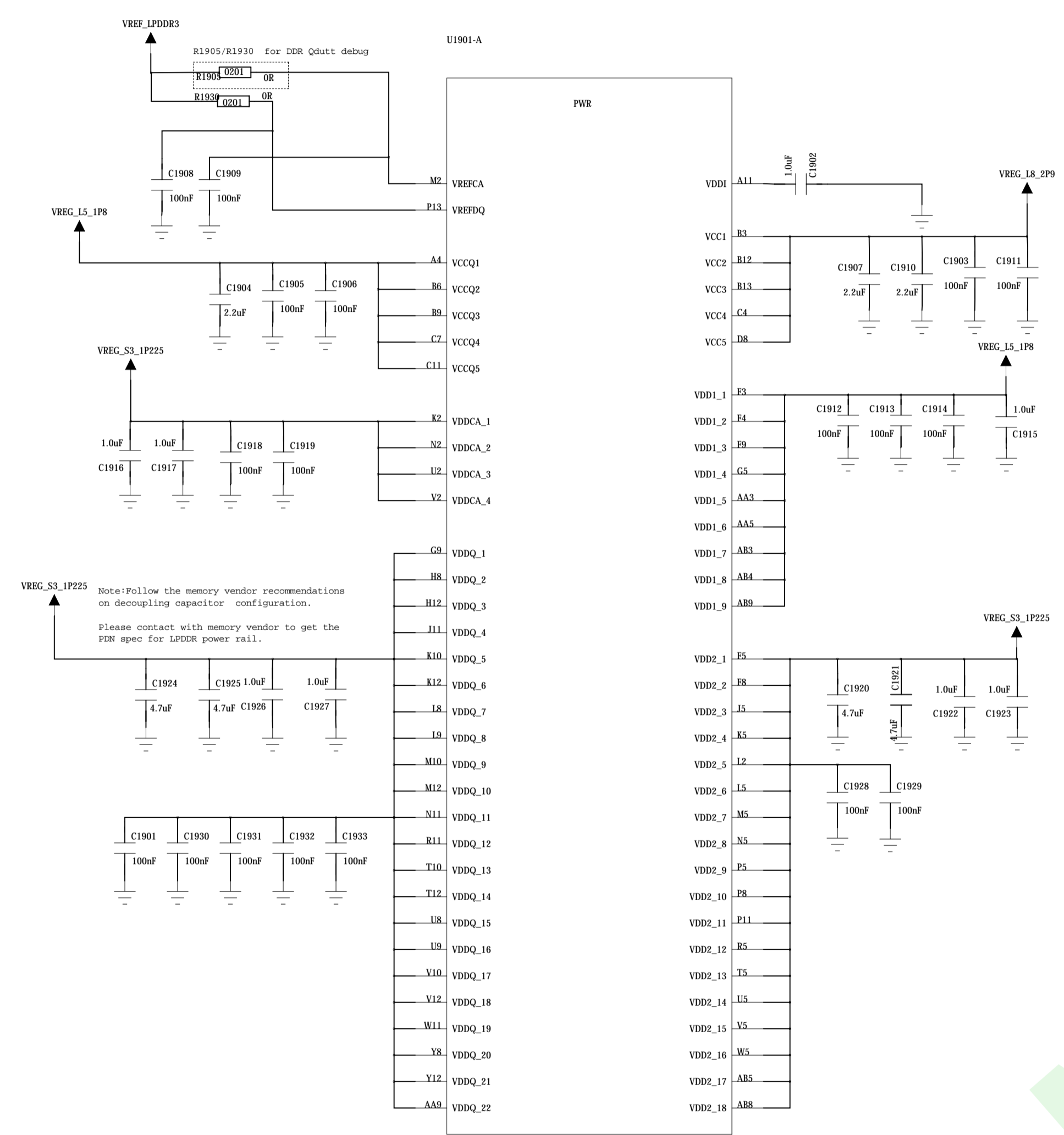
PM8953 LDO



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PM8953 CODEC/Audio PA

QUALCOMM Technologies, Inc. 5750 La Jolla Village Drive San Diego, CA 92121-1714 U.S.A.		
Title		
Sheet		
Size	Name	Rev
Date:	Sheet of	



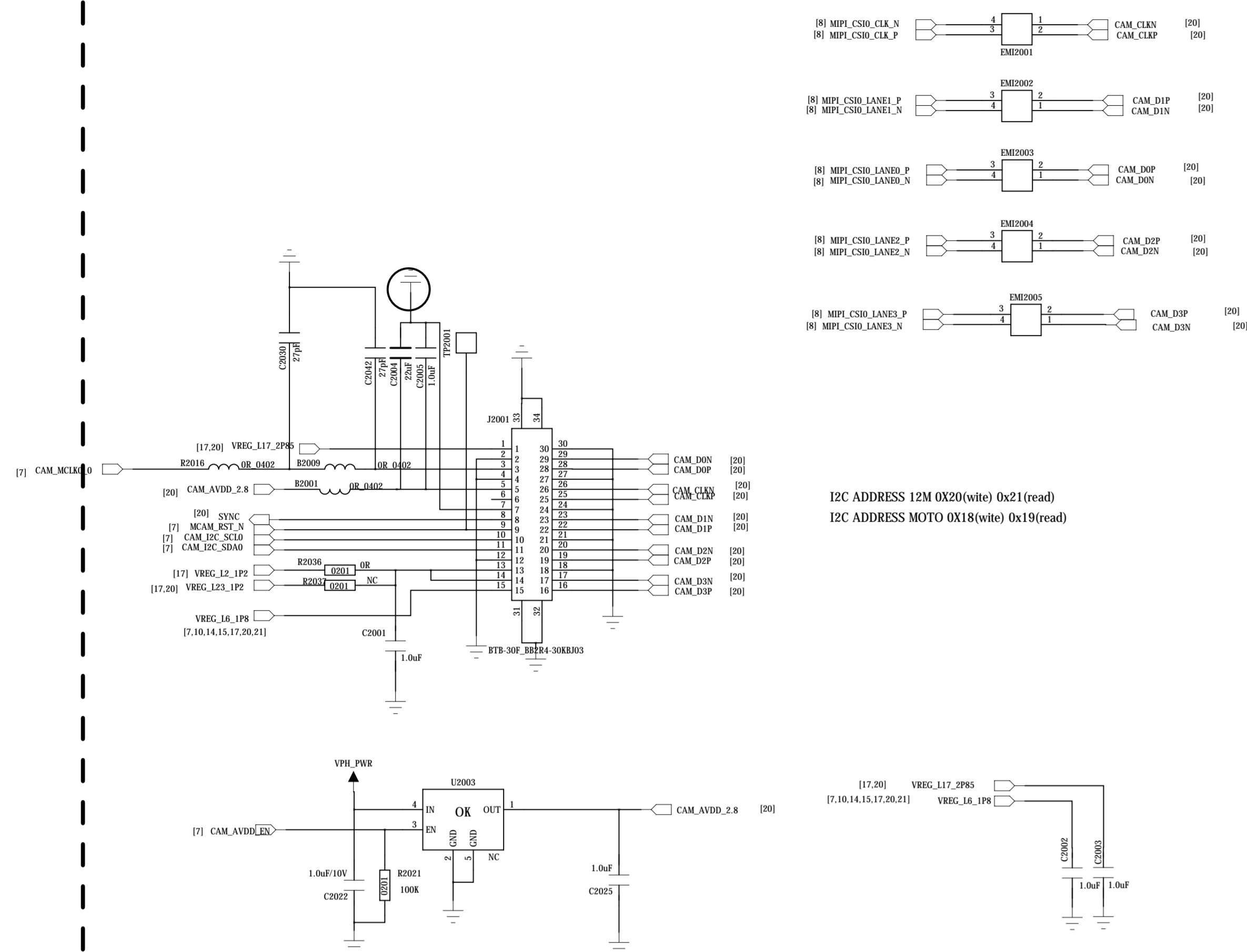
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MEMORY(LPDDR3+EMMC V5.1)

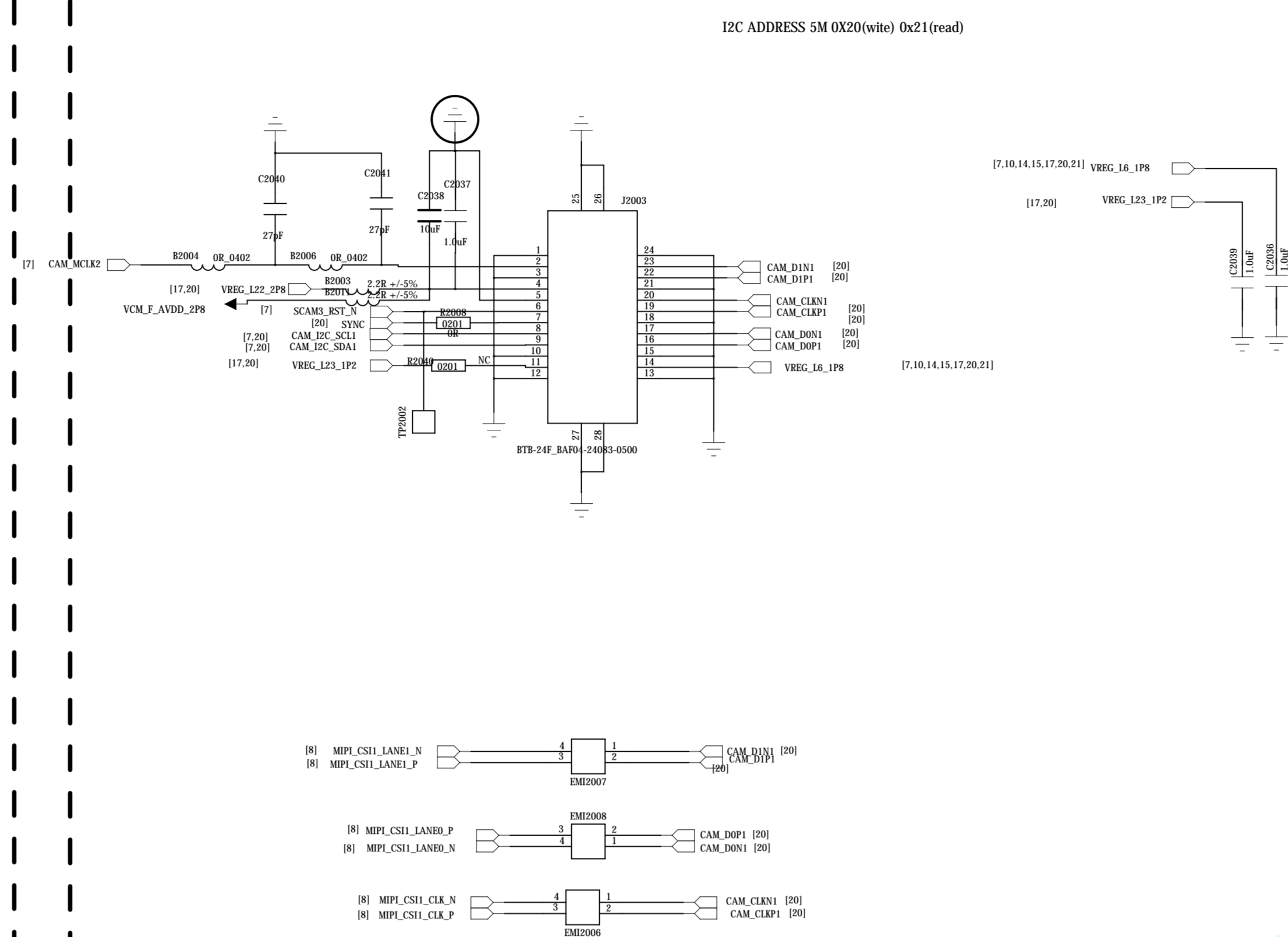
QUALCOMM Technologies, Inc. 5750 La Jolla Village Drive San Diego, CA 92121-1714 U.S.A.	
Title Sheet Size Name Date: _____ of _____ Rev	

REVISION RECORD			
CR	ECO NO.	APPROVED	DATE

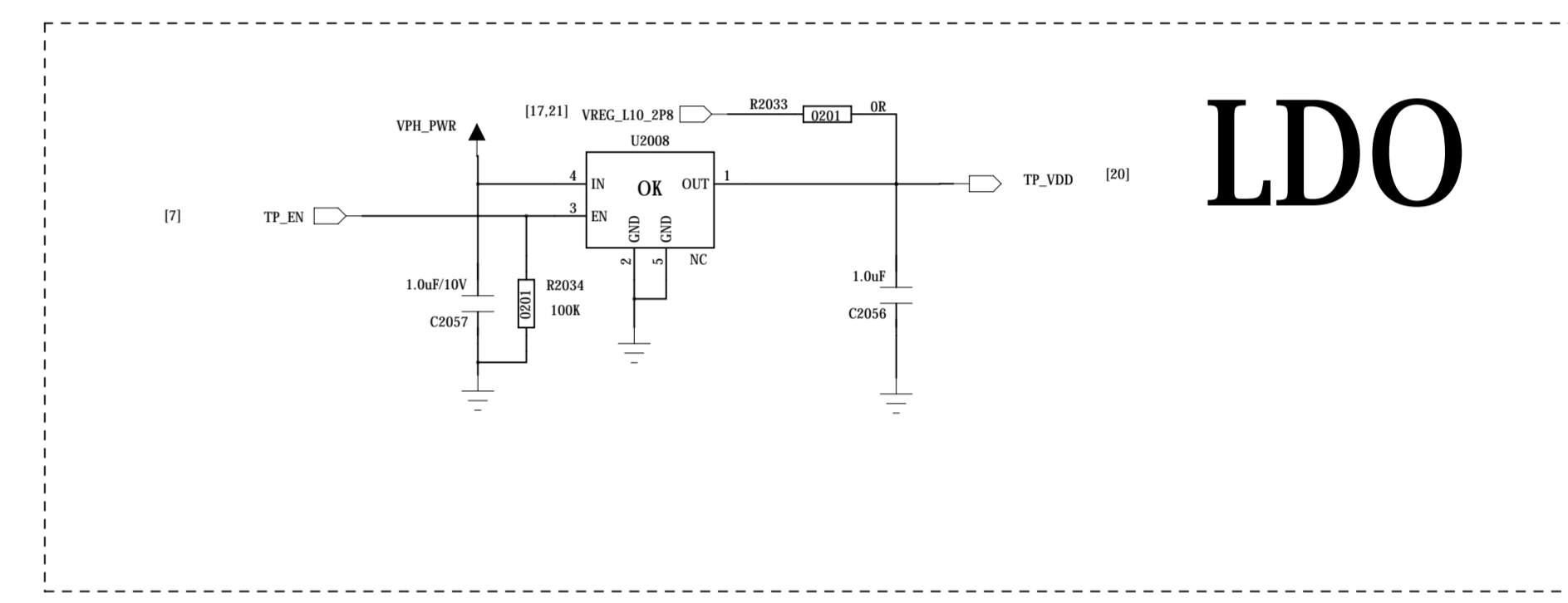
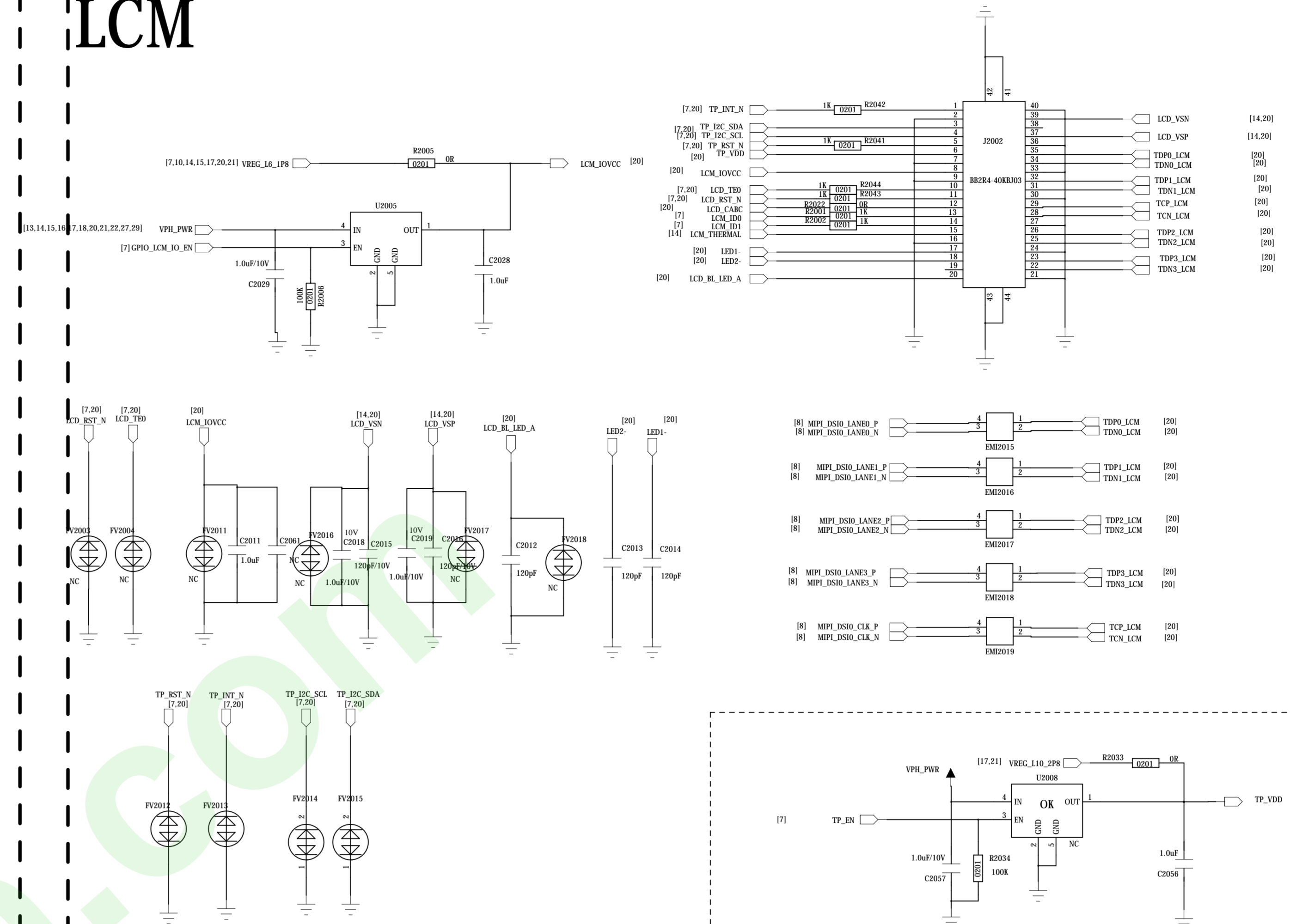
Main Camera A



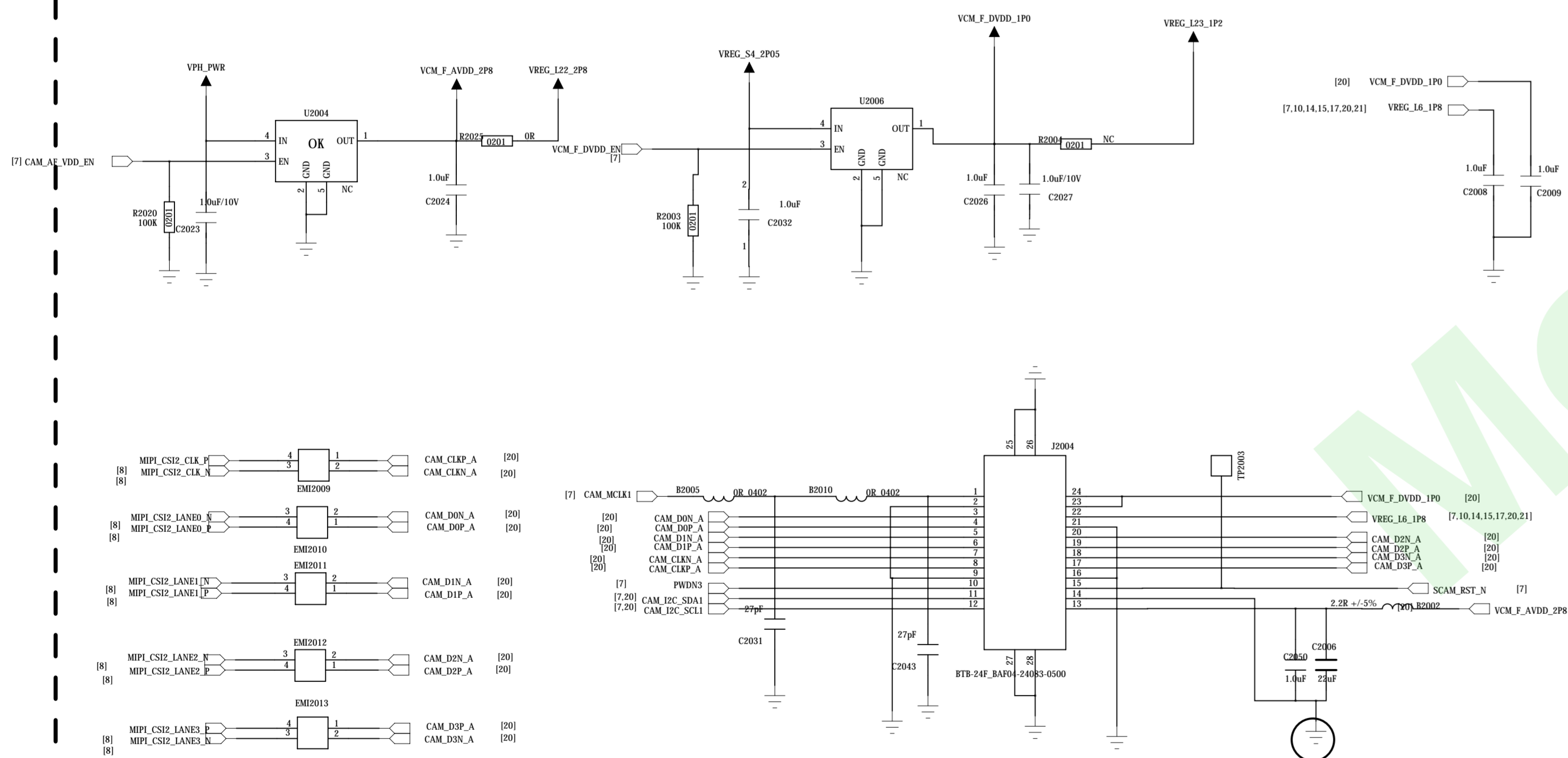
Main Camera B



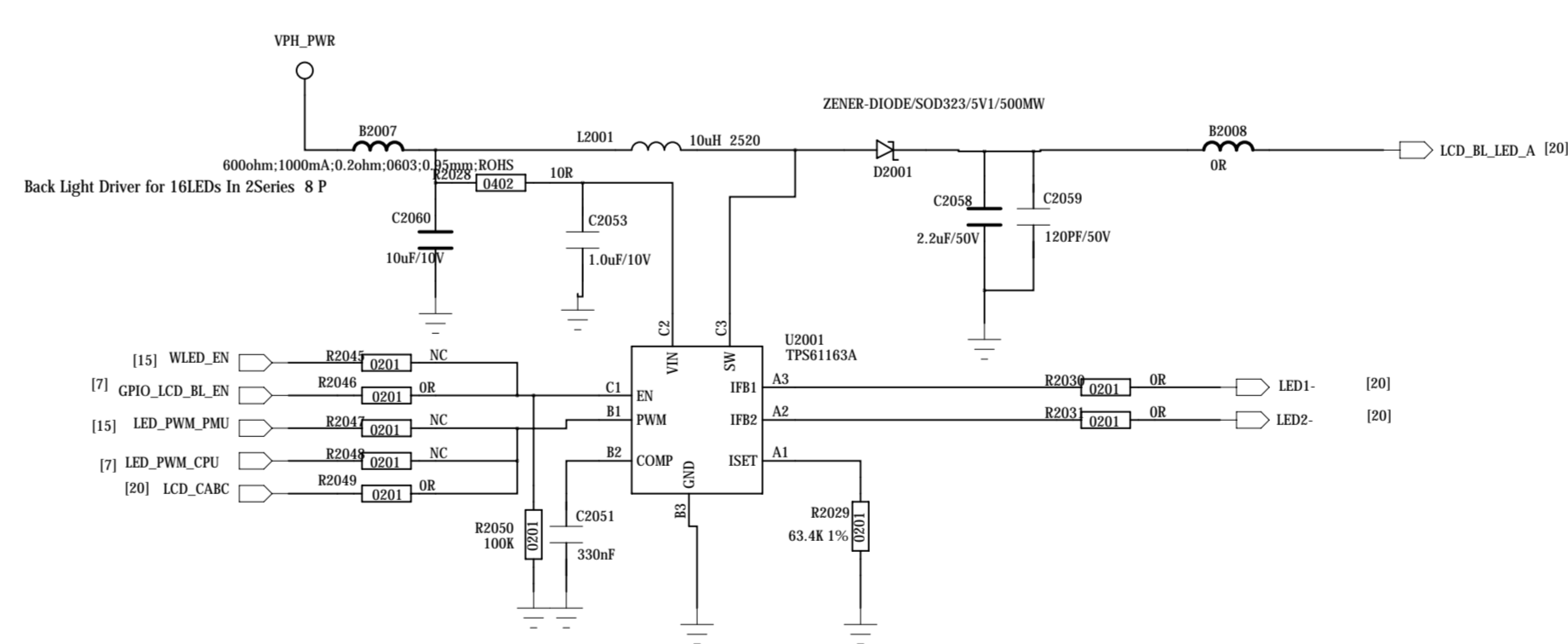
LCM



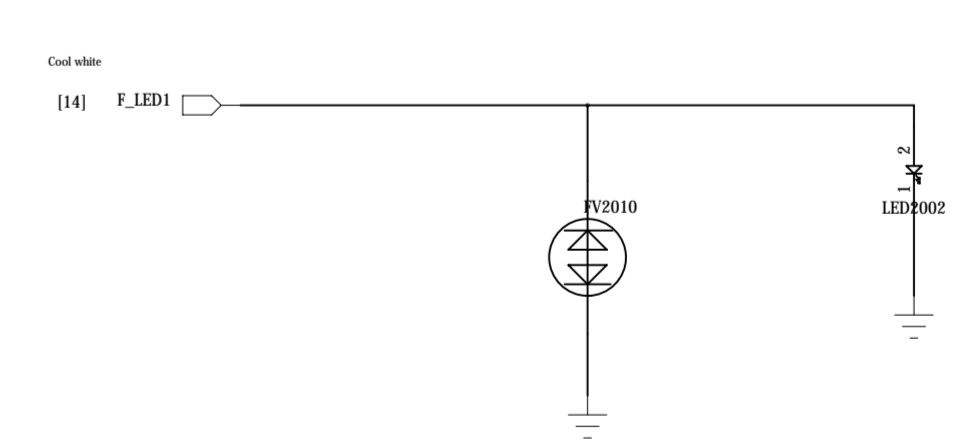
Front Camera



LCM Black Light



Main FLASHLIGHT



Schematic design notice of "63_PERI_CAMERA_KEYPAD" page.

Note 62-1: The VCC of I2C_0 is pulled to "VCAM_IO_PMU".

Note 62-2: I2C control interface of front camera (with AF) must be assigned to I2C-2 bus when PIP/VIV feature be supported.

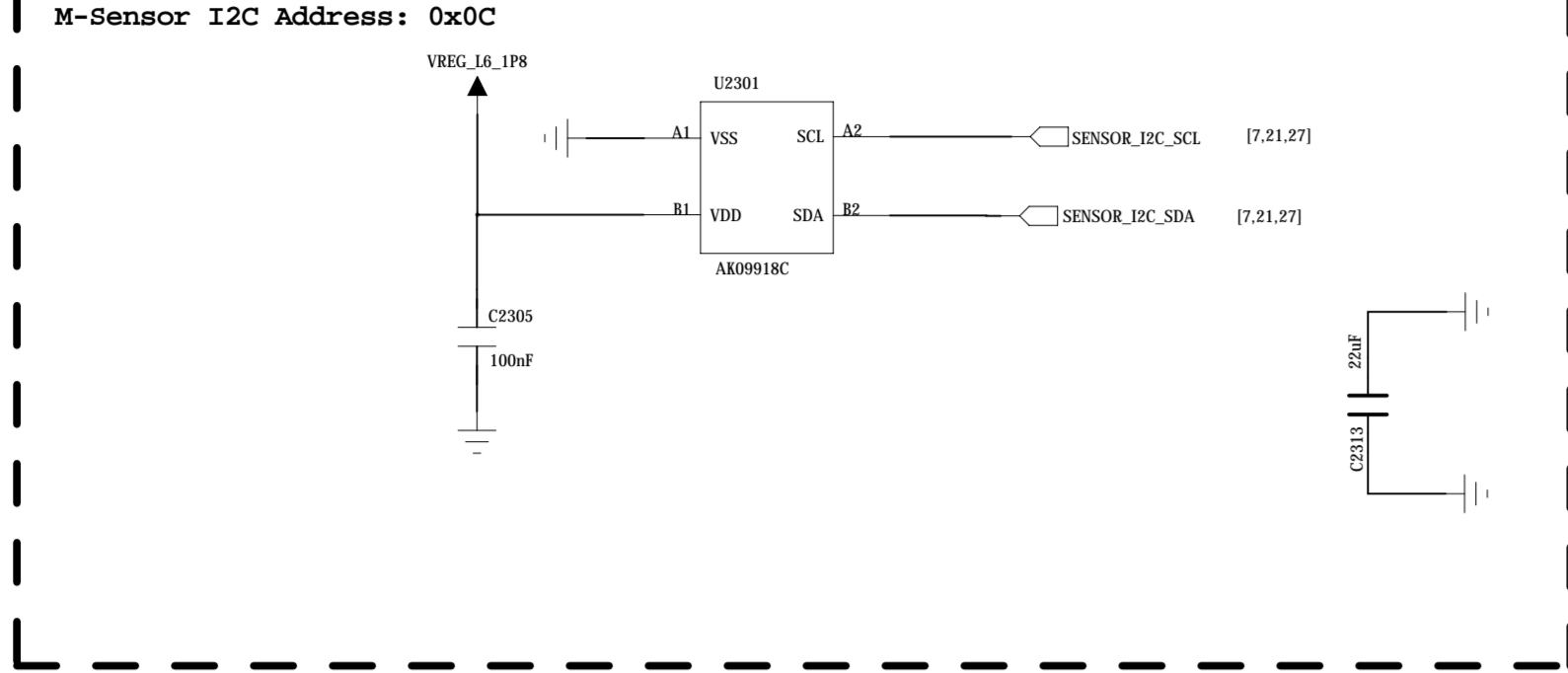
Note 62-3: Reserve a capacitor (27pf) on camera's MCLK and shunt it to GND to prevent GPS de-sense.

IC ADDRESS 2M 0X7a(wh) 0x7b(read)

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TITLE: <Title>			
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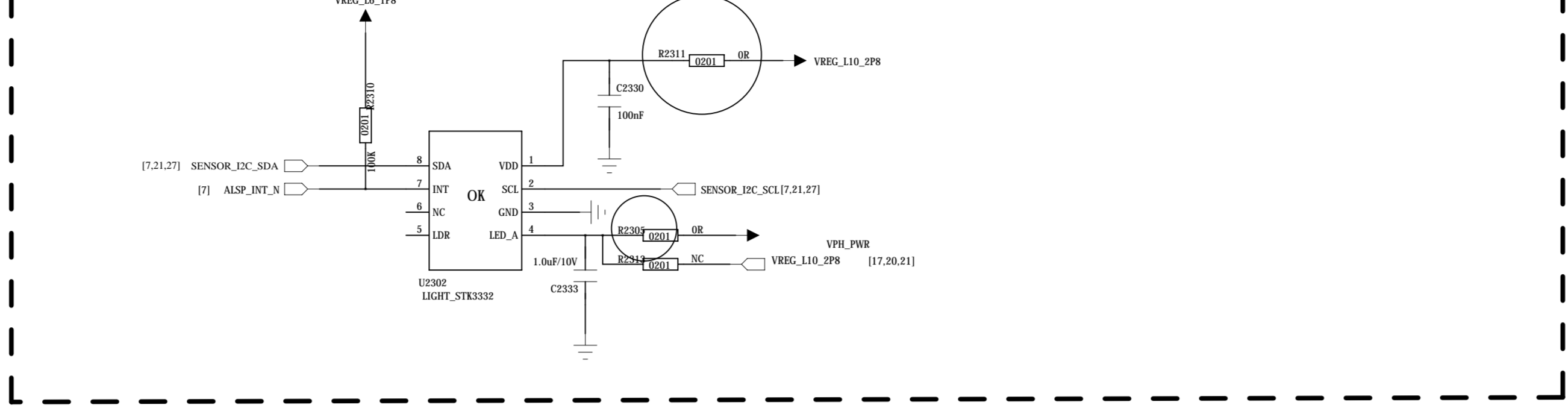
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ITER	REV NO	APPROVED	DATE

M-Sensor

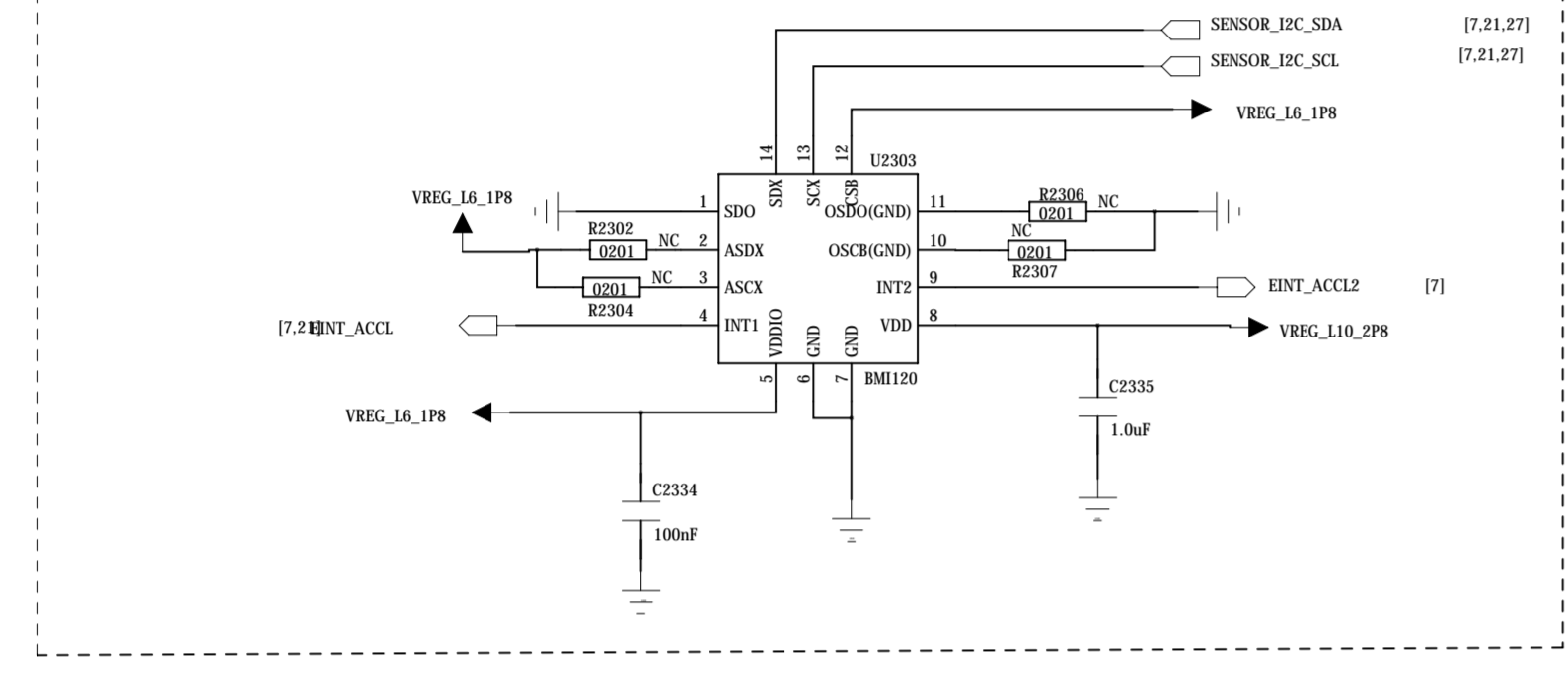


L-SENSOR

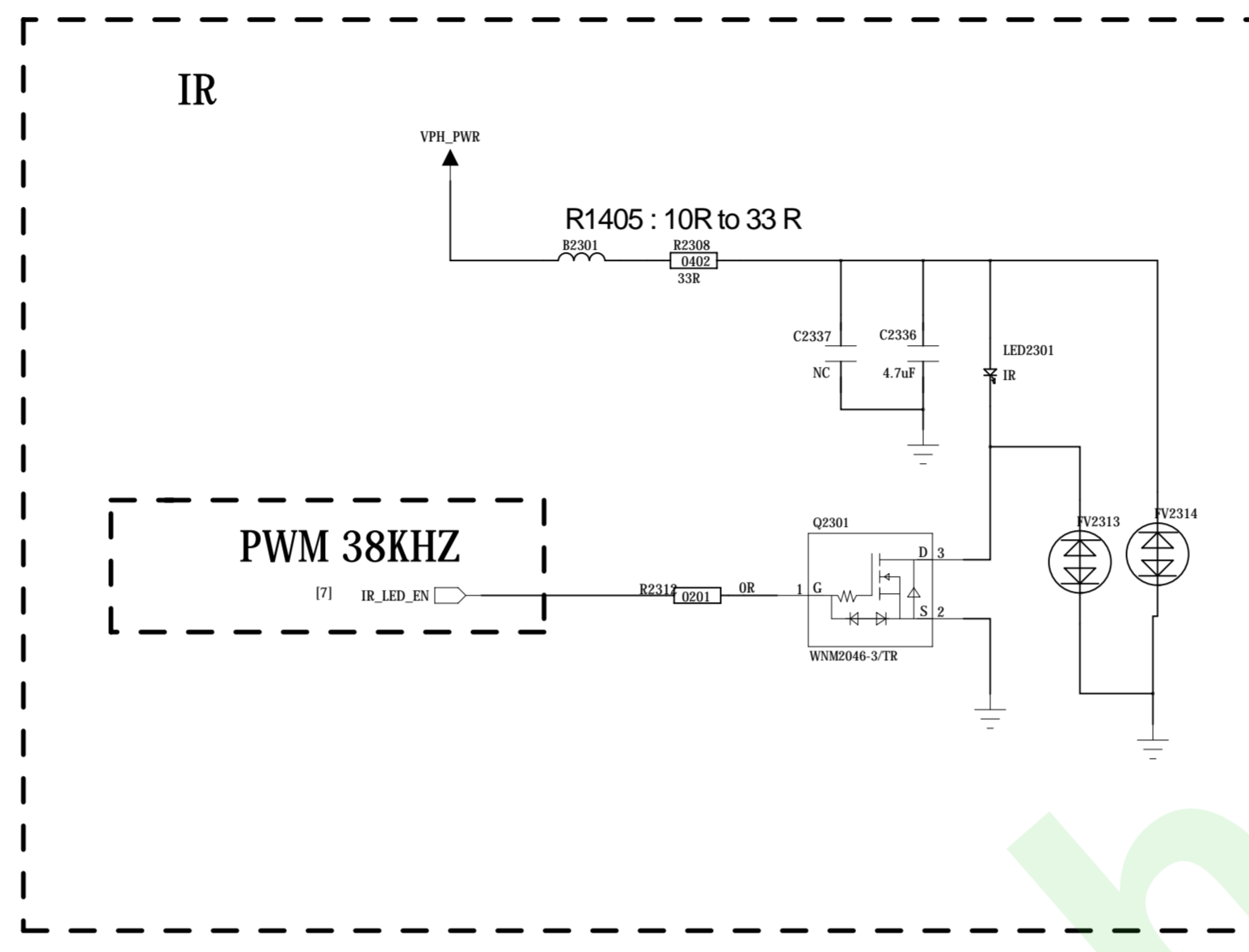
P_SENSOR



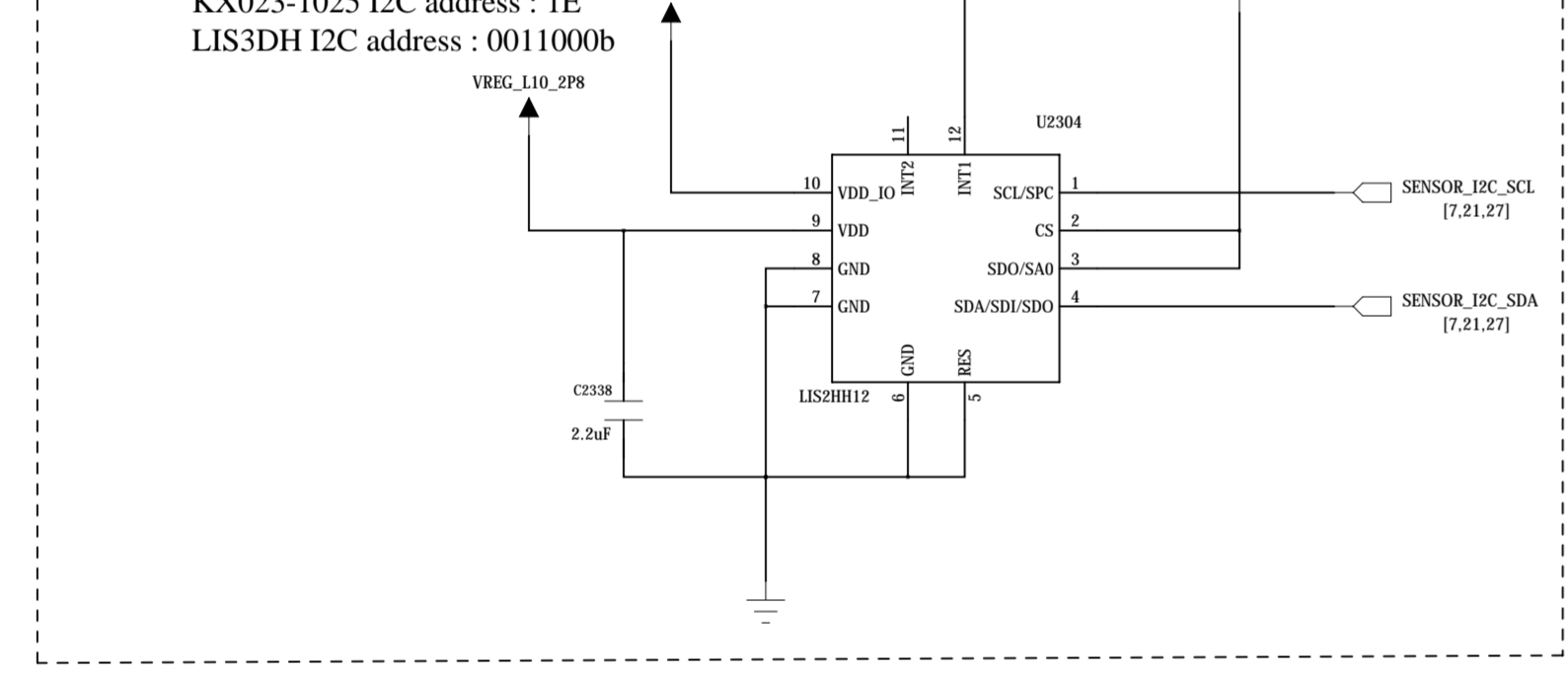
ACC-Sensor



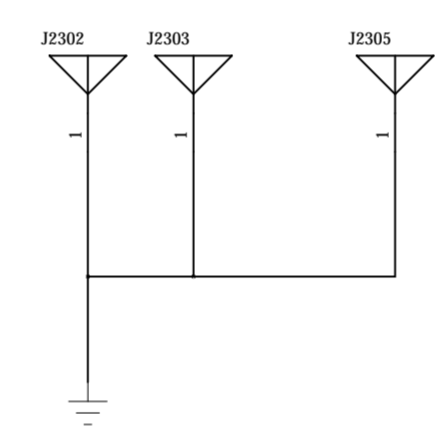
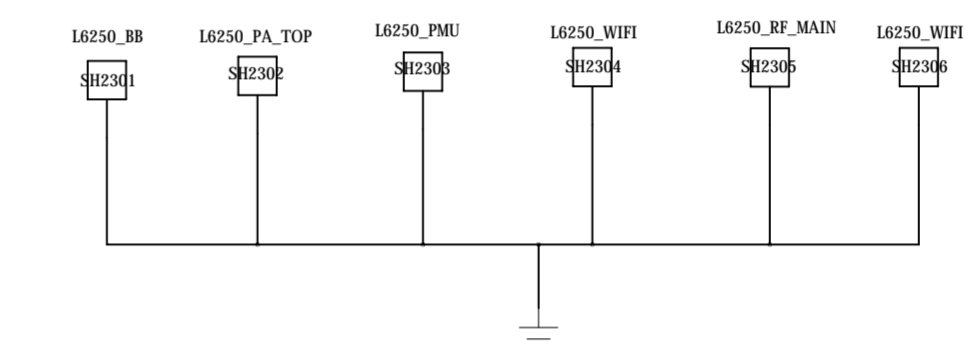
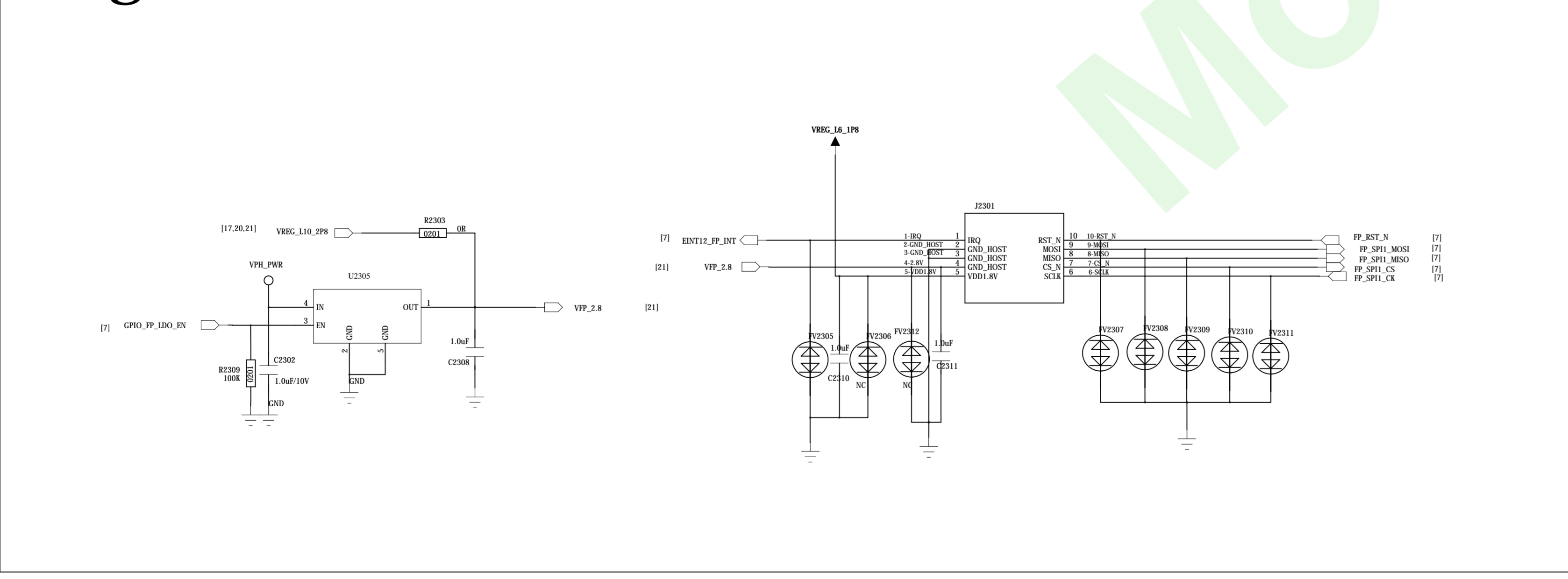
IR



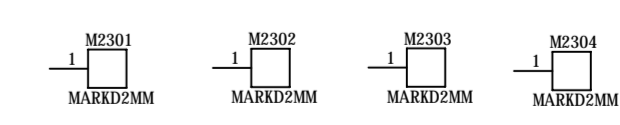
ACC-Sensor



FingerPrint-Sensor

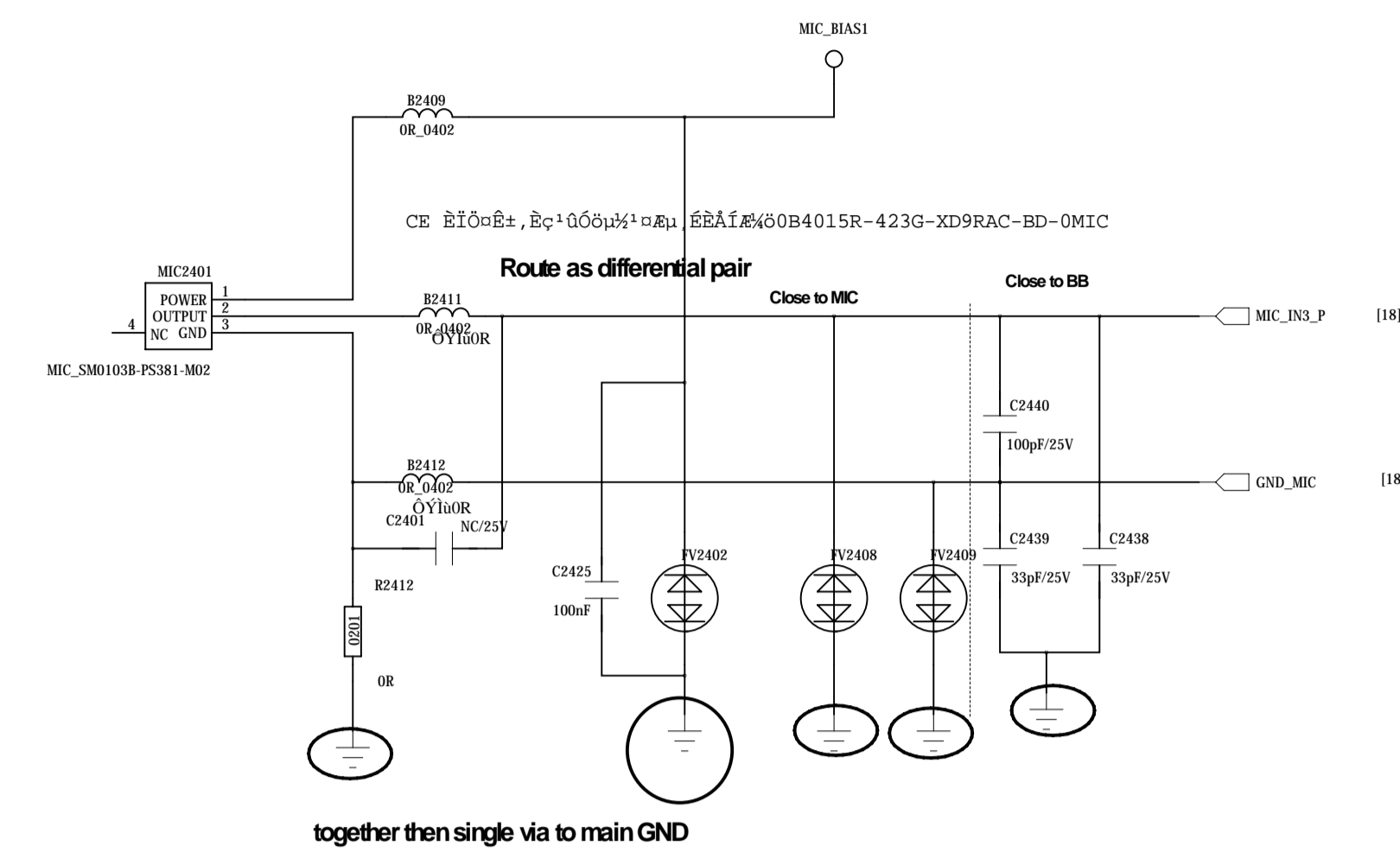


MARK POINT

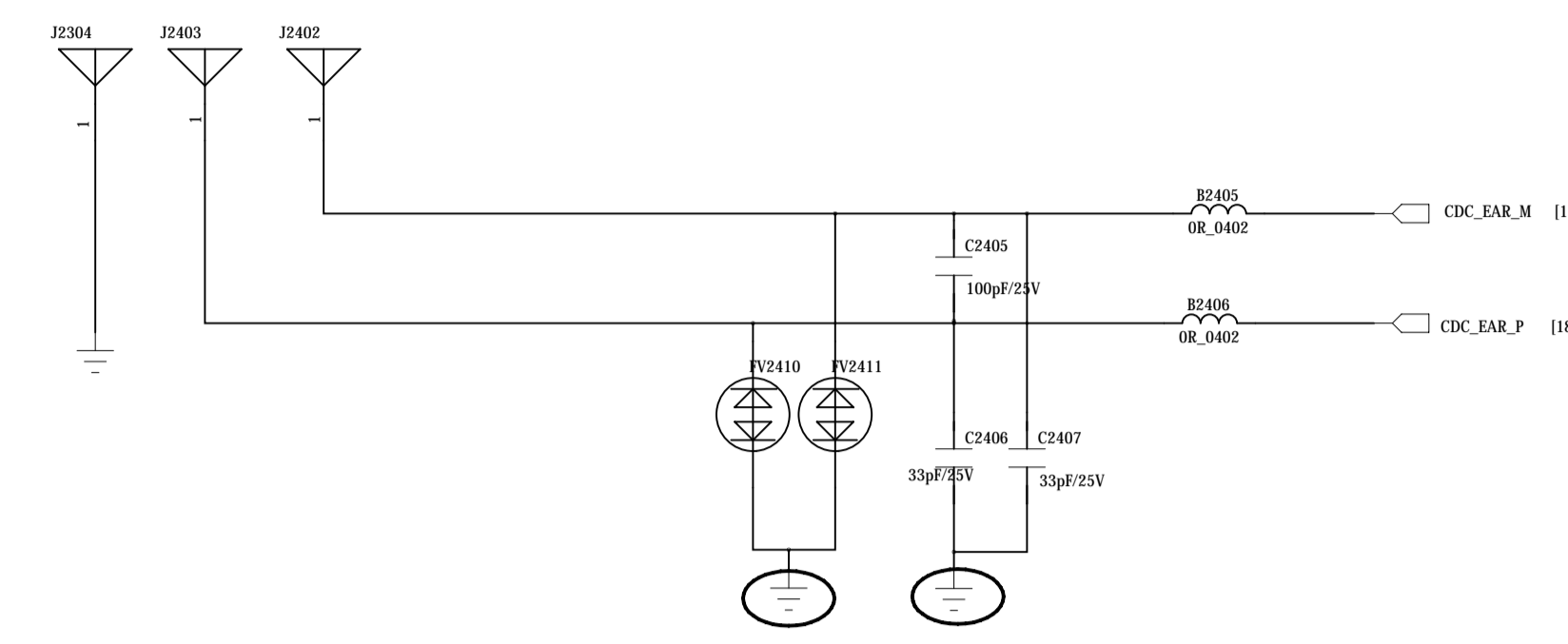


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TITLE: <Title>			
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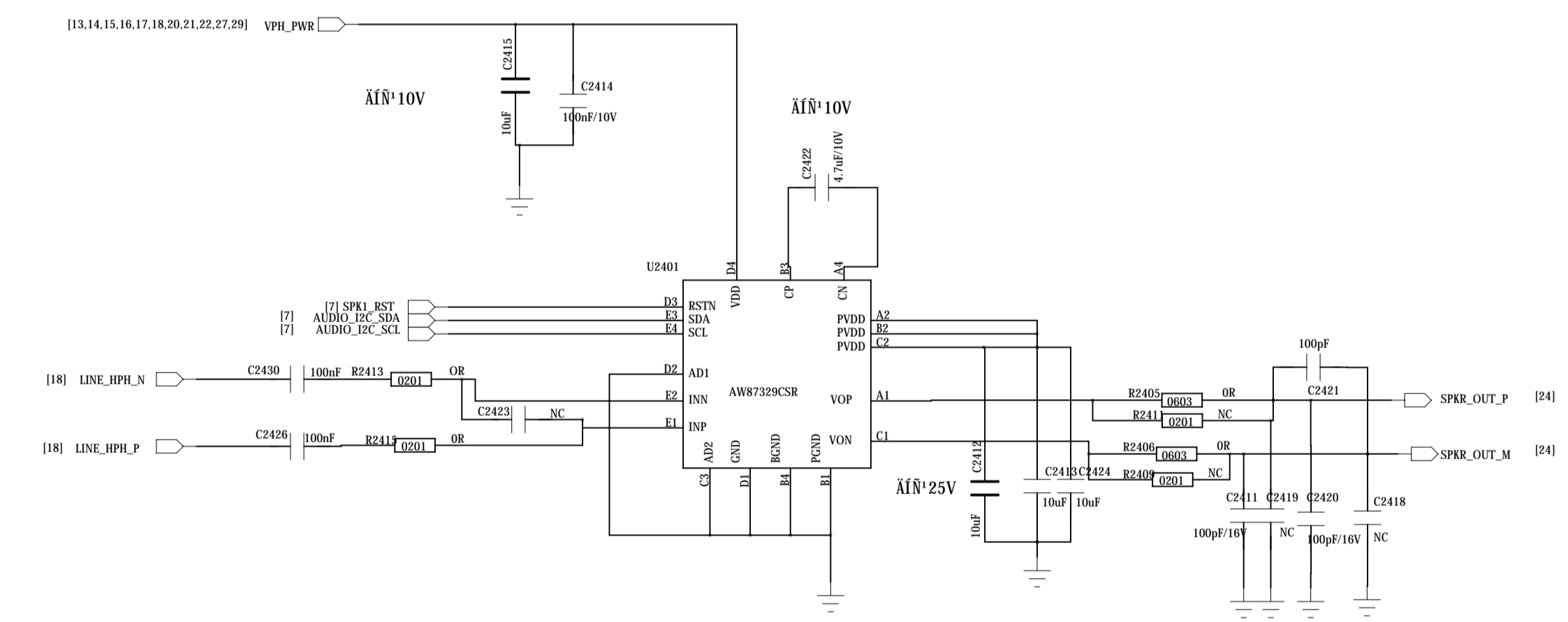
Sub MIC



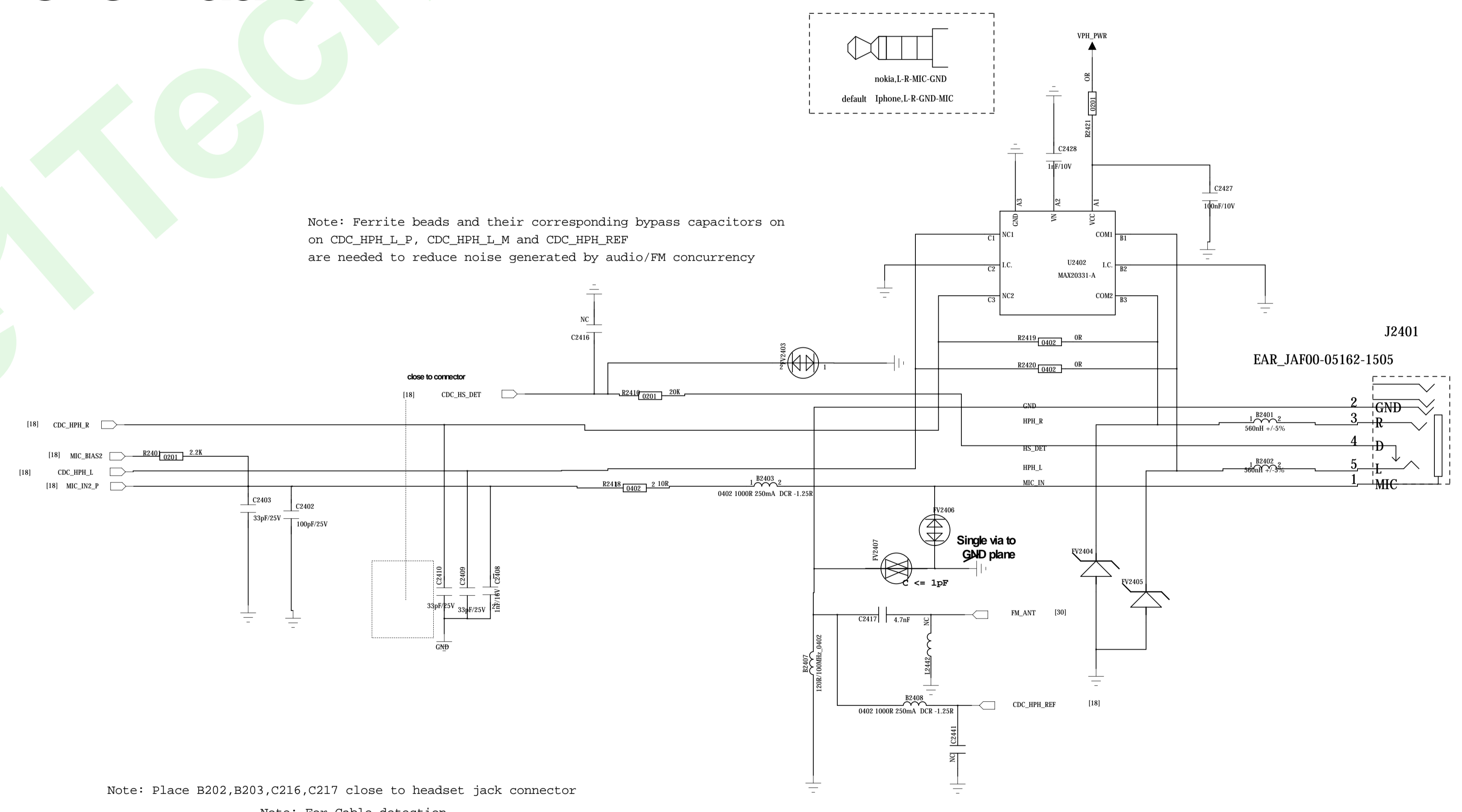
REC



Audio PA

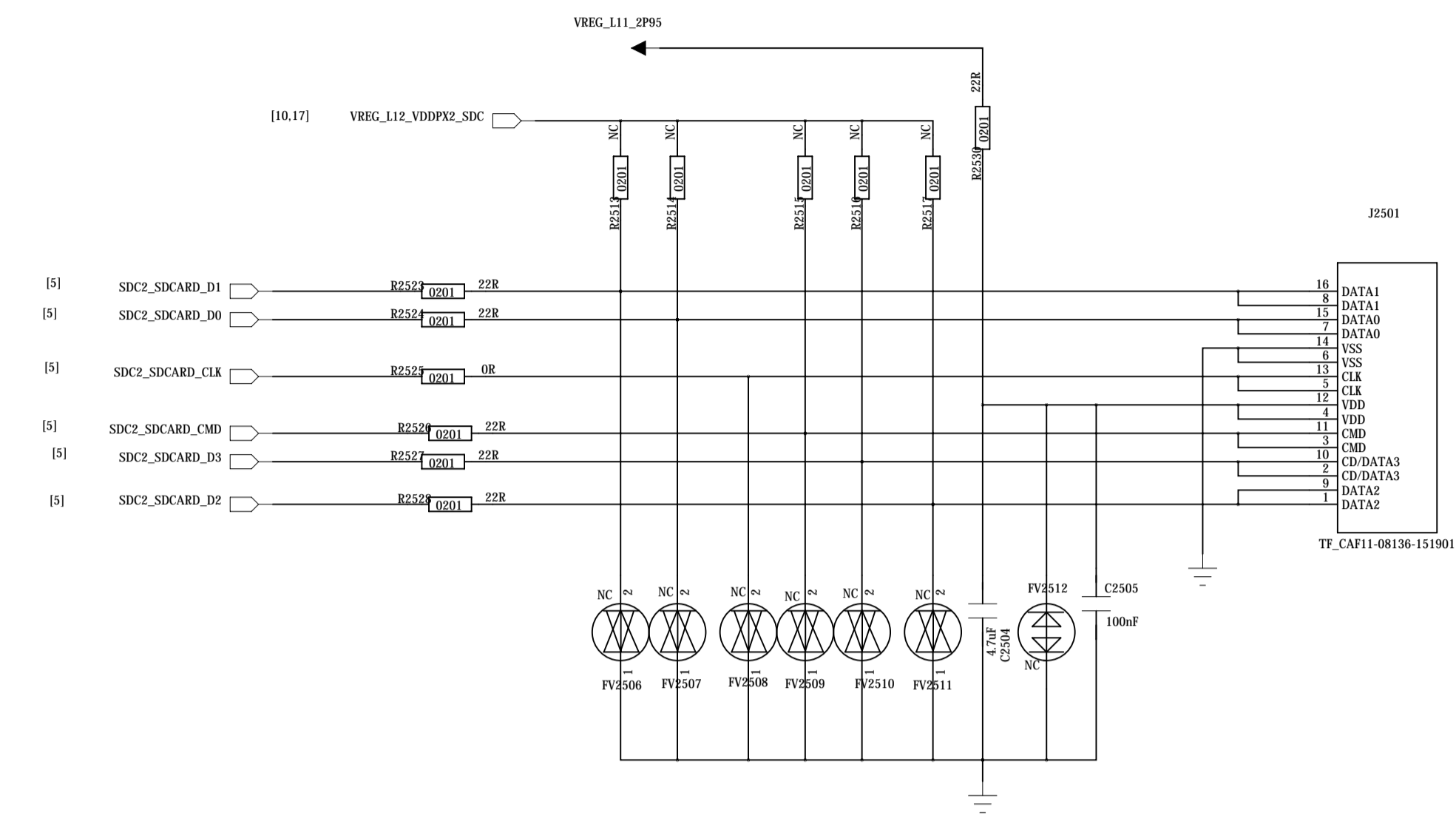


Earphone Audio

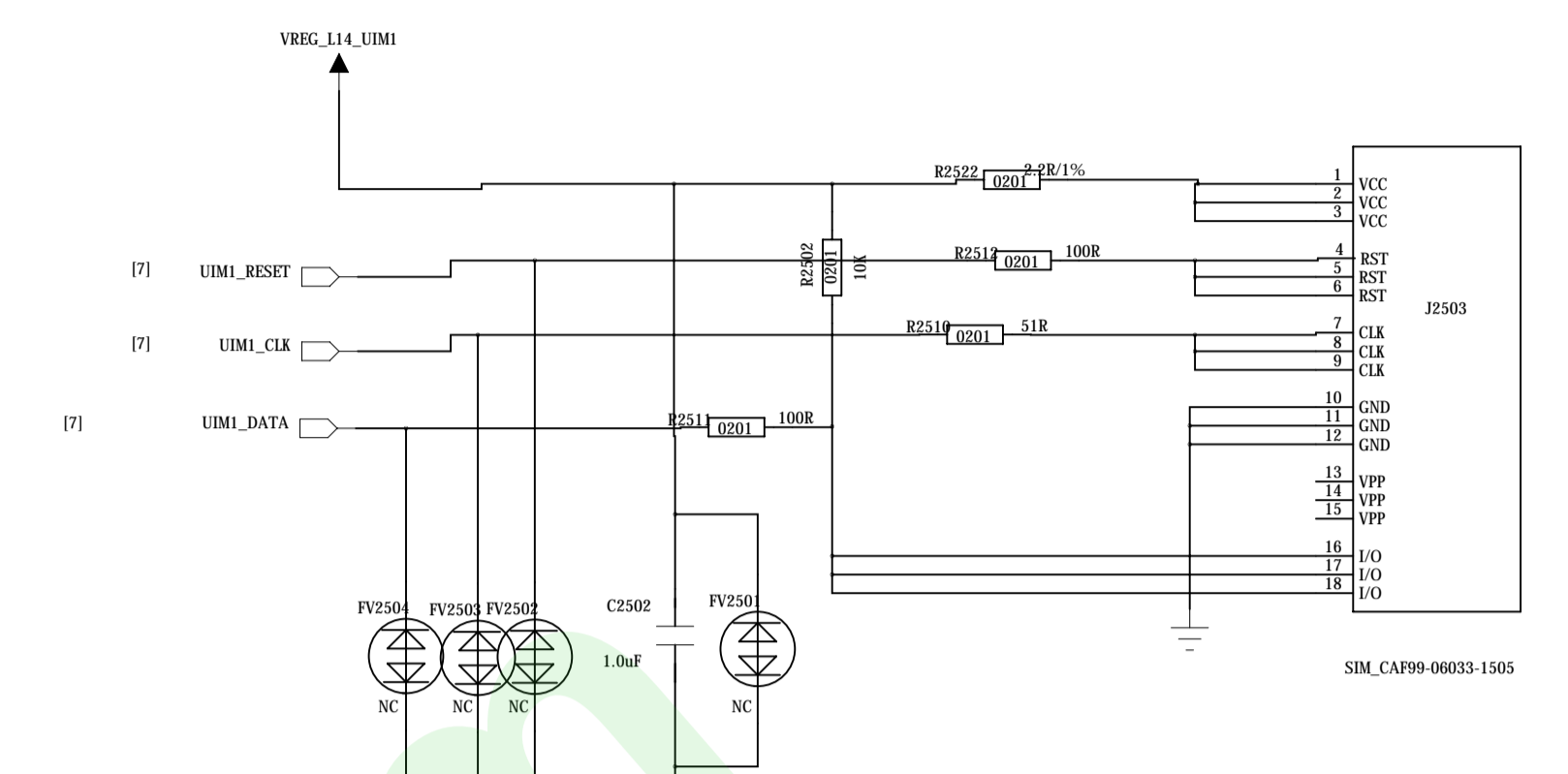


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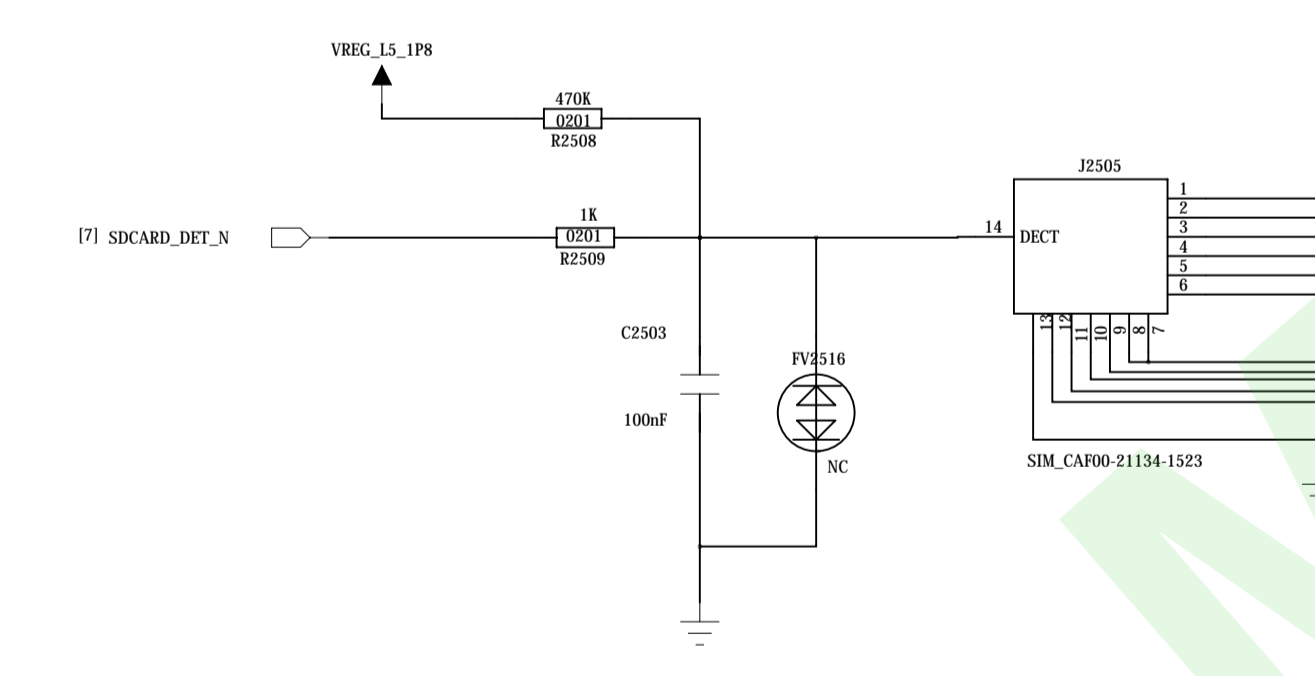
T-Card



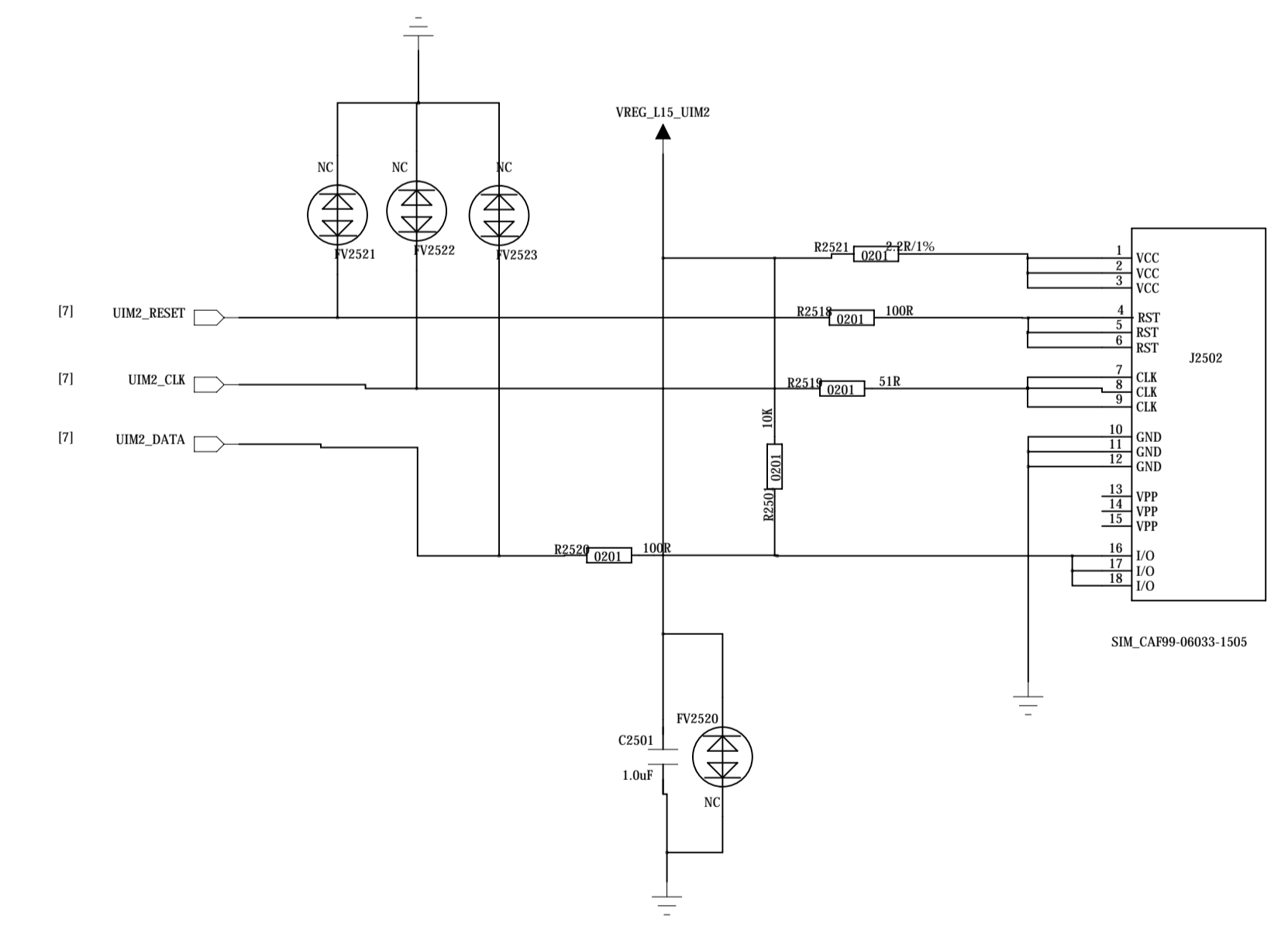
SIM1



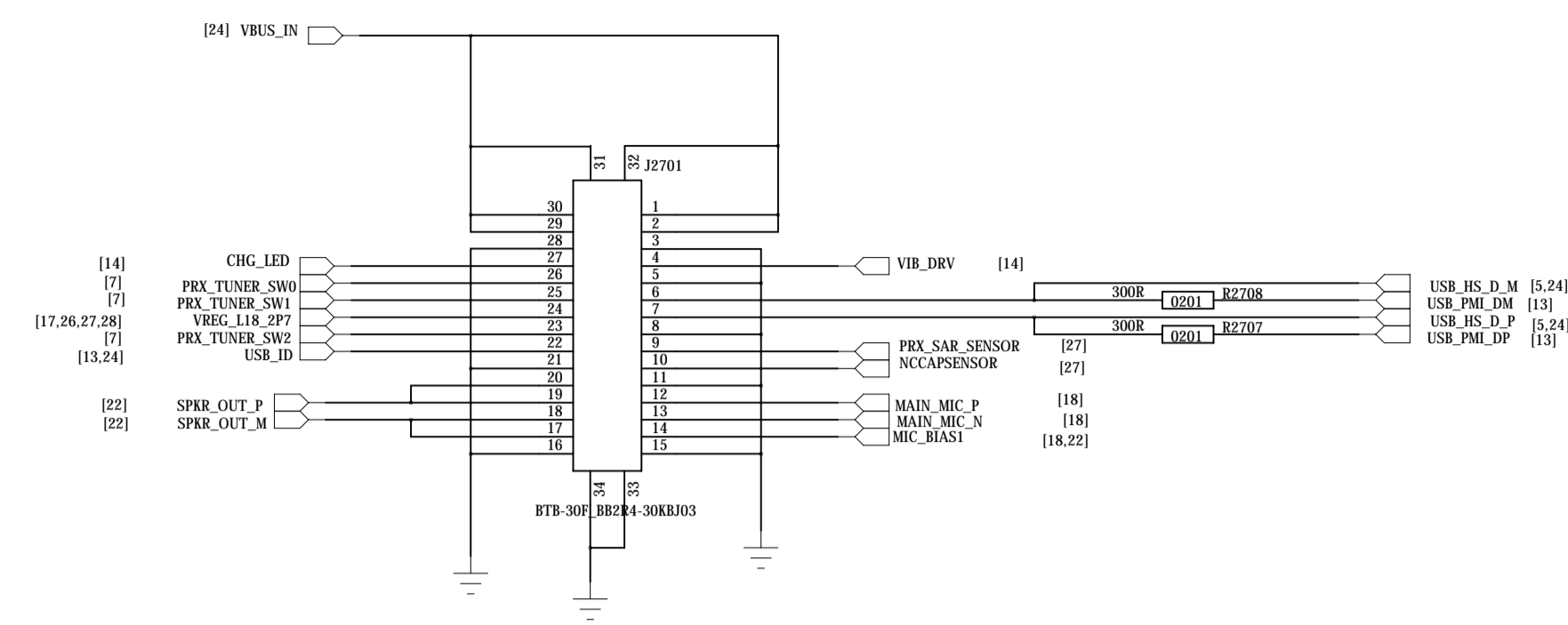
INT



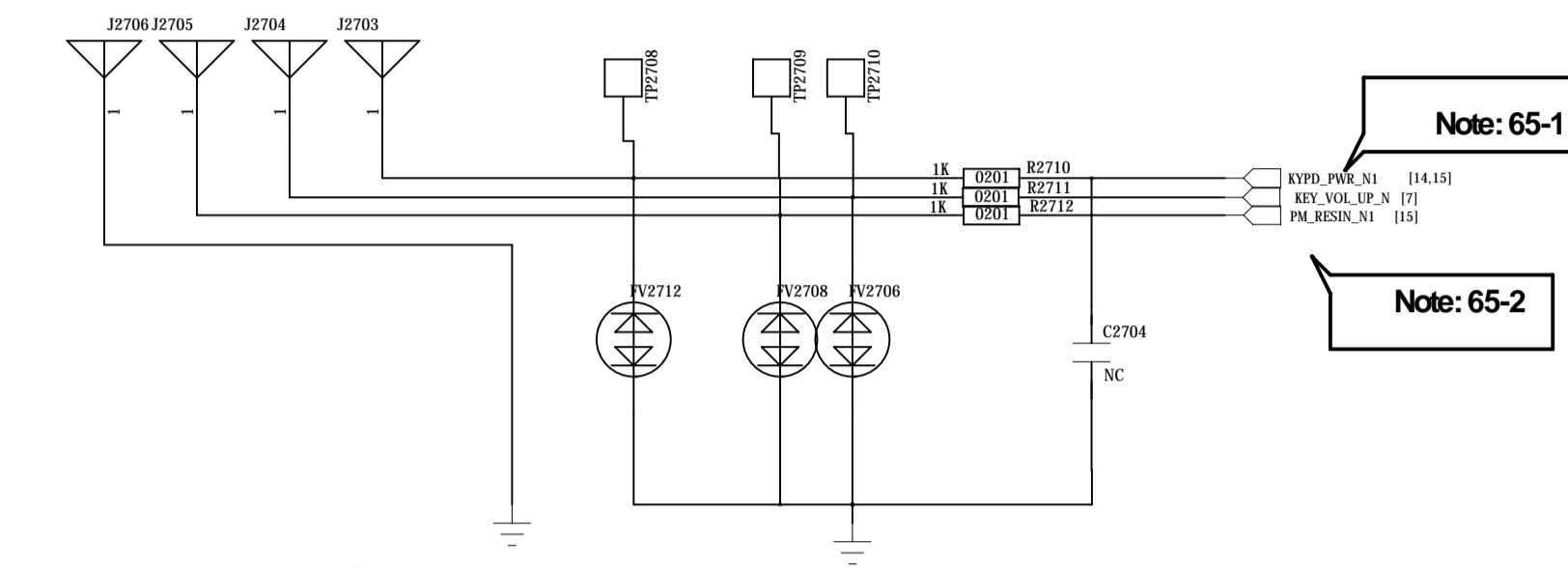
SIM2



SUB_FPC



Power Key

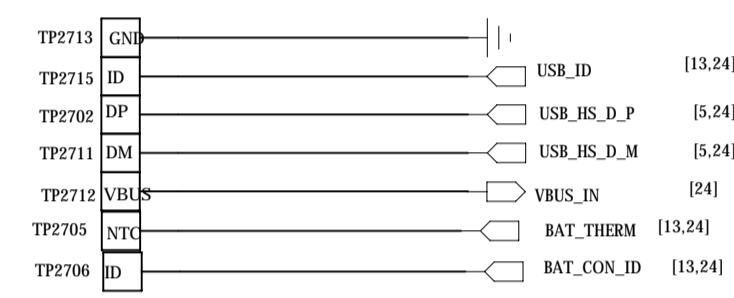


Schematic design notice of '65_PERI_Dual_SIM_ICUSB_KEYPAD' page.

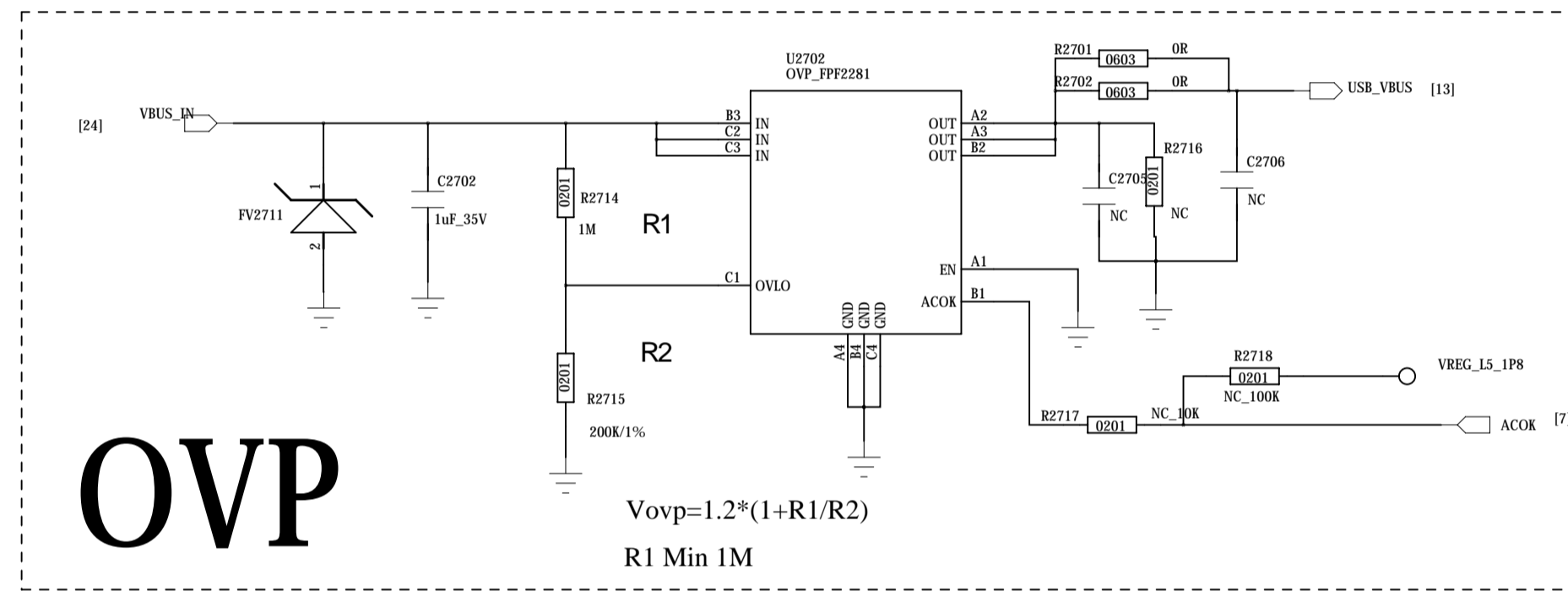
Note 65-1: DO NOT put pull-up resistor on PWRKEY

Note 65-2: Volume Up : HOME key / GND
Volume Down : (RPROW0/KPCOLO) or KPCOLO / GND

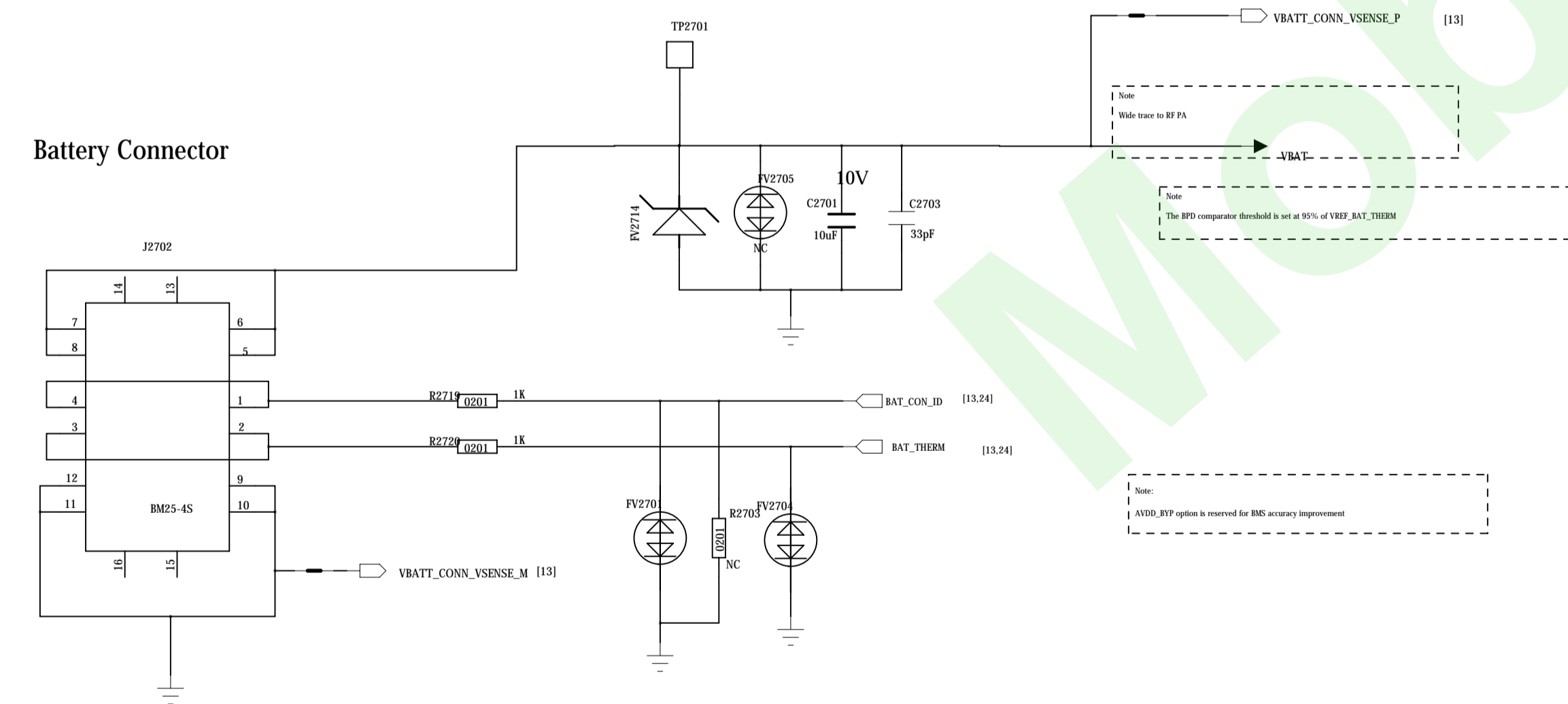
Test point



OVP

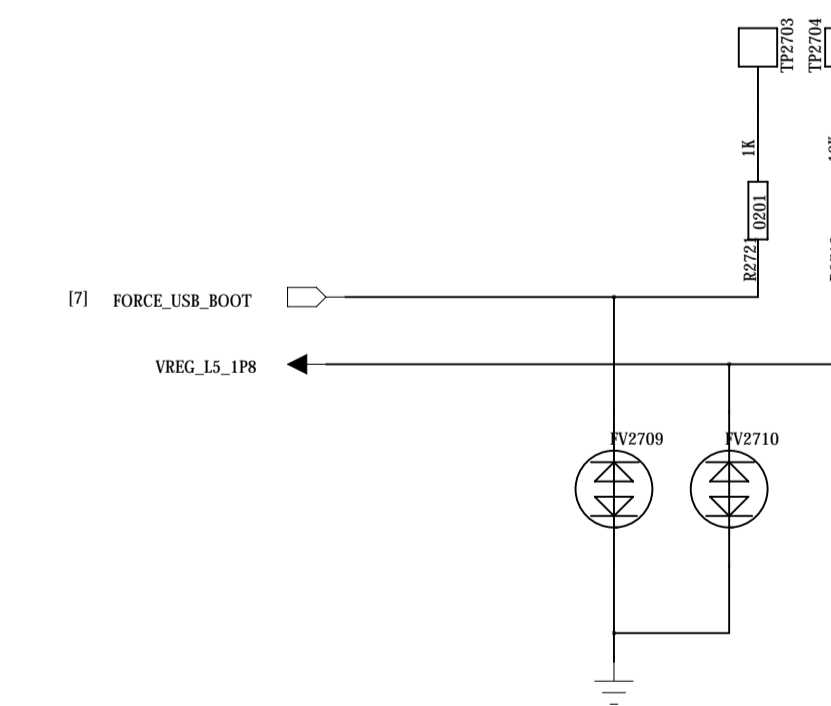


BAT

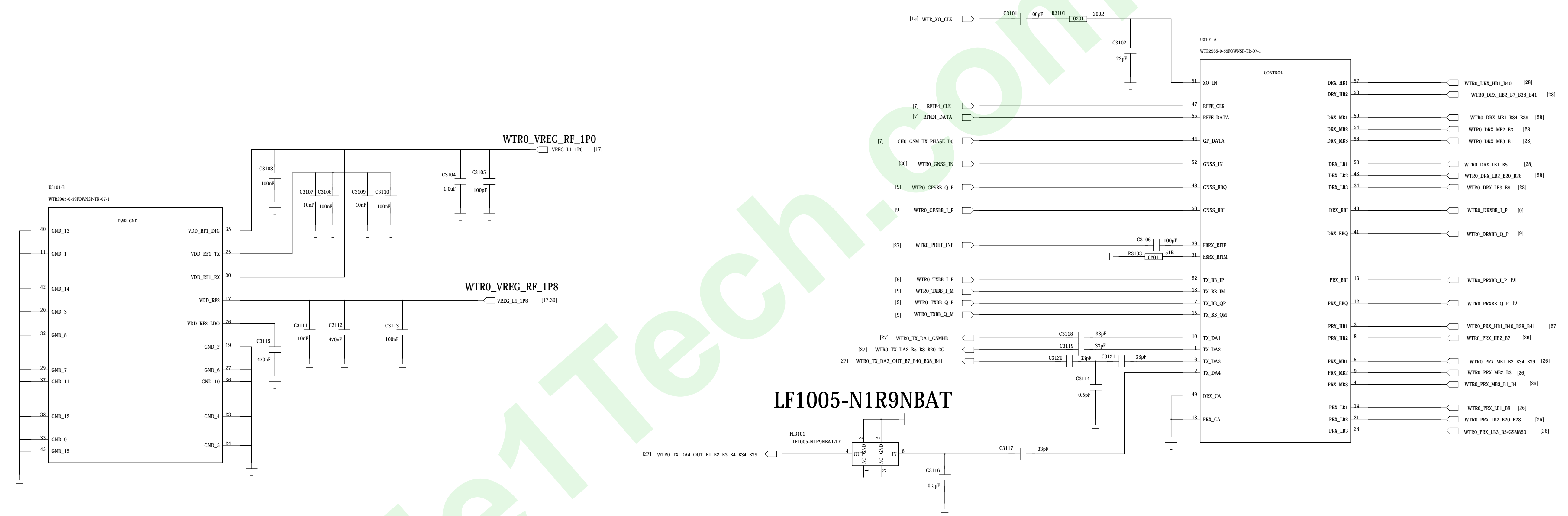


Note:
Battery ID resistor value require 20K-150K,
Add 100K to ground if battery package ID not meet requirement

Force USB boot



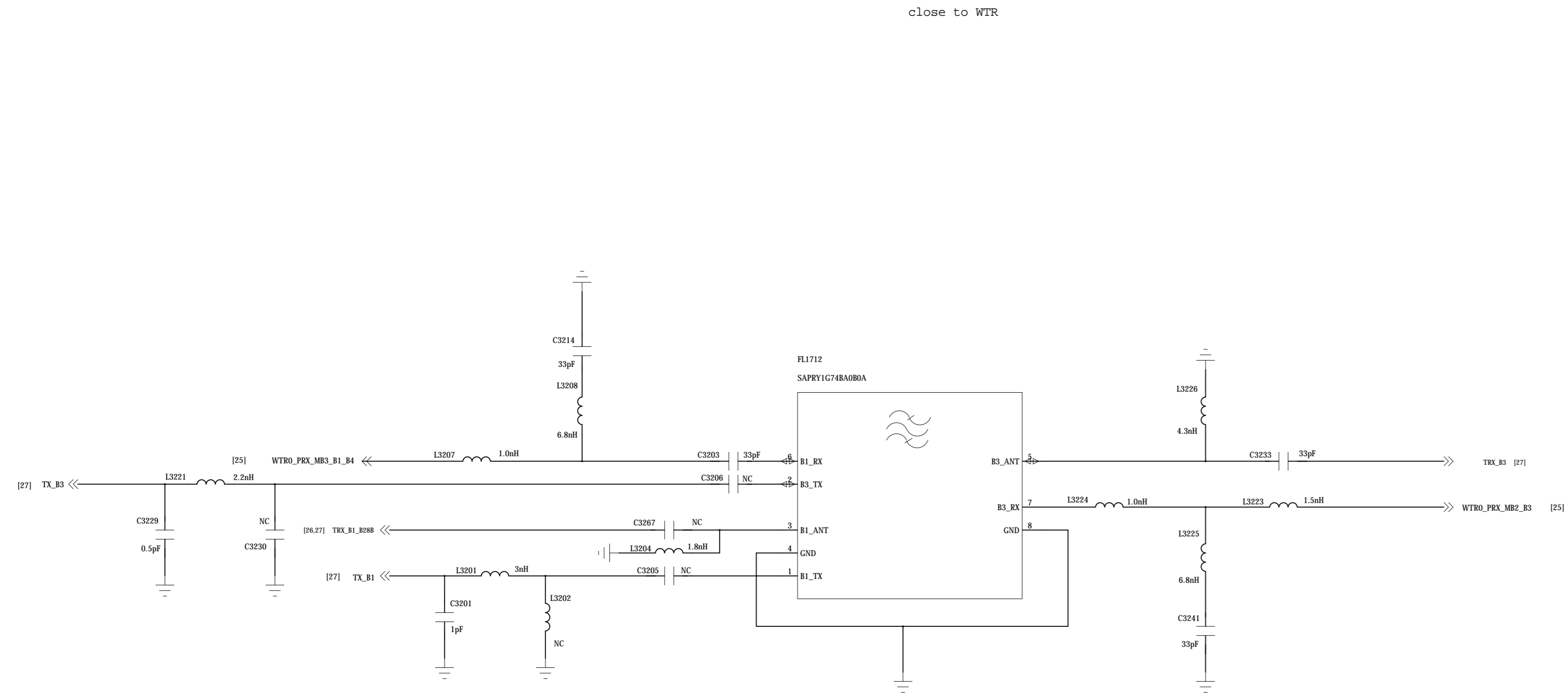
REVISION RECORD			
ITEM	REV NO.	APPROVED	DATE



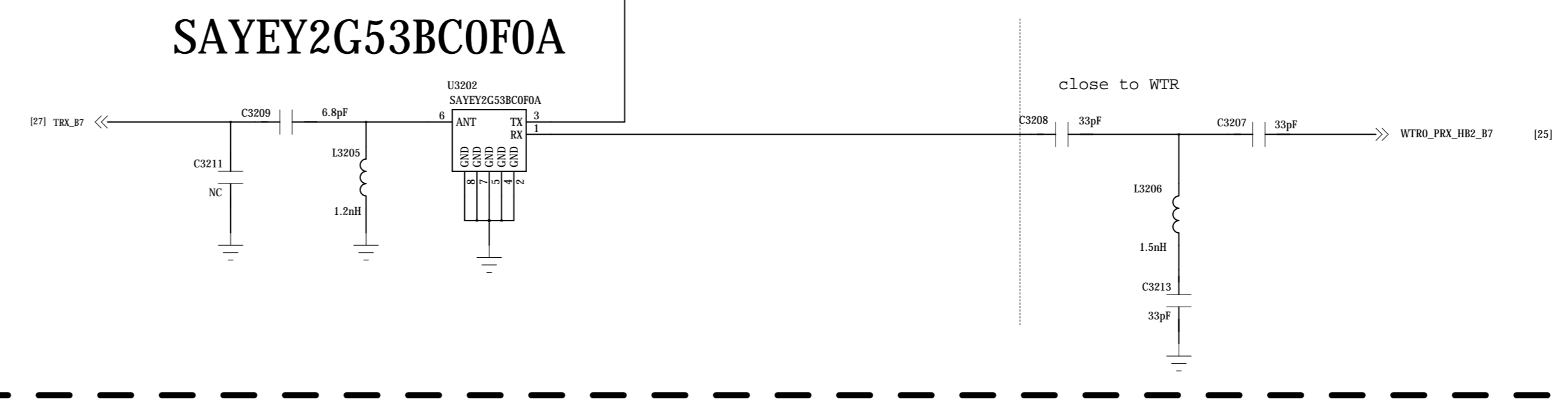
Note:RX ports have DC at the pin, so it need DC block, please make sure there is no DC short to other voltages and GND

DRAWN: <Drawn By>		DATED: <Drawn Date>		COMPANY: <Company Name>	
CHECKED: <Checked By>		DATED: <Checked Date>		TITLE: <Title>	
QUALITY CONTROL: <QC By>		DATED: <QC Date>		CODE: <Code>	SIZE: A0
RELEASED: <Released By>		DATED: <Release Date>		DRAWING NO: <Drawing Number> REV: <Revision>	
SCALE: <Scale>				SHEET: 86 31	

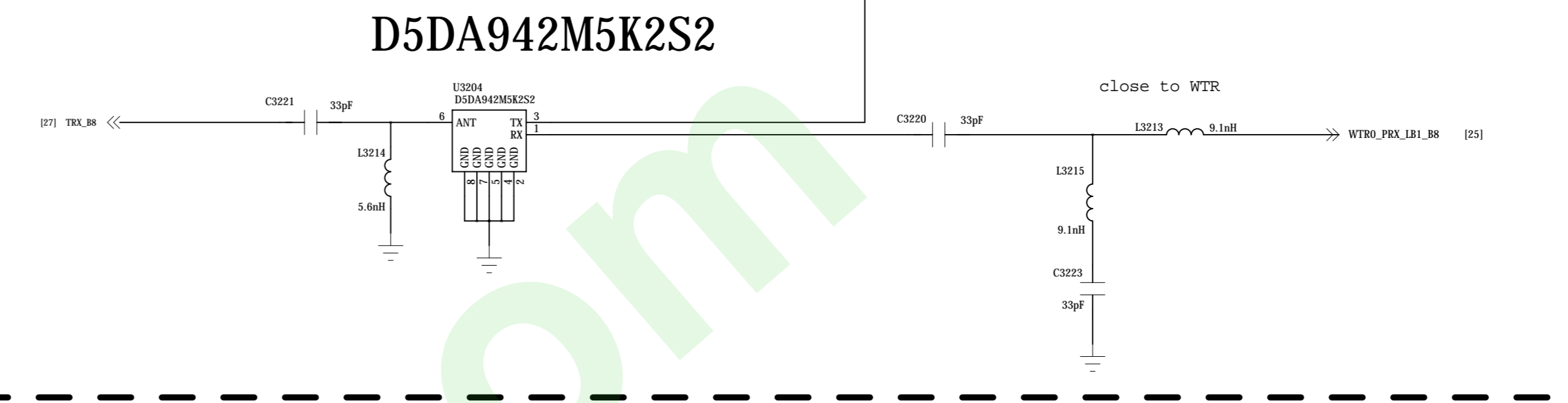
TRX_B1 TRX_B3



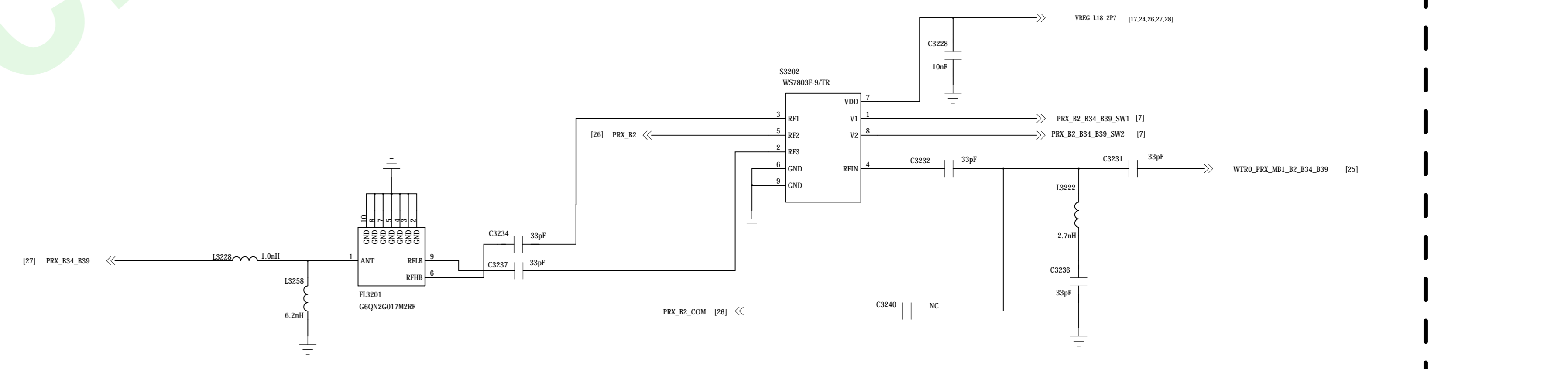
TRX_B7



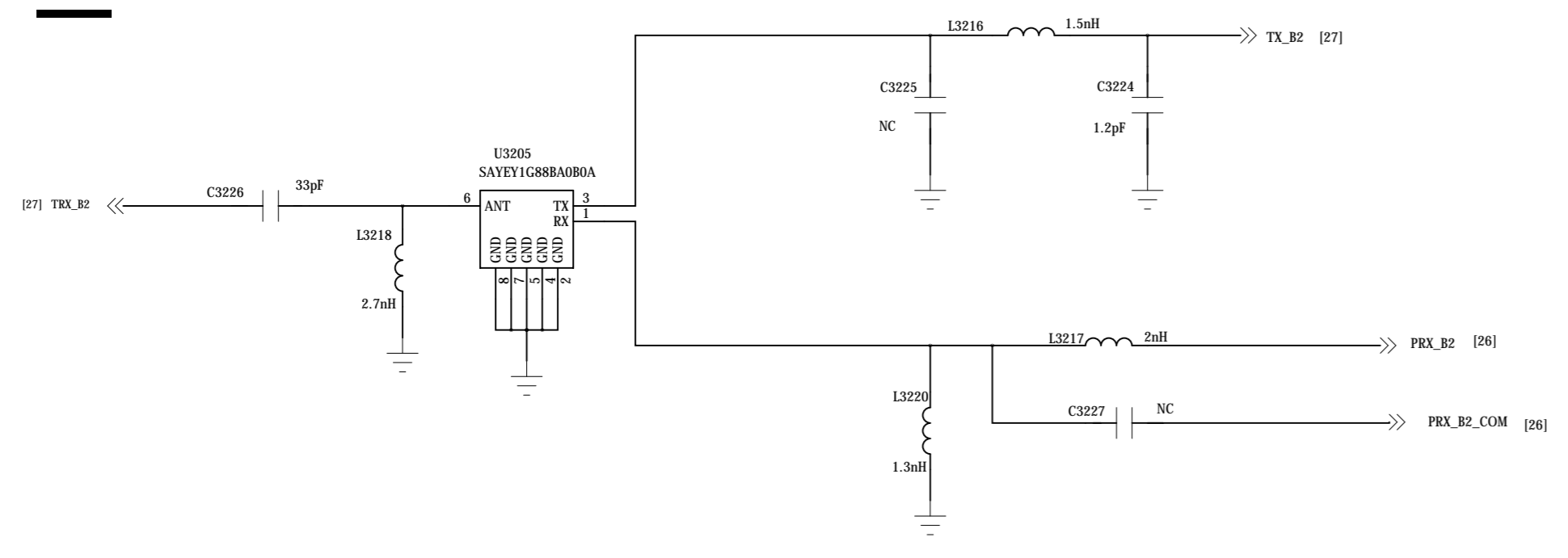
TRX_B8



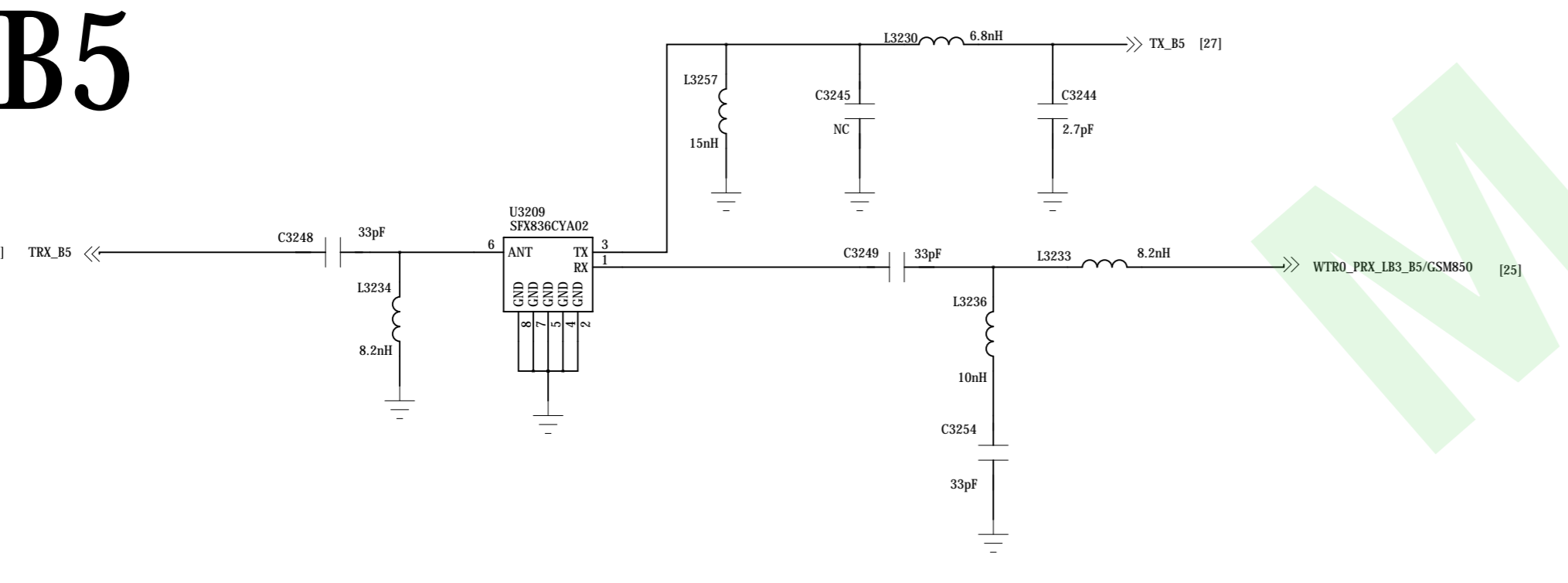
TRX_TDS_B34_B39



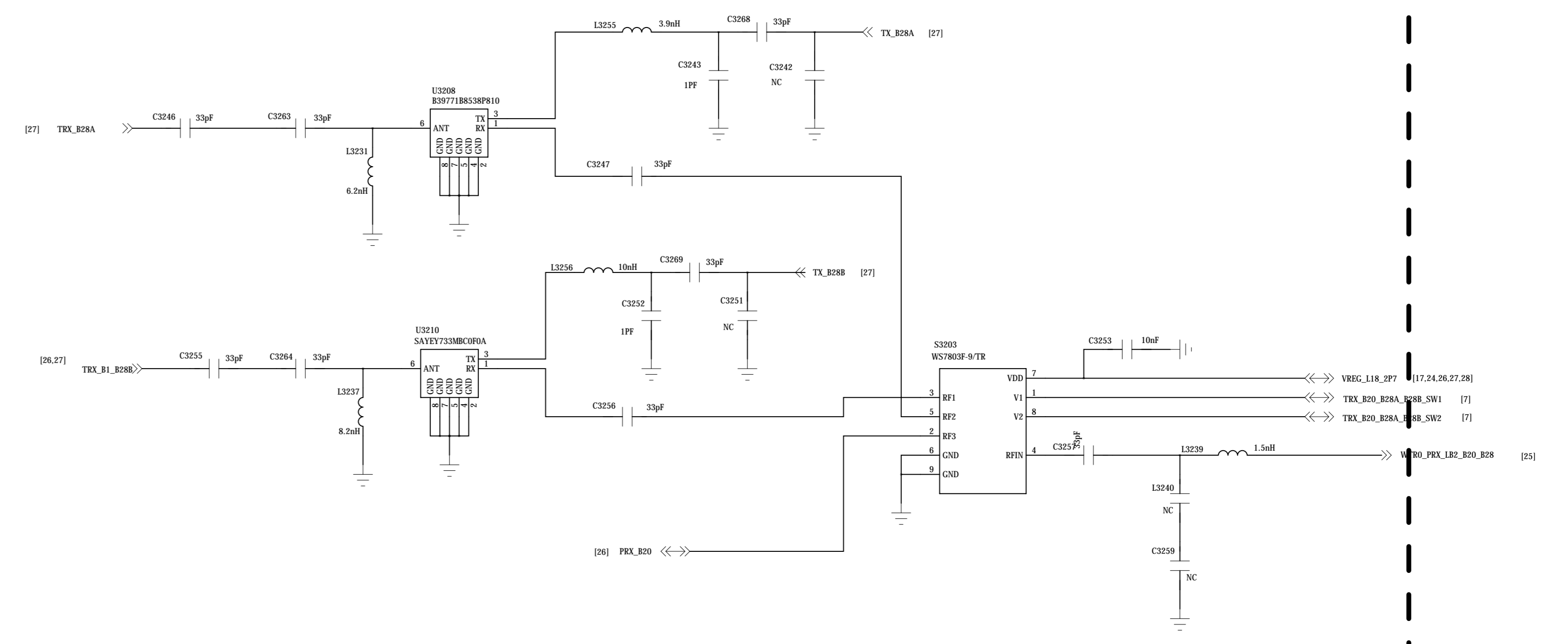
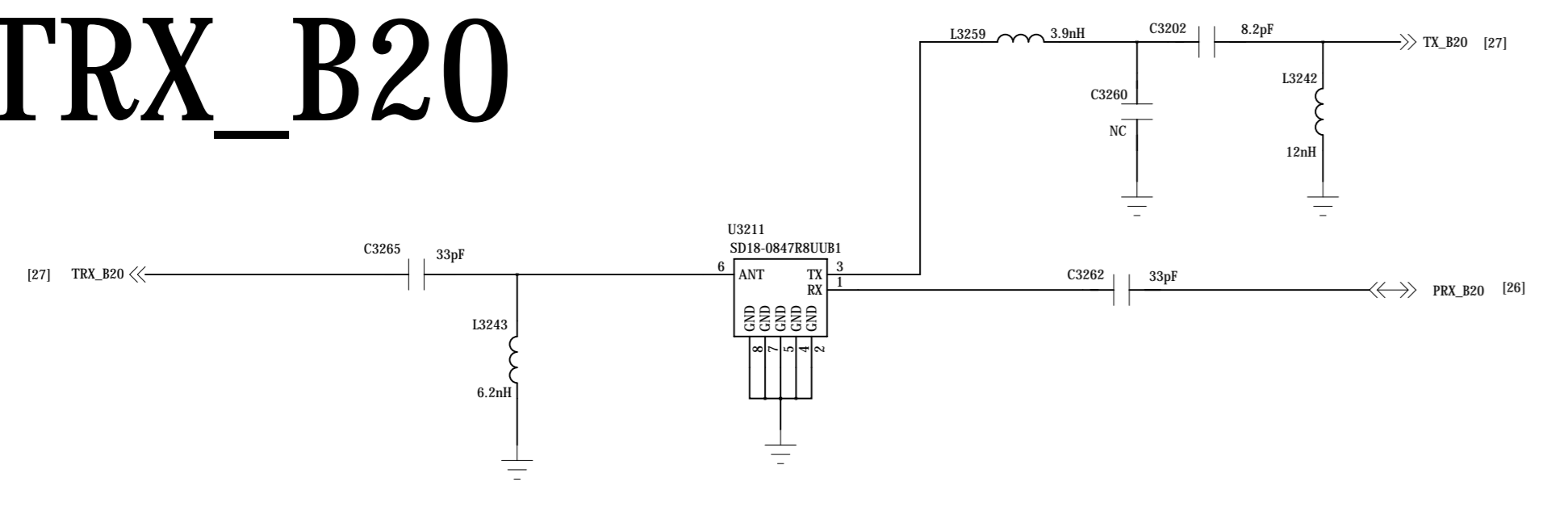
TRX_B2



TRX_B5

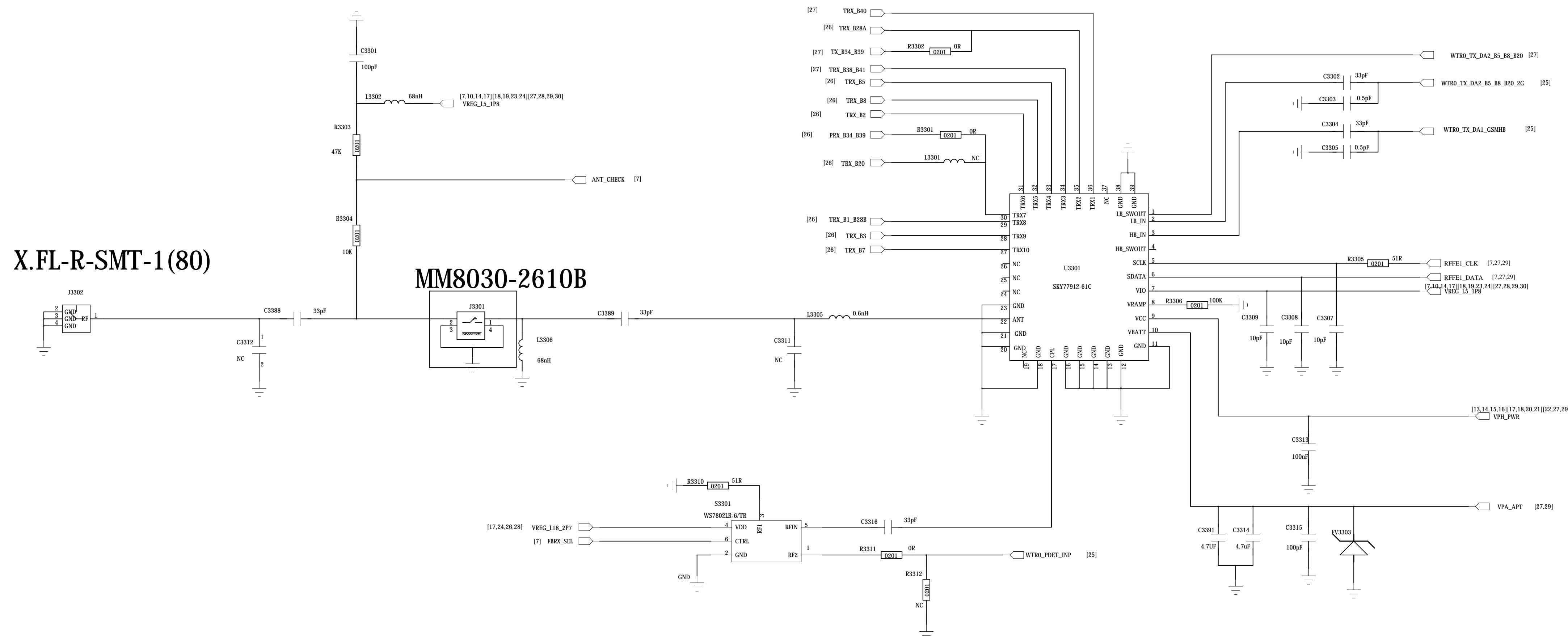


TRX_B20

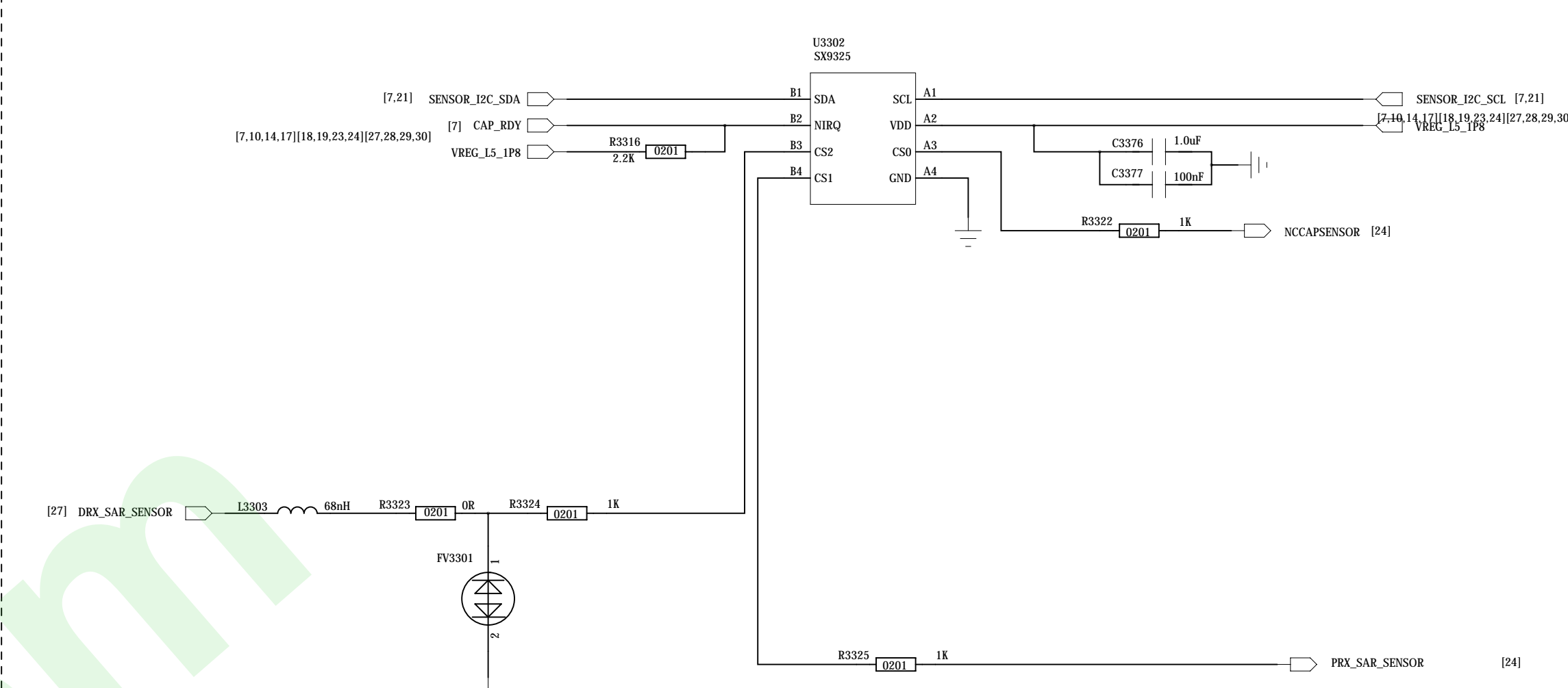


REVISION RECORD			
REV	REV NO	APPROVED	DATE

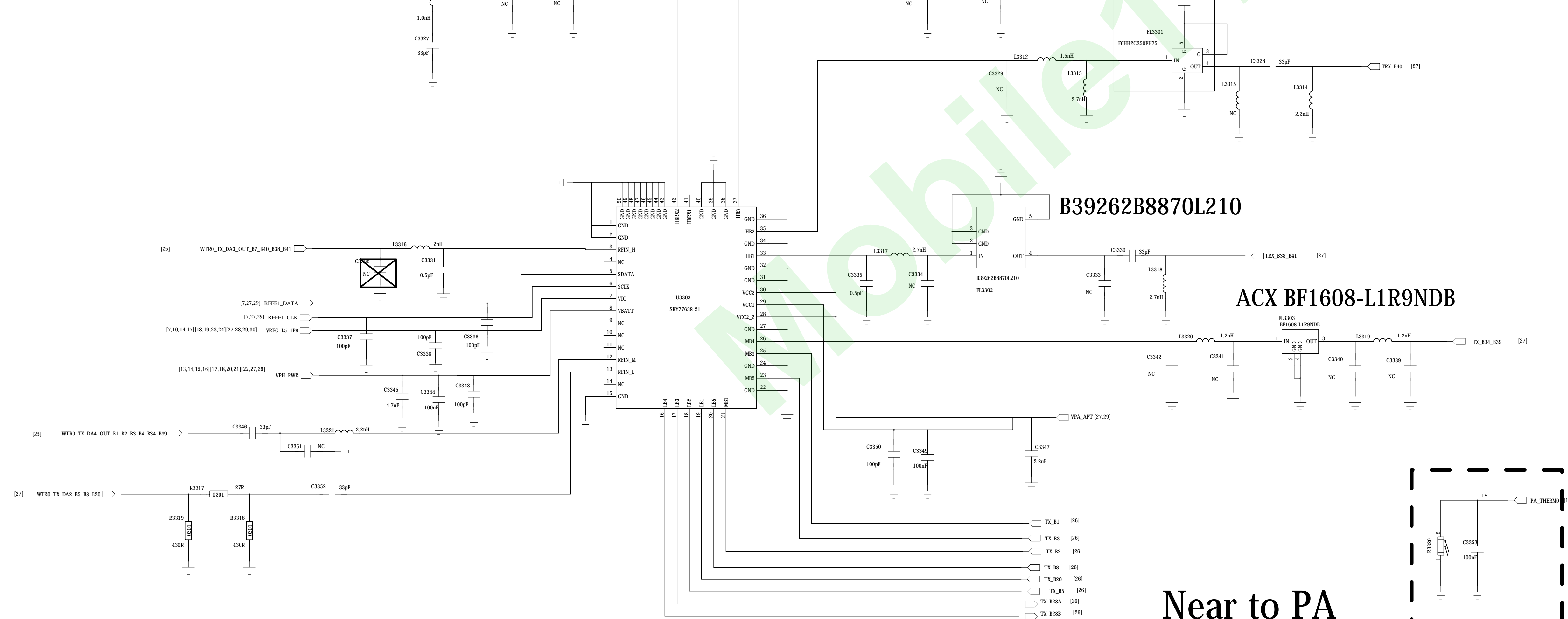
TXM



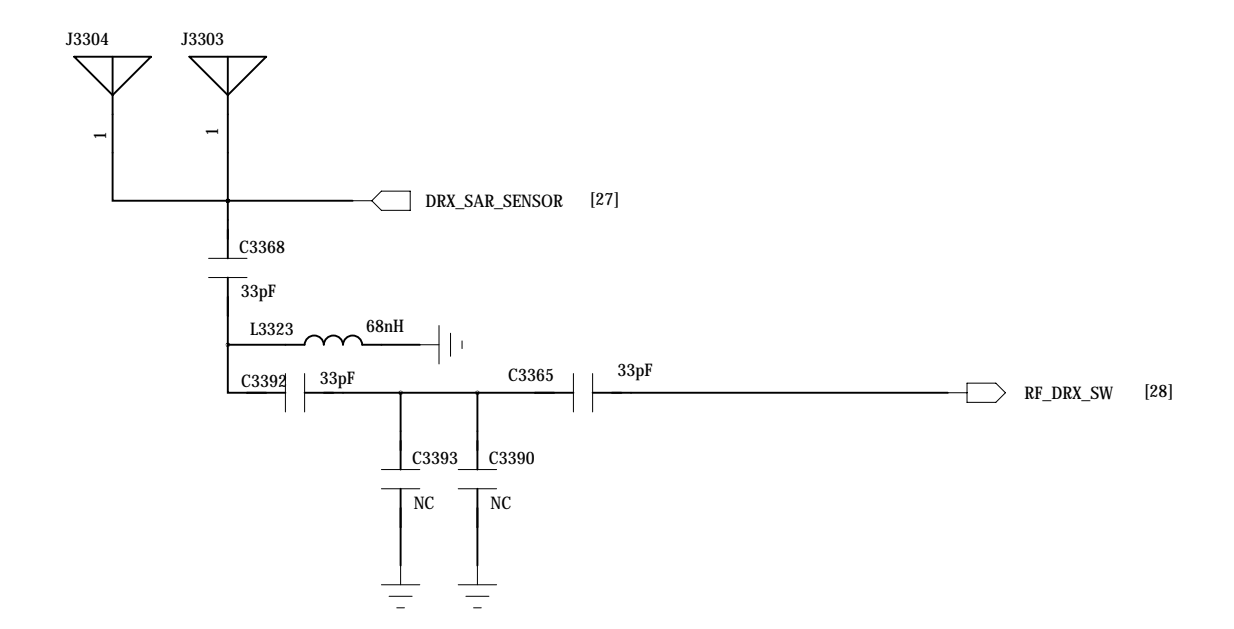
SAR Sensor



MMPA

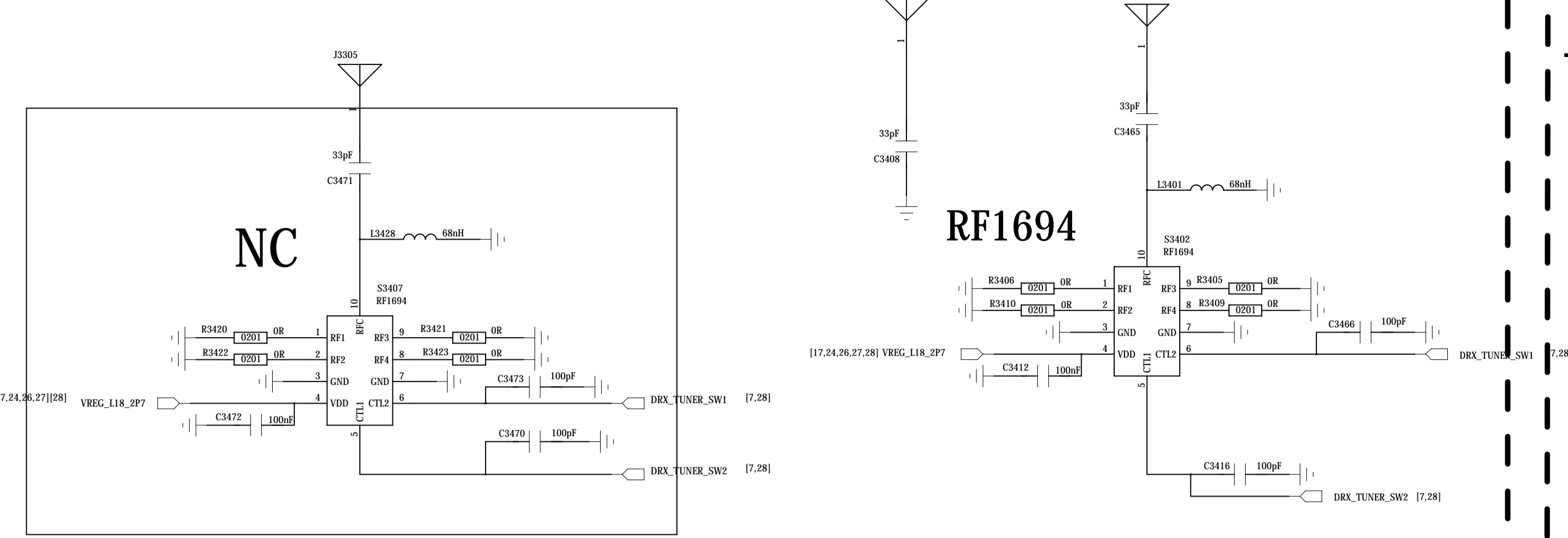


Near to PA

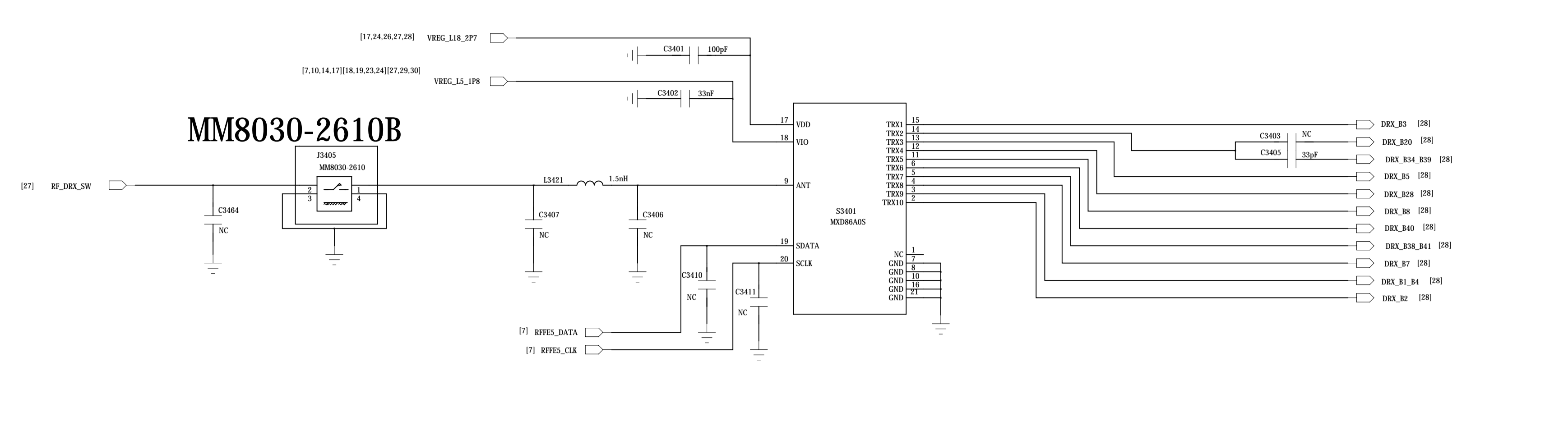


COMPANY: <Company Name>		TITLE: <Title>	
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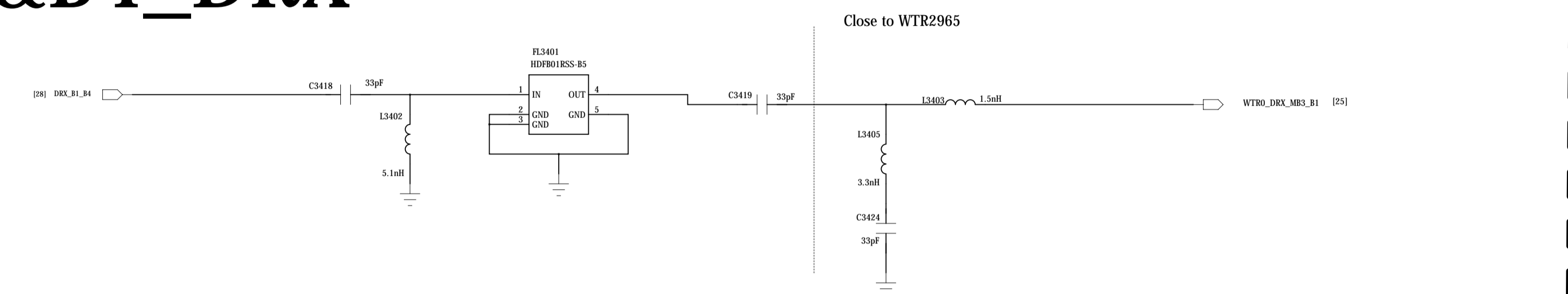
ANT-Switch



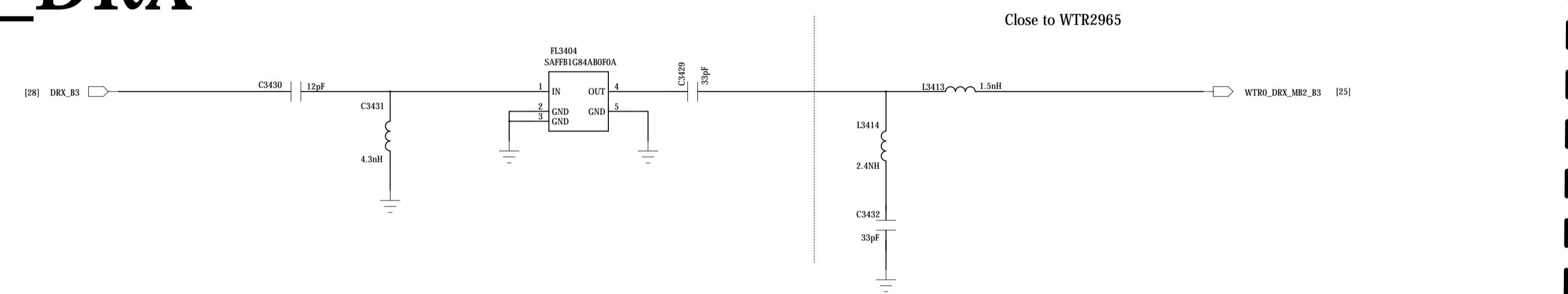
DRX



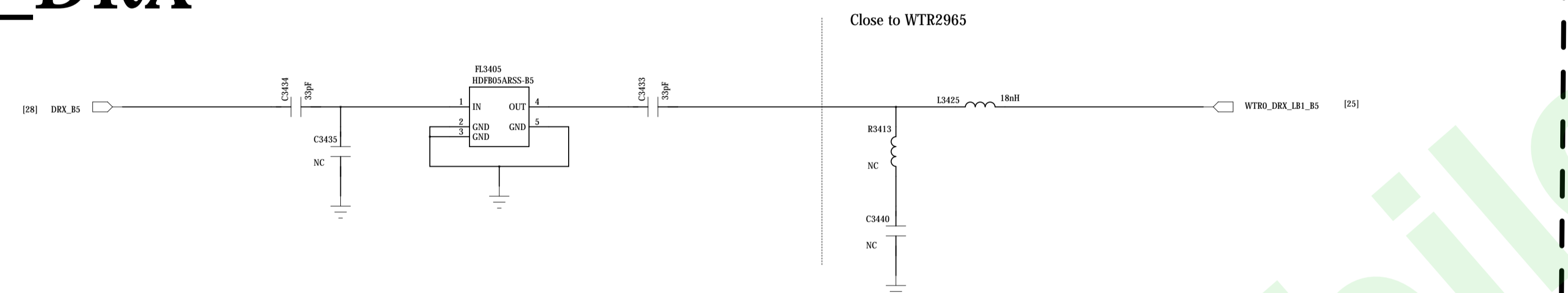
B1&B4_DRX



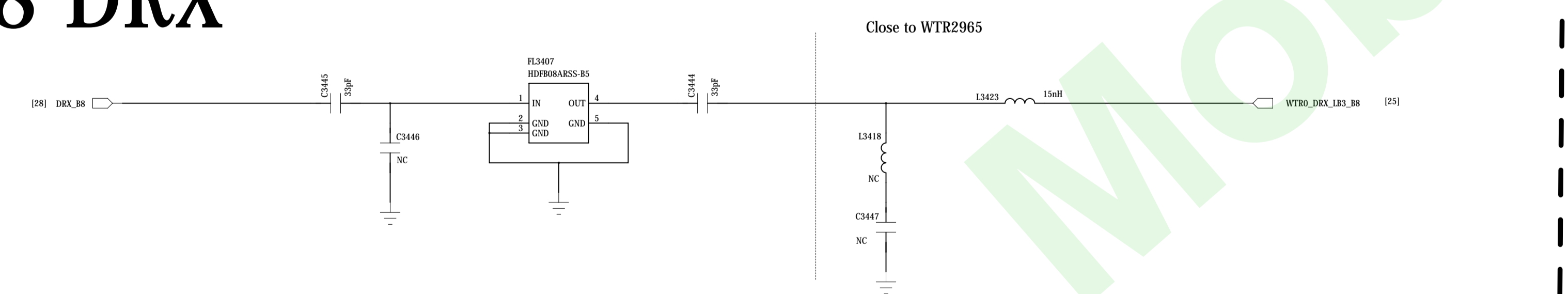
B3_DRX



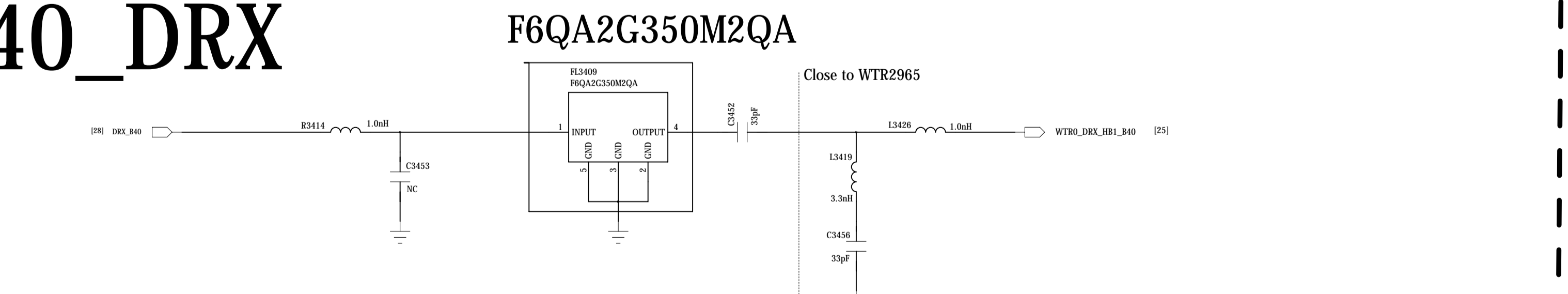
B5_DRX



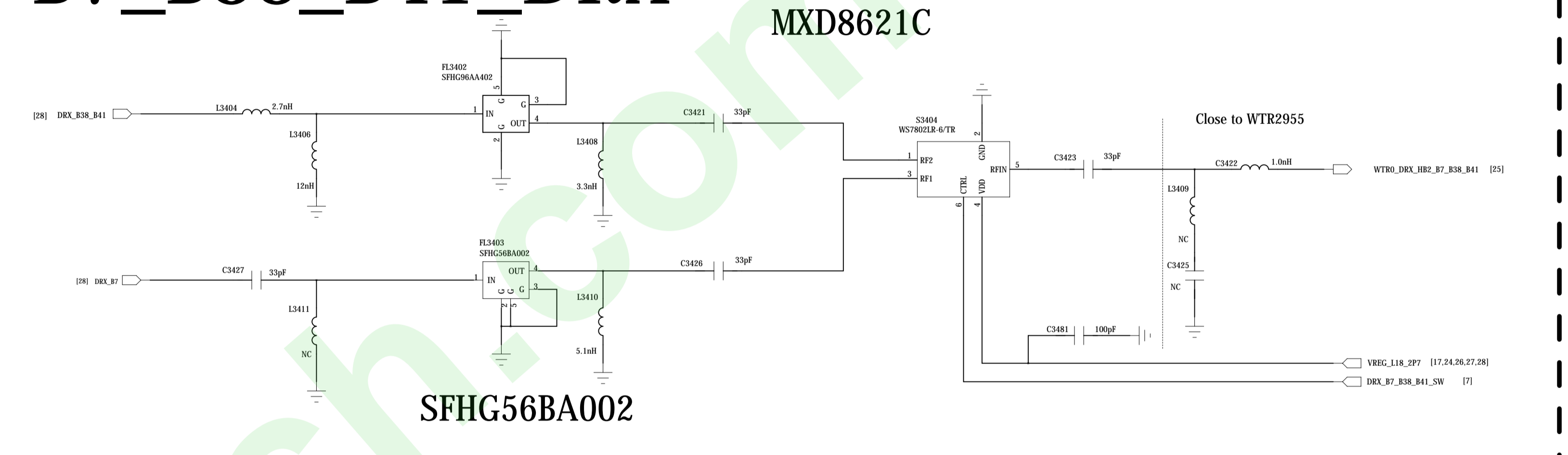
B8 DRX



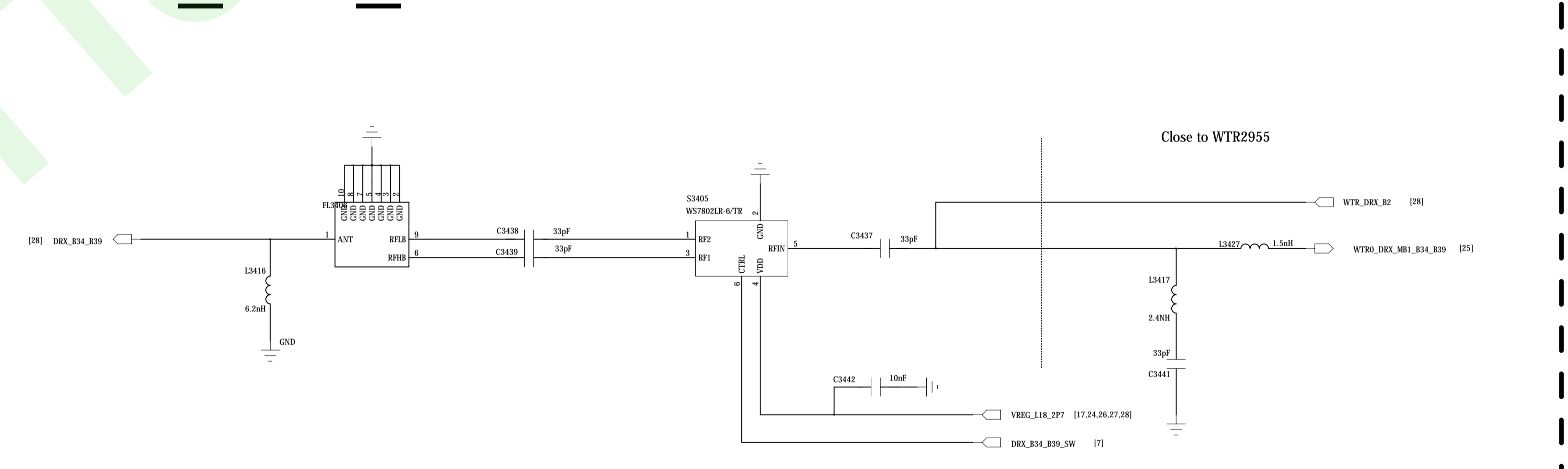
B40_DRX



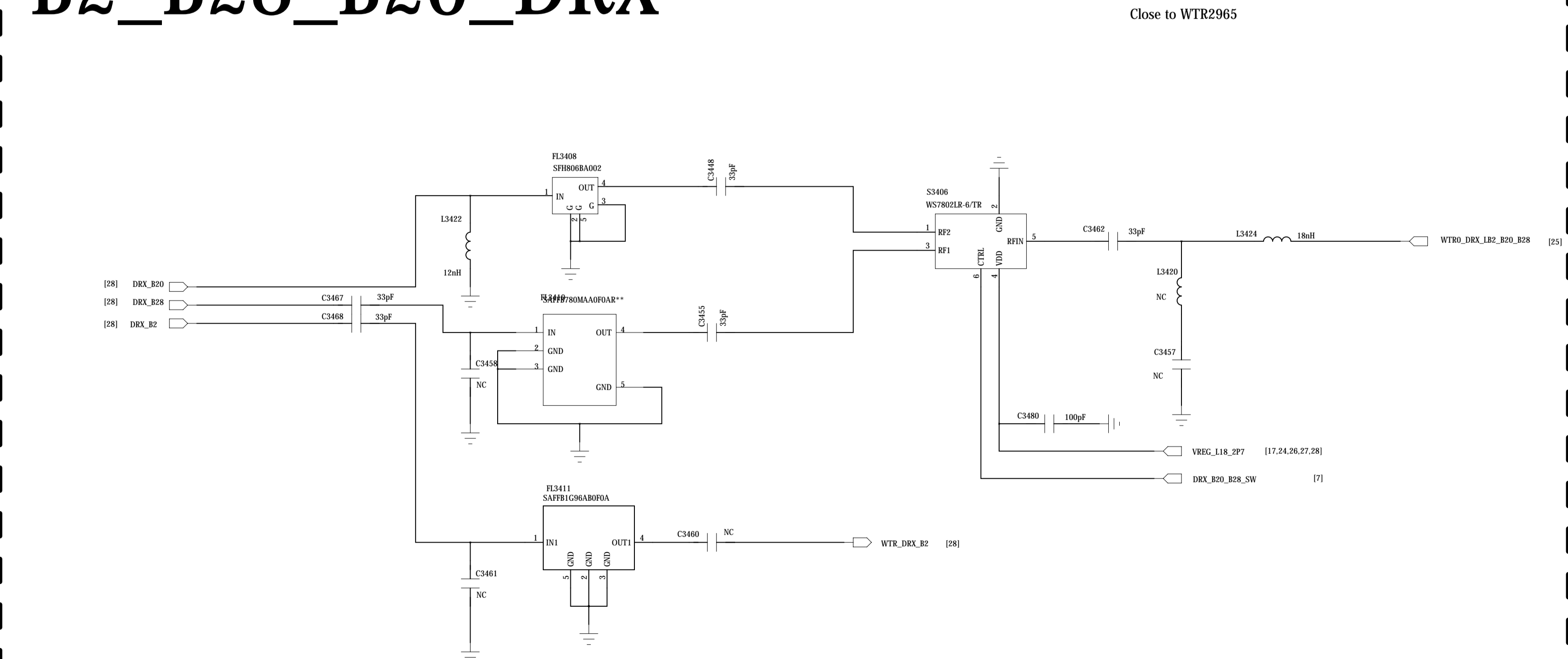
B7_B38_B41_DRX



B34_B39_DRX

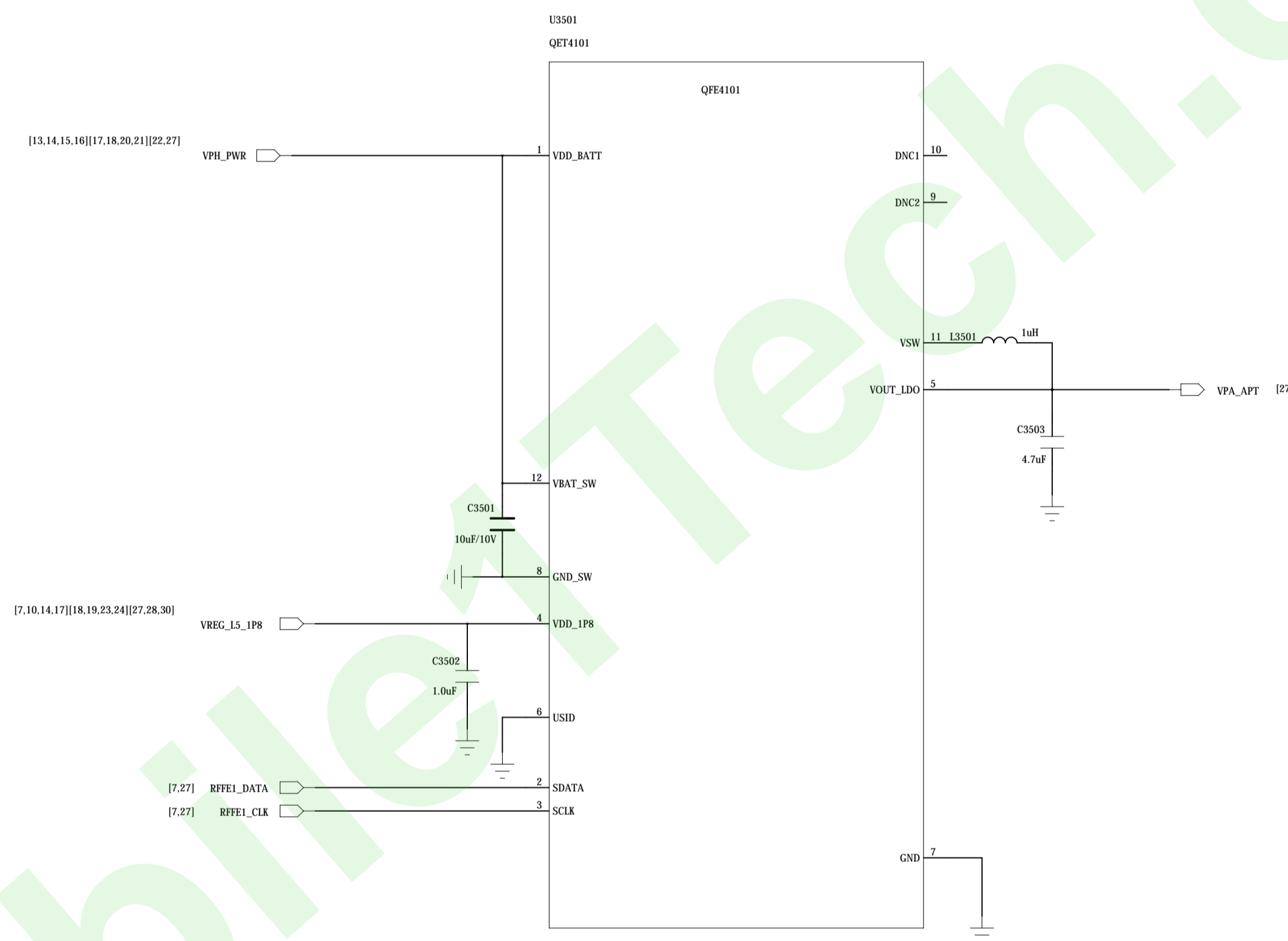


B2_B28_B20_DRX



COMPANY: <Company Name>			
TITLE: 21_LTE_B7			
CODE: <Code>	SIZE: A0	DRAWING NO: <Drawing Number>	REV: <Revision>
DESIGN: LiuMengya	DRAWN: <Drawn Date>		

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COMPANY: <Company Name>		TITLE: 22_DRX Redmi Y3	
CODE: <Code>	SIZE: A0	DRAWING NO: <Drawing Number>	REV: <Revision>
DRAWN: LinMengya	DATE: <Drawn Date>	SCALE: <Scale>	SHEET: 29 of 31
CHECKED: JJJ	DATE: <Checked Date>		

