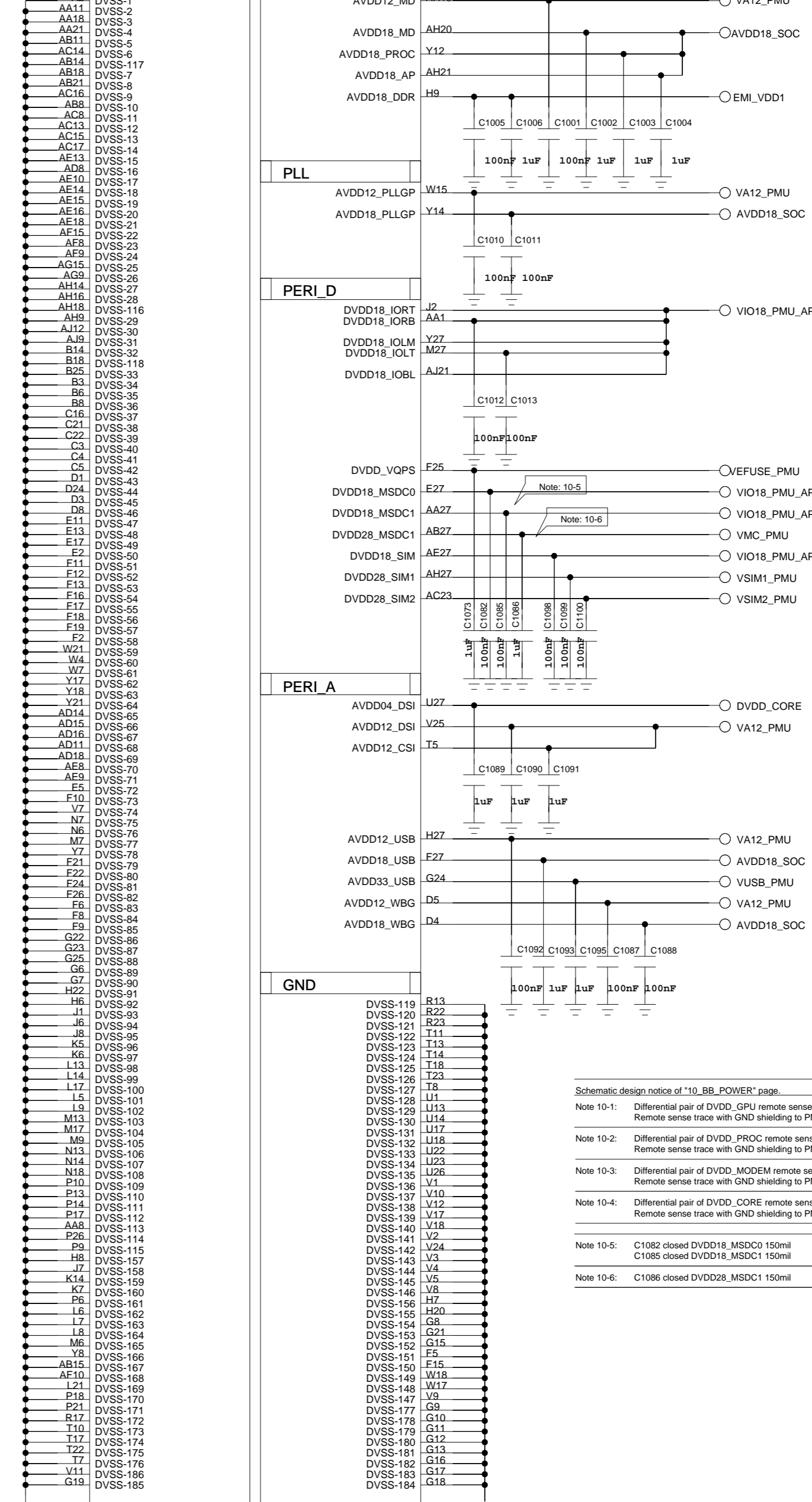
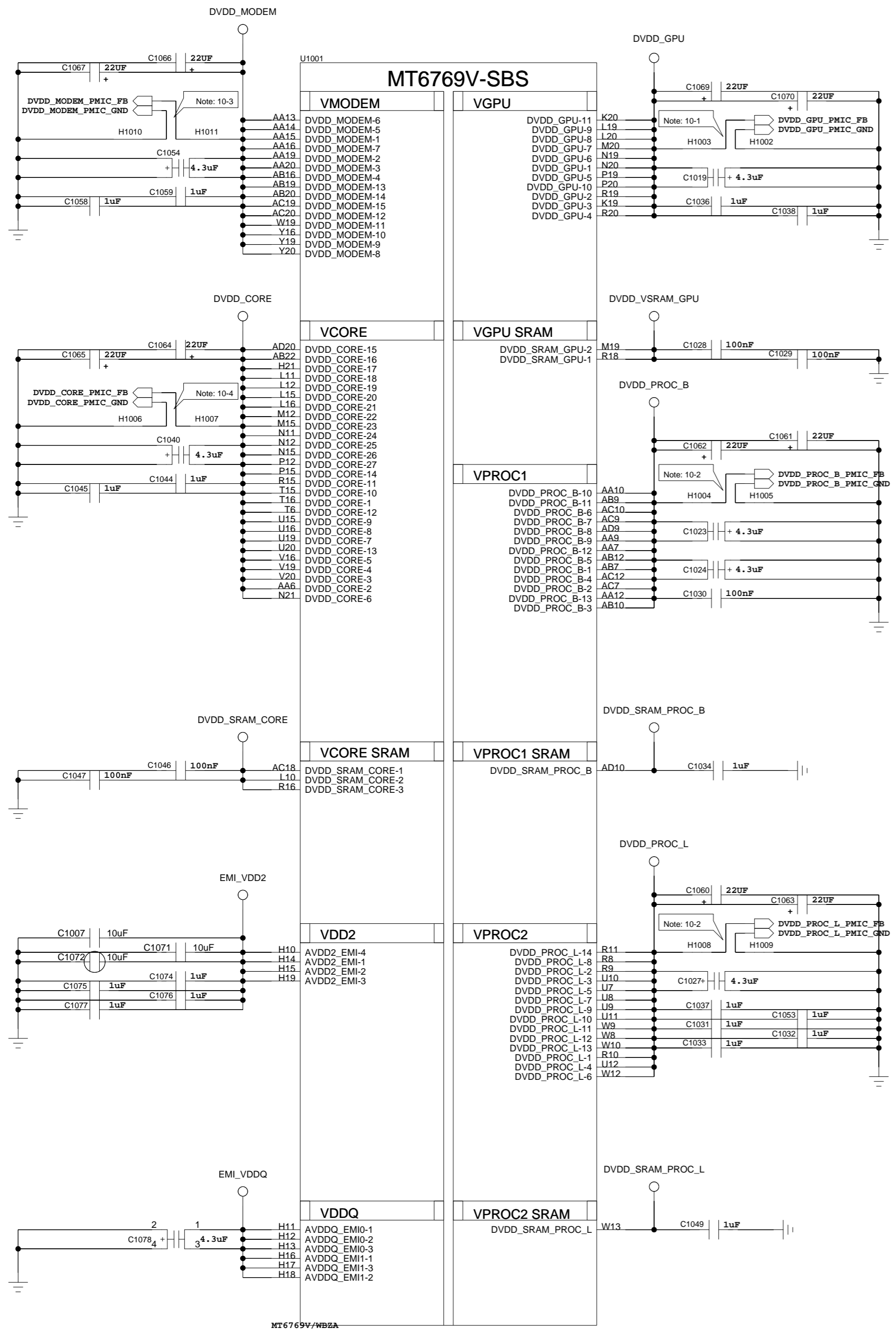


BB_POWER

MT6769V-SBS

REVISION RECORD			
LTR	ECO NO.	APPROVED:	DATE:

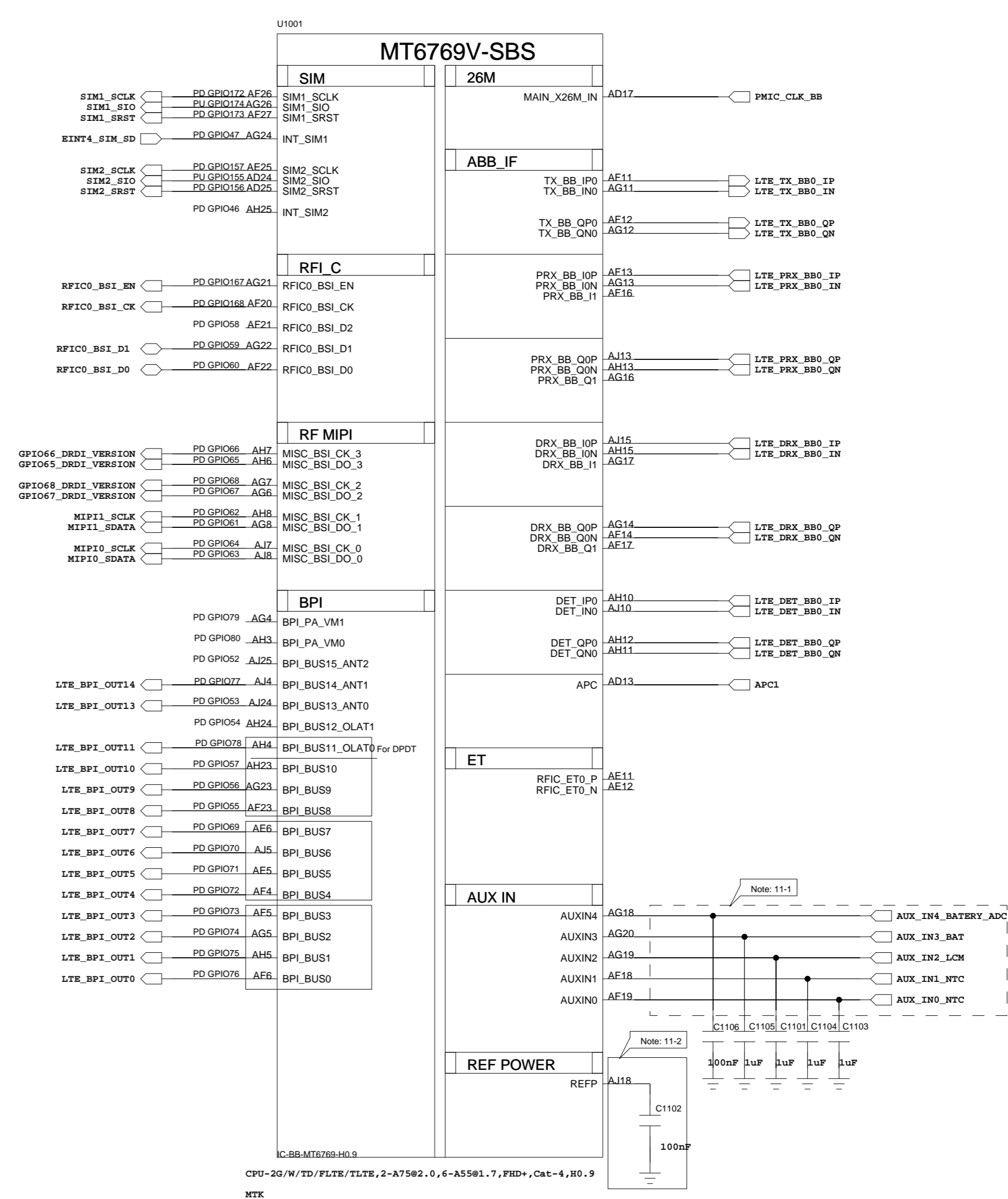
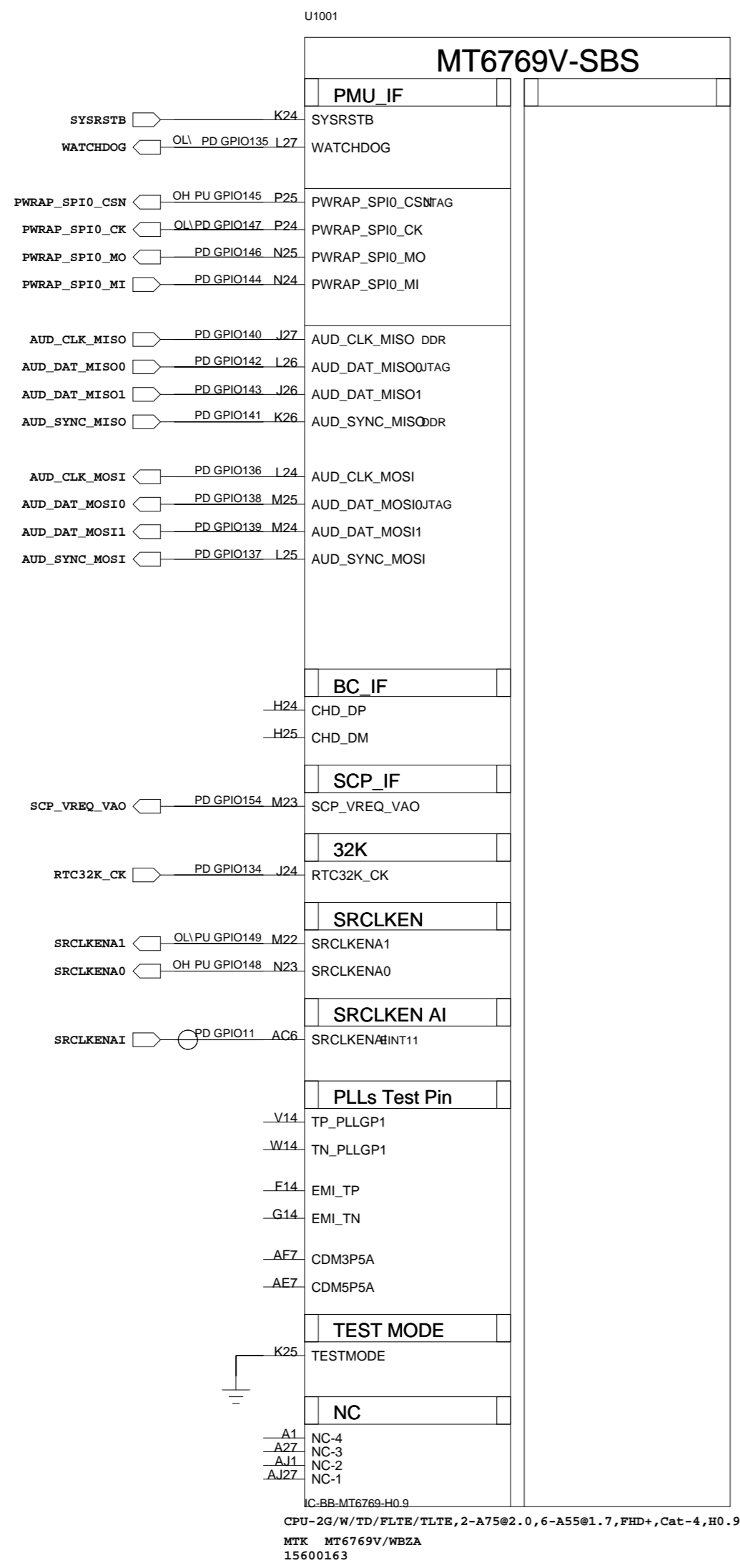


- Schematic design notice of "10_BB_POWER" page.
- Note 10-1: Differential pair of DVDD_GPU remote sense must be close to BB's ball. Remote sense trace with GND shielding to PMIC (Differential)
 - Note 10-2: Differential pair of DVDD_PROC remote sense must be close to BB's ball. Remote sense trace with GND shielding to PMIC (Differential)
 - Note 10-3: Differential pair of DVDD_MODEM remote sense must be close to BB's ball. Remote sense trace with GND shielding to PMIC (Differential)
 - Note 10-4: Differential pair of DVDD_CORE remote sense must be close to BB's ball. Remote sense trace with GND shielding to PMIC (Differential)
 - Note 10-5: C1082 closed DVDD18_MSDC0 150mil
C1085 closed DVDD18_MSDC1 150mil
 - Note 10-6: C1086 closed DVDD28_MSDC1 150mil

MT6769V/WB2A

MT6769V/WB2A

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



"PWRAP_SPI0_CSN" and "AUD_DAT_MOSI0" are bootstrap pin to select which interface will be the JTAG pin out.

	PWRAP_SPI0_CSN	AUD_DAT_MOSI0	AP_JTAG	MD_JTAG
Default	HI	LO	N/A	N/A
	HI	HI	SPI0+EINT8	SPI2+SPI3
	LO	LO	SPI0+EINT8	N/A
	LO	HI	N/A	N/A

AUD_SYNC_MISO and AUD_CLK_MISO are DDR type feature in bootstrap

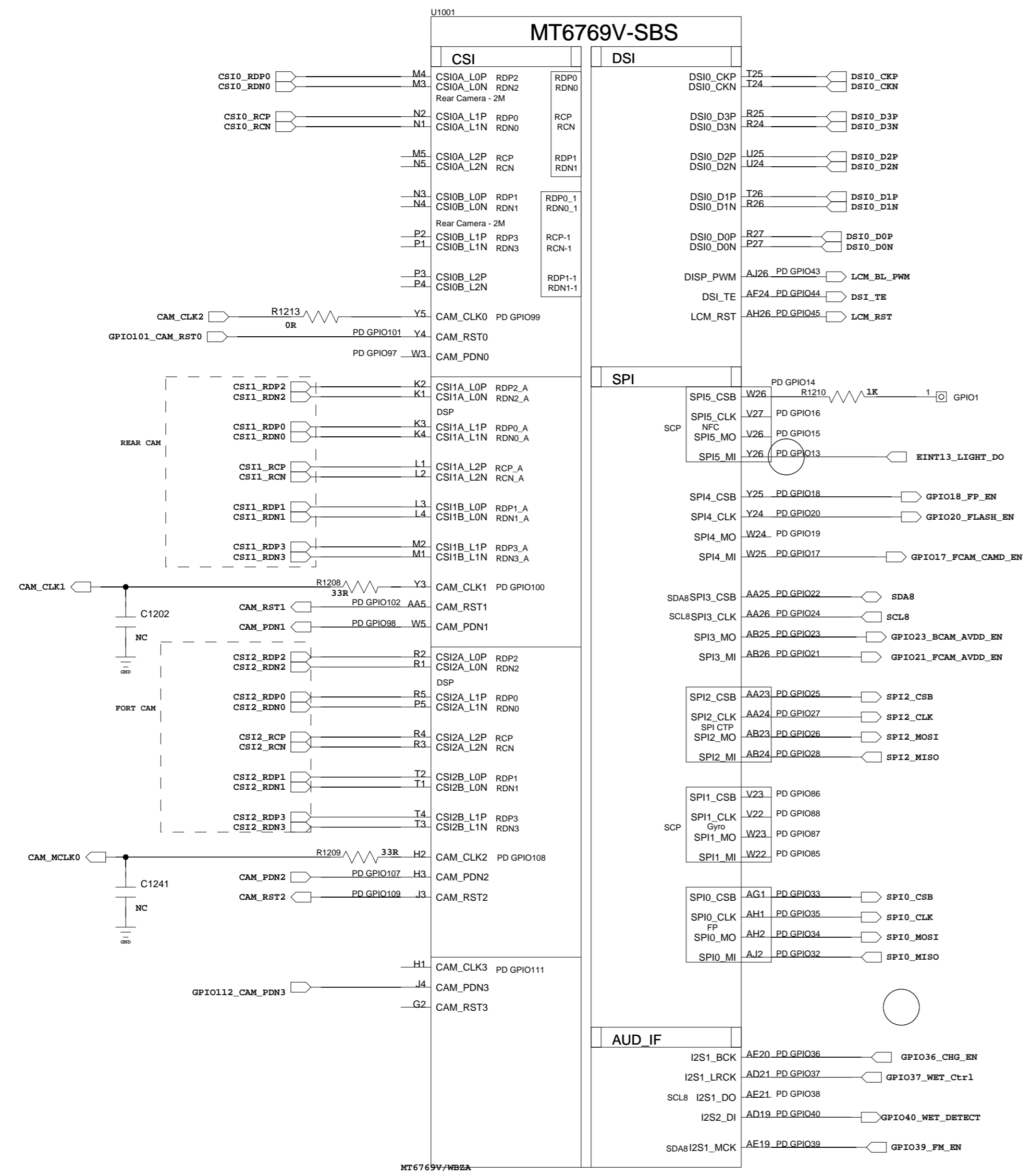
	AUD_SYNC_MISO	AUD_CLK_MISO	DDR Type	VDRAM1 / VDRAM2 (PMU)
Default	LO	LO	LP4X eMCP	1.125V/0.6V
	LO	HI	Reserved	OFF/1.8V
	HI	LO	LP3 eMCP	1.225V/OFF
	HI	HI	Reserved	1.125V/1.8V

Schematic design notice of "11_BB_I" page.

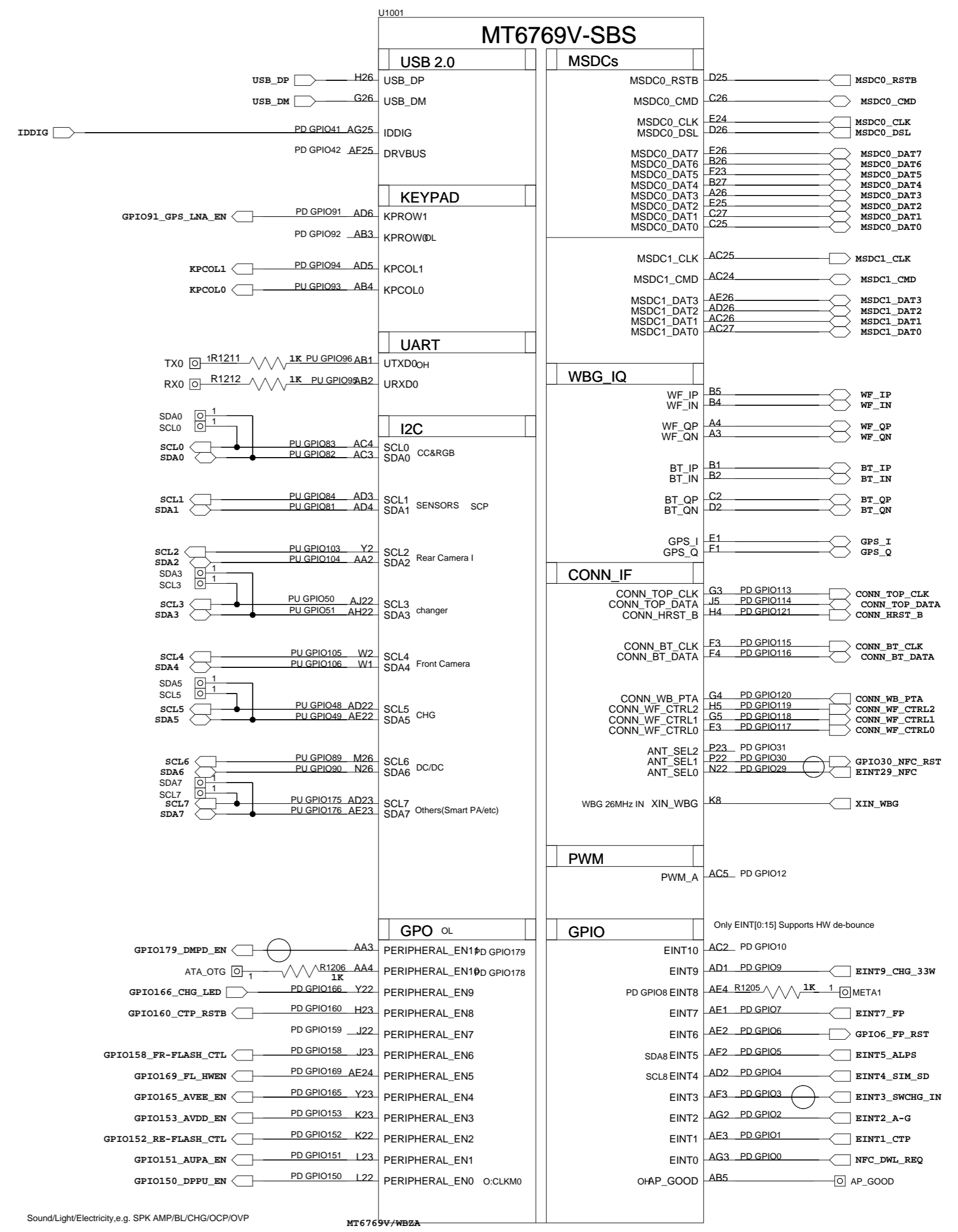
Note 11-1: To shunt a 1uF capacitor in the AUXIN ADC input to prevent noise coupling. It should be placed as close to BB as possible. Connect the unused AUX ADC input to GND.

Note 11-2: The de-coupling cap. for REFP (AJ21 ball) have to be placed as close to BB as possible.

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



MT6769V/WB2A

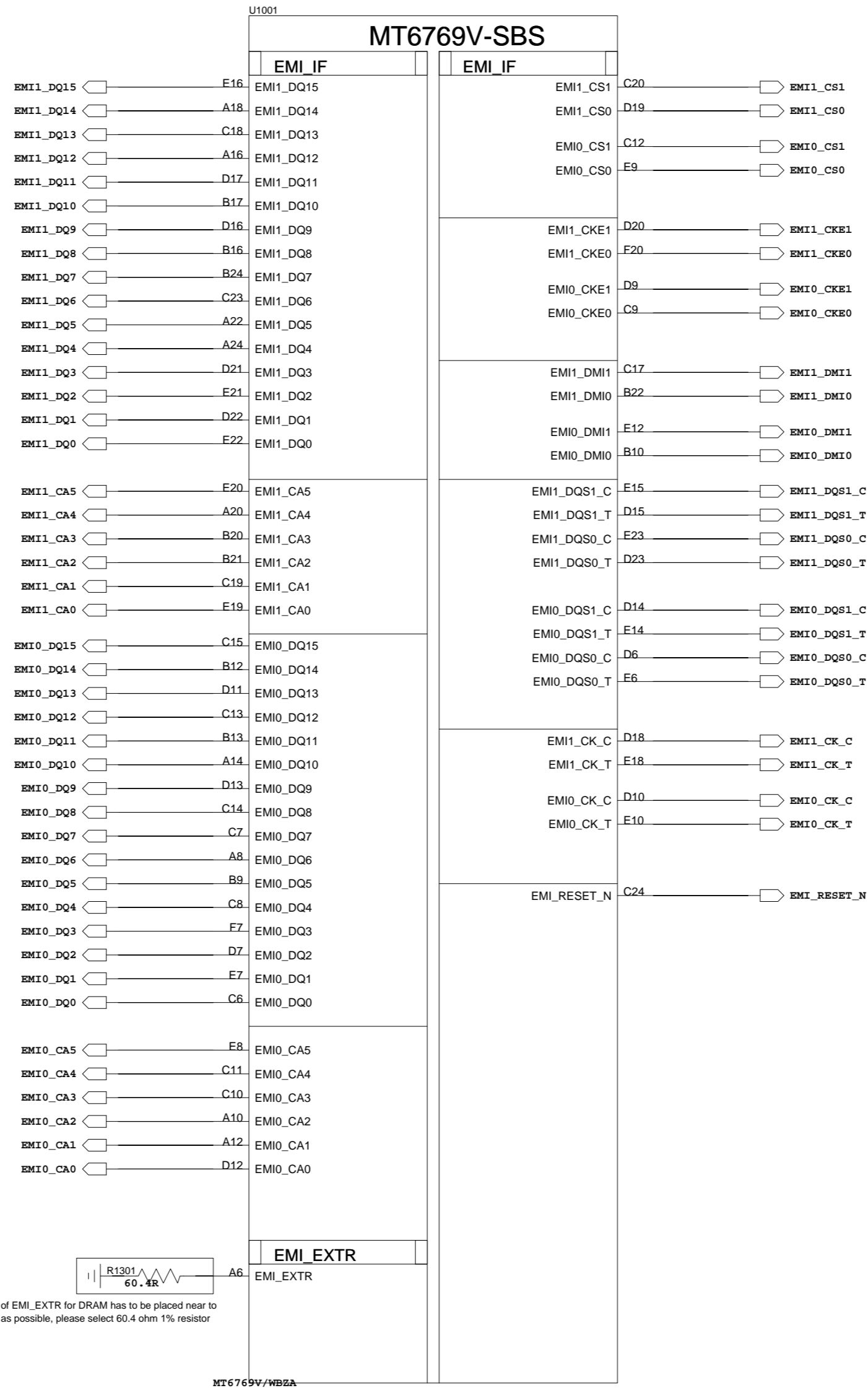


MT6769V/WB2A

Sound/Light/Electricity, e.g. SPK AMP/BL/CHG/OCP/OVP enable Pin suggest to use PERIPHERAL_EN[0:5]

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

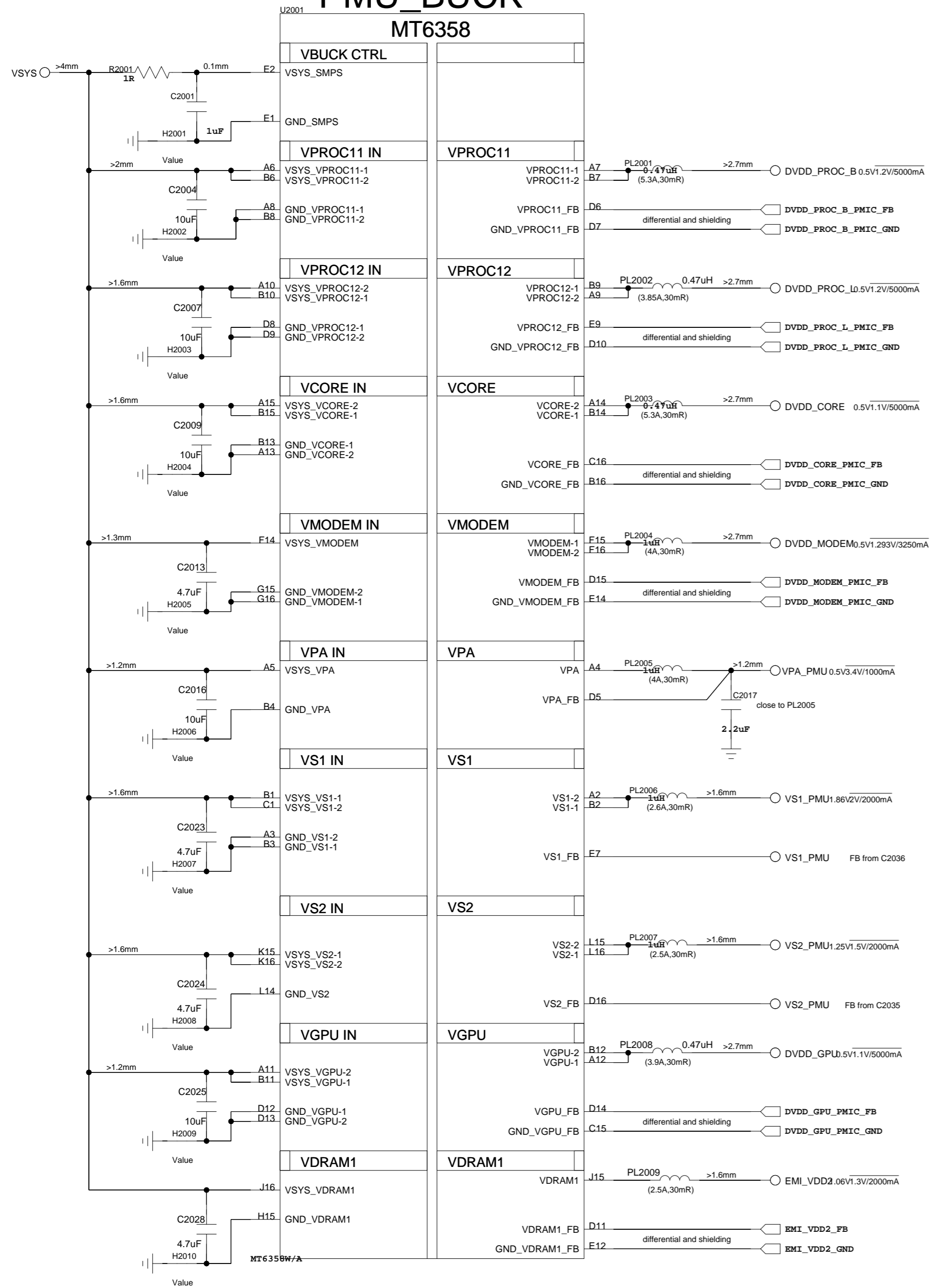
LPDDR4X_EMI_IF



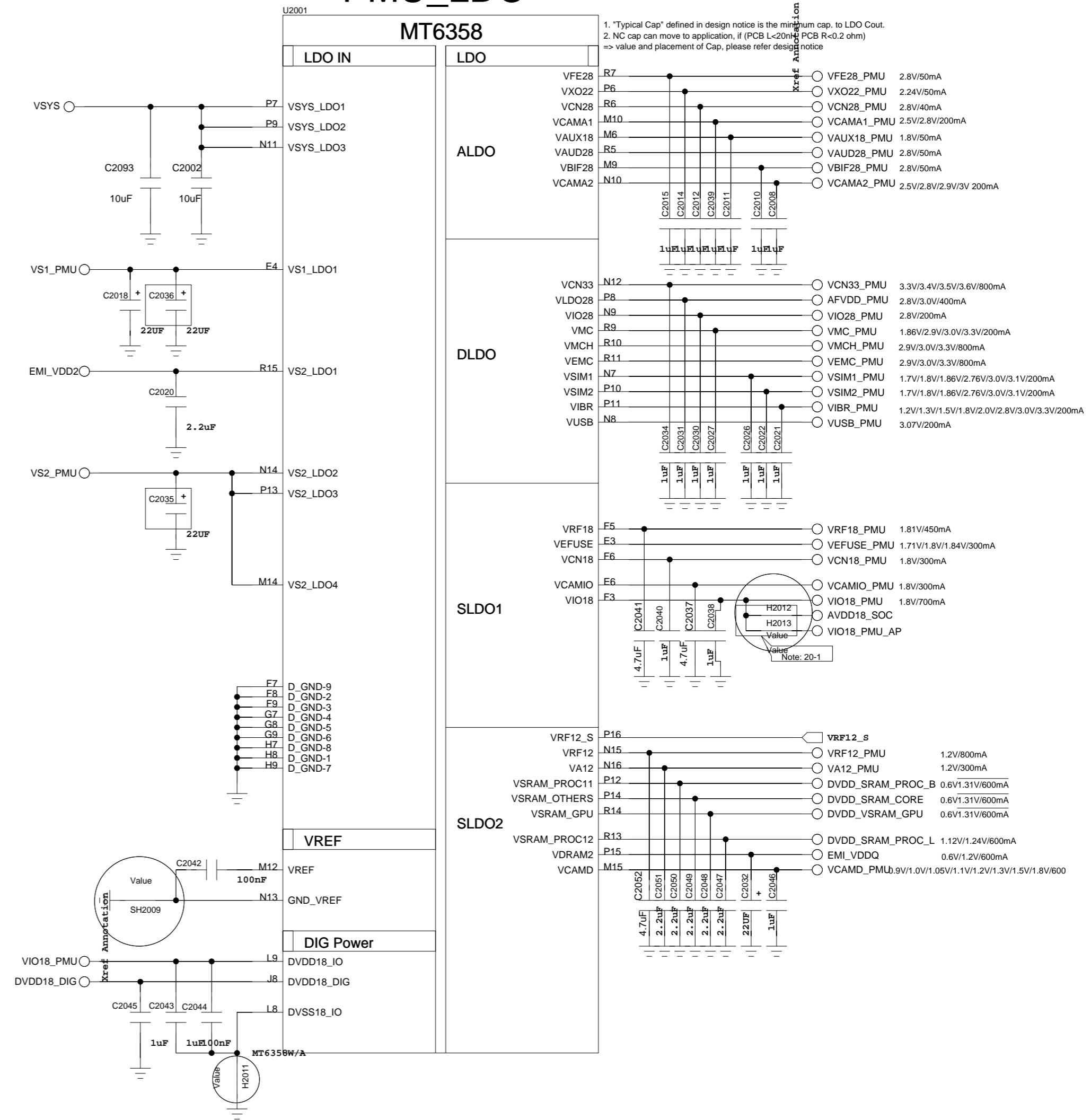
POWER_MT6358_I

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

PMU_BUCK



PMU_LDO

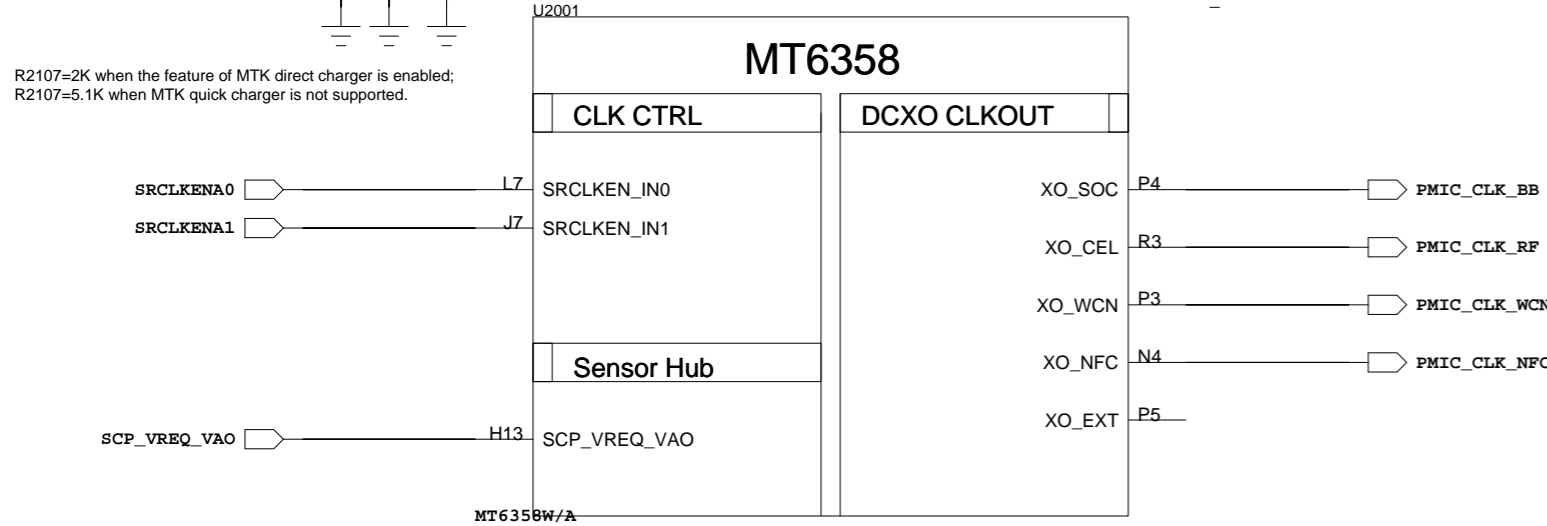
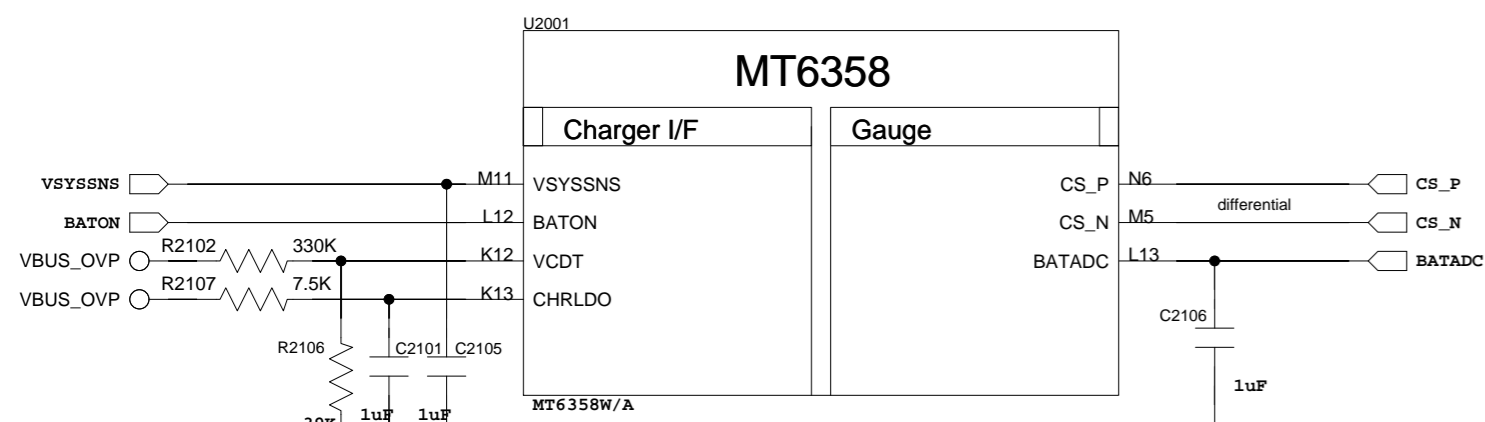
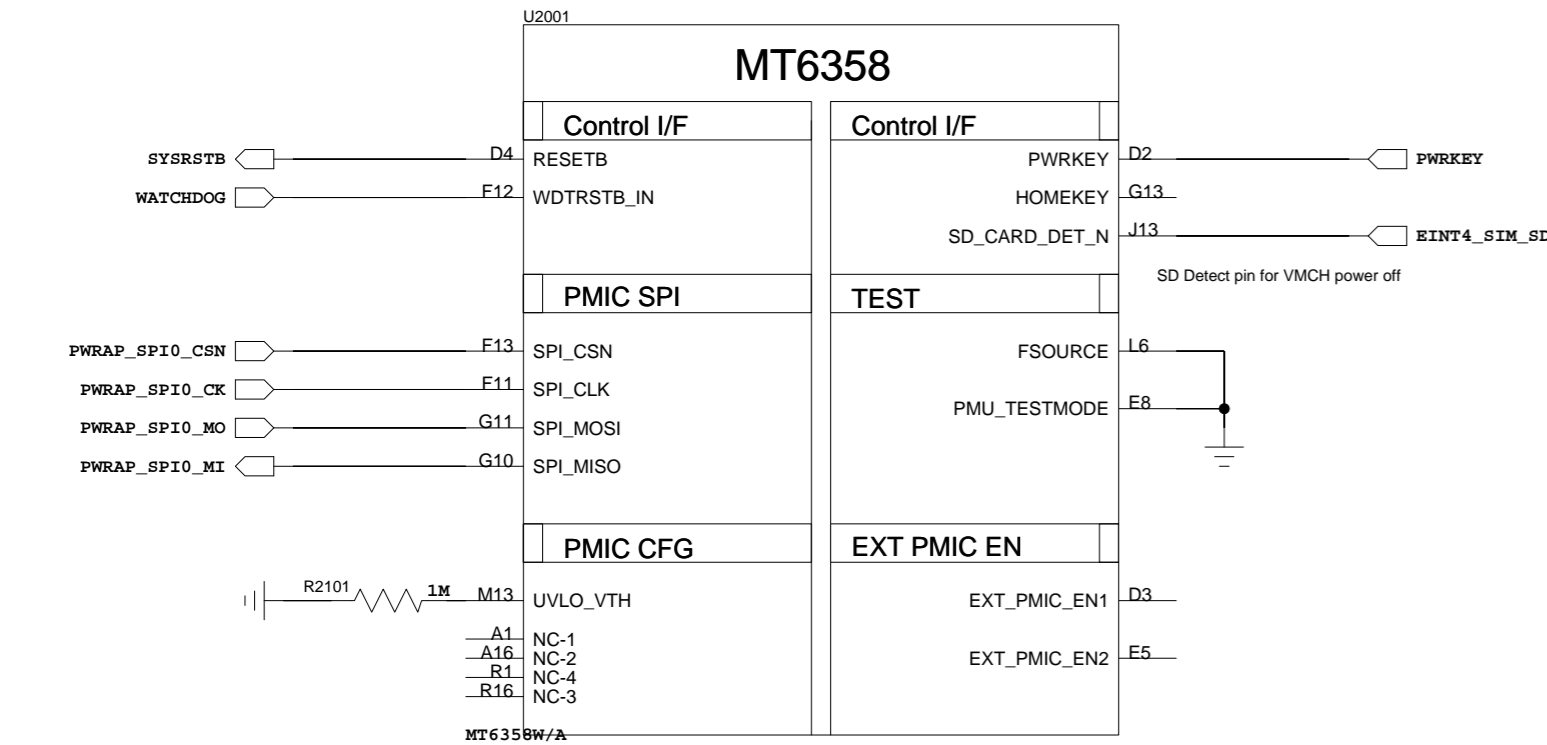


Schematic design notice of "21_POWER_MT6358-LDO" page.

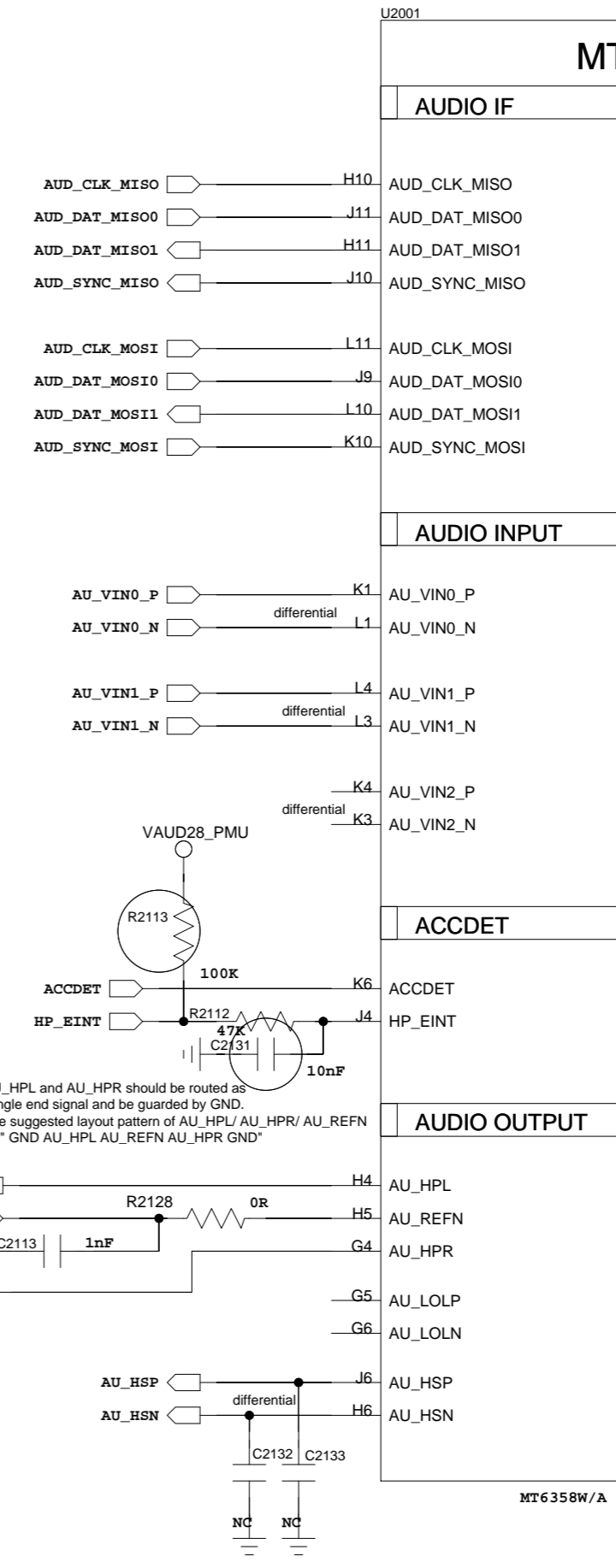
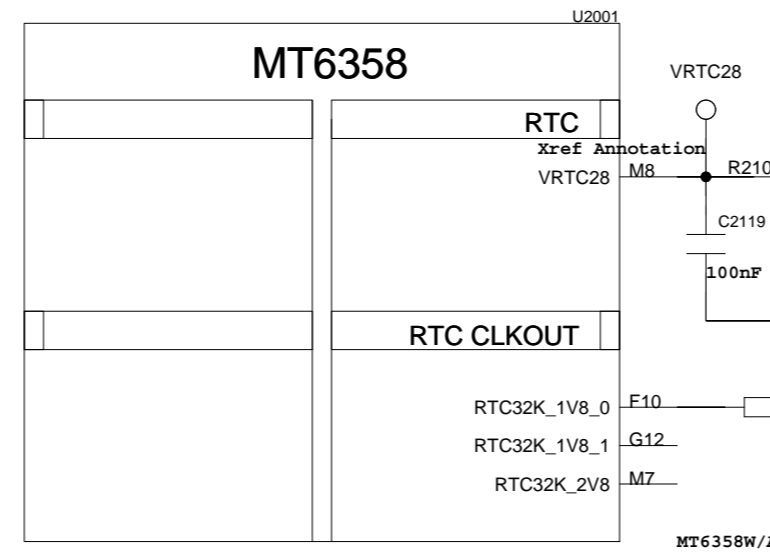
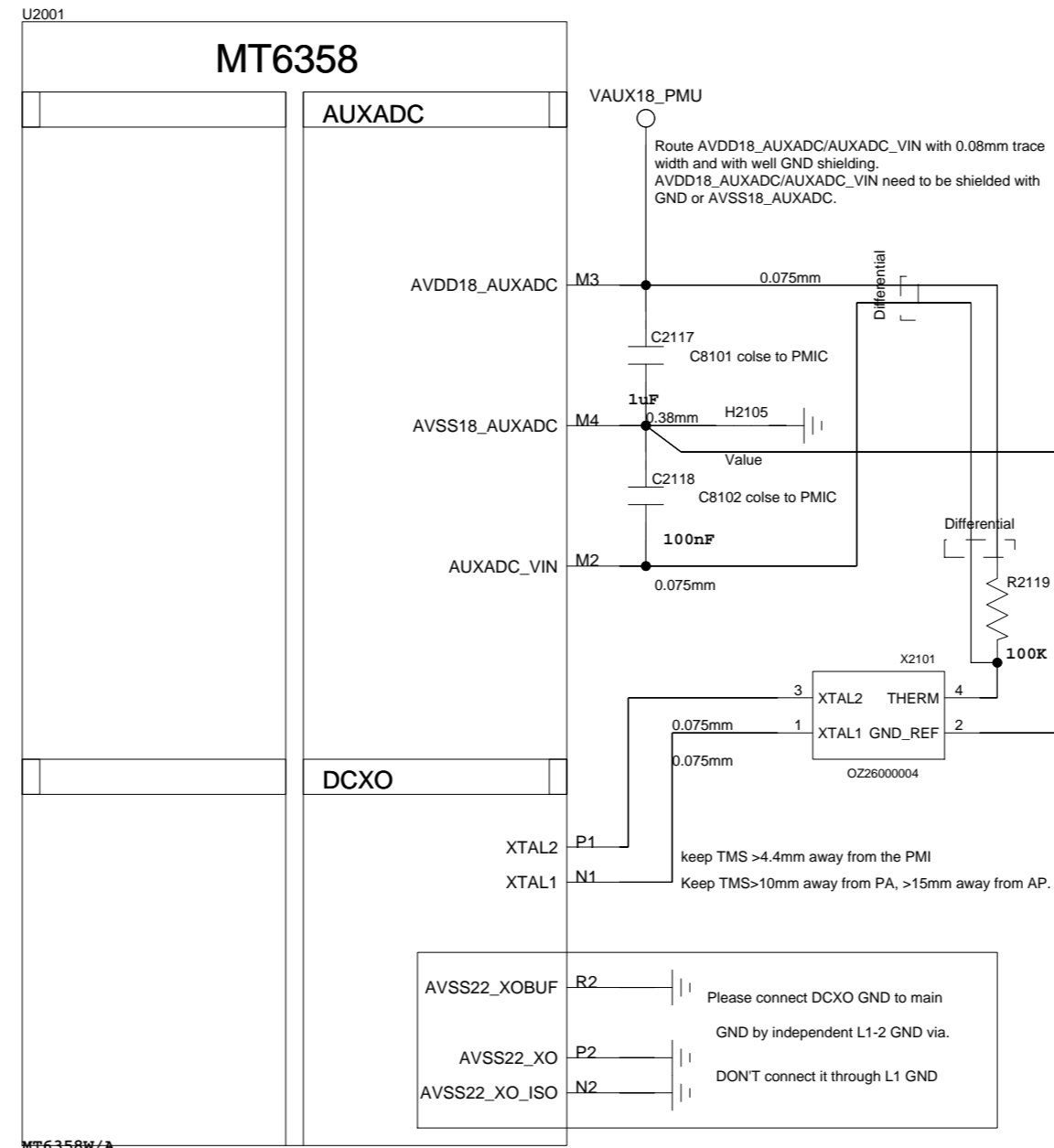
Note 21-1: Please set H2012/H2013 close to C2038, making star connection between VIO18_PMU and AVDD18_SOC/VIO18_PMU_AP near to LDO cap. C2038. Please also refer to MT6358 design notice for further detail design information.

POWER_MT6358_II

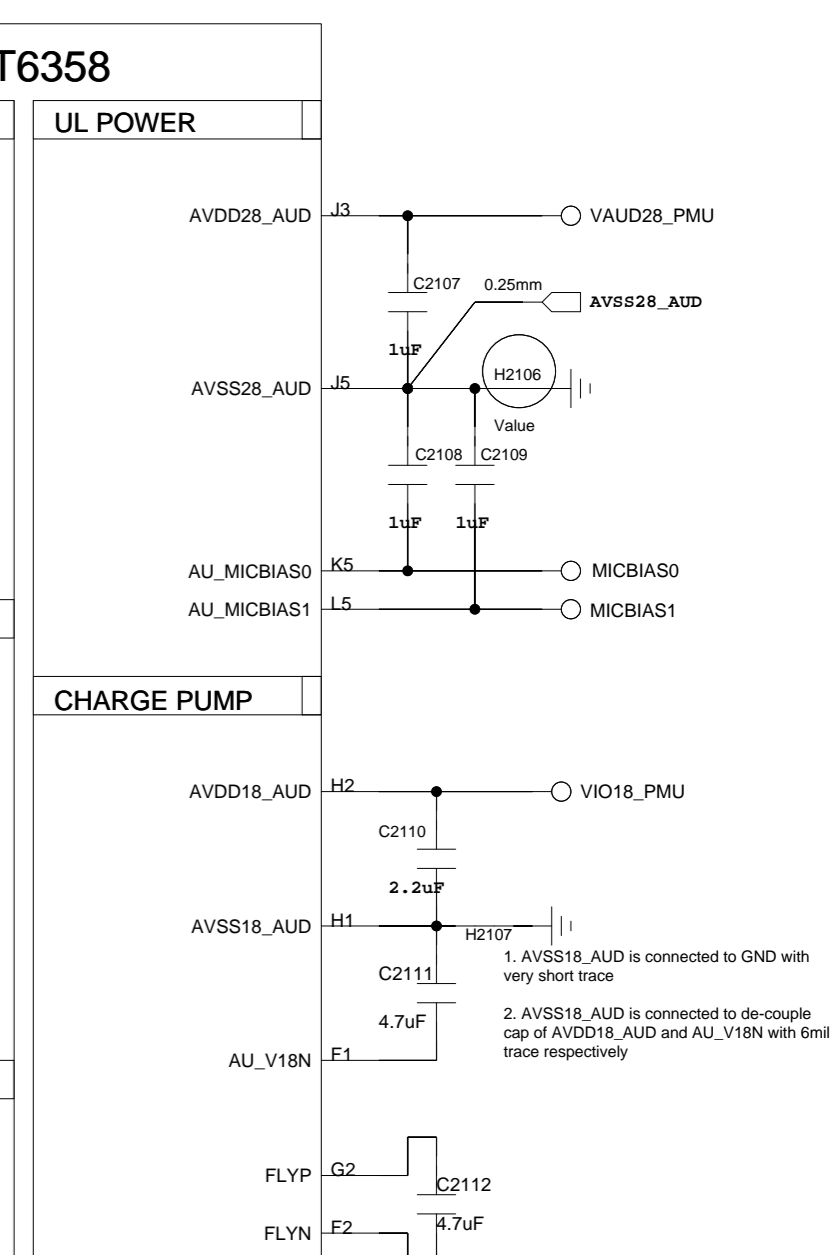
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



R2107=2K when the feature of MTK direct charger is enabled;
R2107=5.1K when MTK quick charger is not supported.



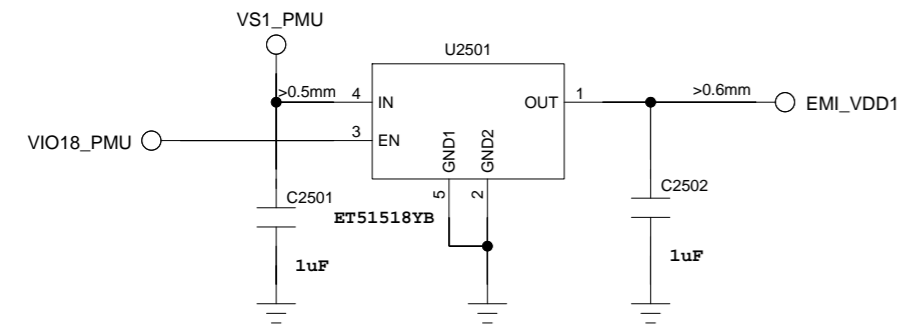
-AU_HPL and AU_HPR should be routed as single end signal and be guarded by GND.
-The suggested layout pattern of AU_HPL/AU_HPR/AU_REFN is "GND AU_HPL/AU_REFN/AU_HPR GND"



POWER_THIRD-PARTY-I

System supply

LPDDR4X VDD1 1.8V LDO

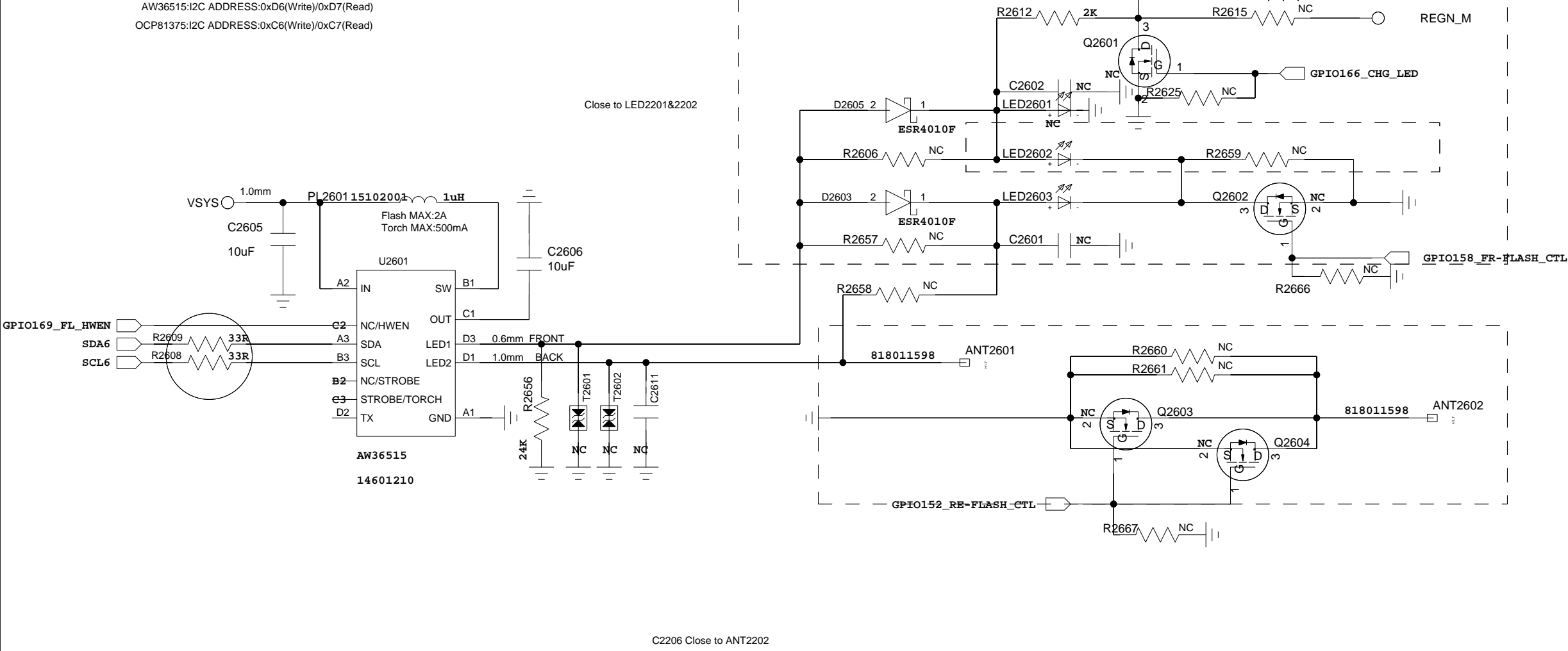


REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

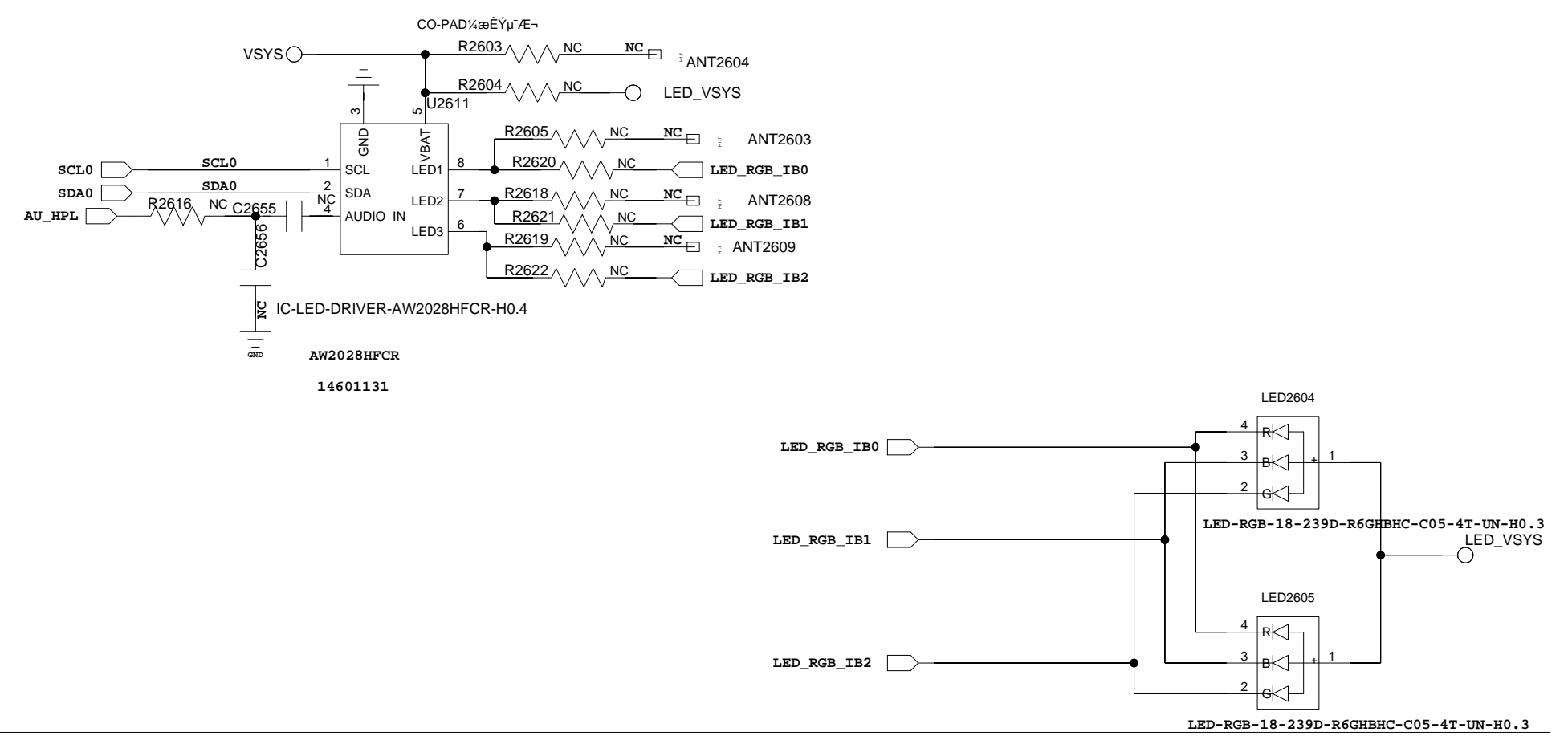
POWER_THIRD-PARTY_I

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

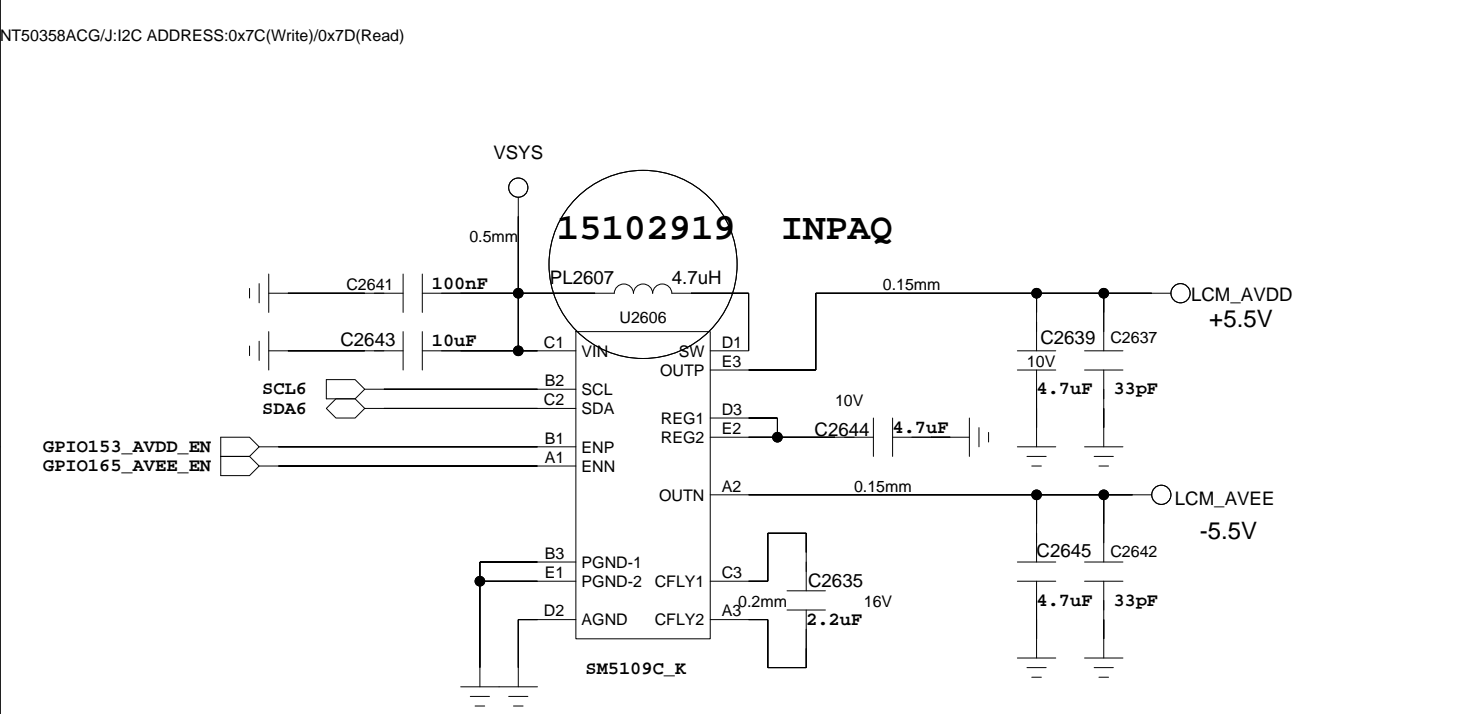
FRONT CAMERA FLASH LED



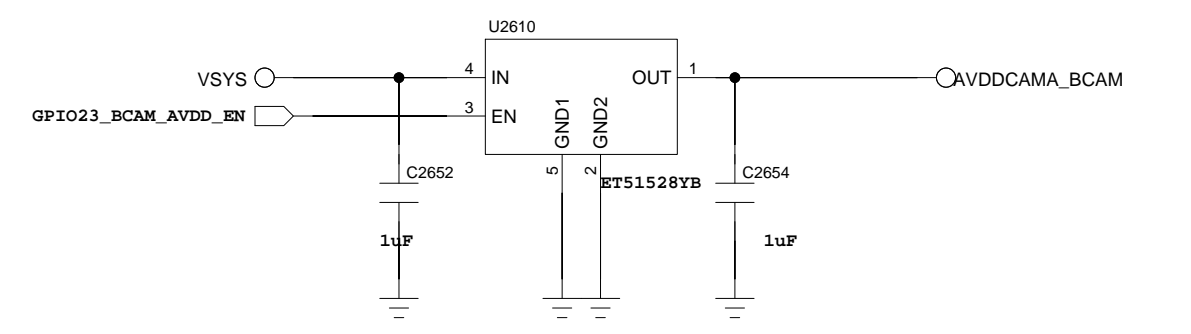
RGB LED



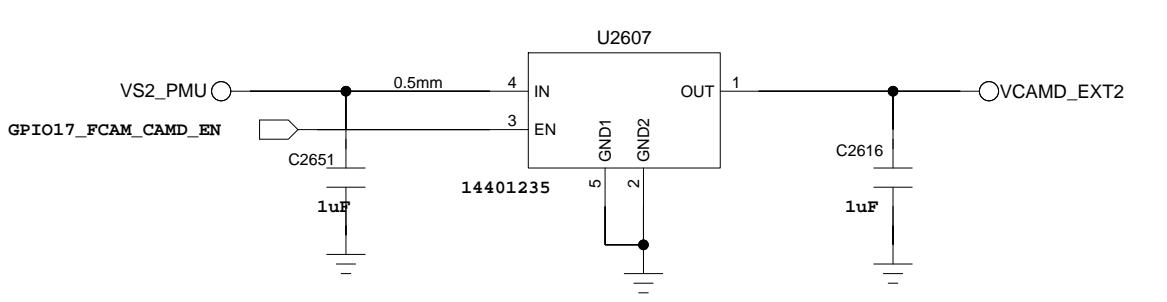
LCM BIAS



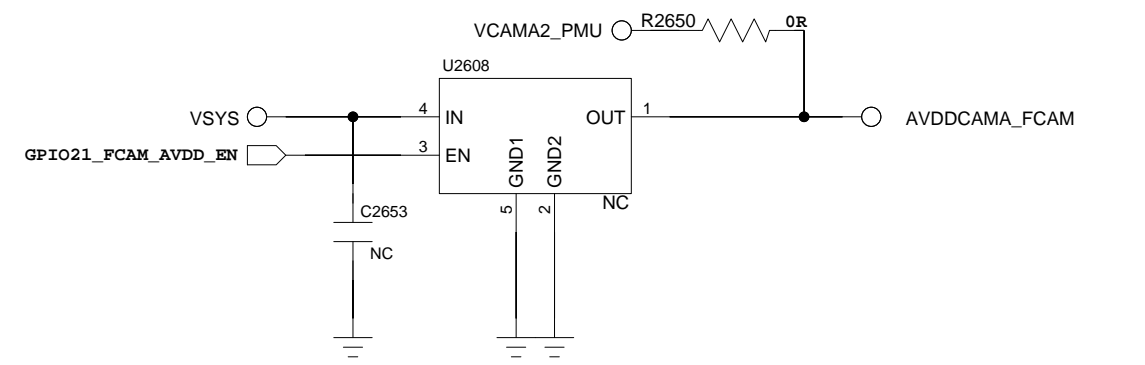
LDO BCAM AVDD



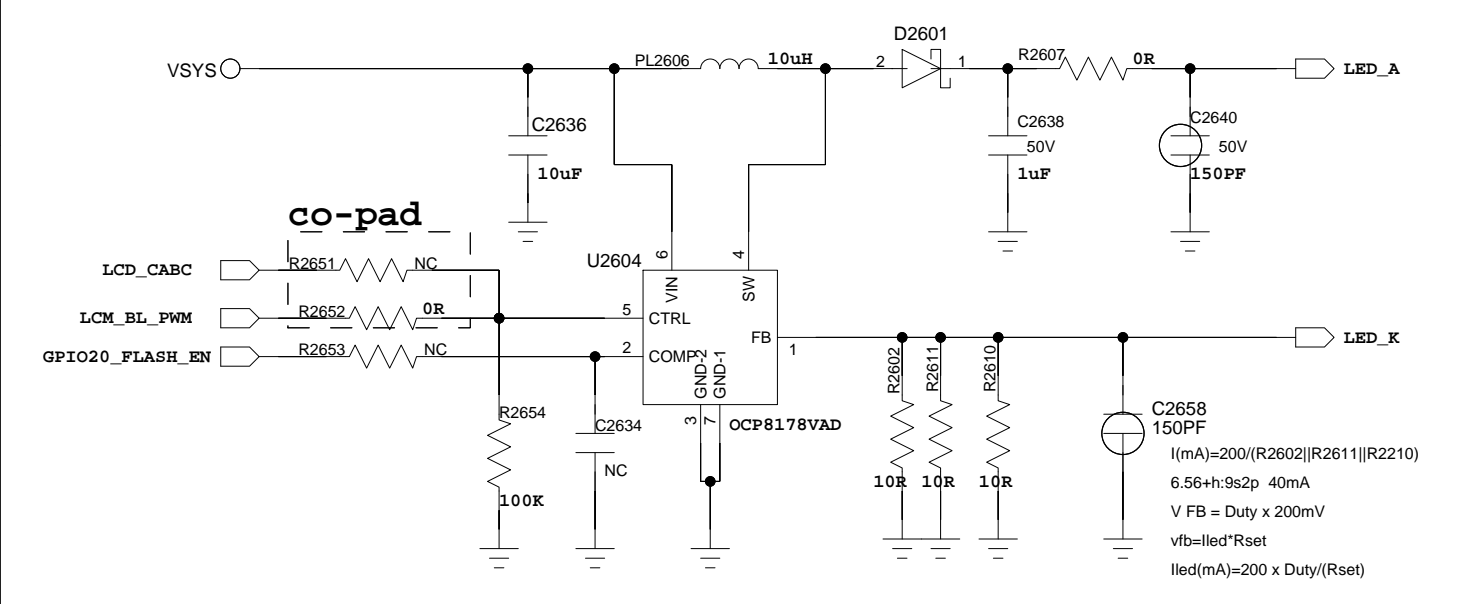
LDO FCAM DVDD(32M)



LDO FCAM AVDD



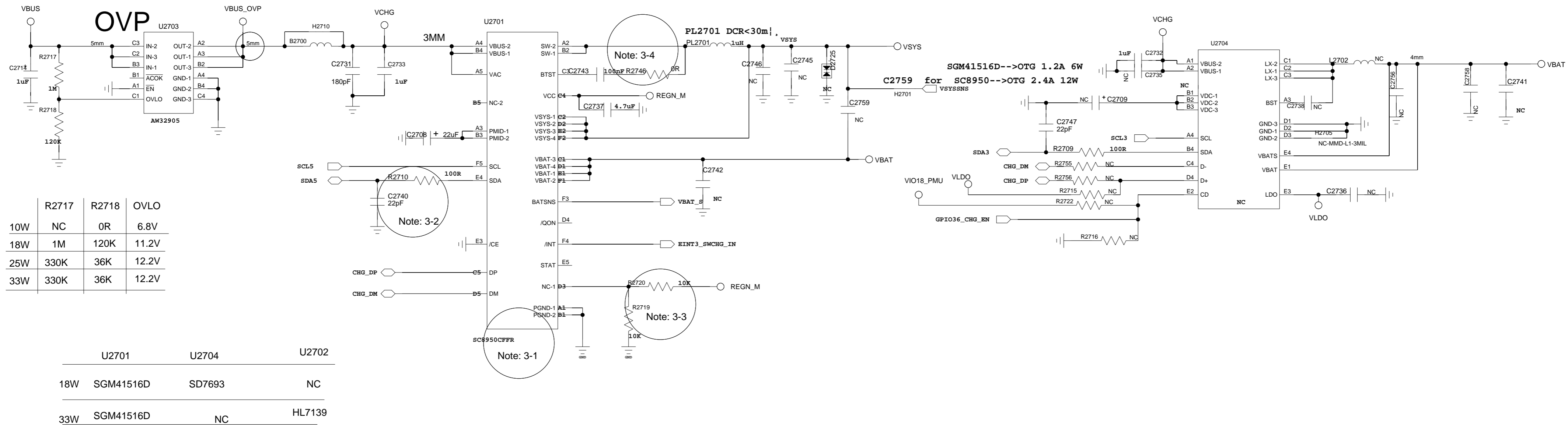
LCM LED



C2634	220nF
OCP8178	NC
AW9962E	NC
OCP81780	NC

POWER_THIRD-PARTY_II

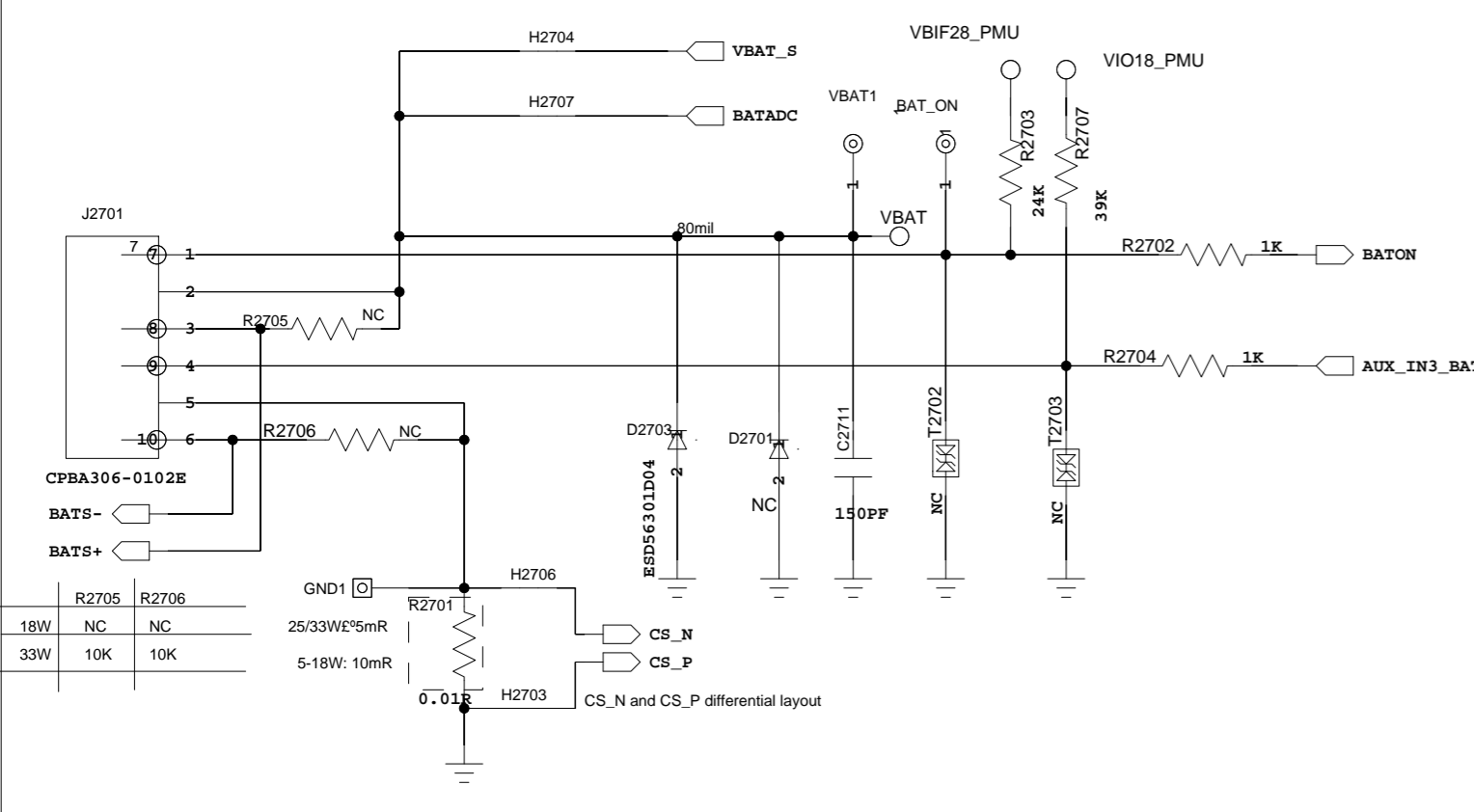
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



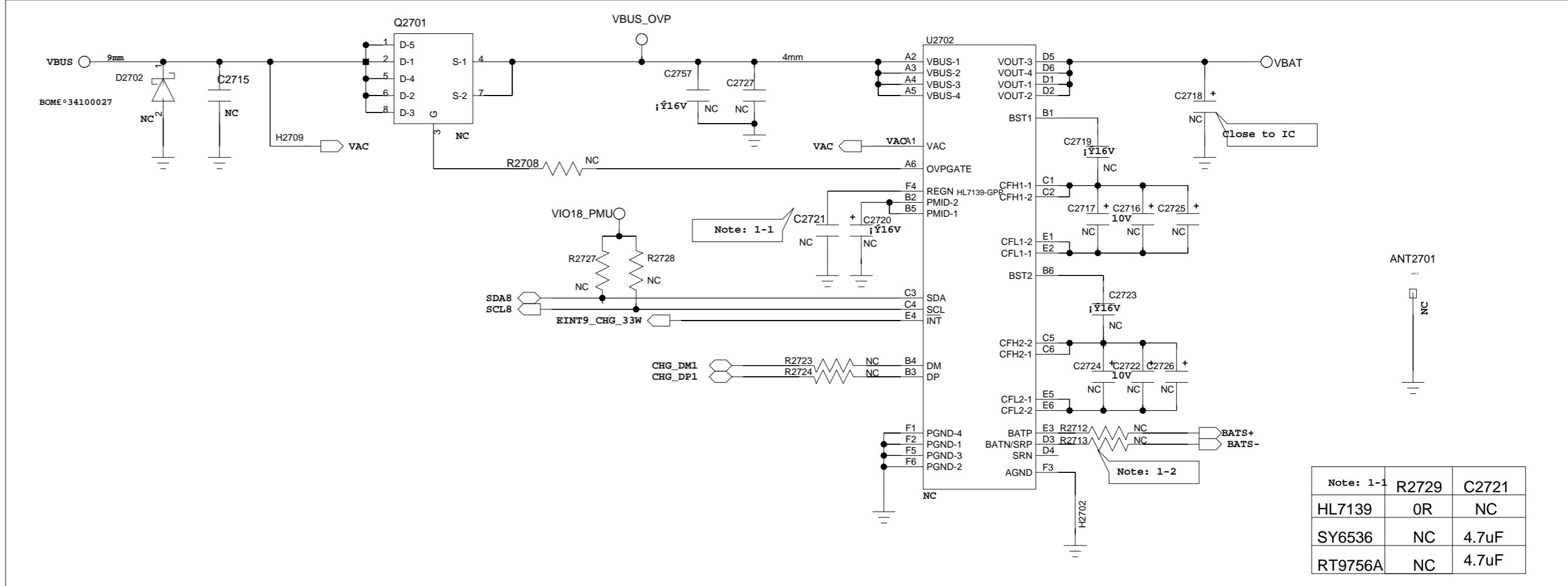
	R2717	R2718	OVLO
10W	NC	0R	6.8V
18W	1M	120K	11.2V
25W	330K	36K	12.2V
33W	330K	36K	12.2V

	U2701	U2704	U2702
18W	SGM41516D	SD7693	NC
33W	SGM41516D	NC	HL7139

BATTERY CONNECTOR



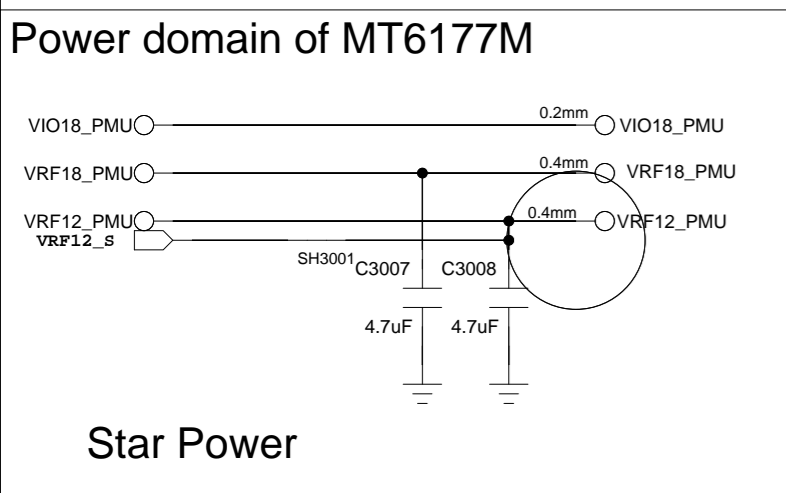
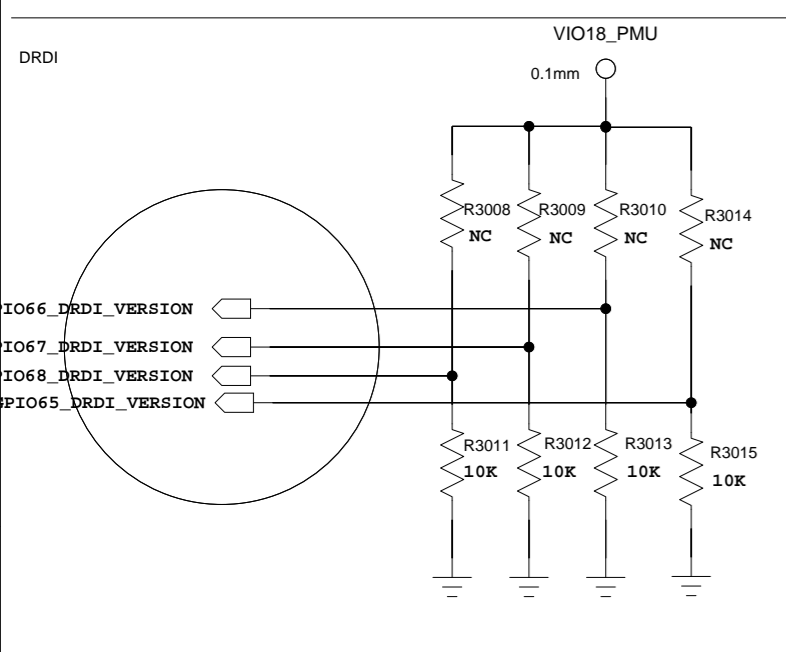
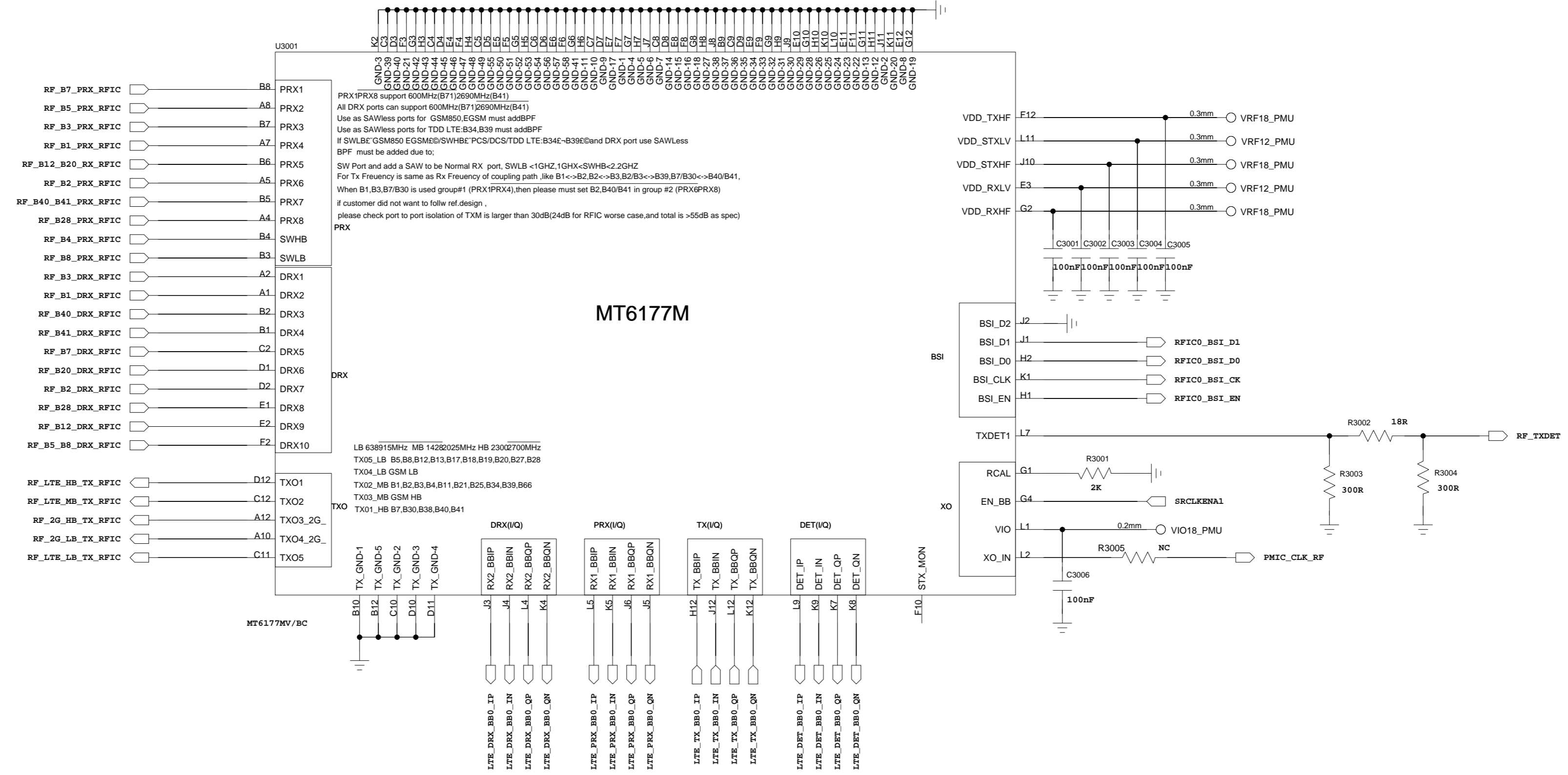
	R2705	R2706
18W	NC	NC
33W	10K	10K



Note: 1-1	R2729	C2721
HL7139	0R	NC
SY6536	NC	4.7uF
RT9756A	NC	4.7uF

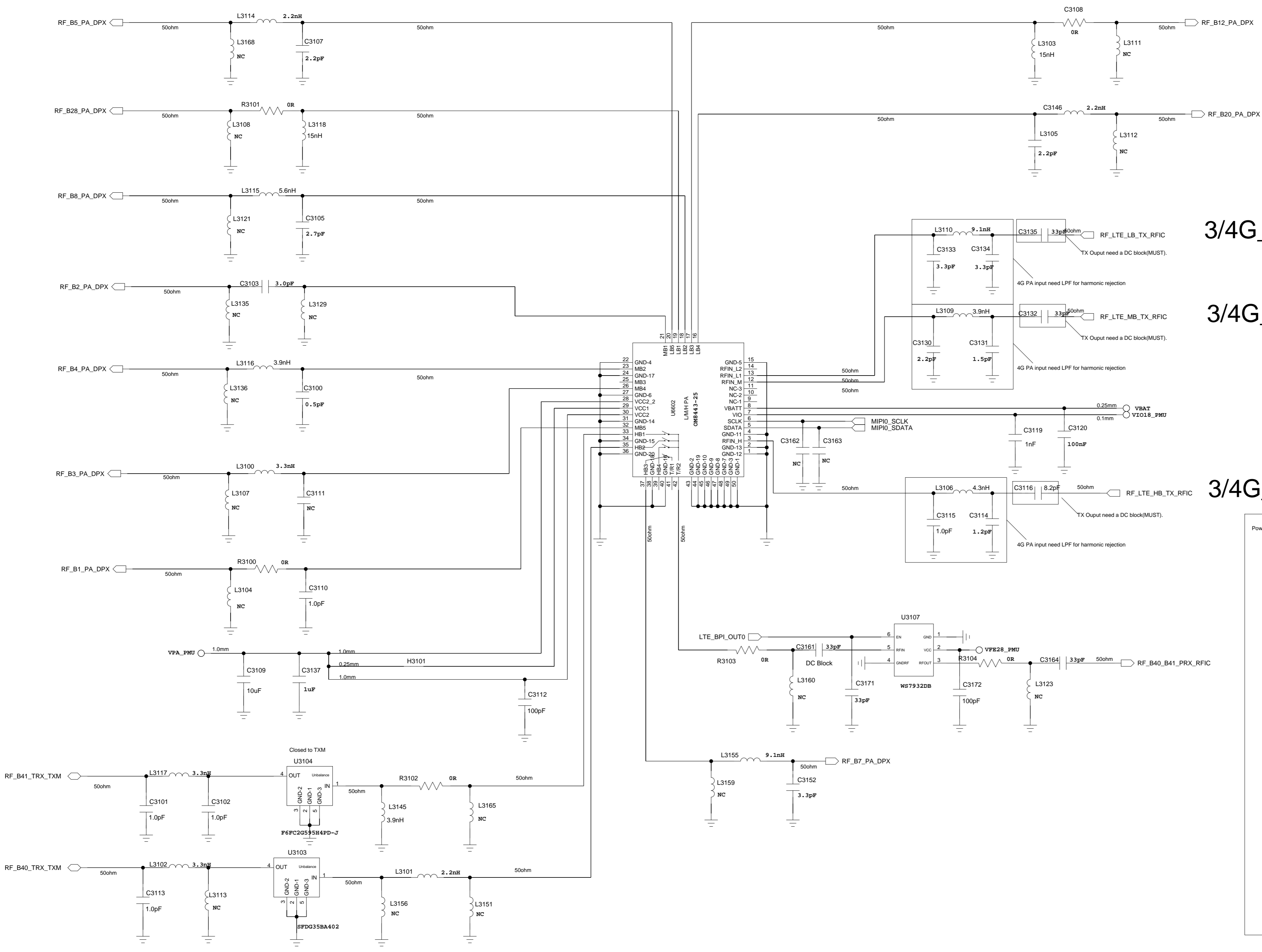
RF_MT6177M_PIN_OUT

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



RF_MT6177M_RF_TX

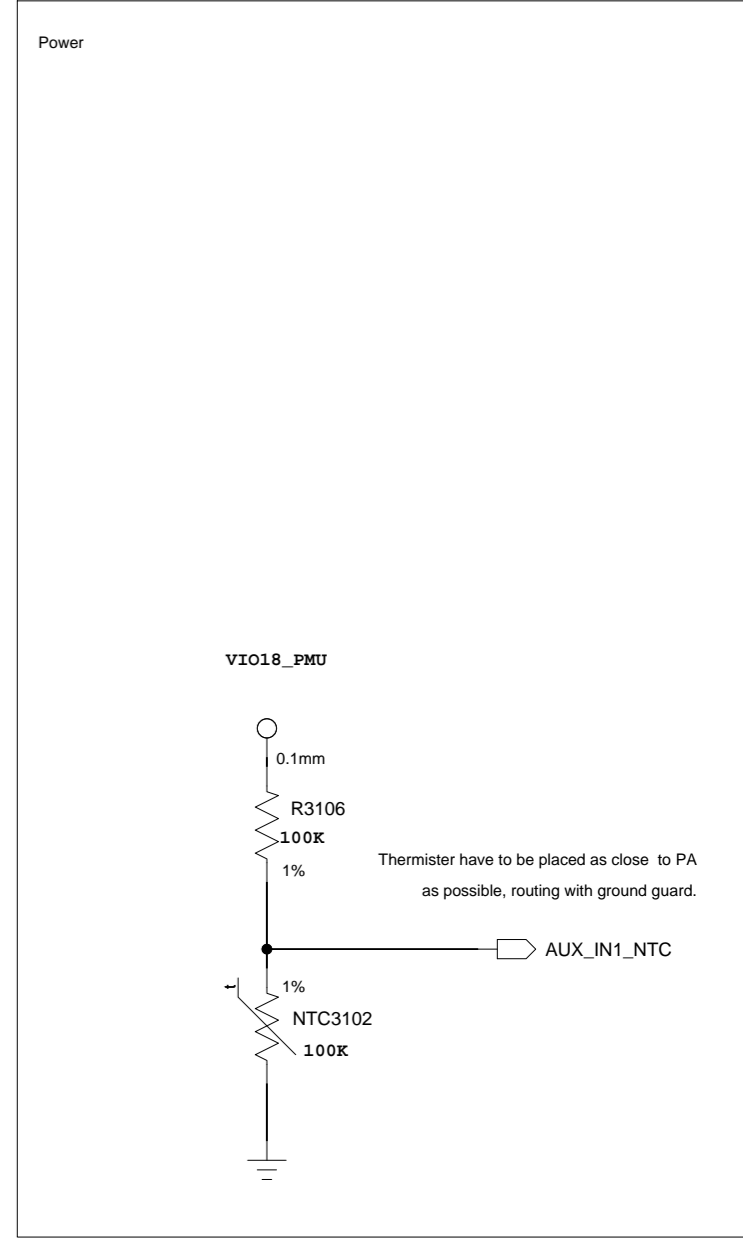
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



3/4G_PAIN_LB

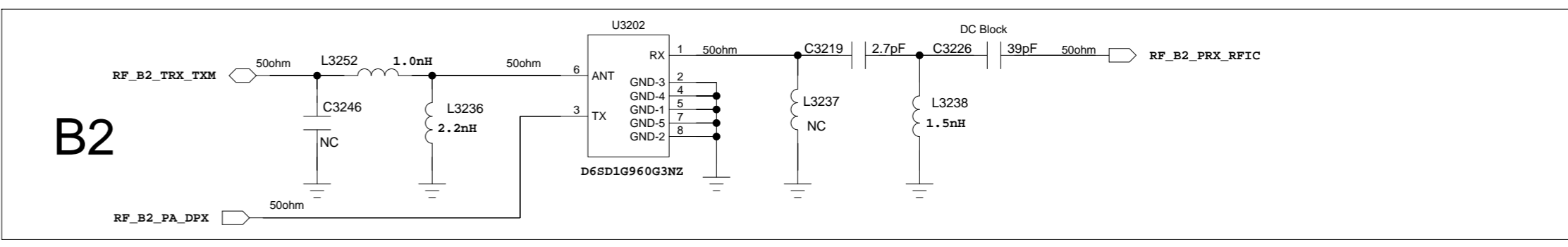
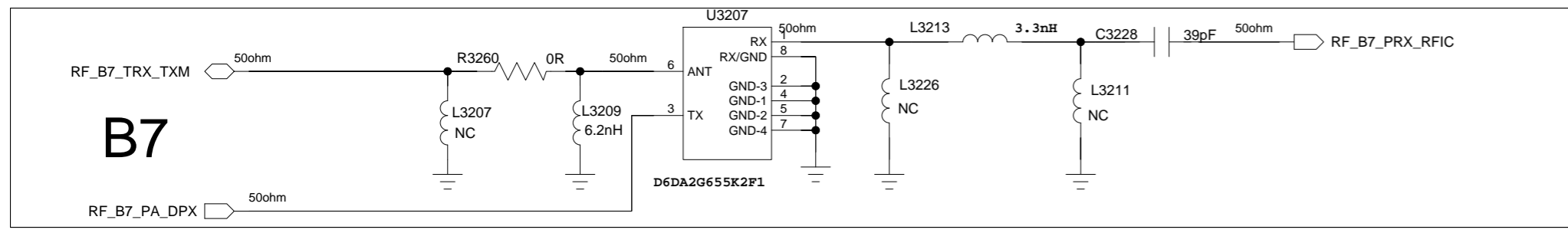
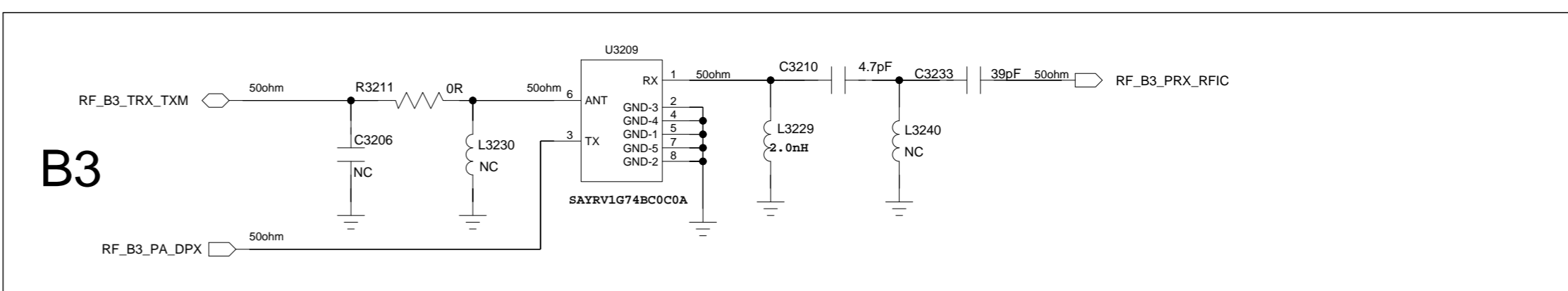
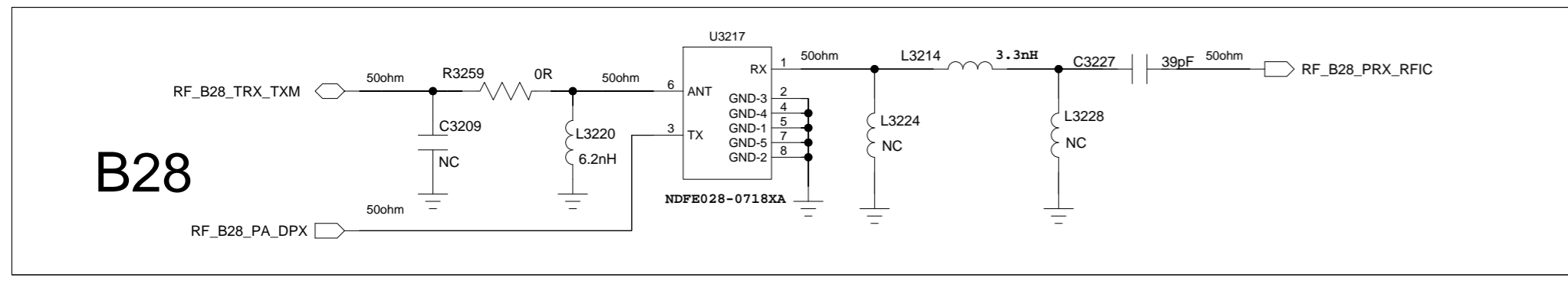
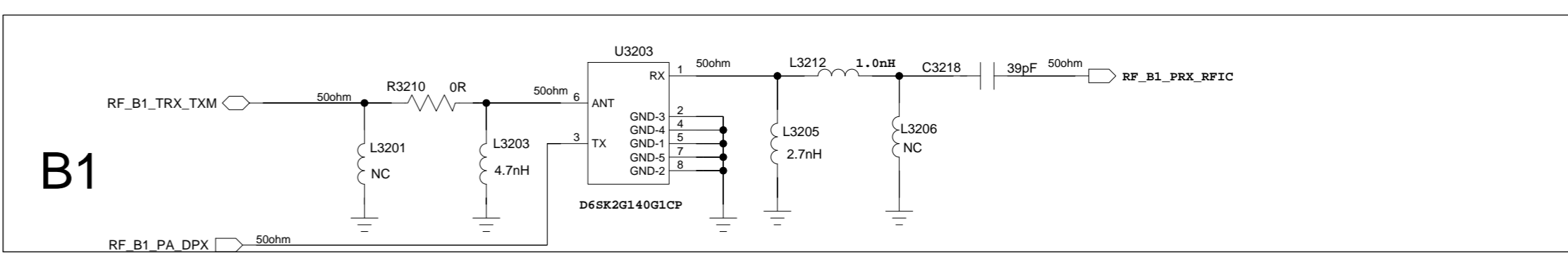
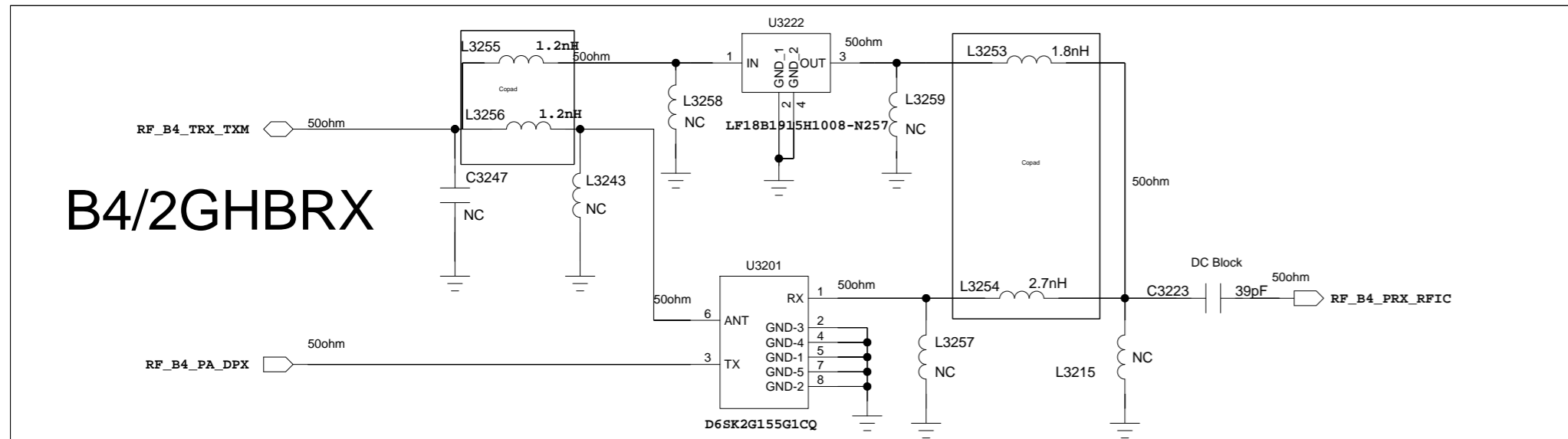
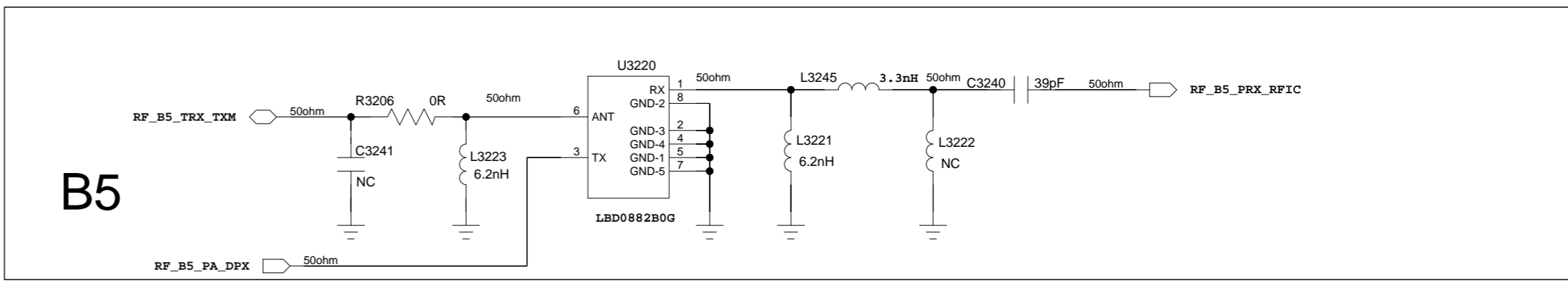
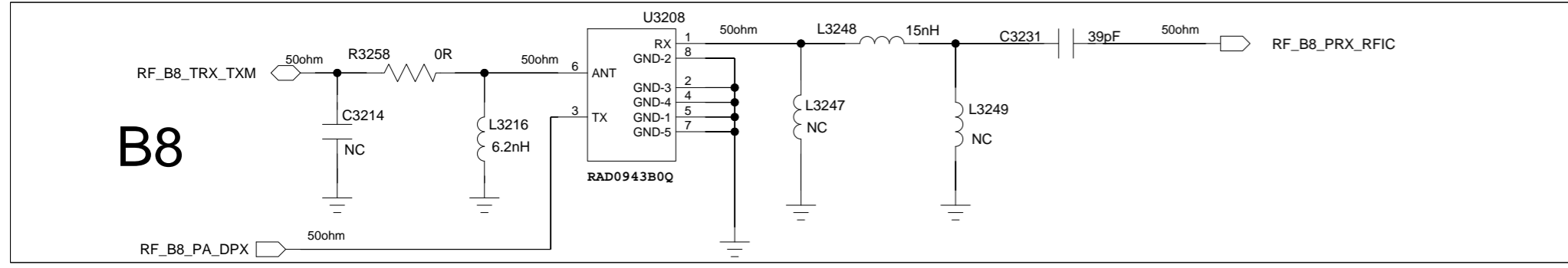
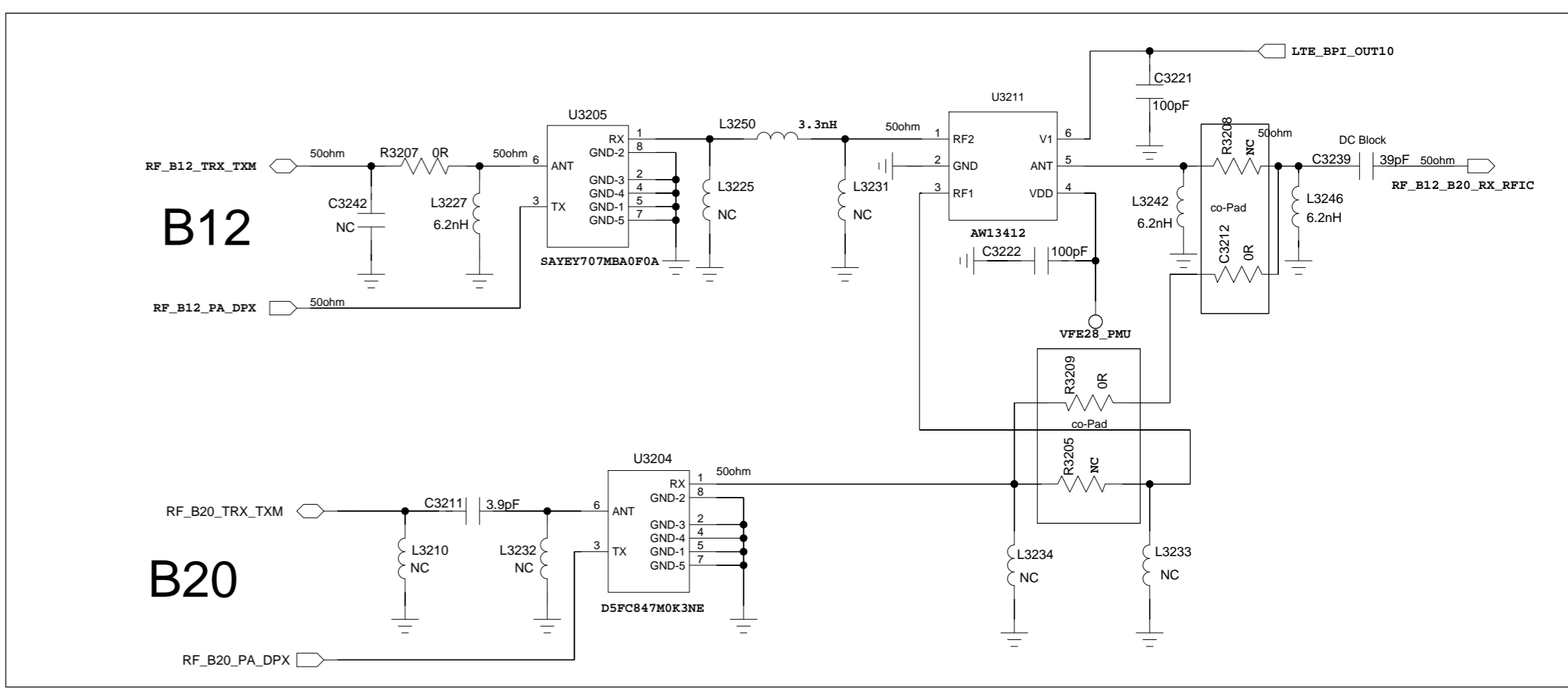
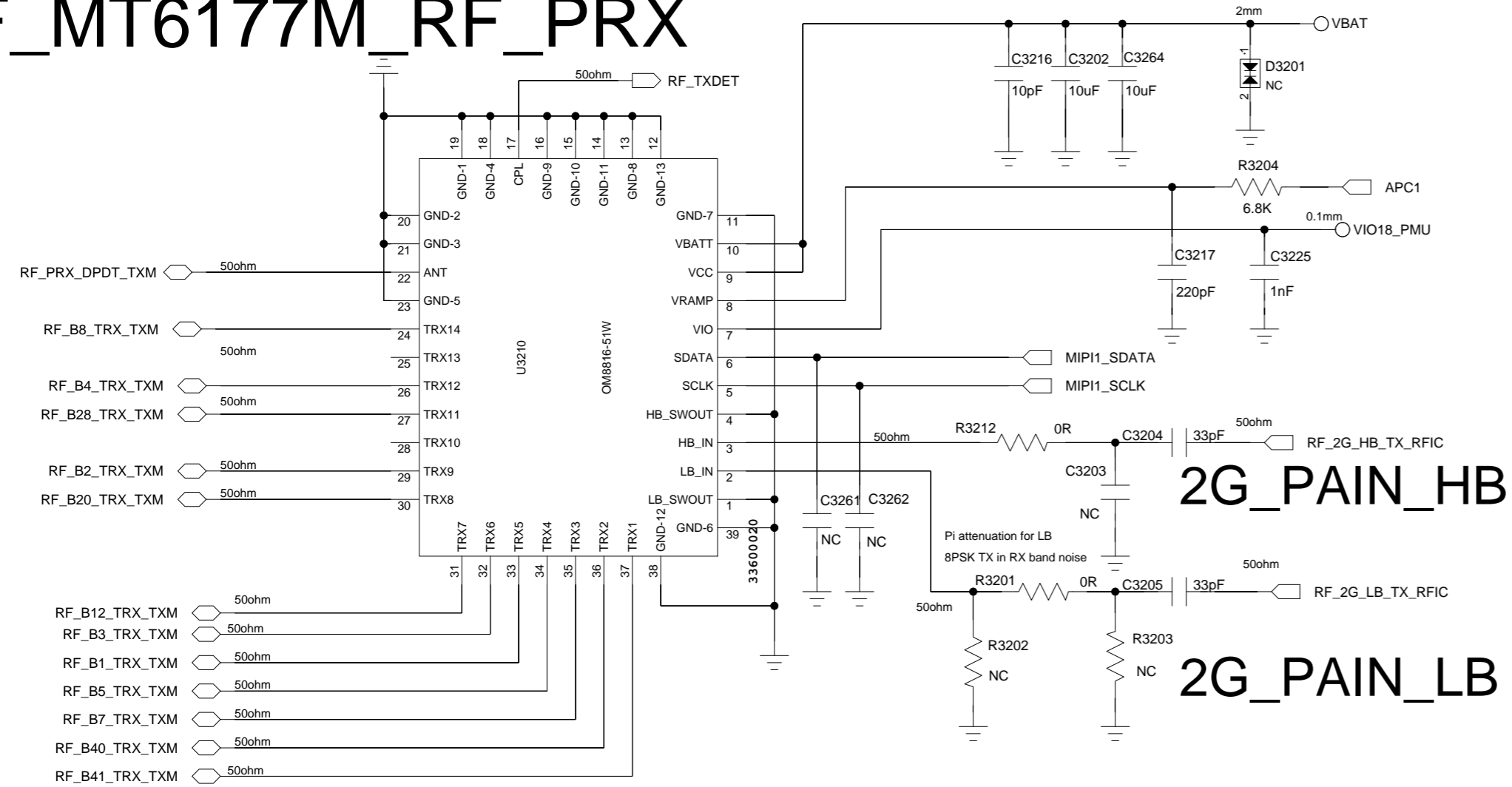
3/4G_PAIN_MB

3/4G_PAIN_HB



RF_MT6177M_RF_PRX

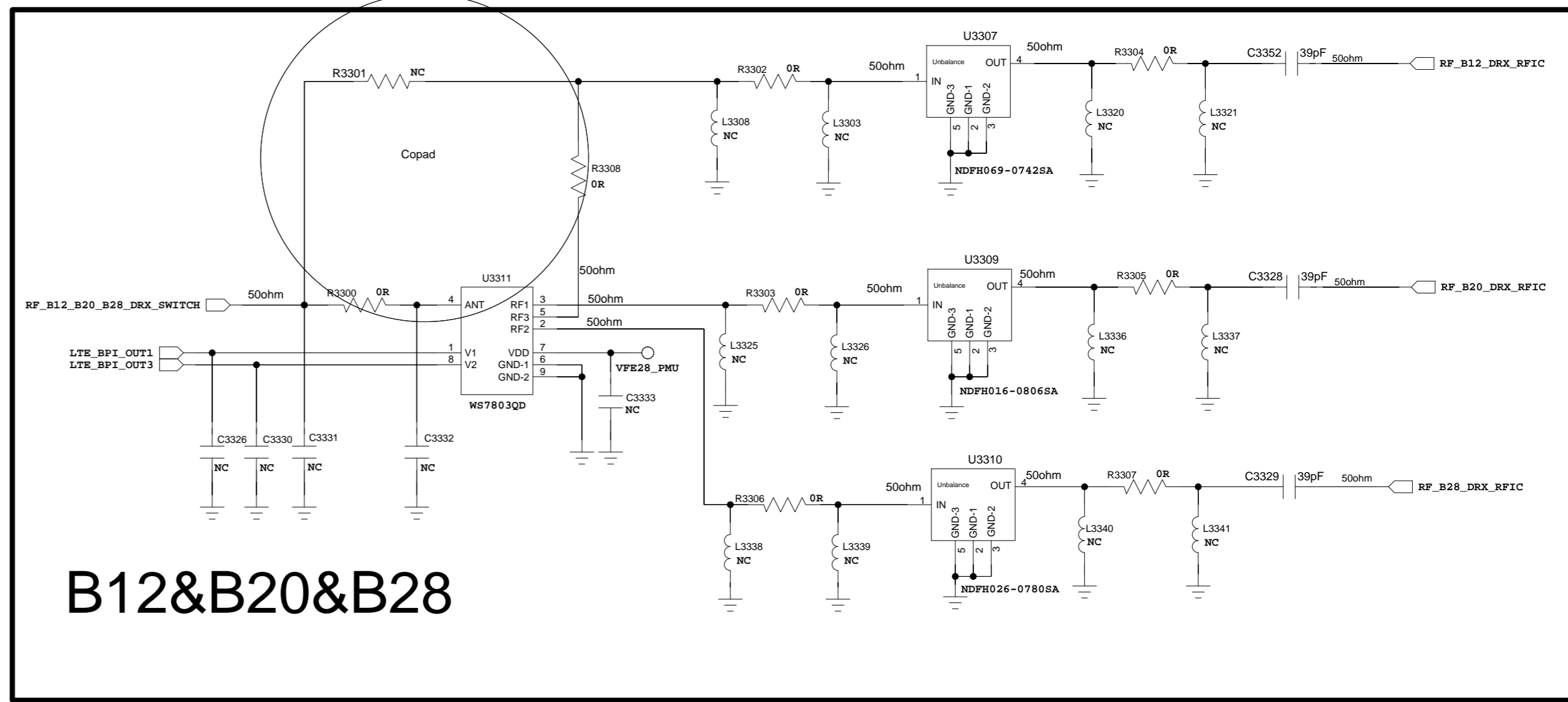
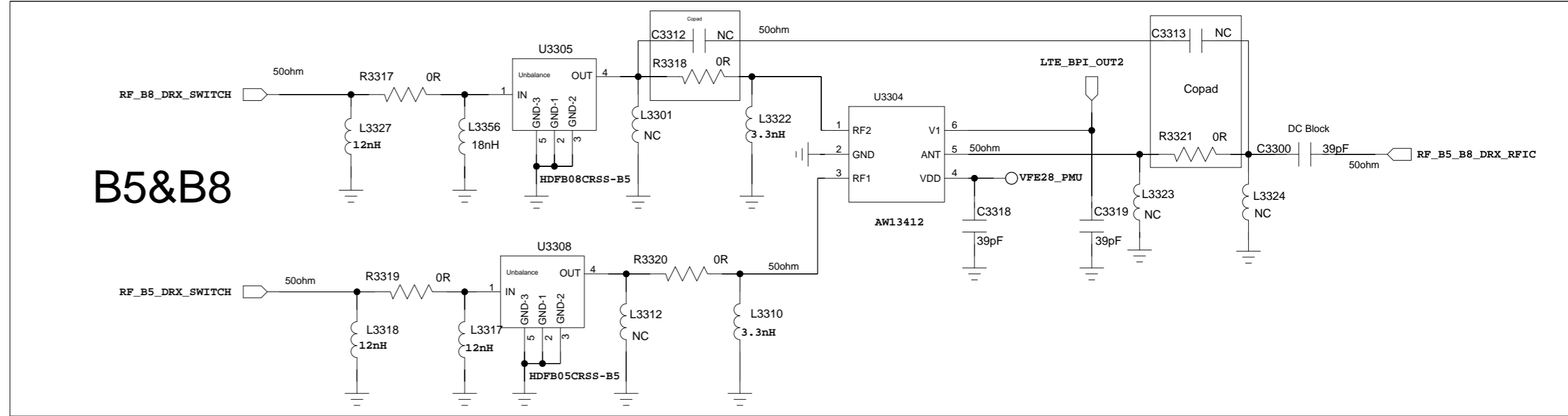
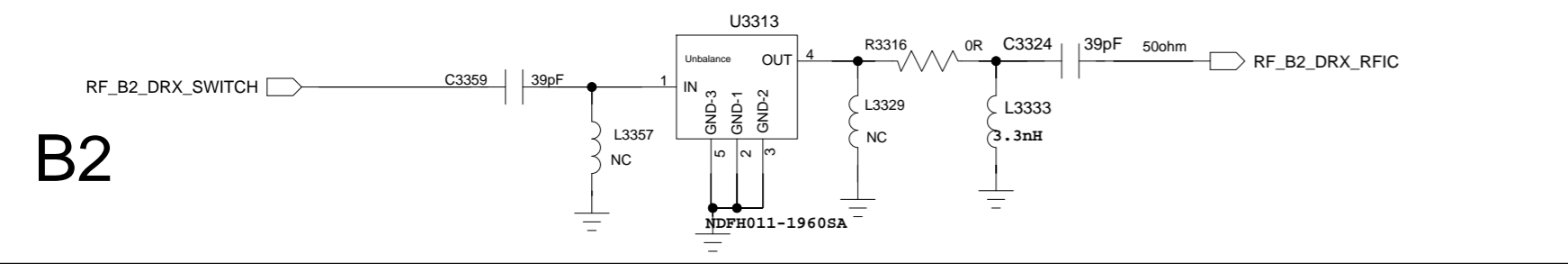
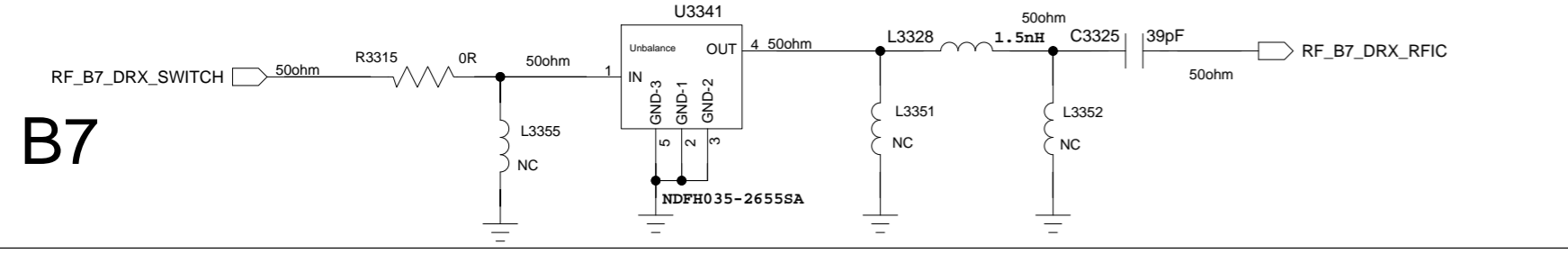
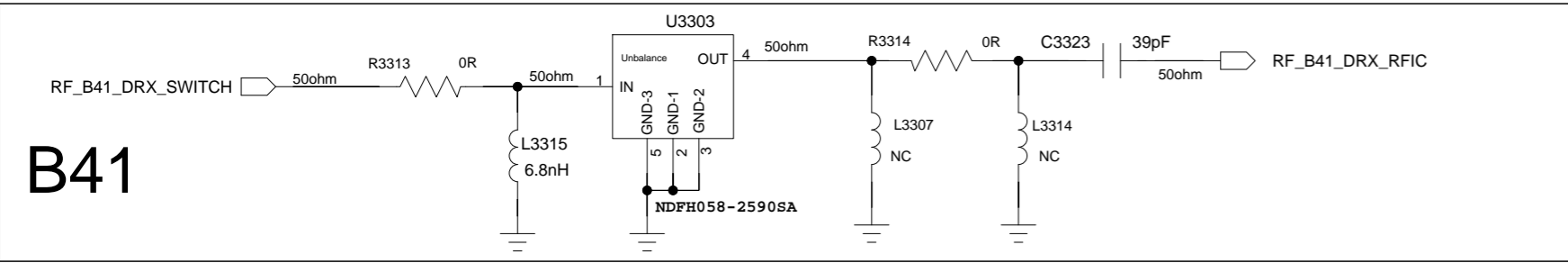
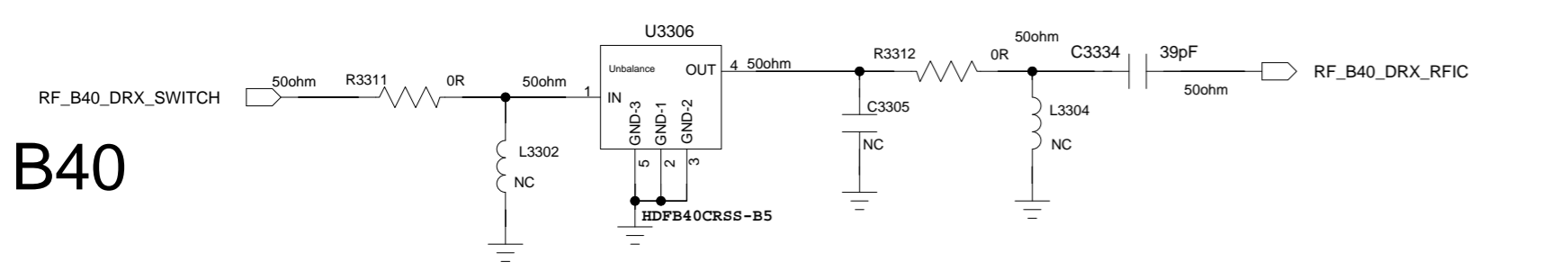
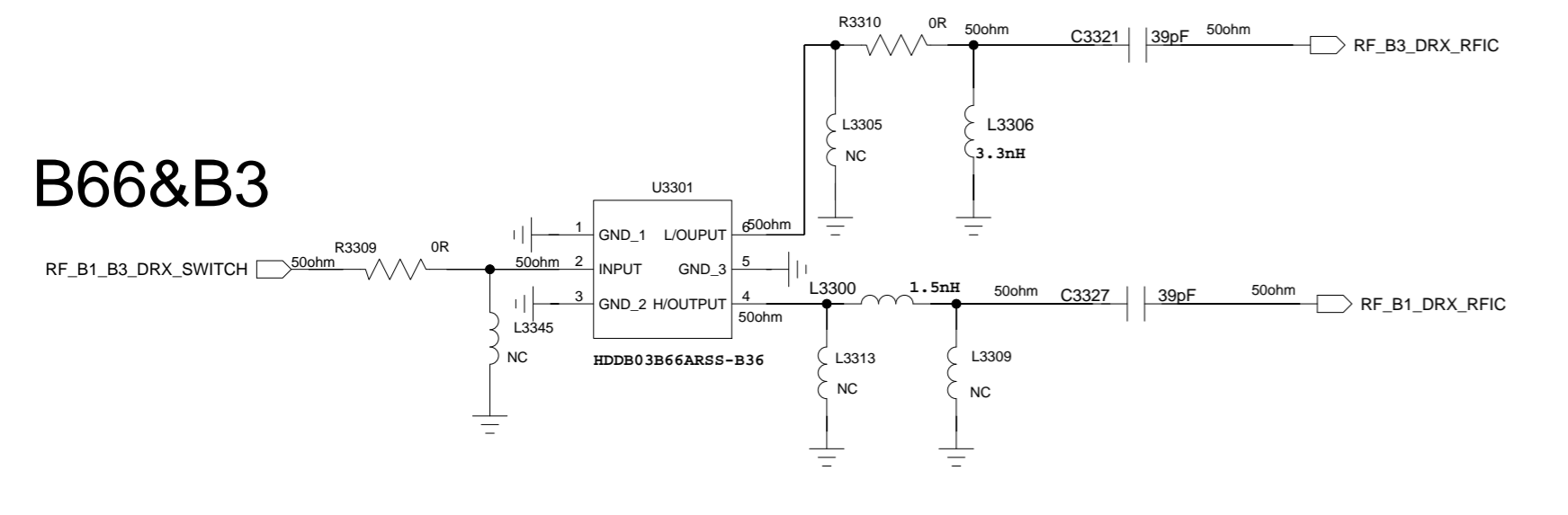
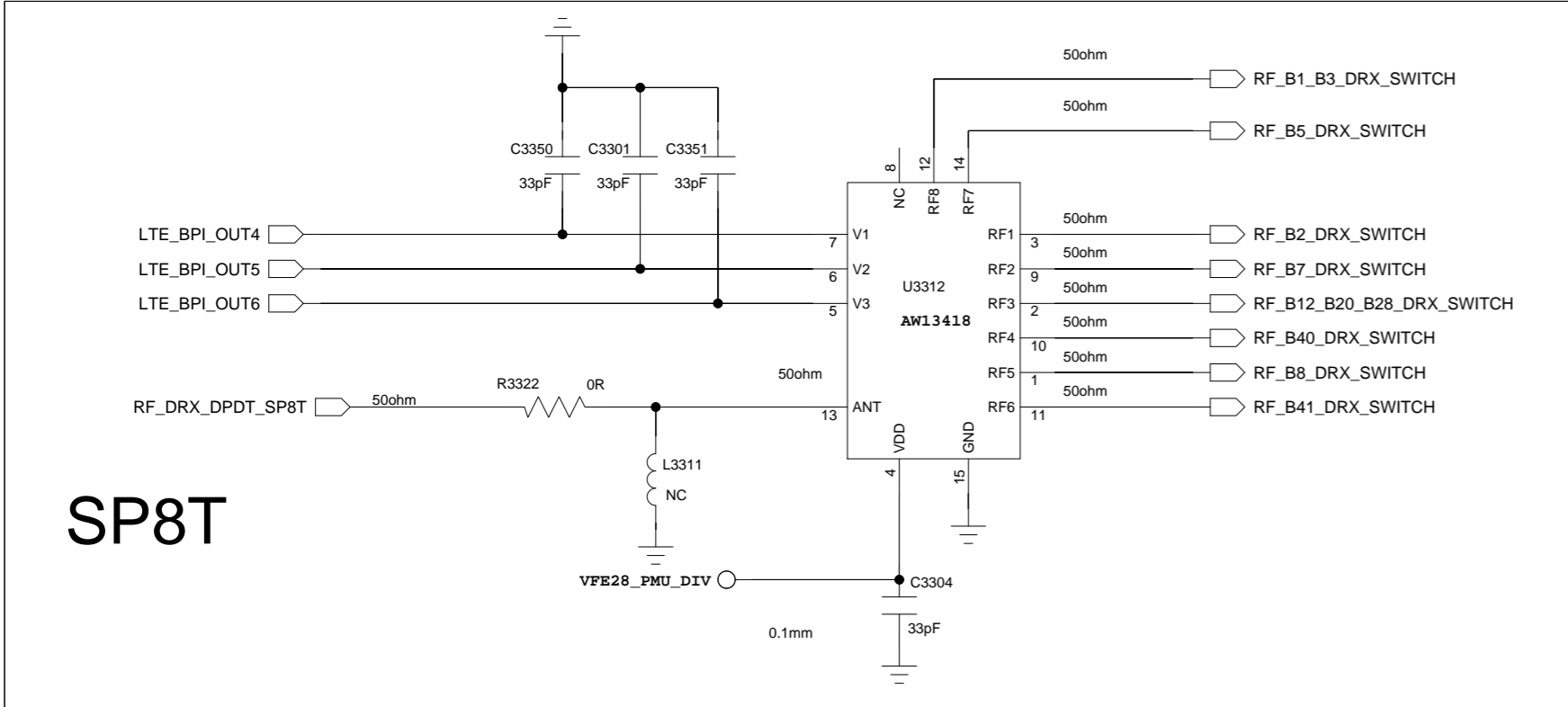
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



RF_MT6177M_RF_DRX

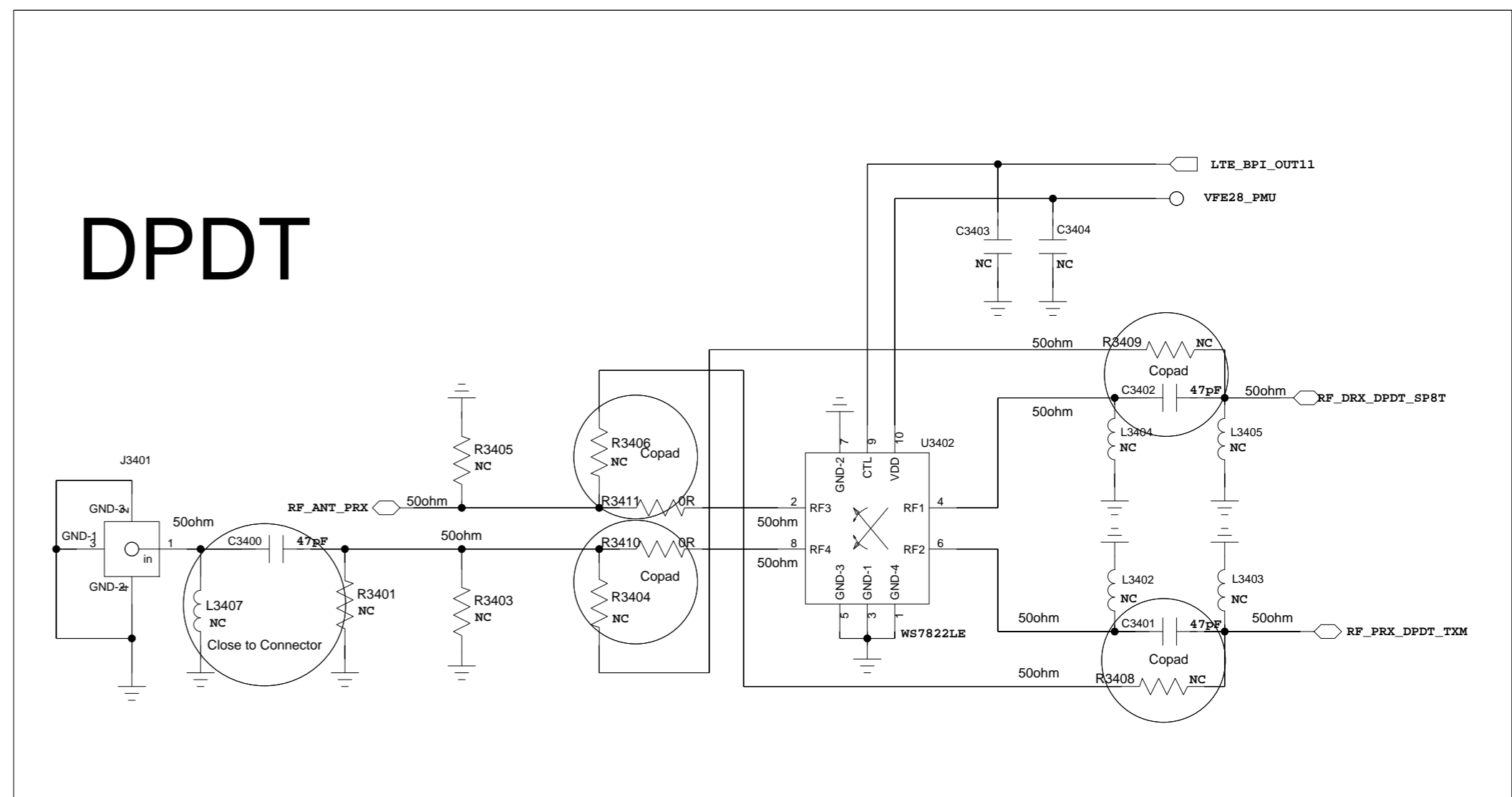
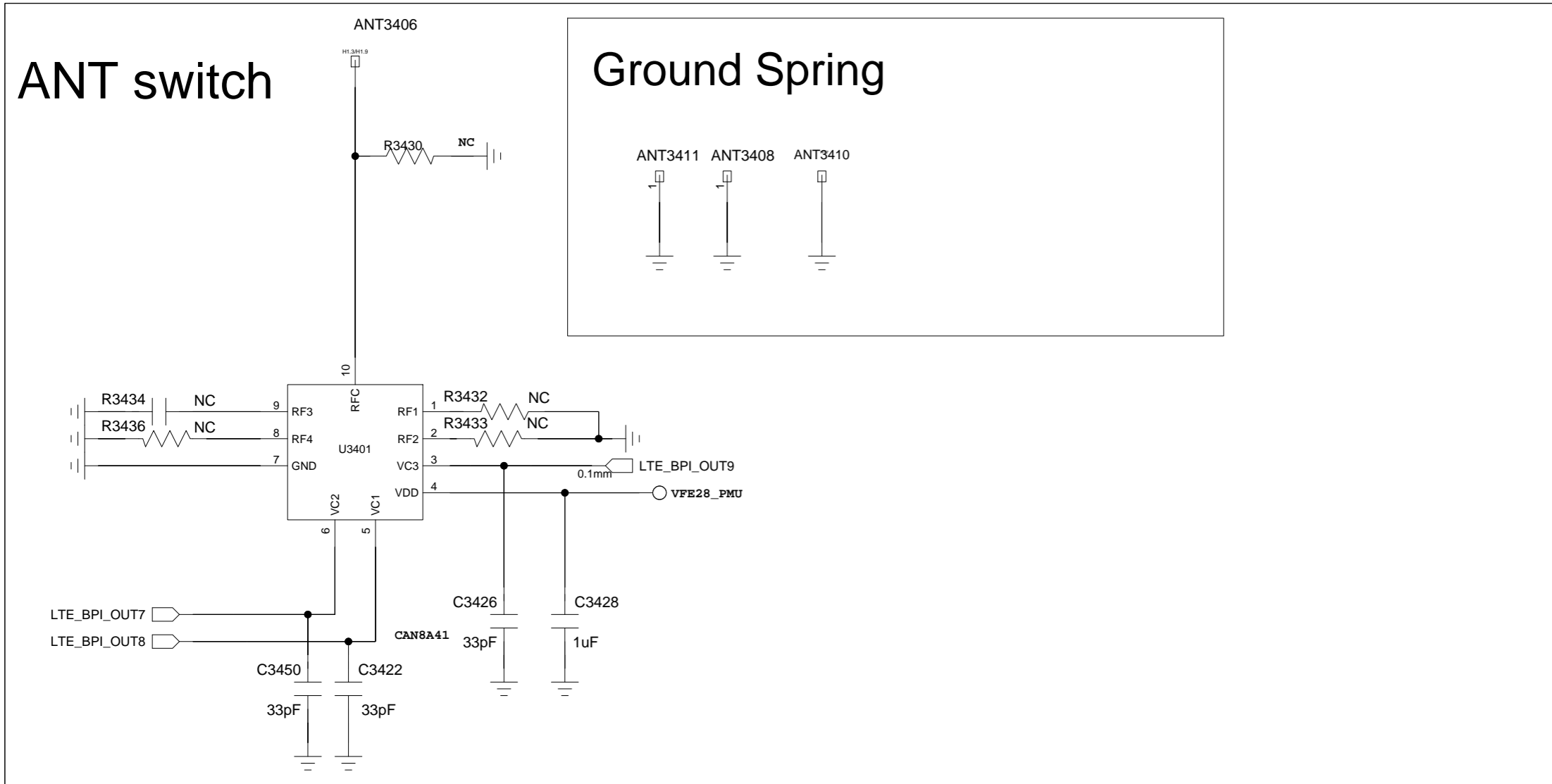
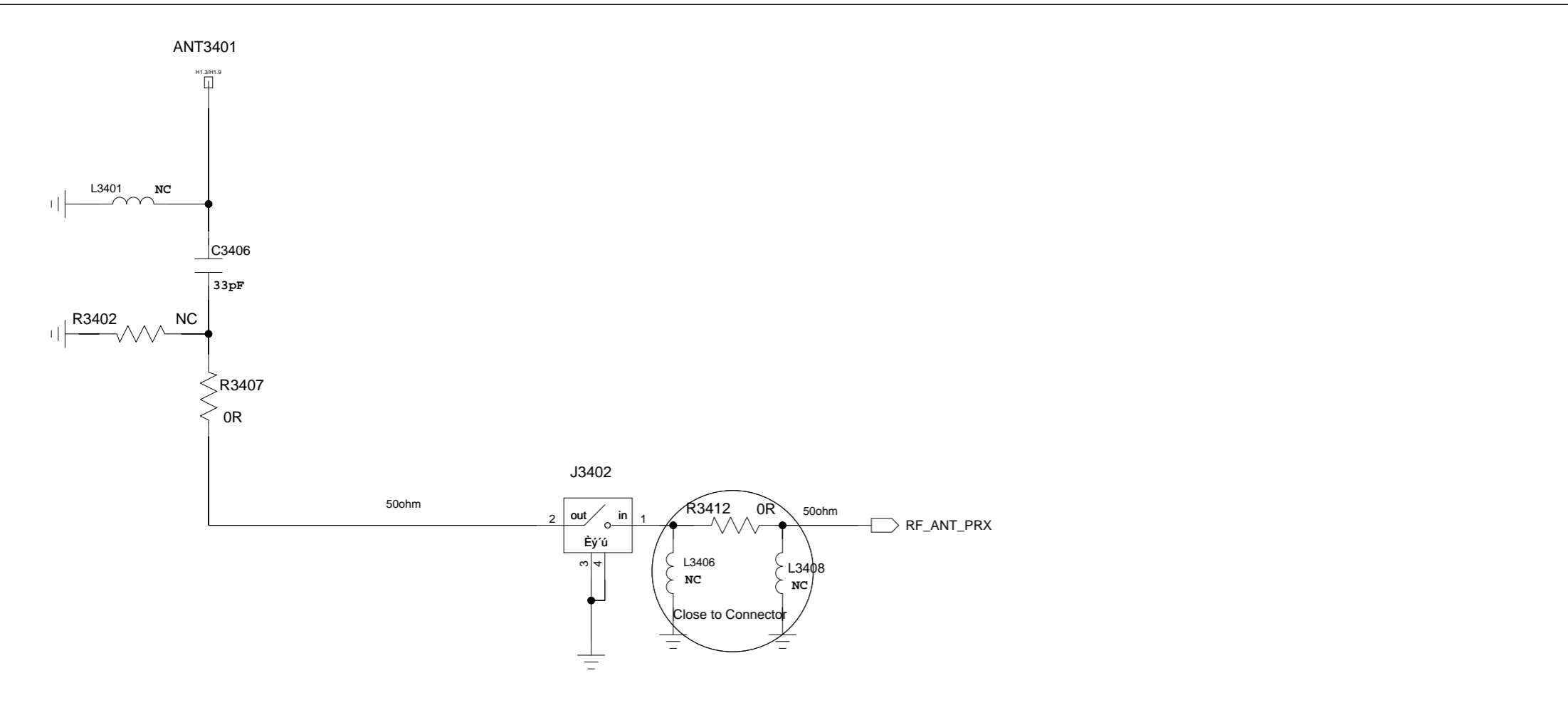
VC1613 control logic				SP8T control logic											
VC1	VC2	RF1	RF2	RF3	V1	V2	V3	RF1	RF2	RF3	RF4	RF5	RF6	RF7	RF8
H	L	Y	N	N	L	L	L	Y	N	N	N	N	N	N	N
H	H	N	Y	N	L	L	L	H	N	Y	N	N	N	N	N
N	H	N	N	Y	L	L	H	N	Y	N	N	N	N	N	N
					L	H	L	N	N	Y	N	N	N	N	N
					L	H	H	N	N	N	Y	N	N	N	N
					H	L	L	N	N	N	N	N	Y	N	N
					H	L	H	N	N	N	N	N	N	Y	N
					H	H	L	N	N	N	N	N	N	N	Y
					H	H	H	N	N	N	N	N	N	N	Y

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



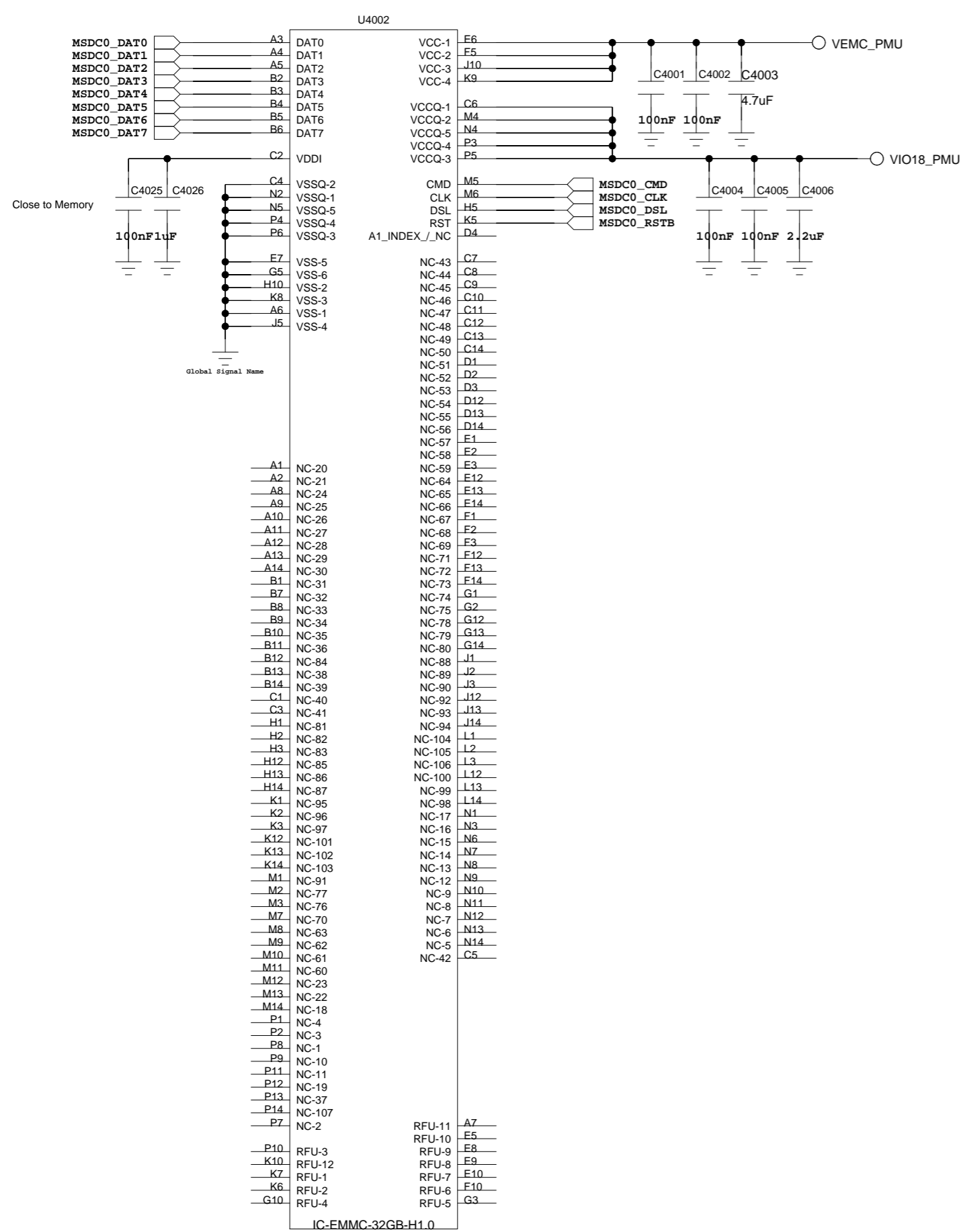
RF_MT6177M_RF_ANT

REVISION RECORD			
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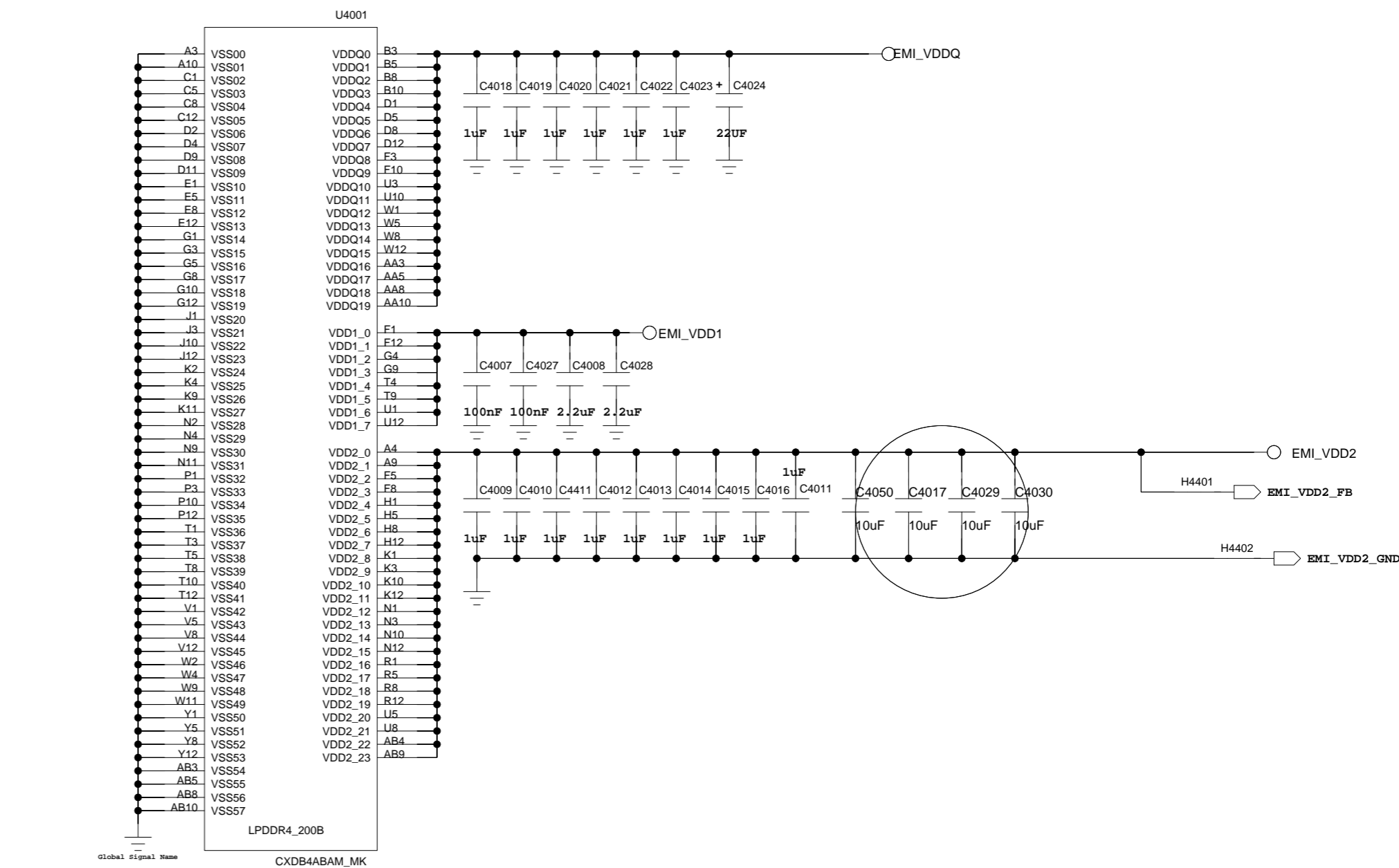
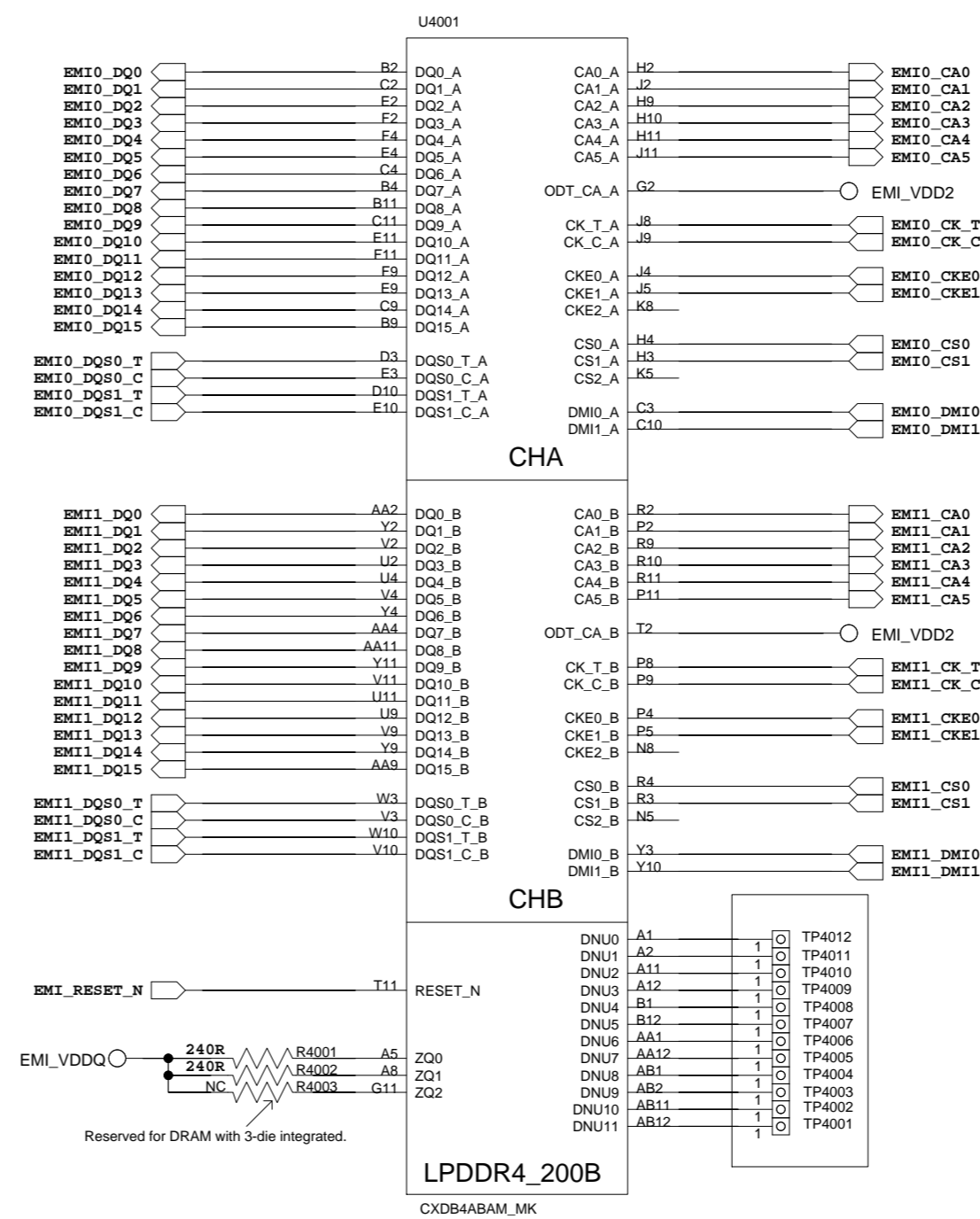


MEMORY_eMCP_LPDDR4X

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



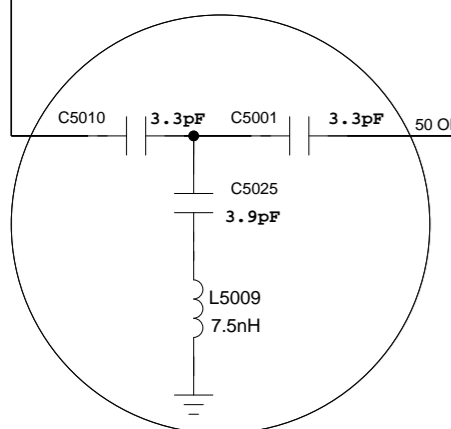
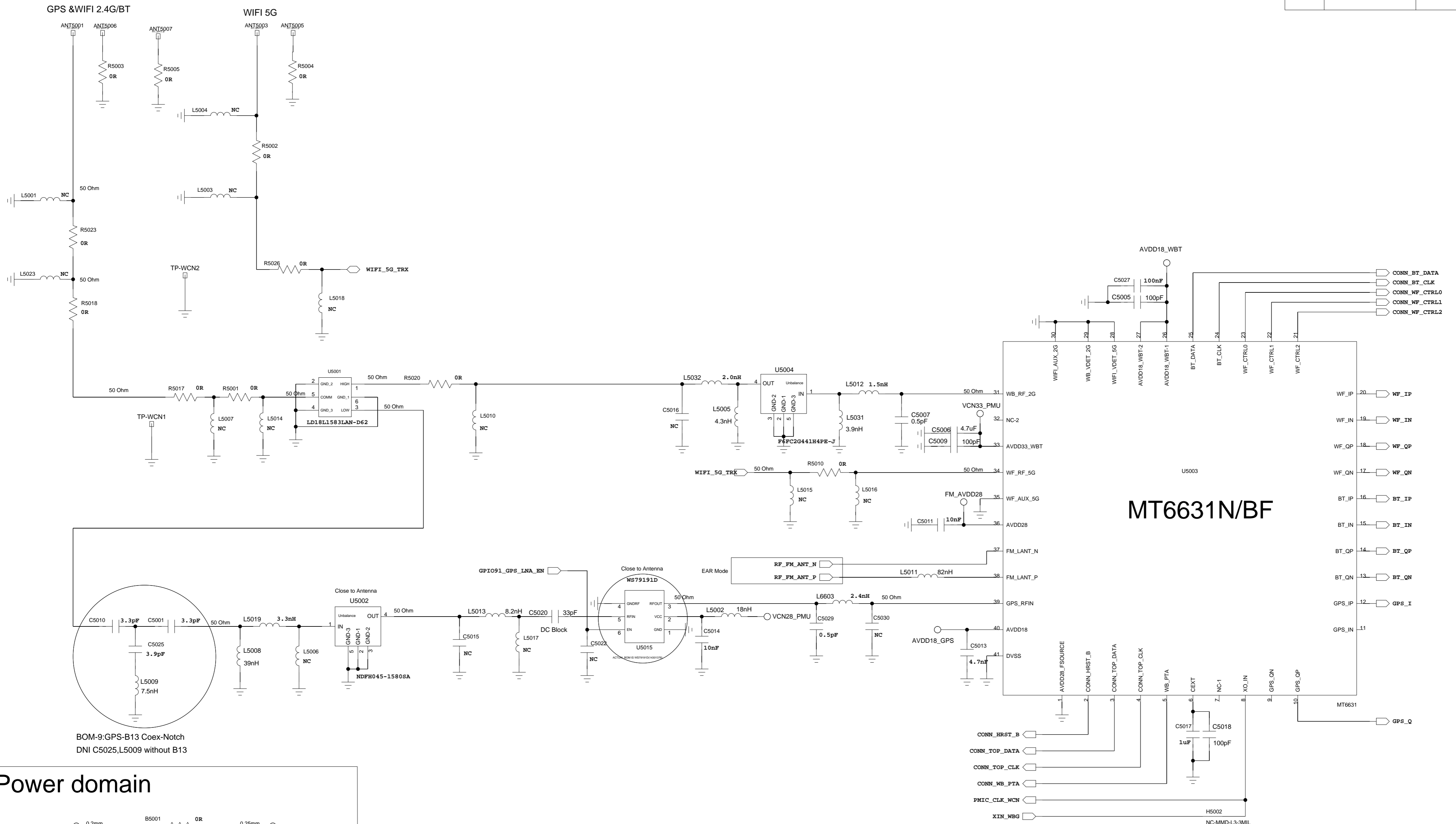
IC-EMMC-32GB-H1.0
 14201116
 KLMBG2JENB-B041
 IC-eMMC, 32GB, H1.0, B041
 SAMSUNG



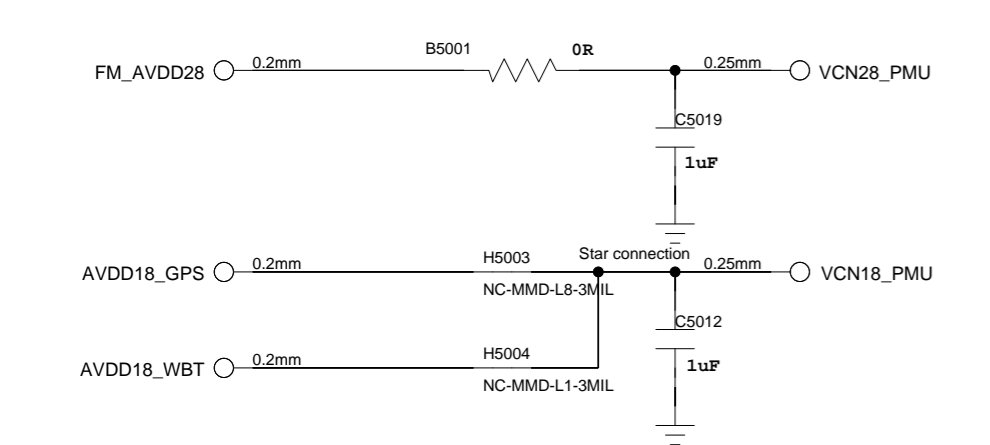
Global signal Name
 CXDB4ABAM_MK

CONNECTIVITY_MT6631

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



Power domain



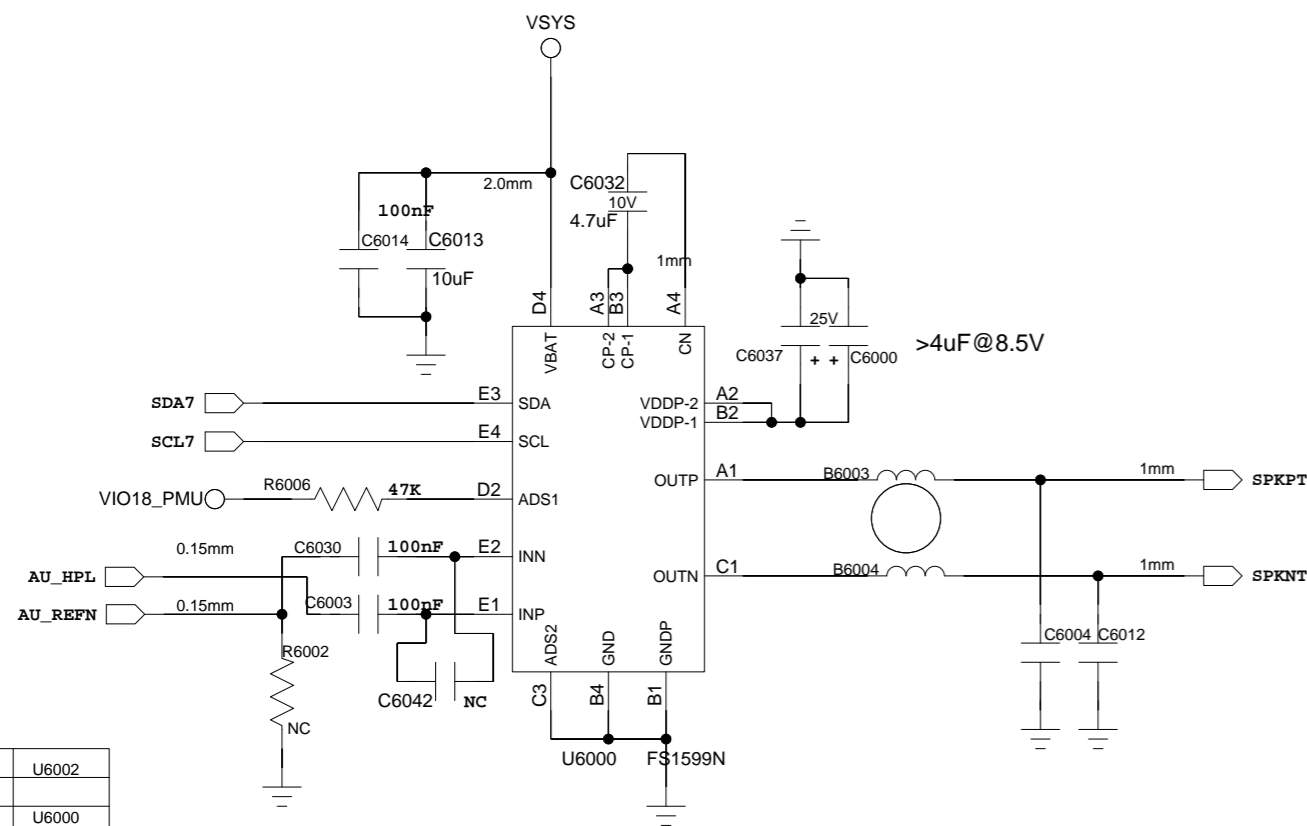
Note: For MT6631 need to configure the VCN33_2_PMU to 2.8V by PMIC SW.

PERI_AUDIO_IO

REC&SPK 2in1

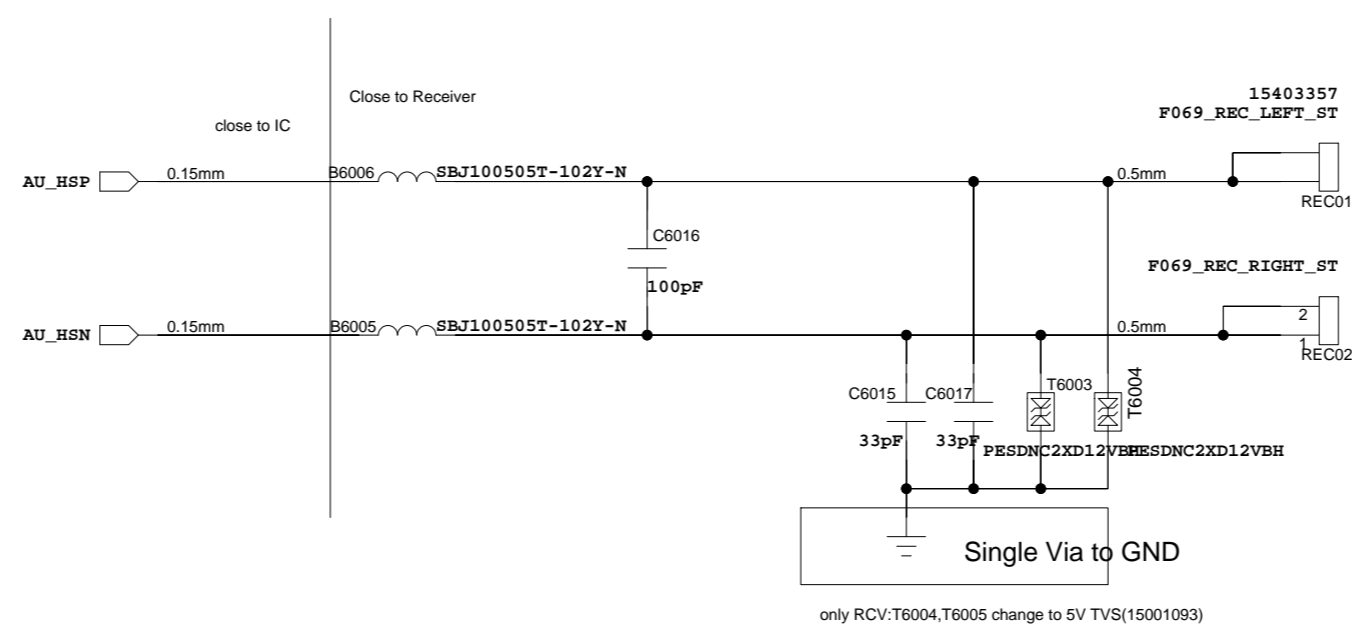
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

Audio PA UP SPK

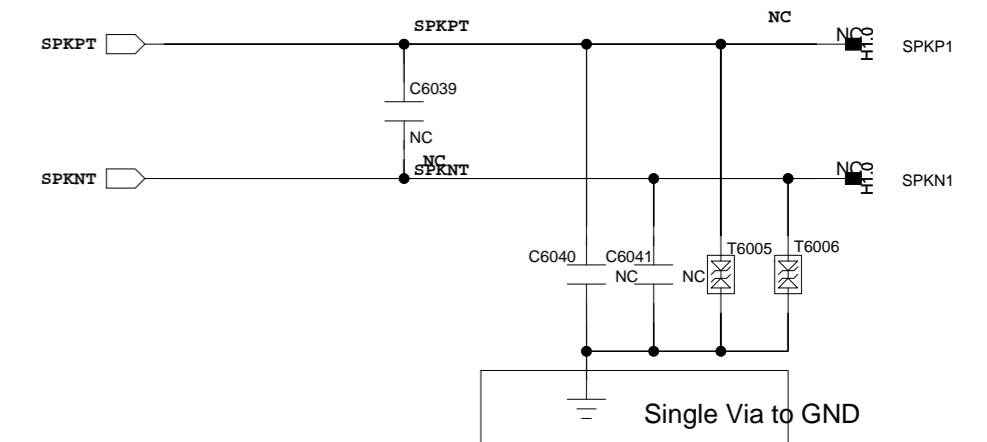


FS1558SN	GPIO	U6002
FS1599N	I2C	U6000

RECEIVER



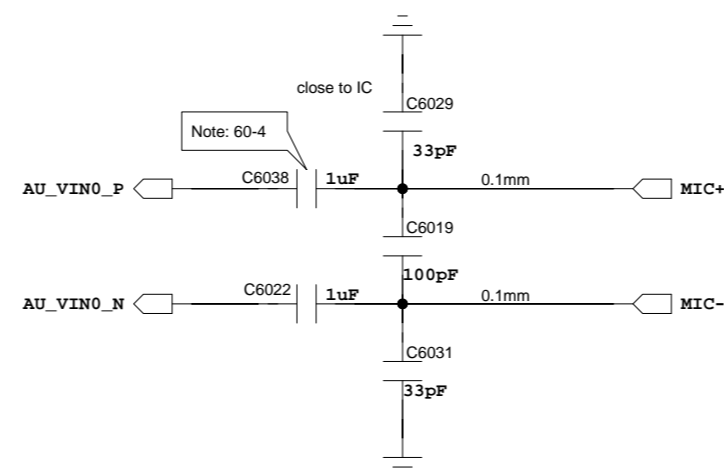
UP SPK



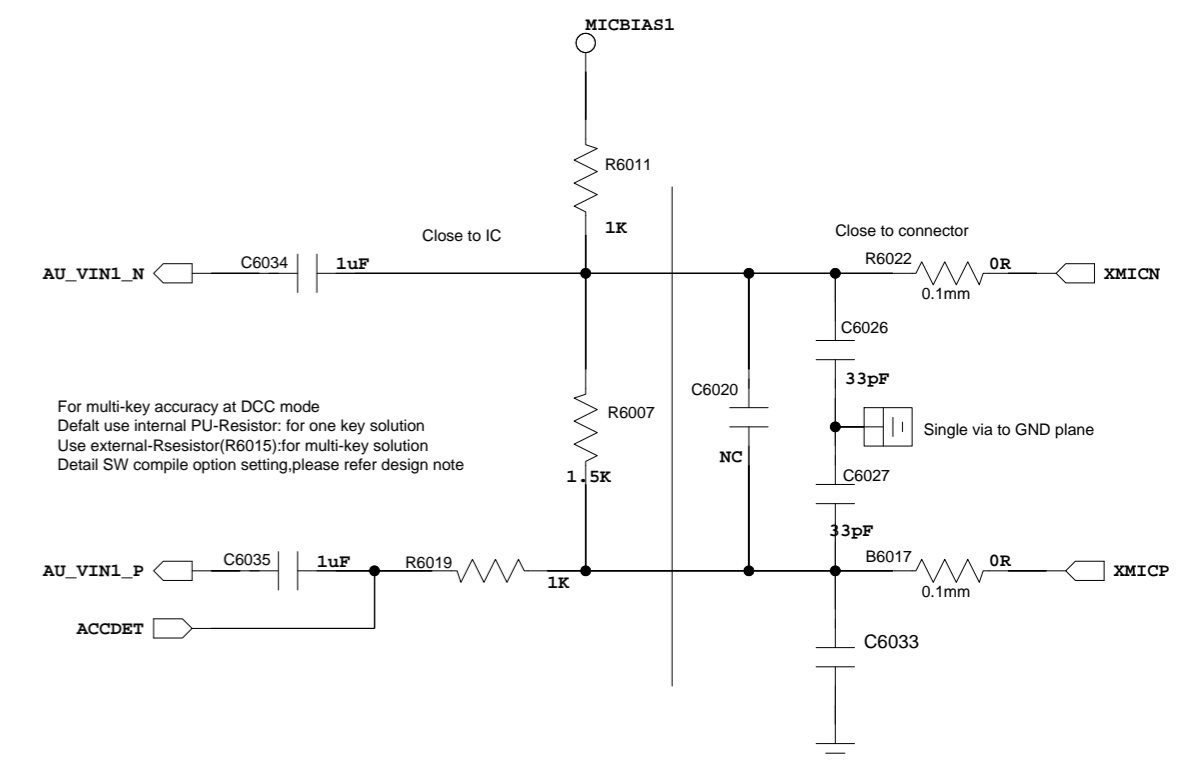
Audio PA DOWN SPK

DOWN SPK ON SUB

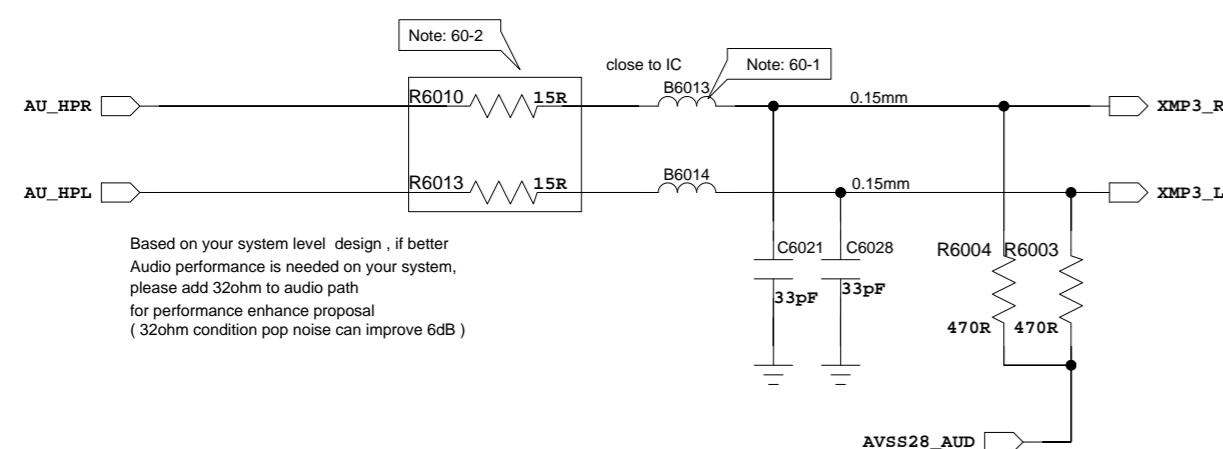
MAIN MIC



Earphone MICPHONE



Earphone Receiver



Based on your system level design, if better Audio performance is needed on your system, please add 32ohm to audio path for performance enhance proposal (32ohm condition pop noise can improve 6dB)

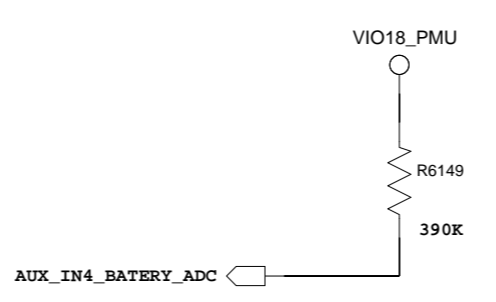
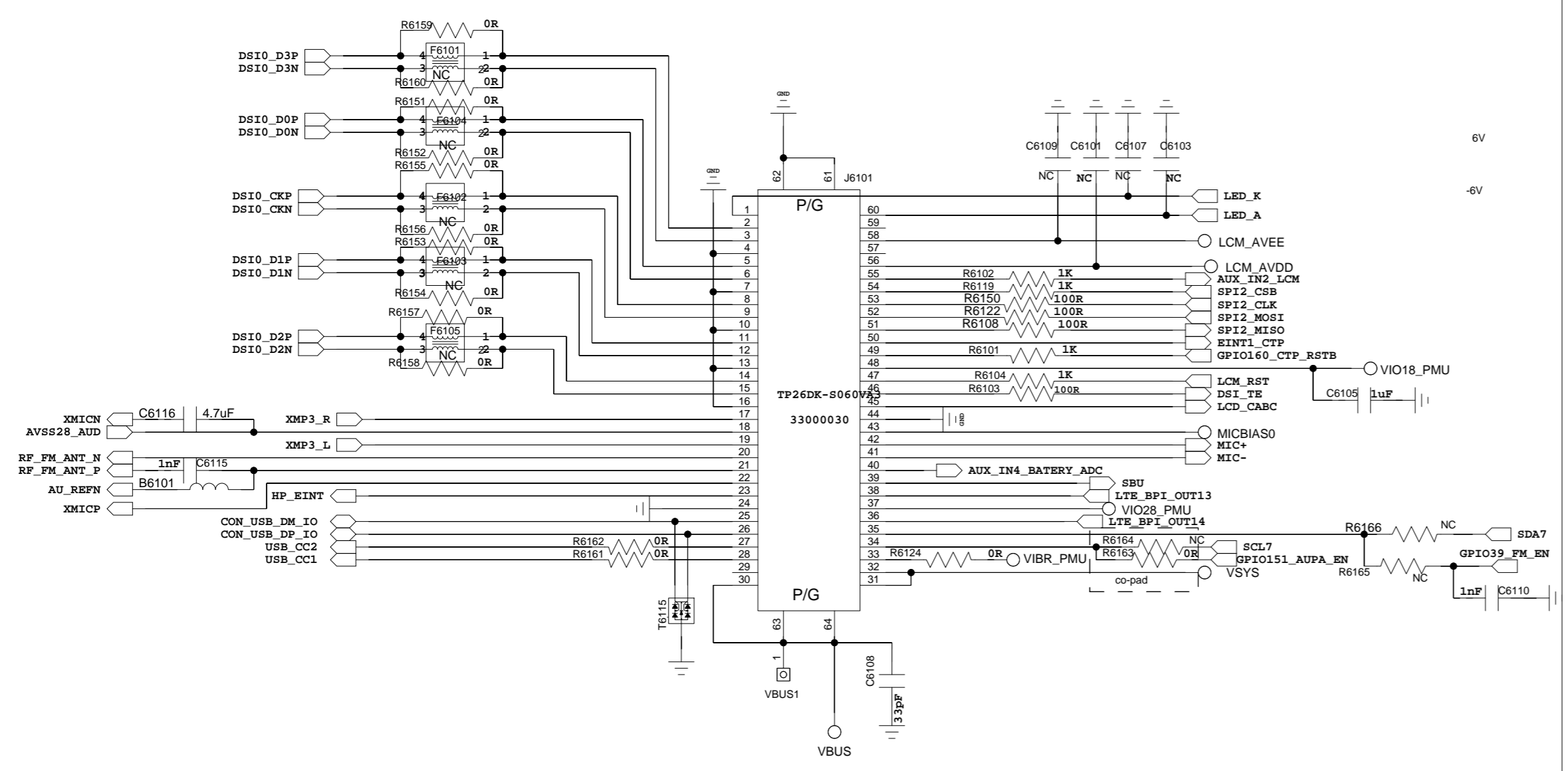
- Schematic design notice of "60_PERI_AUDIO_IO" page.
- Note 60-1: B6009 B6010 B6013 B6014 needs change to "BLM18BD102SN1" for high THD performance(-90dB), but this BOM change will result in FM RSSI 10dB degraded.
 - Note 60-2: To reserve a resistor in HPL and HPR in series connection both in order to optimize headphone pop noise. The recommended value of this resistor is 33R.
 - Note 60-3: Layout trace from MT6353 ball J3 AUDREFN to Audio jack GND must surround shield with GND.
 - Note 60-4: 0.1/1uF for ACC mode(1uF for WB_AMR Speech/0.1uF for NB_AMR Speech),0R for DCC mode.

PERI_LCM_CTP_FP

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

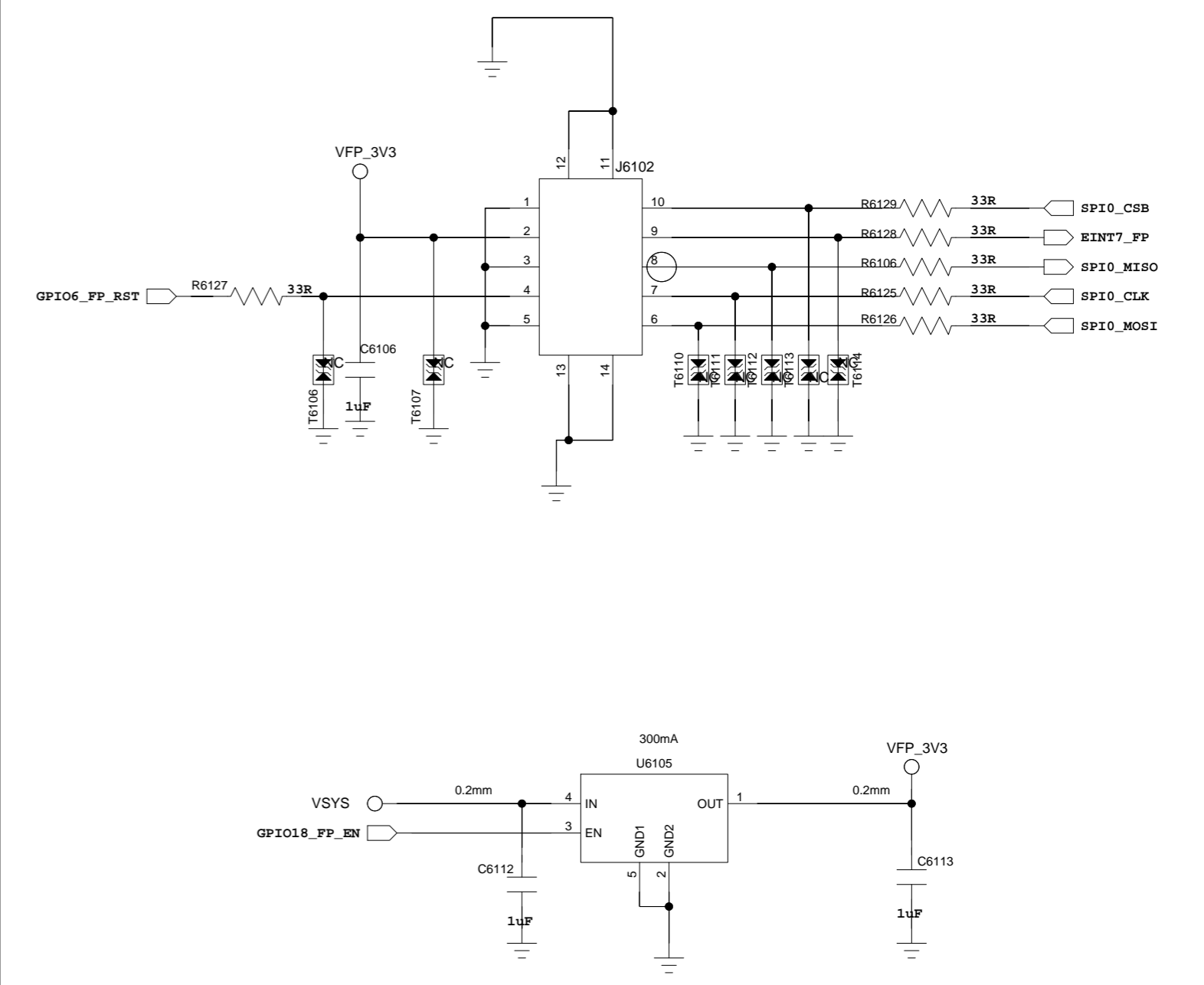
LCD_CTP_INTERFACE

CTP (NT36525) I2C address: 0X01 (Write:0x02, Read:0x03)



2. The distance is the shortest distance from package edge to edge.

FINGER PRINT



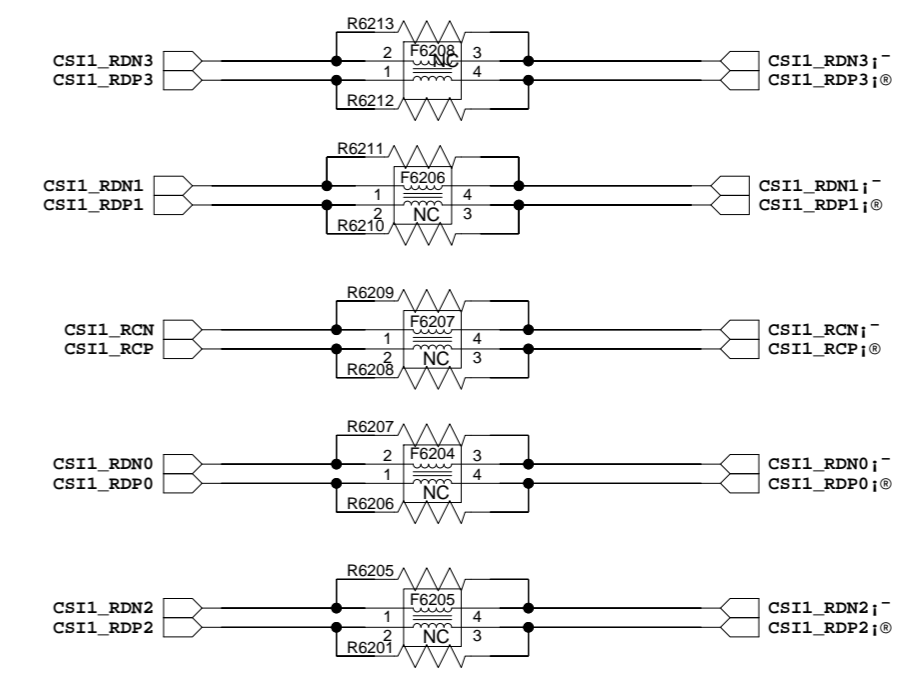
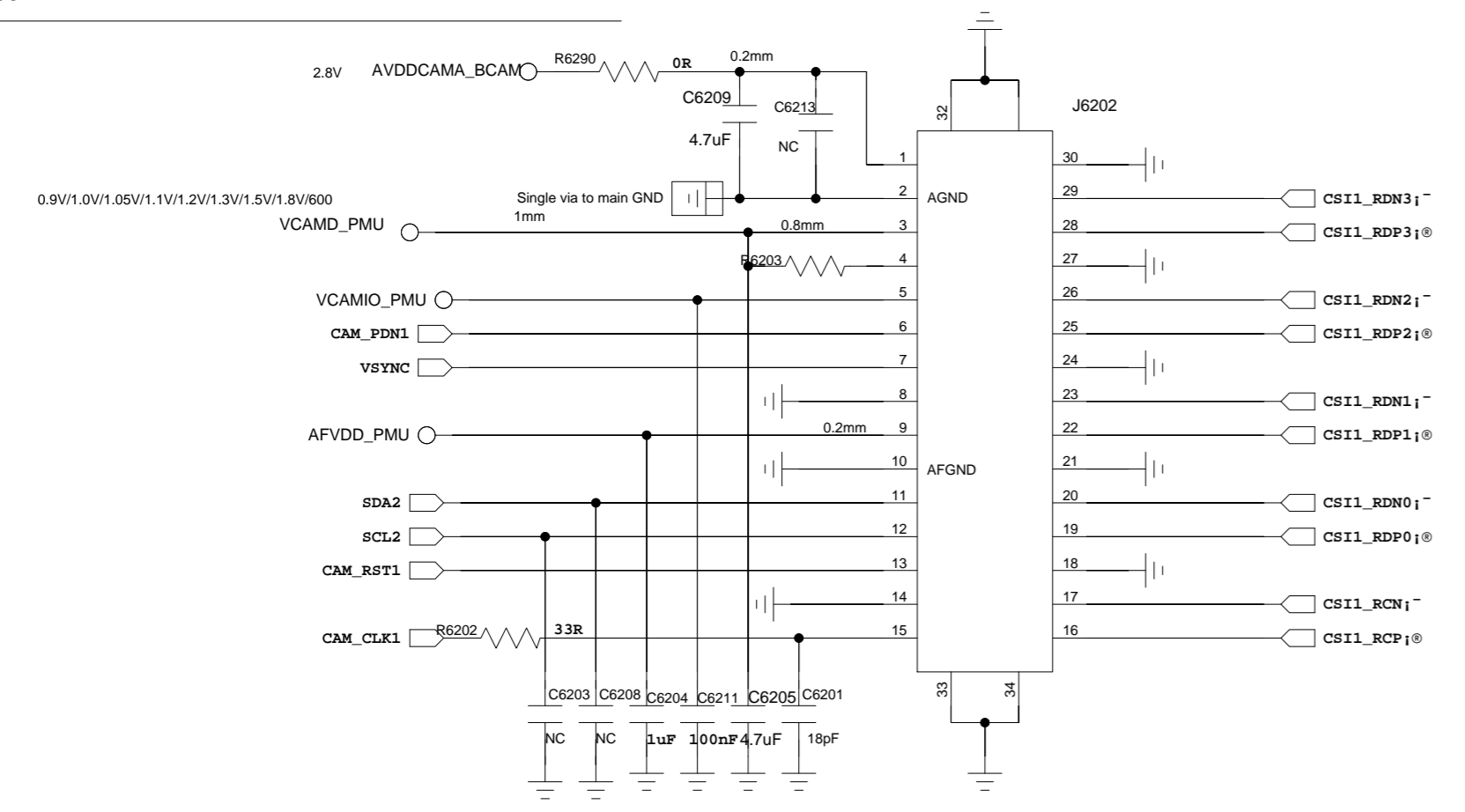
PERI_CAMERA_I

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

REAR CAM I (50M/13M/8M)

64M/50M/48M R6203=0R

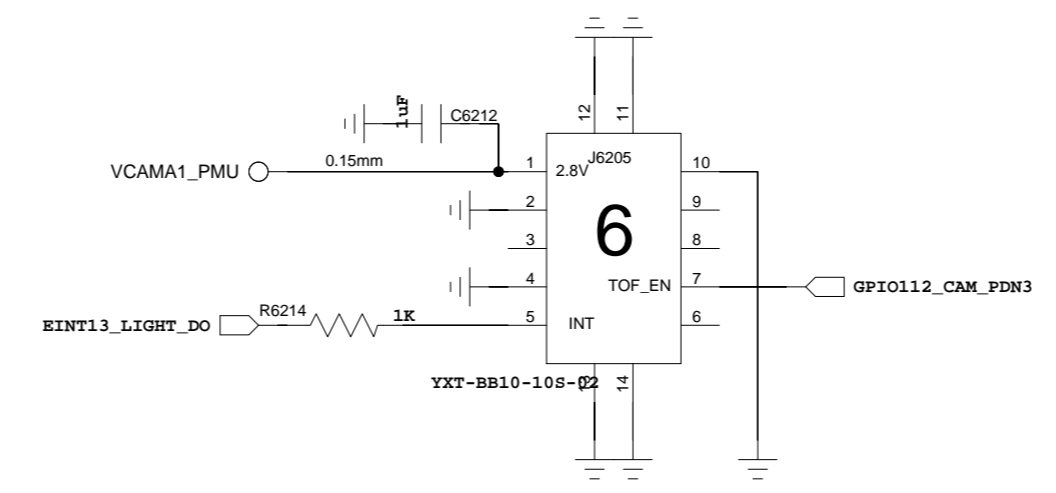
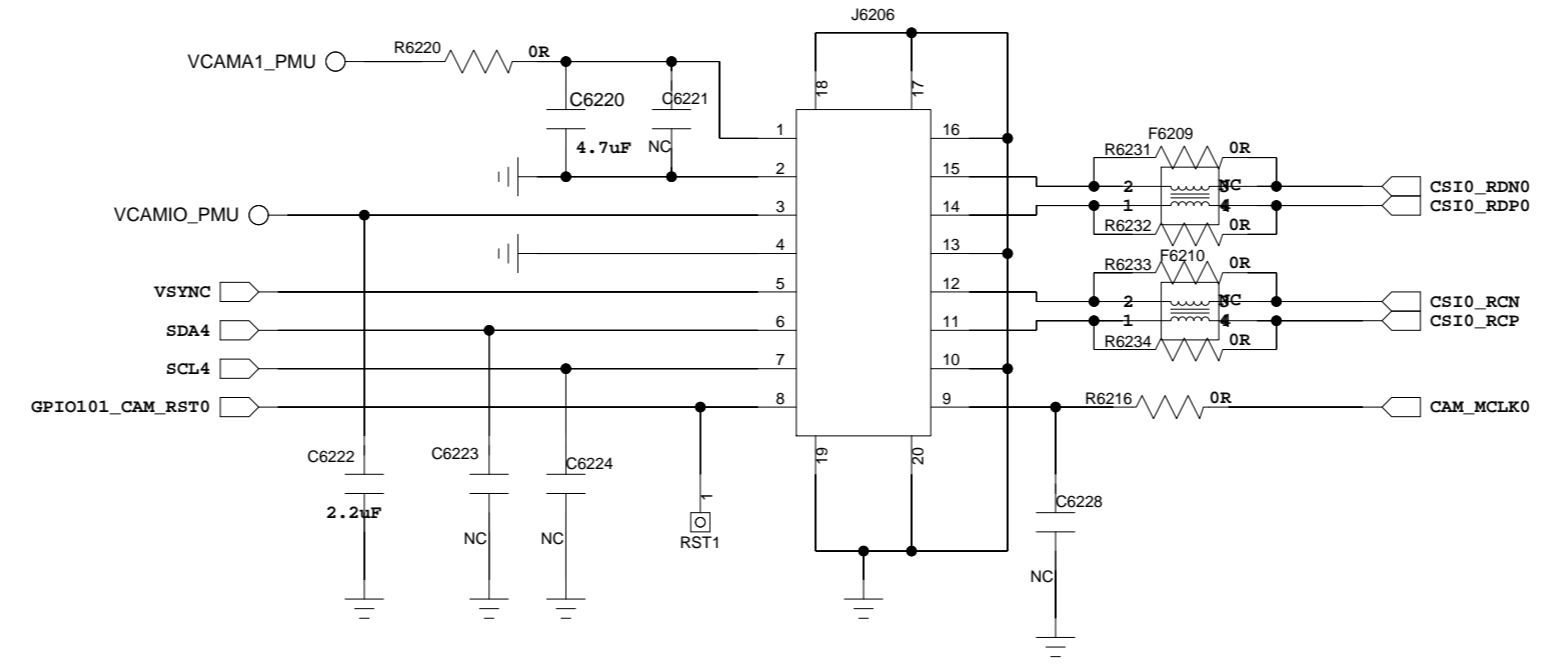
13M/16M/8M R6203=NC



	SENSOR	I2C Address	VCAMA	VCAMD	VCAMIO	AFVDD	SAP
50M	H-5021Q AA5021PXX	Write:0x40 Read:0x41	2.8V @78mA	1.1V @598mA	1.8V @ 31mA	2.8V @ 103mA	17201826(0.7um)
	SSKJN1SQ03-FGX9	Write:0x20 Read:0x21	2.8V @67.7mA	1.05V @260.7mA	1.8V @ 4mA	2.8V @ 100mA	17201711(0.64um)
13M	HI-1336-AA1336NXX-C20AHX	Write:0x40 Read:0x41	2.8V @44mA	1.1V @106mA	1.8V @ 6mA	2.8V @ 125mA	17201835
	SSK3L6X03-FGX	Write:0x20 Read:0x21	2.8V @45mA	1.05V @160mA	1.8V @ 1.1mA	2.8V @ 125mA	17201836
8M	H846/AA08466NXX-B2CWXC	Write:0x40 Read:0x41	2.8V @42mA	1.2V @67mA	1.8V @ 2mA	2.8V @ 123mA	17201833
	GC08A3-WA1XA	Write:0x62 Read:0x63	2.8V @60mA	1.2V @150mA	1.8V @ 10mA	2.8V @ 125mA	17201834

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

2M

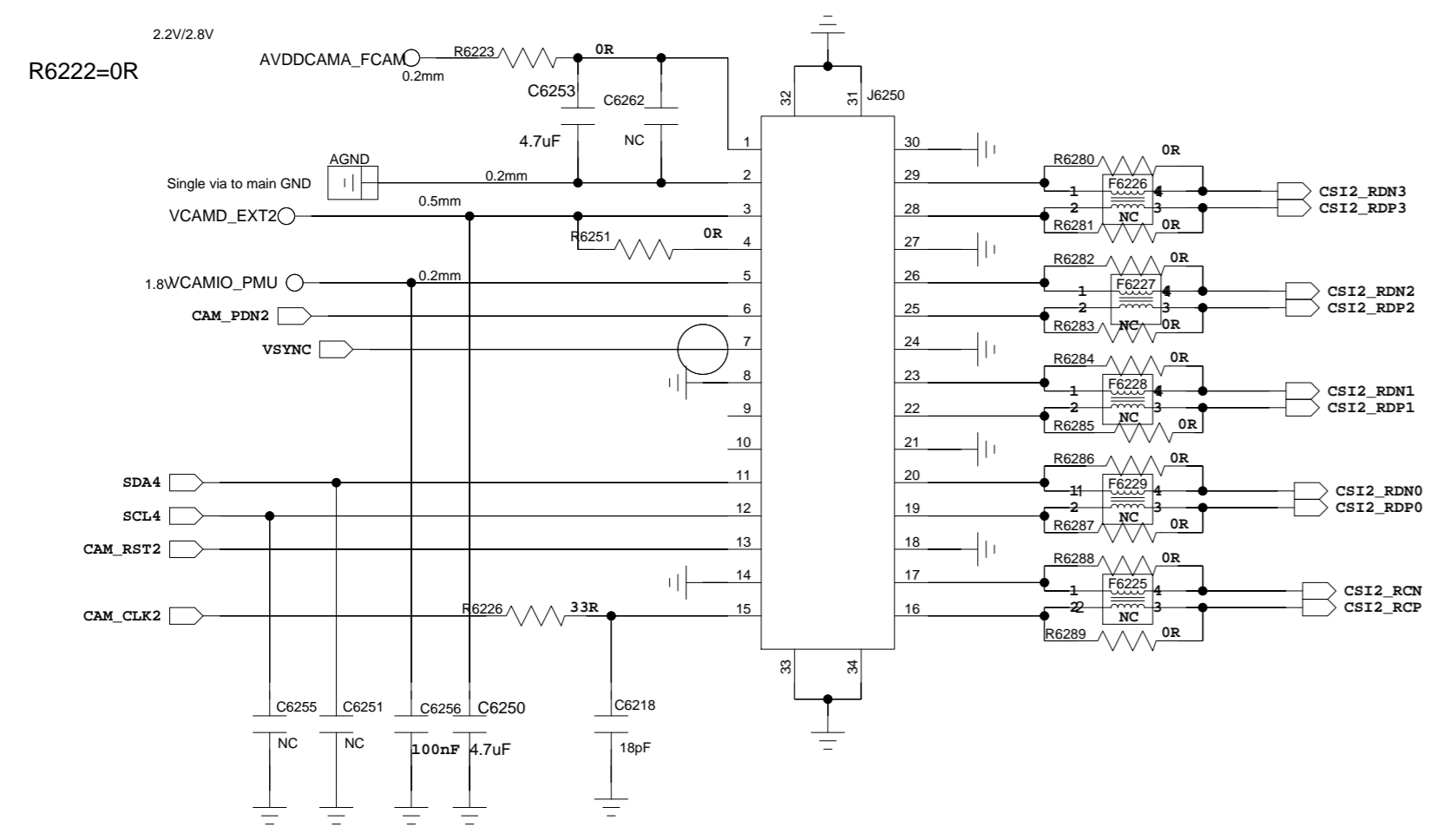


REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

PERI_CAMERA_III

Front Camera (32M/16M/8M/5M)

32M	R6251=0R	R6222=NC VCAMD_EXT1 ¹ @µç
5M/16M/8M	R6251=NC	



	SENSOR	I2C Address	VCAMA	VCAMD	VCAMIO	SAP
32M	GC32E1-WA1XA	Write:0x94 Read:0x95	2.8V 43mA	1.2V 93.05mA	1.8V 4mA	
16M	HI-1631Q	Write:0x40 Read:0x41	2.8V 49mA	1.1V 115mA	1.8V 3mA	17201821
8M	GC8034-WC1X0	Write:0x6E Read:0x6F	2.8V 35mA	1.25V 140mA	1.8V 10mA	17201857
	GC08A3-MDD0	Write:0x24 Read:0x25	2.8V 60mA	1.2V 150mA	1.8V 10mA	17201829
	OV08856-GA4A-2	Write:0x6C Read:0x6D	2.8V 28mA	1.2V 95mA	1.8V 2.7mA	17201831
5M	GC5035-MCHD0	0X6E(W)0X6F(R)	2.8V 35mA	1.2V 80mA	1.8V 3mA	
	HI-556D(HYNIK)	0X50(W)0X51(R)	2.8V 43mA	1.2V 46mA	1.8V 1mA	

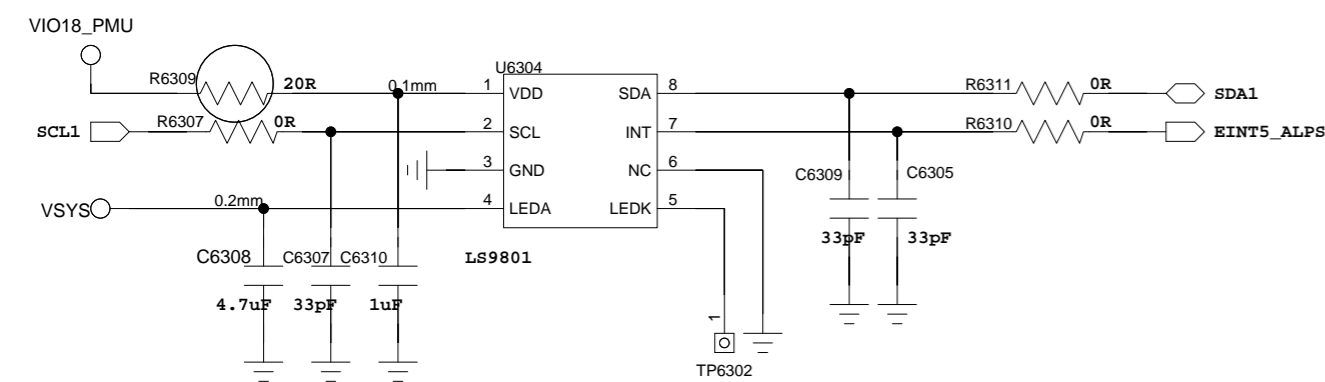
PERI_SENSORS

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

AL& PS Sensor

STK33562:I2C address: Write:0x8C, Read:0x8D

1.8V for STK33562

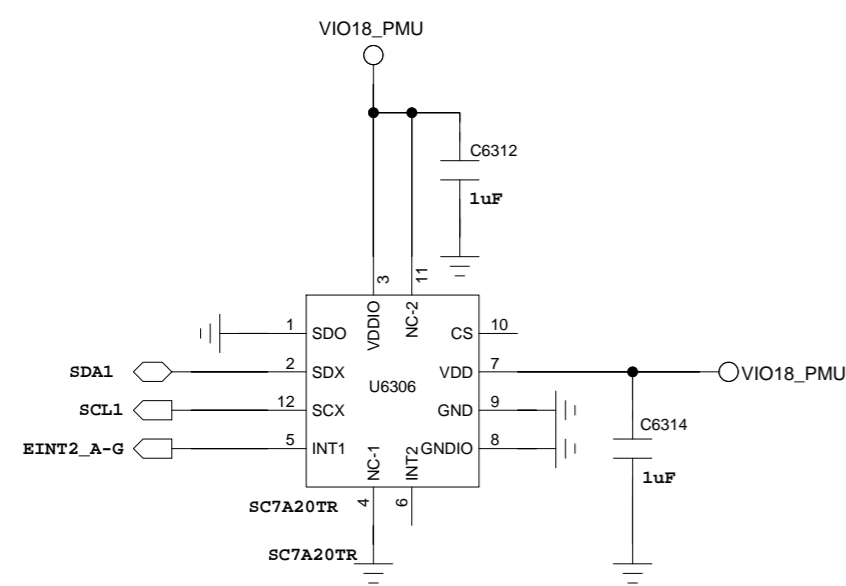


G-Sensor

MXC6655XA:ADDRESS:0x2A(Write)/0x2B(Read)

SC7A20:ADDRESS:0x30(Write)/0x31(Read)

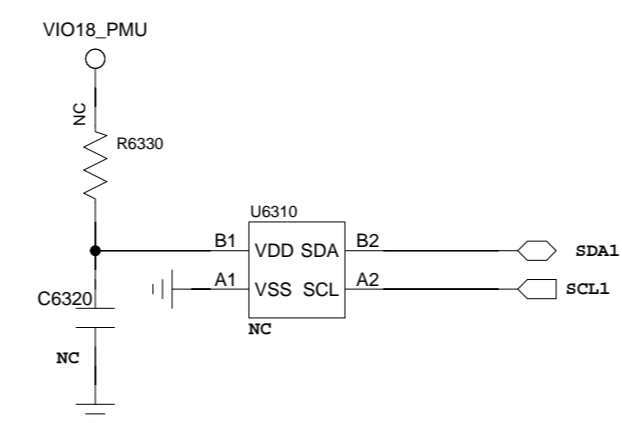
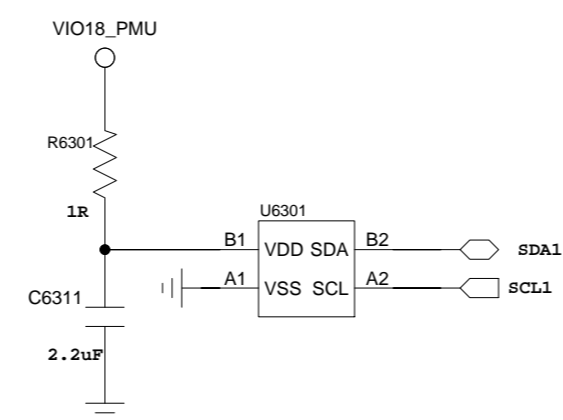
MXC4005XC:ADDRESS:0x2A(Write)/0x2B(Read)



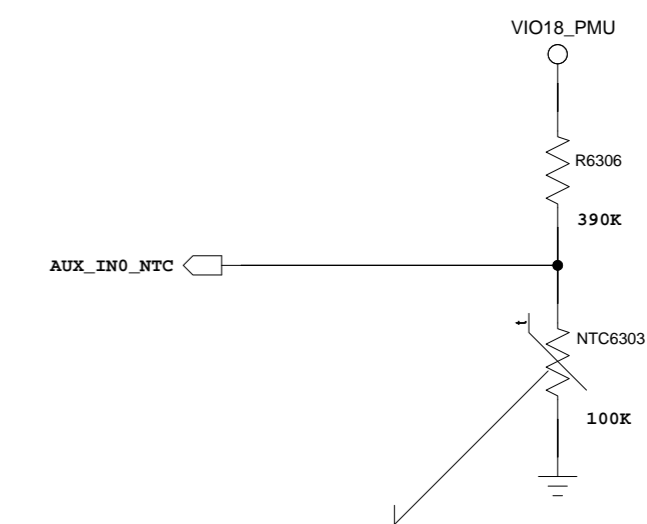
M-Sensor(COMPASS)

MMC5603:I2C ADDRESS:0x60(Write)/0x61(Read)

QMC6308:I2C ADDRESS:0x58(Write)/0x59(Read)



Thermistor to sense AP temperature



1. NTC6303 must keep a distance about 68 mm away from BB and far from other heat sources 10 mm at least.
2. The distance is the shortest distance from package edge to edge.

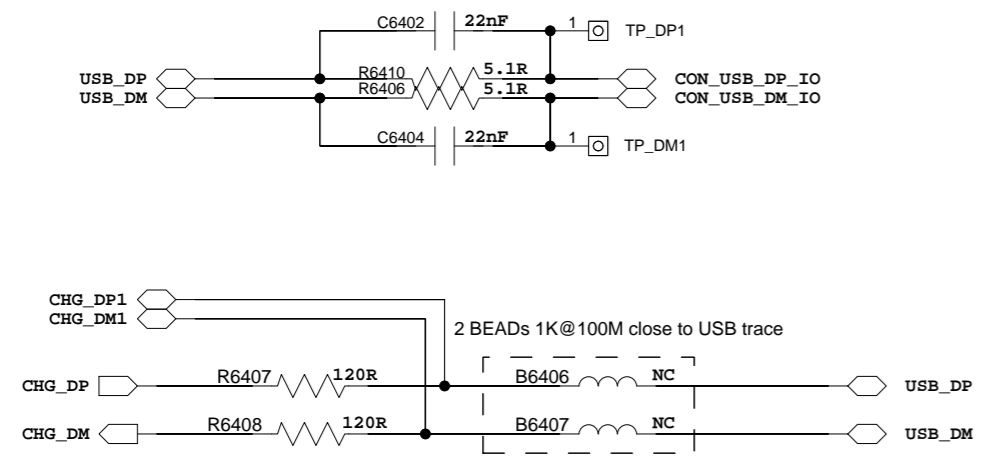
component	MXC6655XA	SC7A20	STK68BA50-S
C6302	NC	100nF	1uF
C6303	1uF	100nF	1uF

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

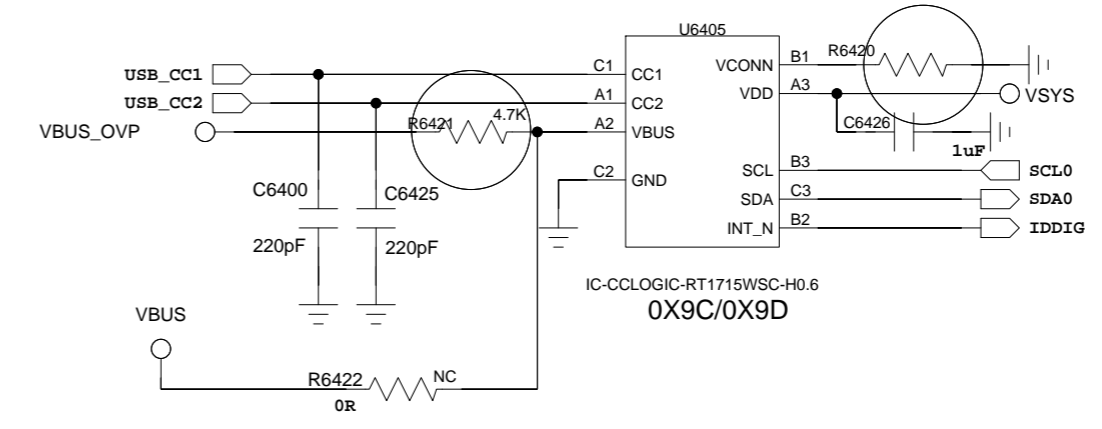
PERI_EXCH_IO

RFC

Put it on the trace, do not by-passed Place on battery side outside shielding case

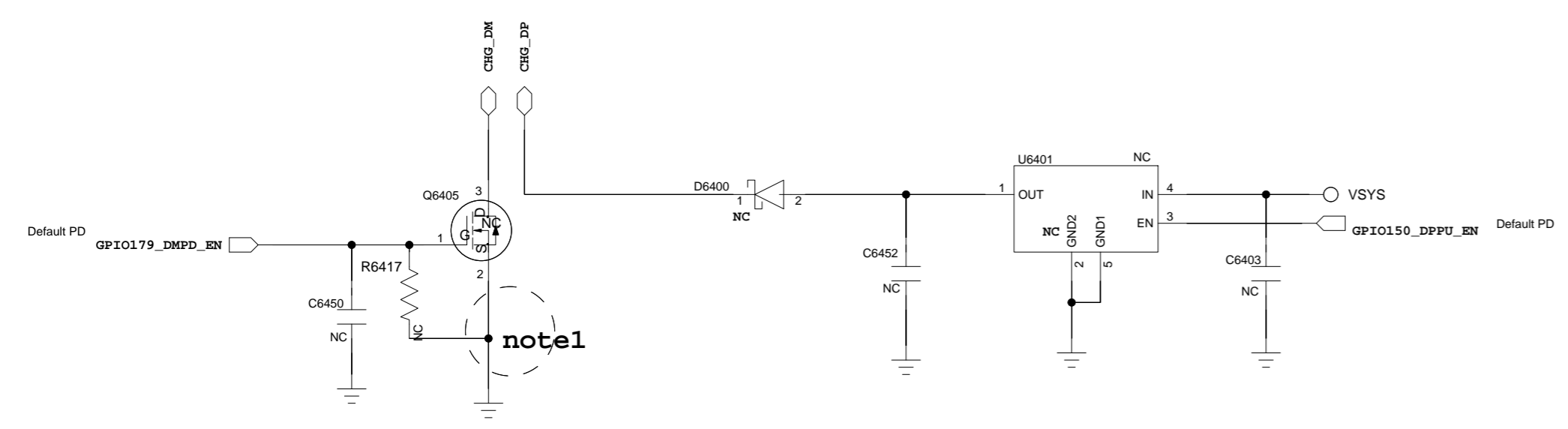


CC Logic

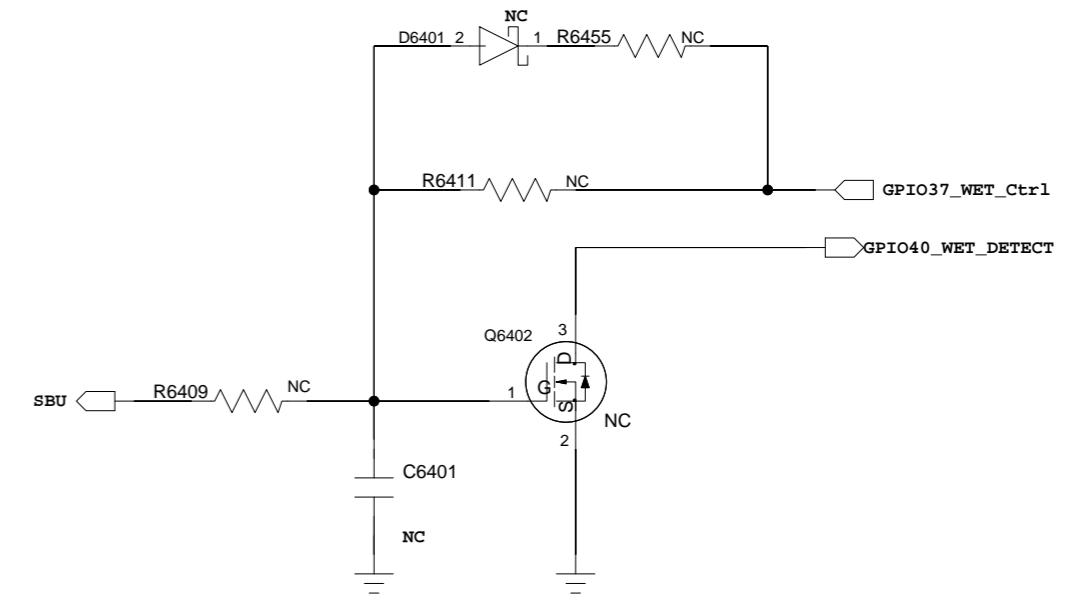


18W IC	T6405	R6407	R6408	
OTHERS	RES-->0R	120R	120R	T6405 SMT 0R

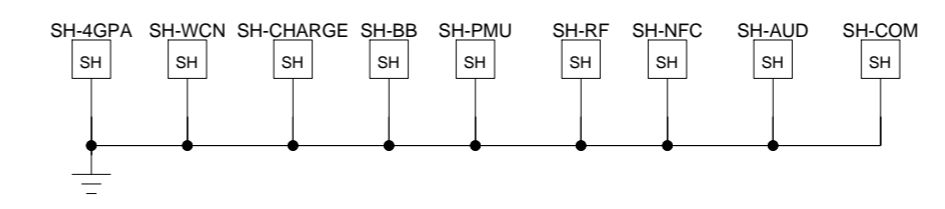
HVDCP TA



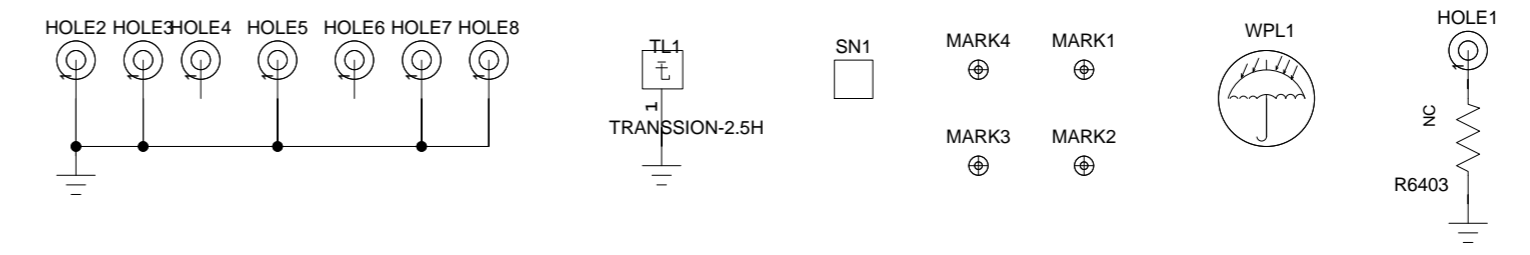
WET detect



SHIELDING



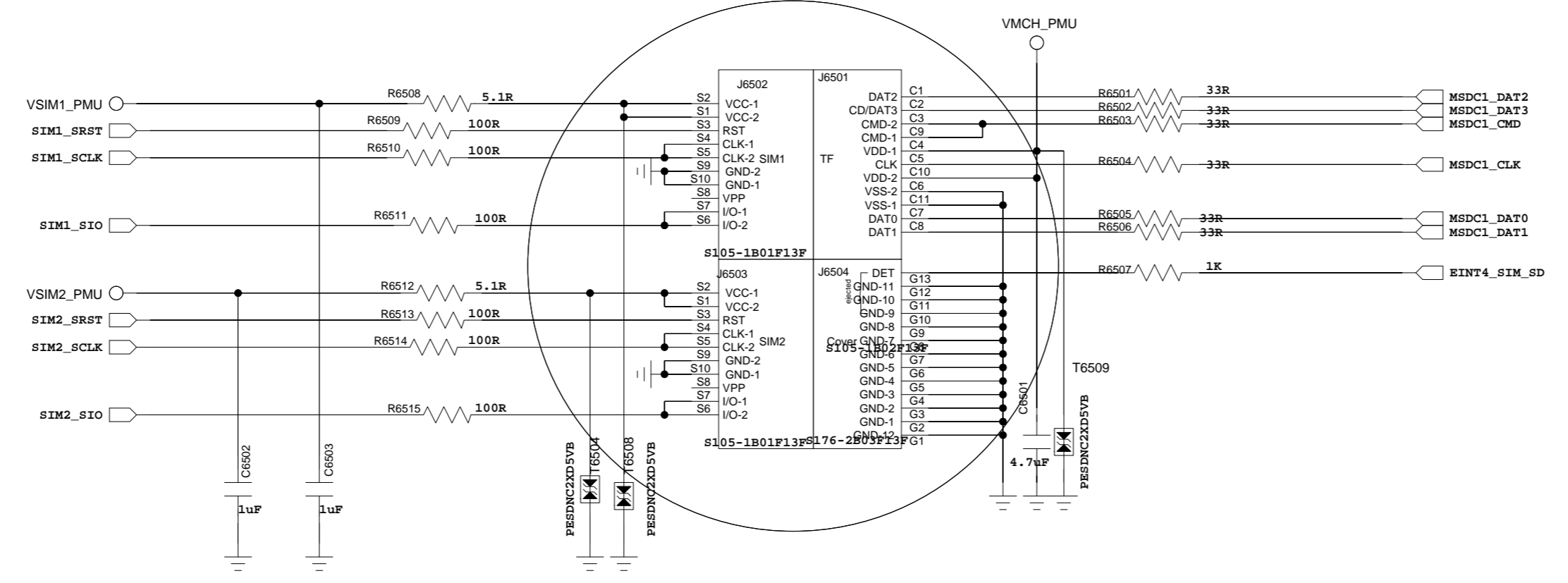
LOGO&SN&MARK



PERI_SIM_SD_KEYPAD

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

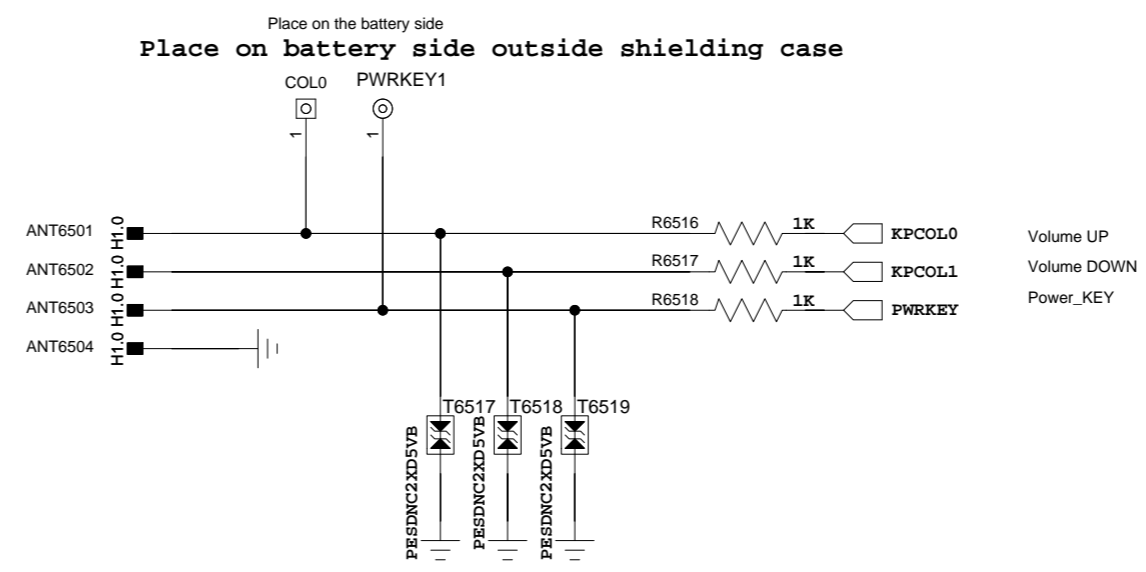
SIM1/2-SD-CARD



SD DETECT	PUSH IN	PUSH OUT
EINT	H	L

SD POWER CONTROL

SIDEKEY

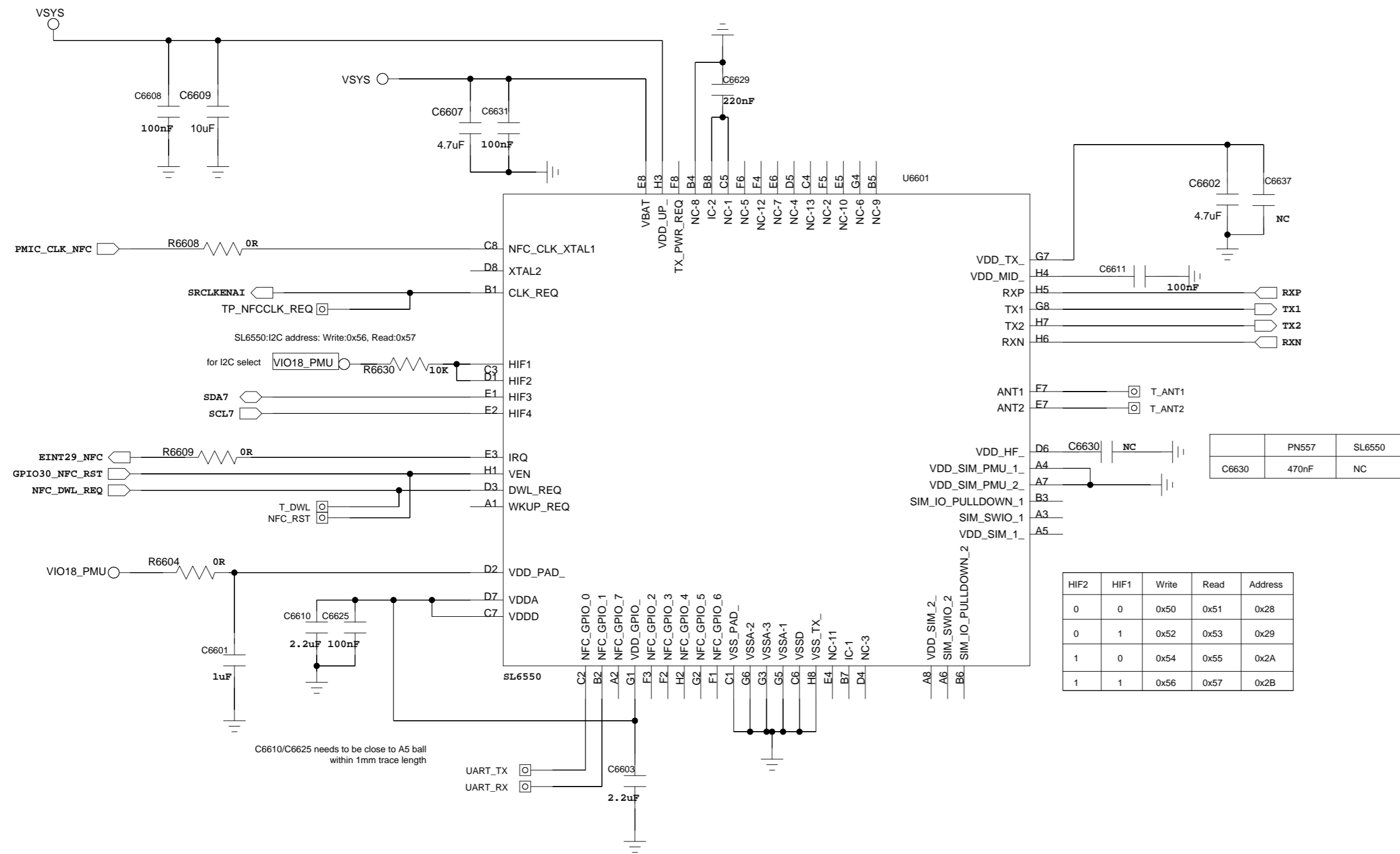


Volume UP	COL0	COL1
Volume DOWN	GND	UP
Power_KEY	UP	DOWN

PERI_NFC

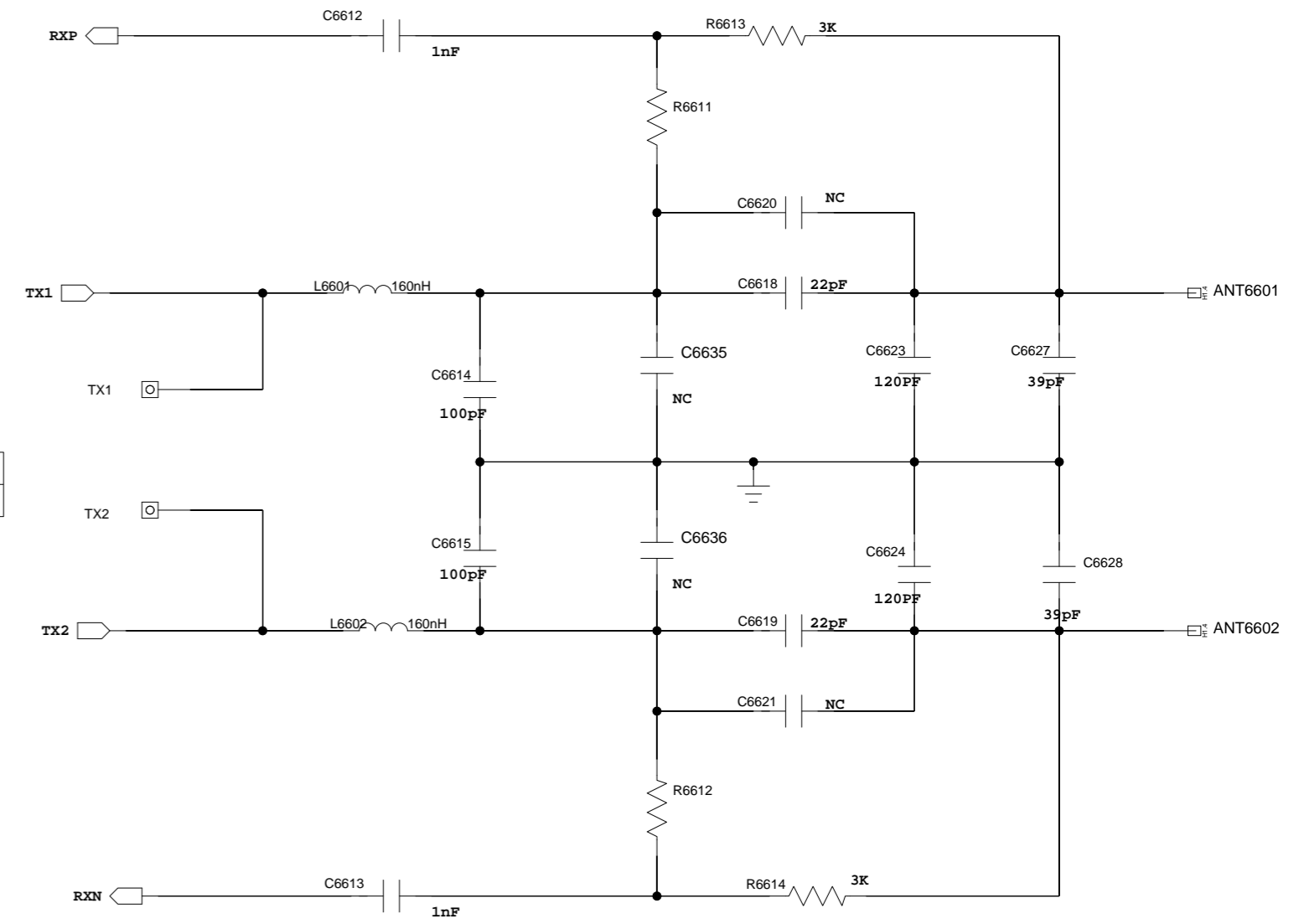
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

NC



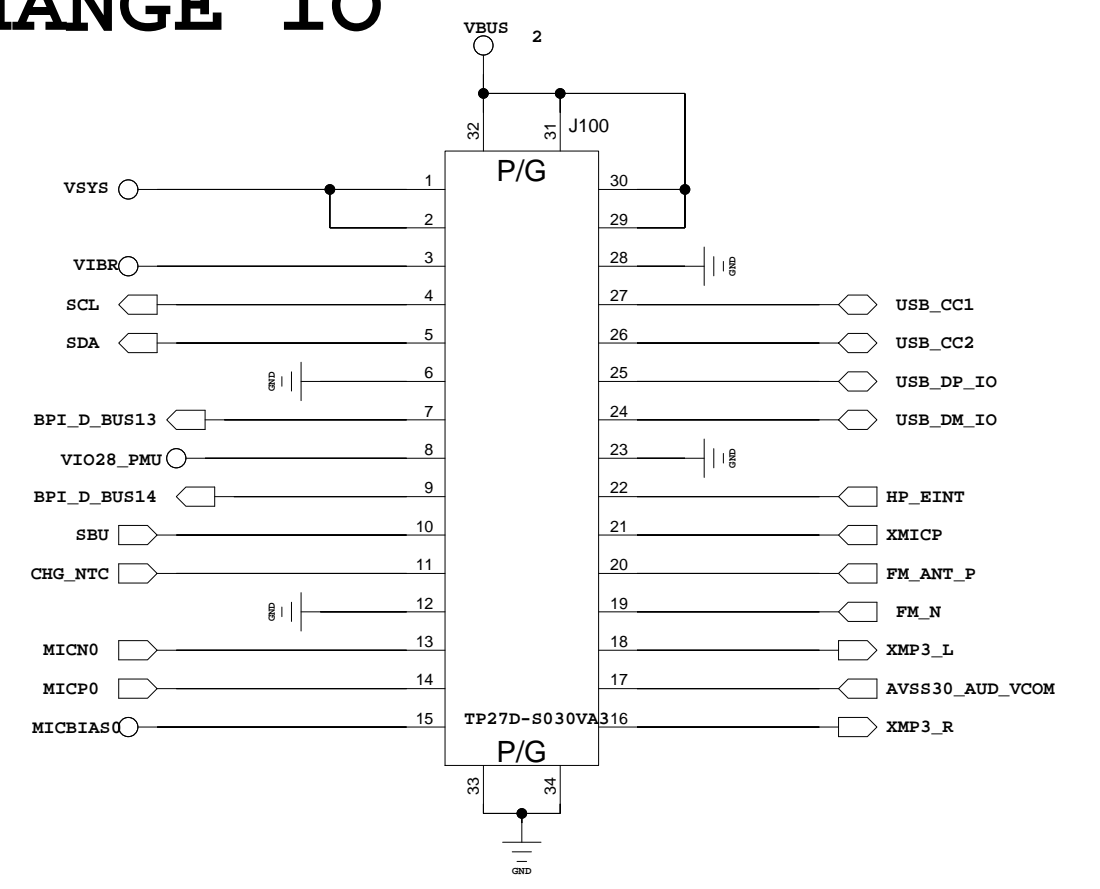
HIF2	HIF1	Write	Read	Address
0	0	0x50	0x51	0x28
0	1	0x52	0x53	0x29
1	0	0x54	0x55	0x2A
1	1	0x56	0x57	0x2B

PN557	SL6550
C6630	470nF
	NC

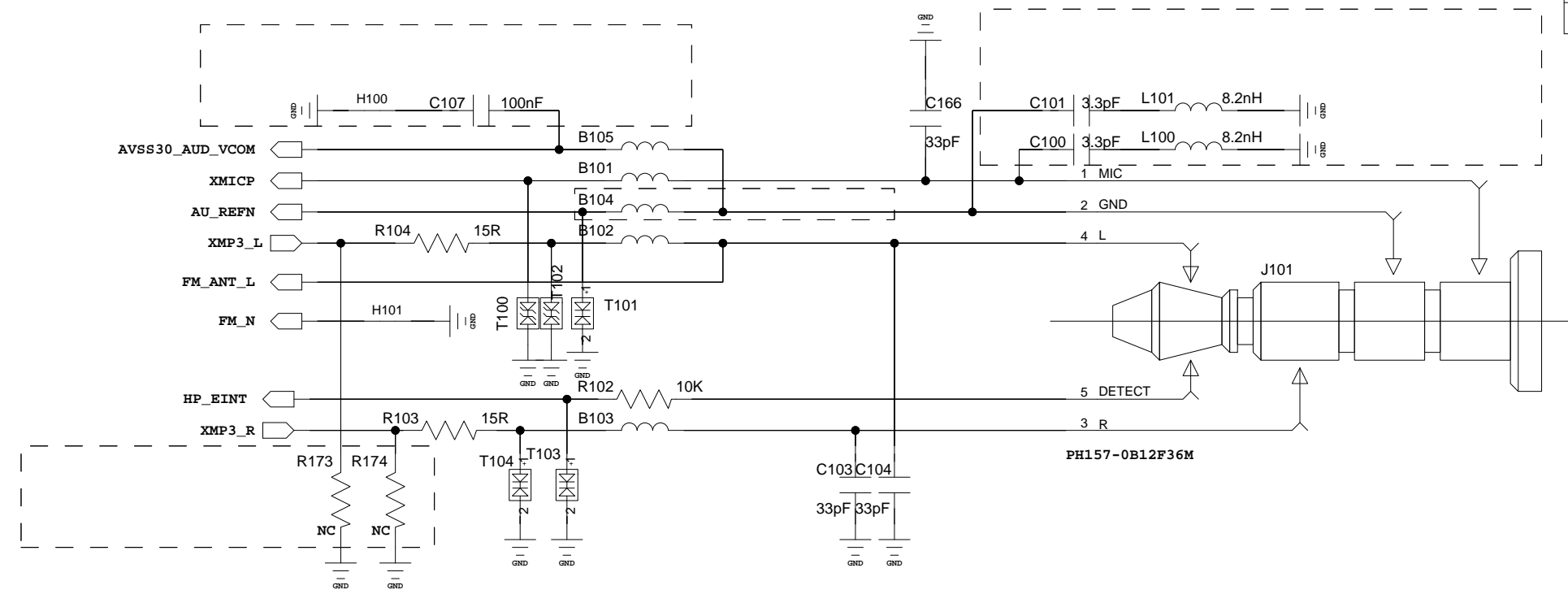


REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

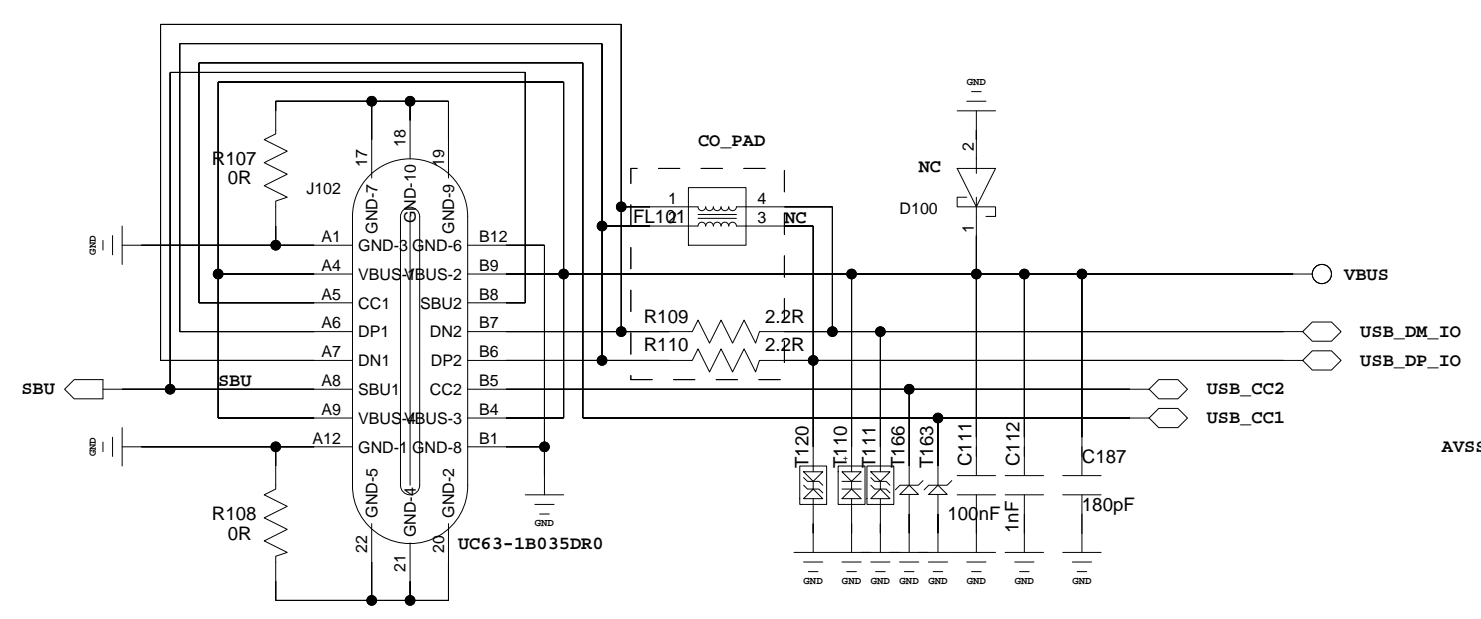
EXCHANGE IO



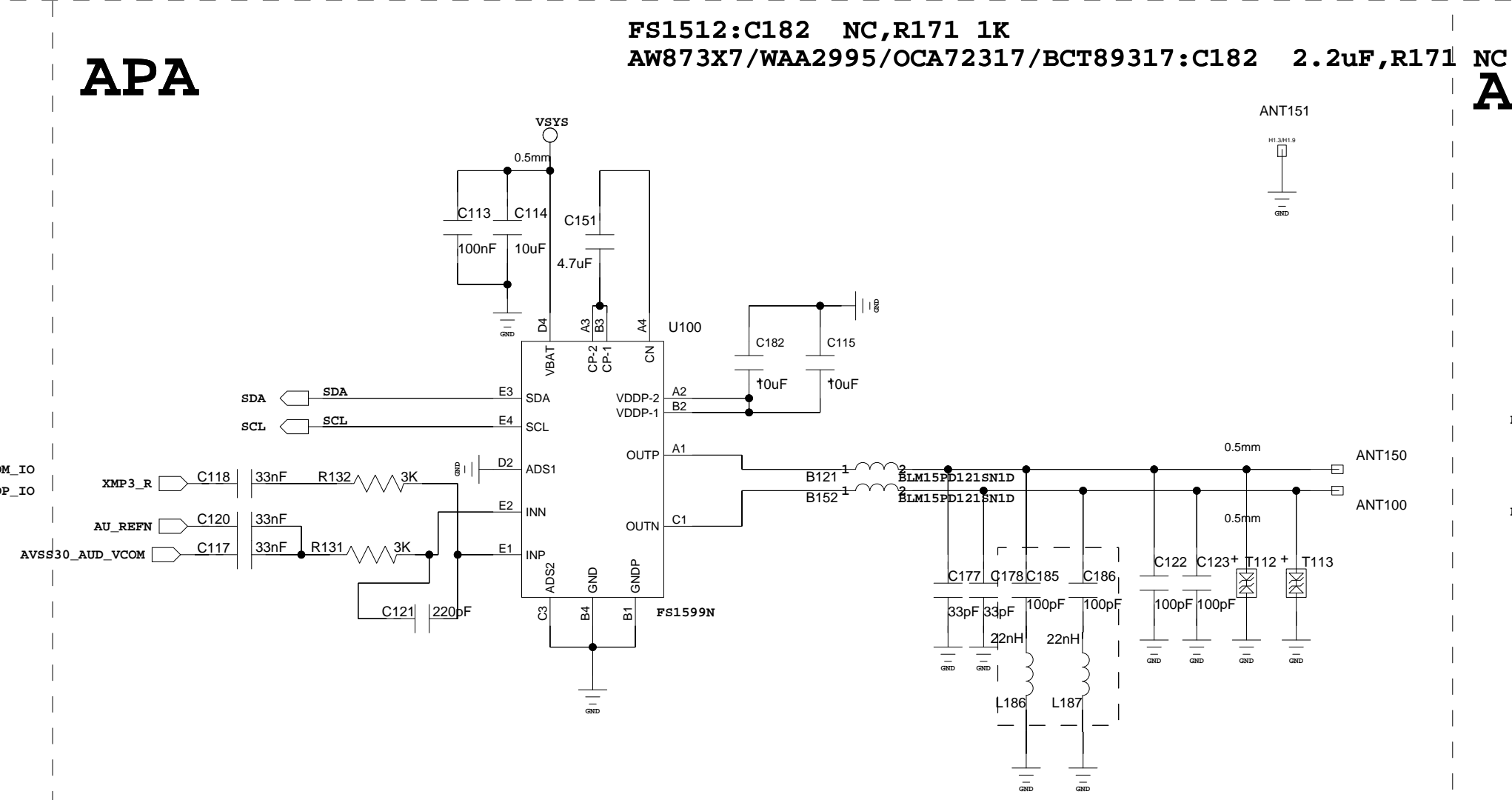
AUDIO EAR



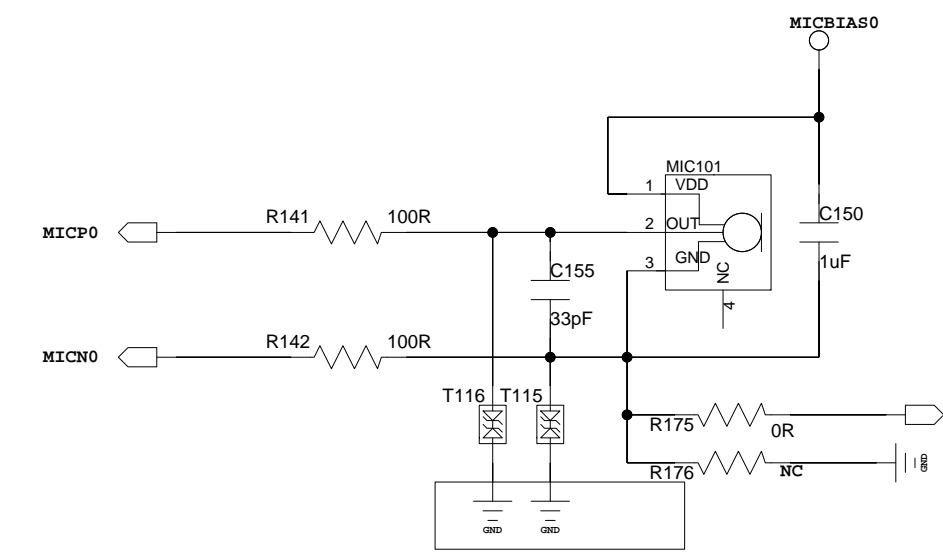
TYPE C



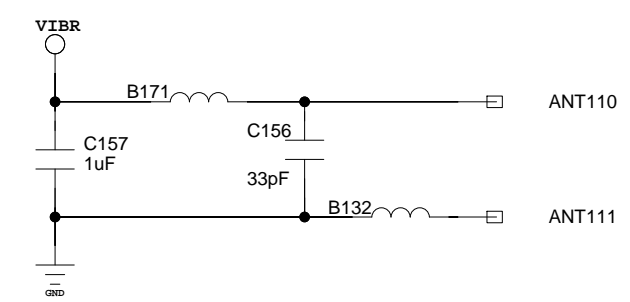
APA



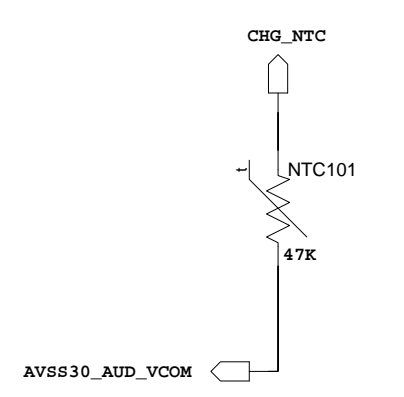
AUDIO MIC



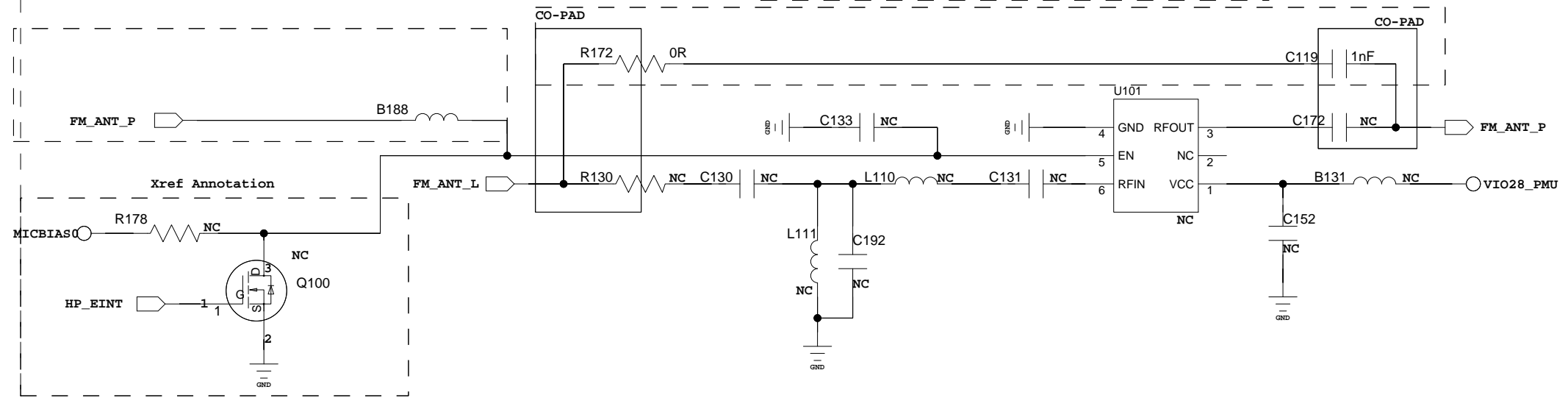
VIBR



NTC



FM



REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

