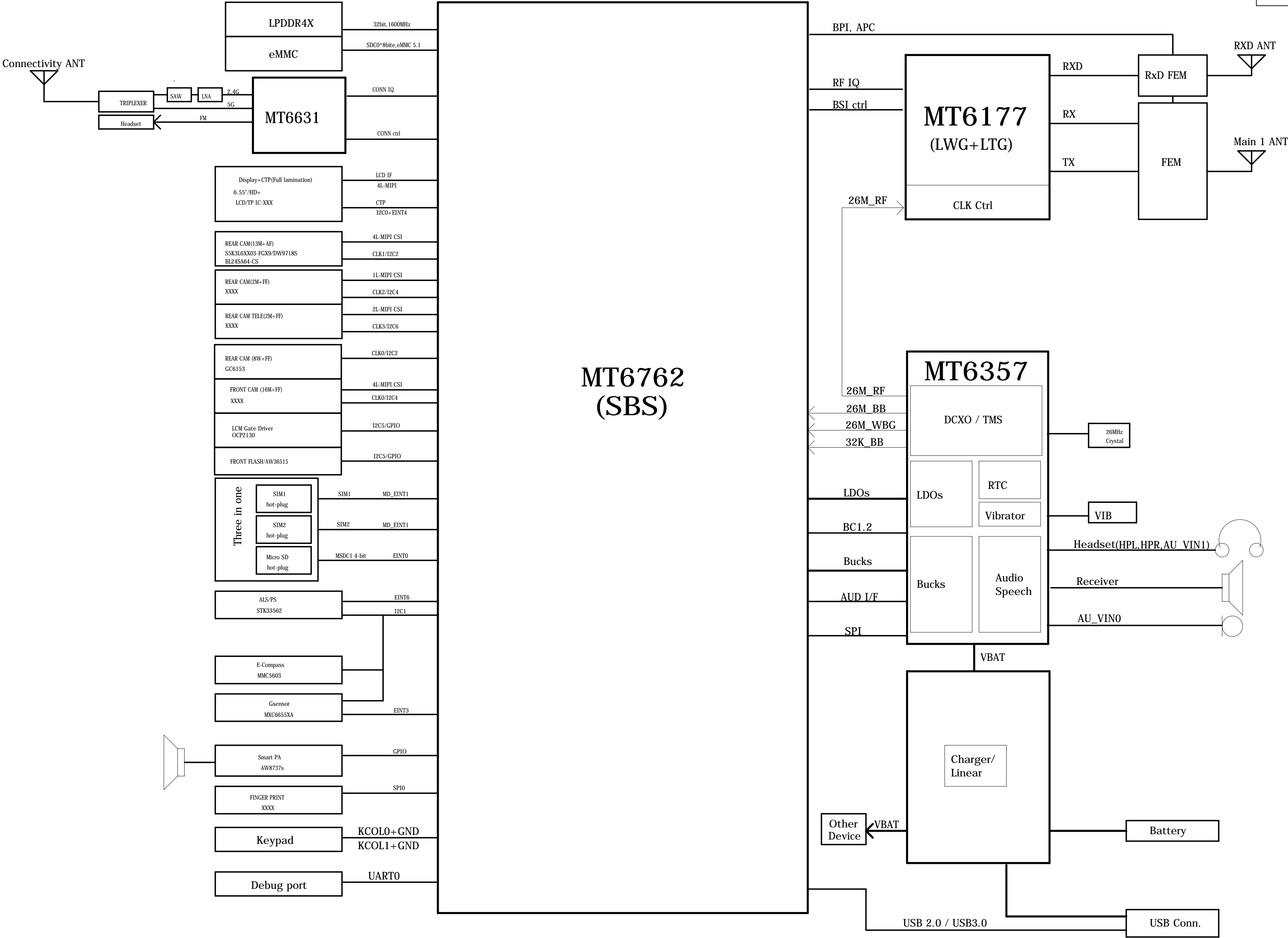


# BLOCK\_DIAGRAM

Project : MT6762 LPDDR4X

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



COMPANY: TRANSSION HOLDINGS				MODEL: H6218		Modified Date: 2020/10/23	
DRAWN	DJF/TS	DATED	20201021	TITLE: 00_BLOCK_DIAGRAM		VERSION: V1.0	SHEET: 1 OF 25
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

# I2C\_ID\_OVERVIEW

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

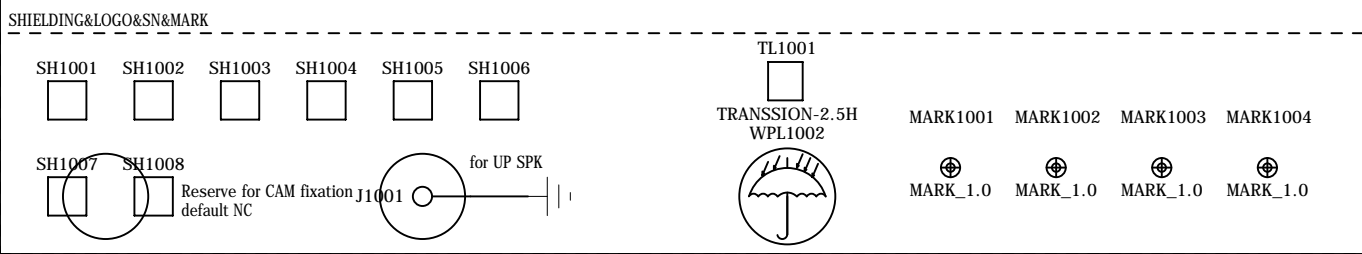
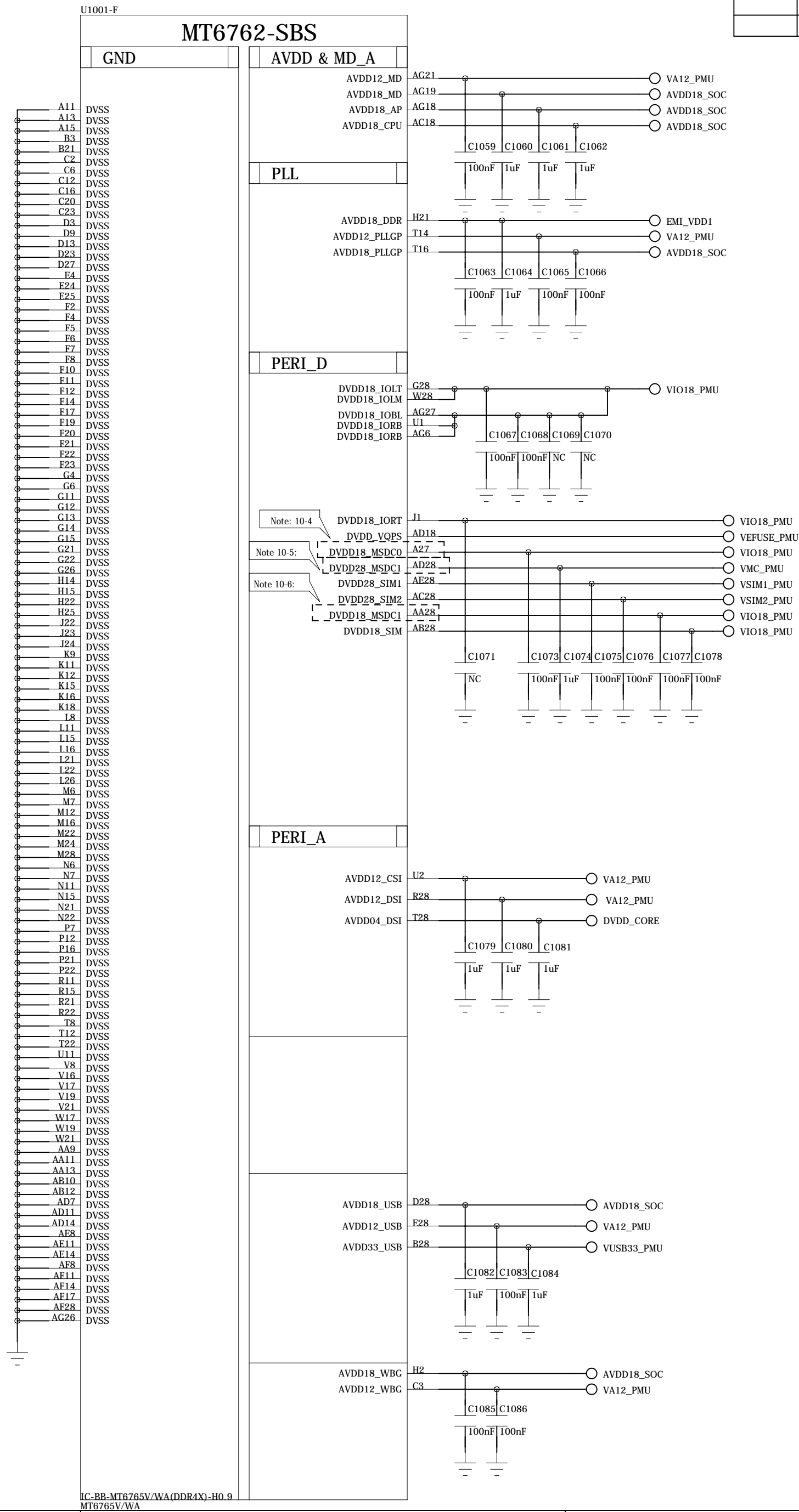
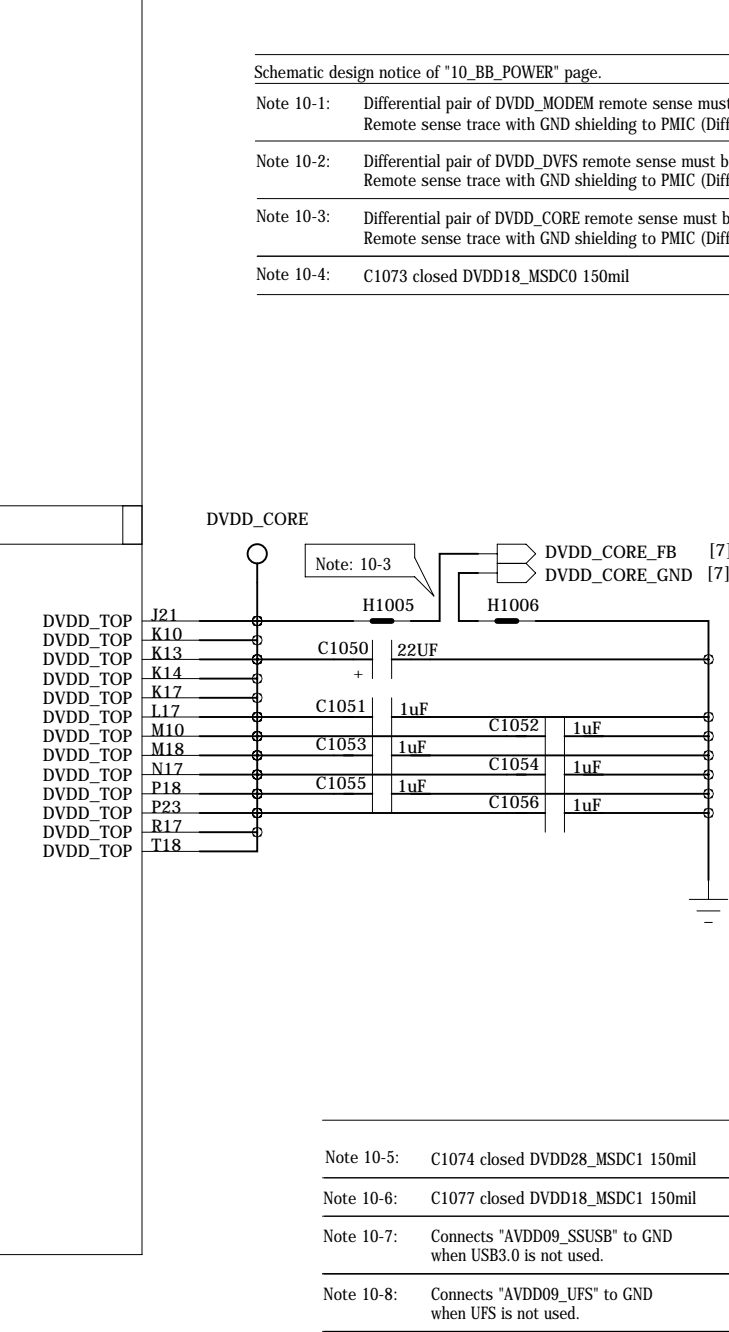
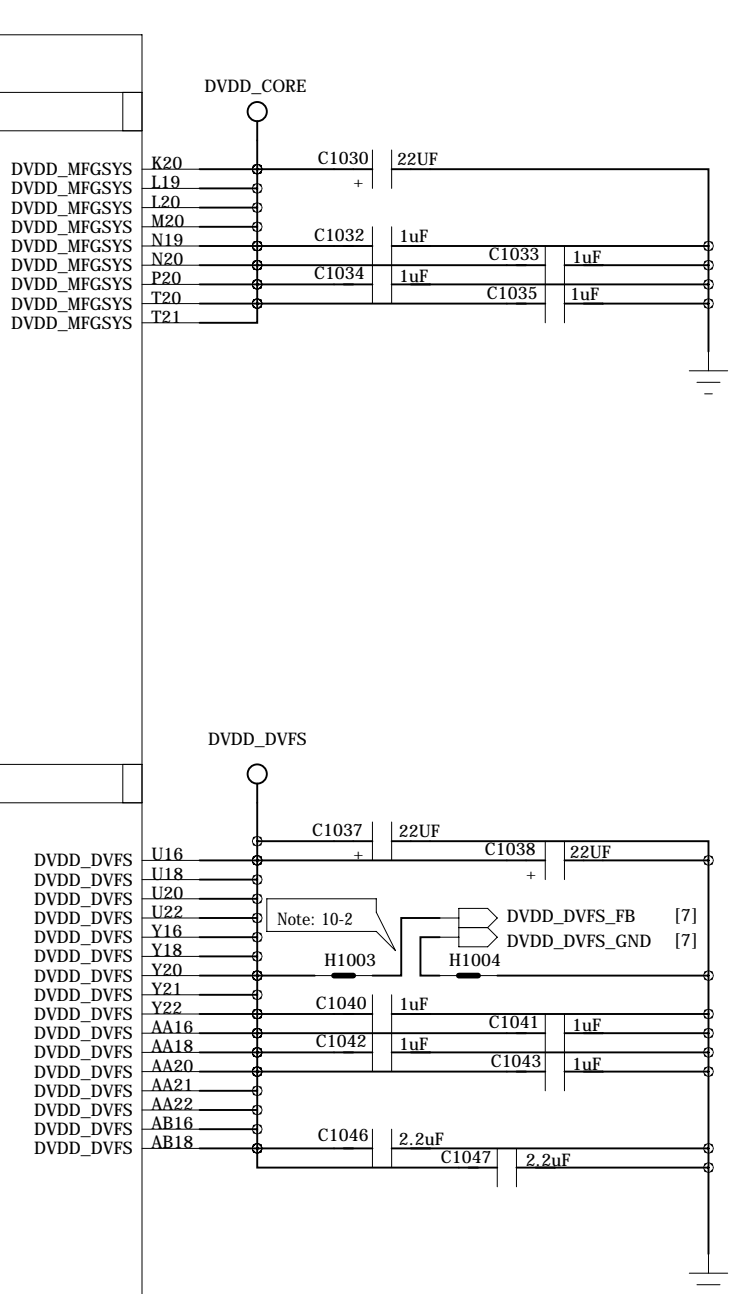
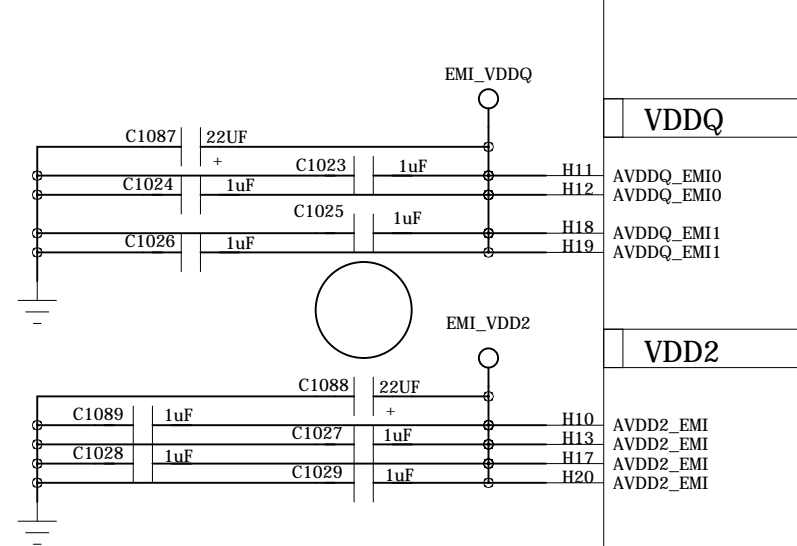
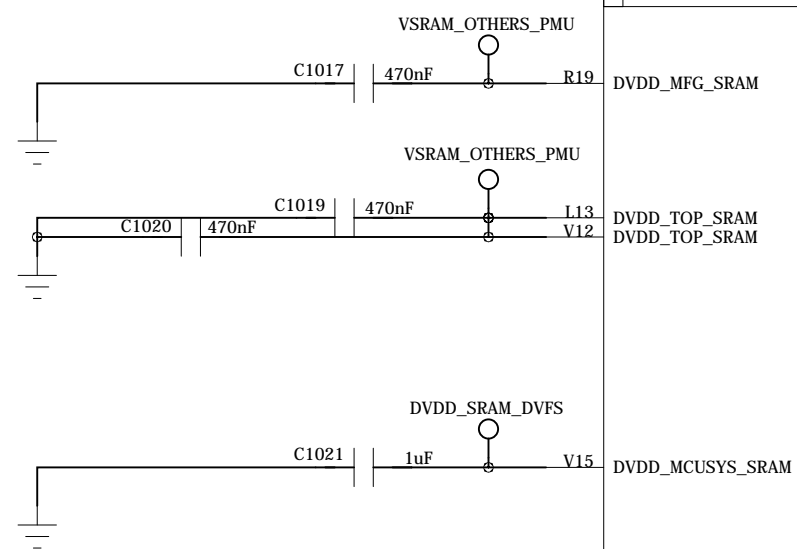
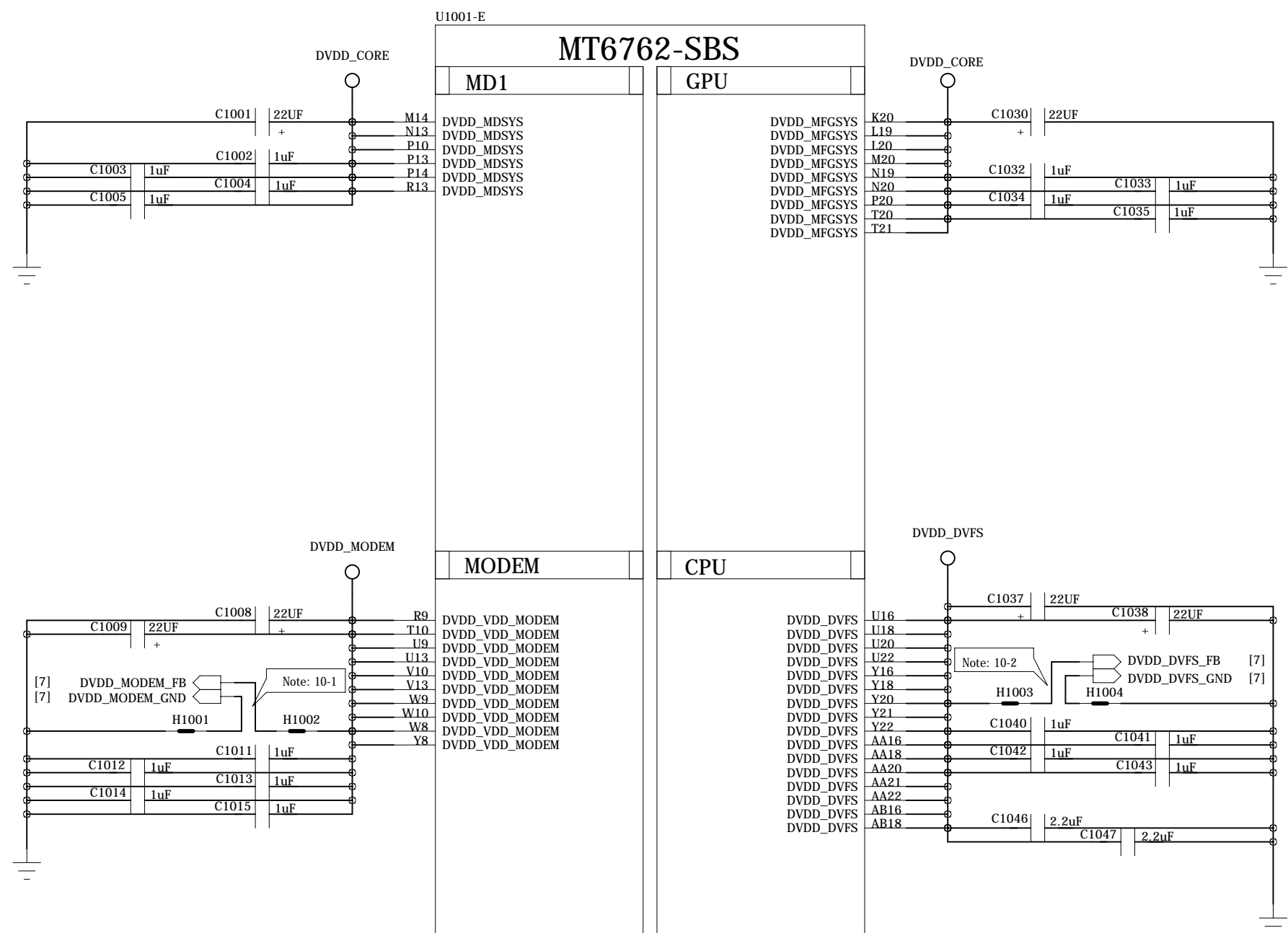
I2C	Function	I2C Spec.	Budget Timing	I2C Slave Address (7-bit mode)
I2C-0	CTP	400 Kbps	Yes.	CTP (NT35672) I2C address: 0X01 (Write:0x02, Read:0x03)
I2C-1	M Sensor	400 Kbps	Yes.	AF6133:I2C ADDRESS:0x18(Write)/0x19(Read)
	ALS / PS Sensor	400 Kbps	Yes.	STK3332-SV address: Write:0xEE, Read:0xEF
	Gsensor	400 Kbps	Yes.	MC3416-P:ADDRESS:0x98(Write)/0x99(Read)
I2C-2	REAR CAMERA Wide (13M+AF)	400 Kbps	Yes.	Back camera(S5K3L6XX03-FGX9) I2C address: (Write:0x20, Read:0x21) EEPROM IC(BL24SA64) I2C address: (Write:0xA2, Read:0xA3 ) MOTOR IC(DW9718S) I2C address: (Write:0x18, Read:0x19 )
	REAR 4 CAMERA	400 Kbps	Yes.	Back camera(GC6133) I2C address: (Write:0x80, Read:0x81)
I2C-3	HL7593WL02	400 Kbps	Yes.	I2C address: 0X57 (Write:0xAE, Read:0xAF)
I2C-4	REAR CAMERA MONO (2M+FF)	400 Kbps	Yes.	Back camera(SP250ACSP) I2C address: (Write:0x78, Read:0x79)
	FRONT CAMERA (32M+FF)	400 Kbps	Yes.	Front camera(S5KGD1SP03-FGX9)I2C address: (Write:0x5A, Read:0x5B) EEPROM £ ¨ P24C64E-C4H-MIR) I2C address: (Write:0xA2, Read:0xA3)
I2C-5				
	LCM Gate Driver	400 Kbps	Yes.	OCP2131:I2C ADDRESS:0x7C(Write)/0x7D(Read)
	Flash Driver	400 Kbps	Yes.	AW3644YFFR:I2C ADDRESS:0xC6(Write)/0xC7(Read)
I2C-6	REAR CAMERA Tele	400 Kbps	Yes.	Back camera(GC8034W) I2C address: (Write:0x6E, Read:0x6F) EEPROM IC(P24C64E-C4H-MIR) I2C address: (Write:0xA0, Read:0xA1)

Note : I2C Spec. : Standard mode (100 kbps) and Fast mode (400 kbps), Fast mode Plus (1 Mbps) and High-speed mode (3.4 Mbps)

COMPANY: TRANSSION HOLDINGS				MODEL: H6218		Modified Date: 2020/10/23	
DRAWN	DJF/TS	DATED	20201021	TITLE: 01_I2C_ID_OVERVIEW		VERSION: V1.0	SHEET: 2 OF 25
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

# BB\_POWER

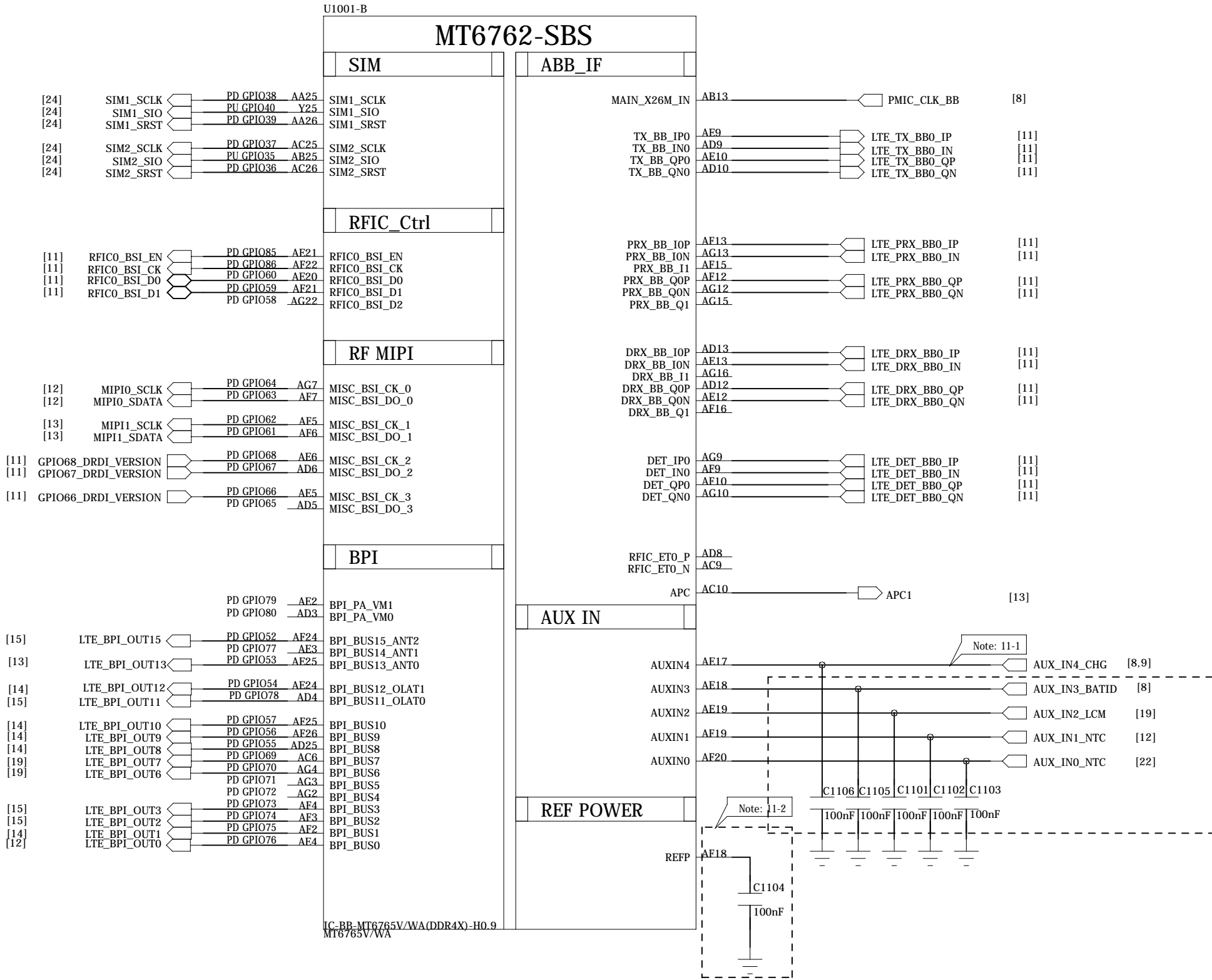
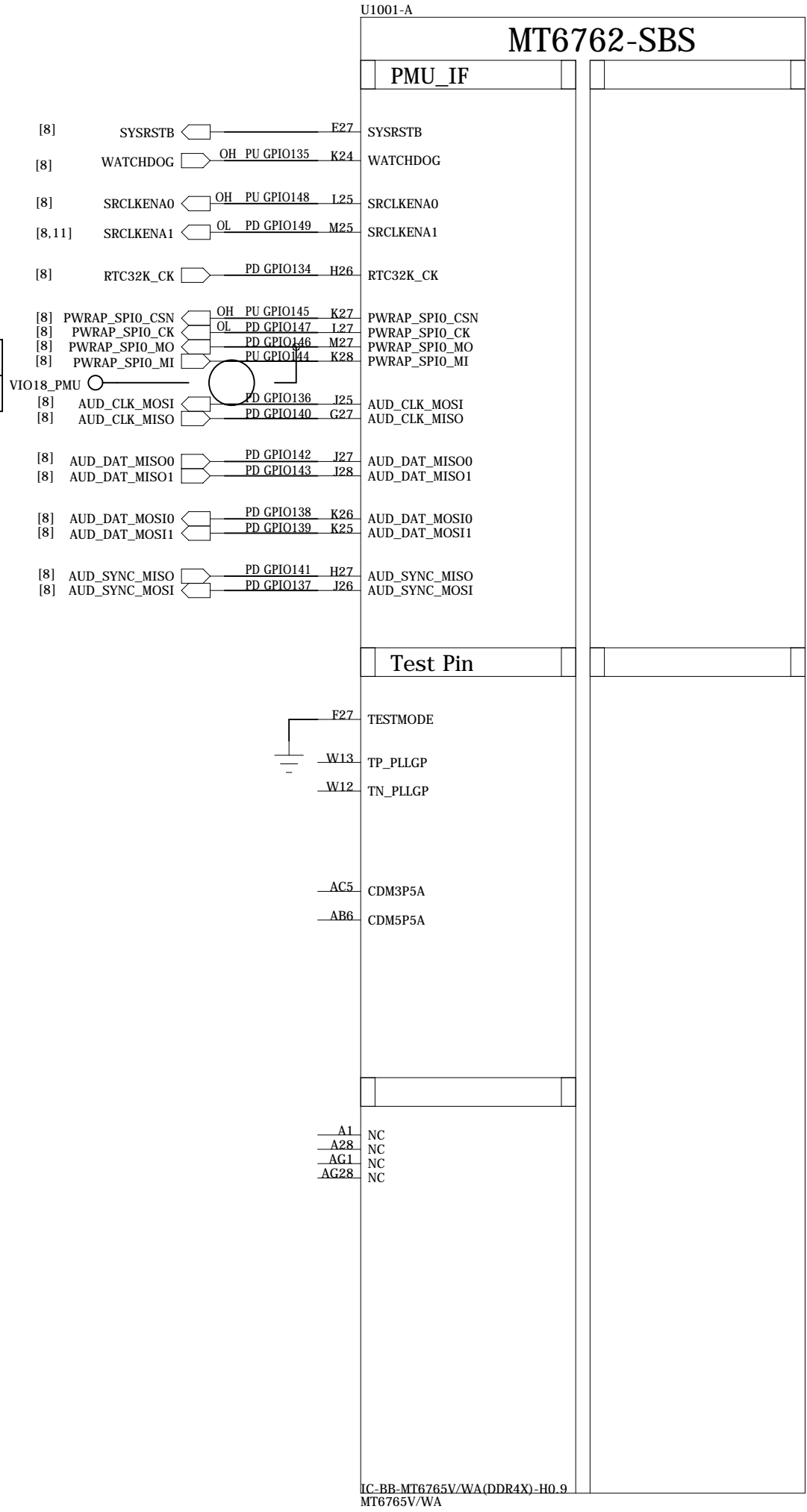
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



COMPANY: TRANSSION HOLDINGS				MODEL: H6218		Modified Date: 2020/10/23	
DRAWN	DJF/TS	DATED	20201021	TITLE: 10_BB_POWER		VERSION: V1.0	SHEET: 3 OF 25
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

	LPDDR4(discrete)	LPDDR4X  EMCPE
R1101	10K	NC



"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	IO_JTAG
(PU) HI	(PD) LO	N/A	N/A
HI	HI (by ext. P3)	SPI_CSB/SPI_CLK/SPI_MO/SPI_MI/EINT8	N/A
LO (by ext. P3)	LO	SPI_CSB/SPI_CLK/SPI_MO/SPI_MI/EINT8	SPI1+SPI3
LO (by ext. P3)	HI (by ext. P3)	MSDC1_CLK/CMD/DAT0/DAT1/DAT2	N/A

Note 22-4: PWRAP\_SPI0\_MI are DDR type feature in bootstrap

PWRAP_SPI0_MI	Bootting interface	
Default=PU	DDR	MSDC0 pin mux
LO (by ext. P3)	LPDDR3	follow LP3 Ref SCH.
Default HI	LPDDR4X	follow LP4X Ref SCH.

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 (AF18 ball) have to be placed as close to BB as possible.

COMPANY: TRANSSION HOLDINGS

MODEL: H6218

Modified Date: 2020/10/23

DRAWN

DJF/TS

DATED

20201021

TITLE:

11\_BB\_I

VERSION: V1.0

SHEET: 4 OF 25

CHECKED

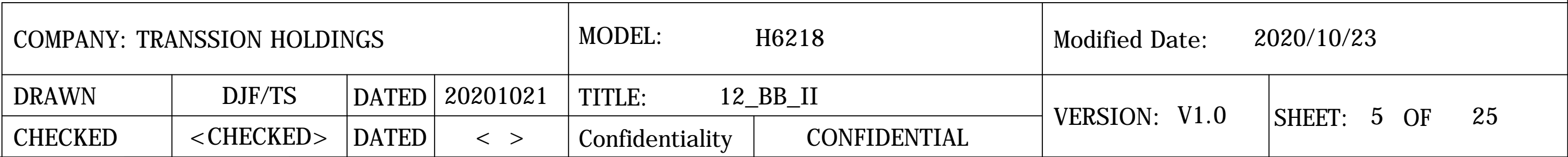
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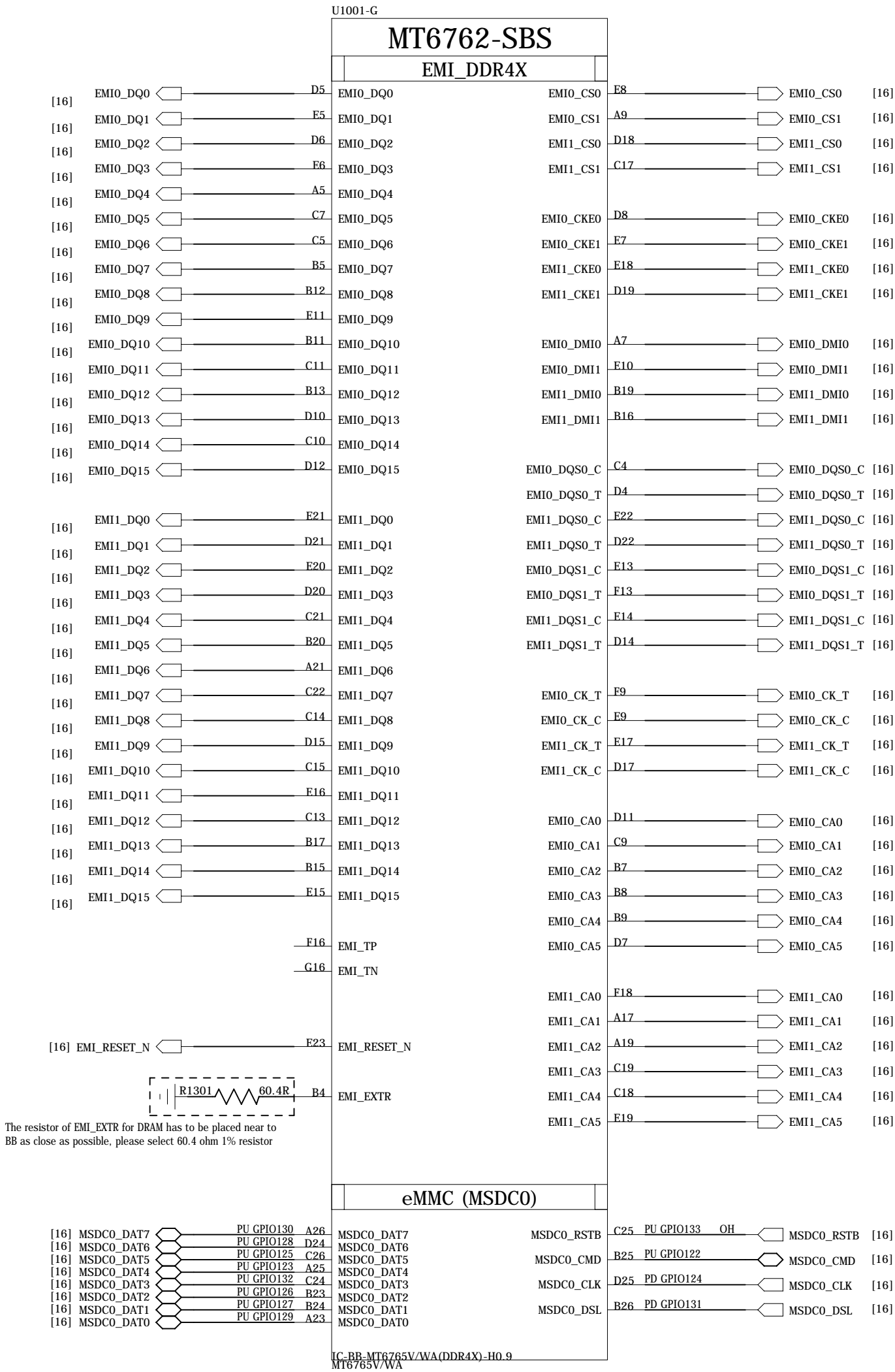
Confidentiality

CONFIDENTIAL



REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

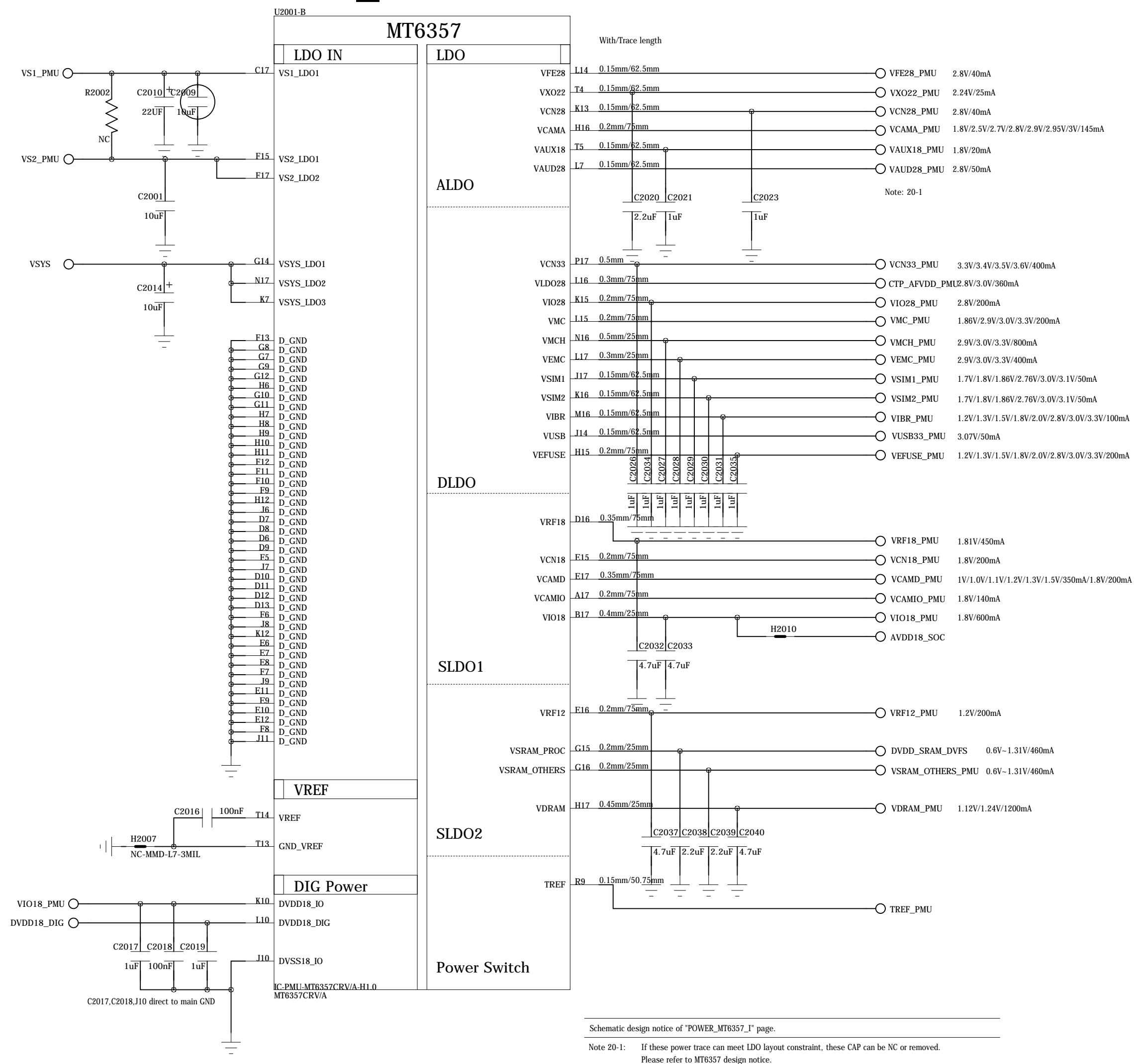
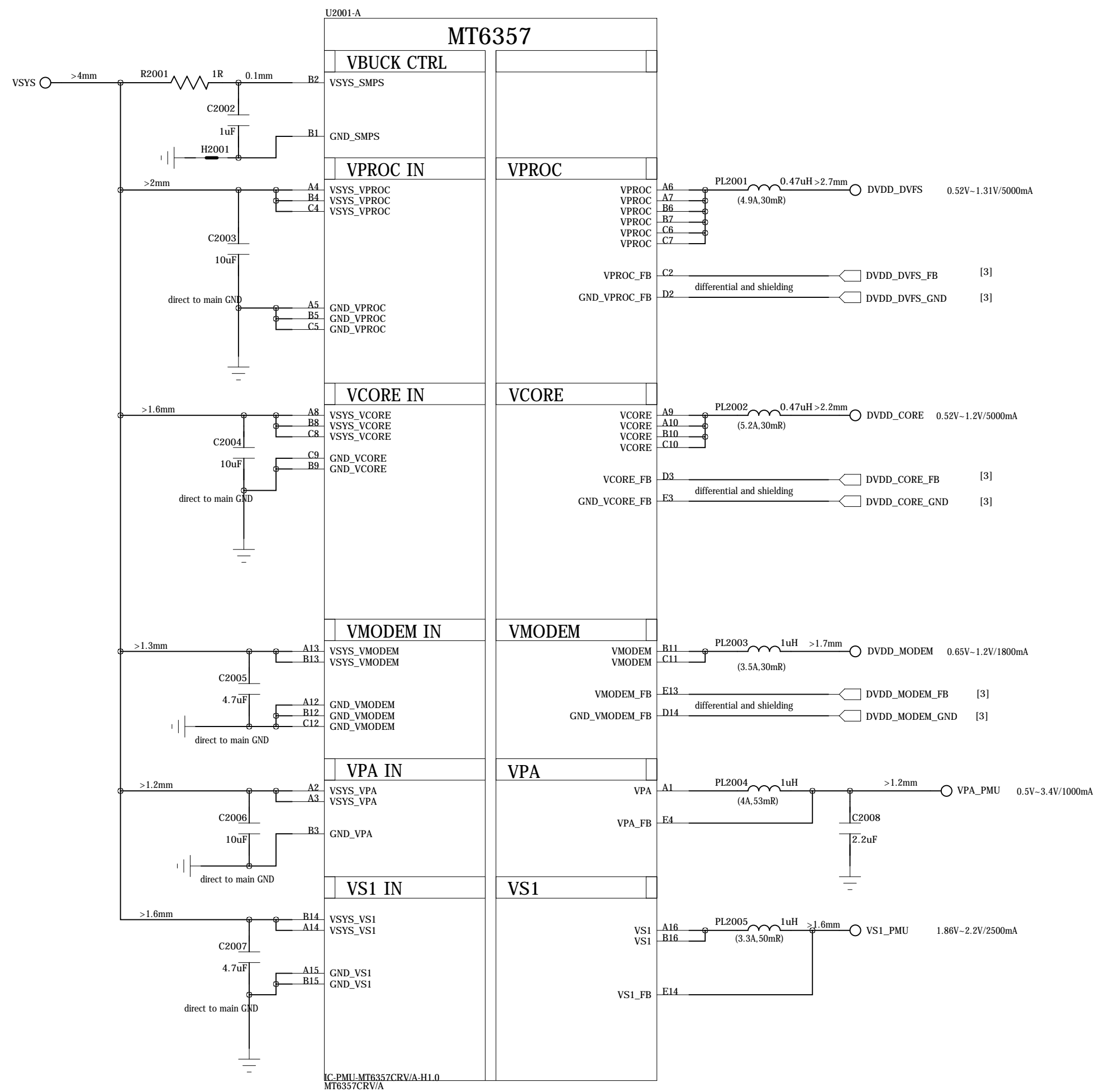
LPDDR4X\_EMI\_IF



COMPANY: TRANSSION HOLDINGS				MODEL: H6218		Modified Date: 2020/10/23	
DRAWN	DJF/TS	DATED	20201021	TITLE: 13_BB_III		VERSION: V1.0	SHEET: 6 OF 25
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

## PMU\_LDO

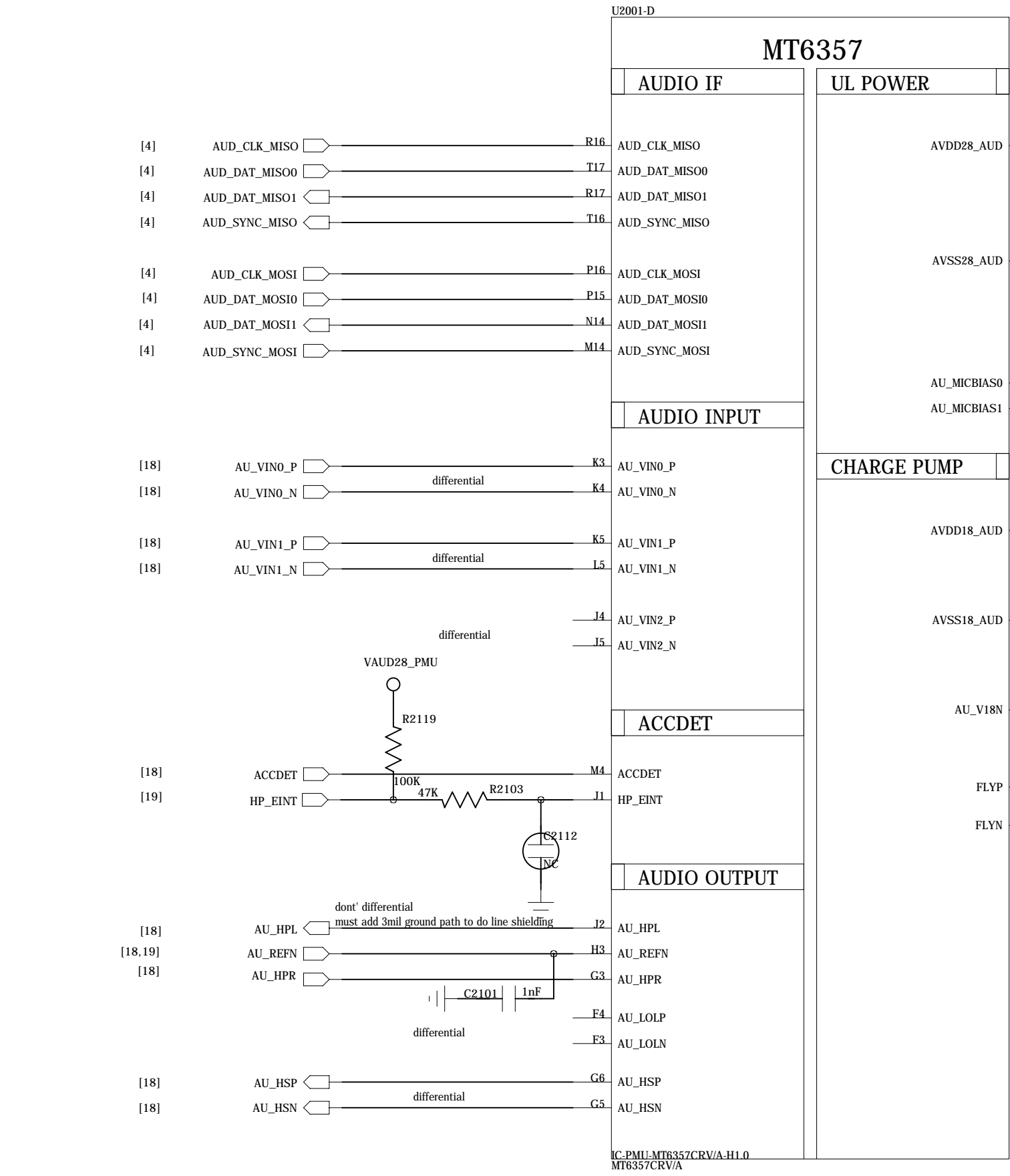


COMPANY: TRANSSION HOLDINGS				MODEL: H6218		Modified Date: 2020/10/23	
DRAWN	DJF/TS	DATED	20201021	TITLE: 20_POWER_MT6357_I		VERSION: V1.0	SHEET: 7 OF 25
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

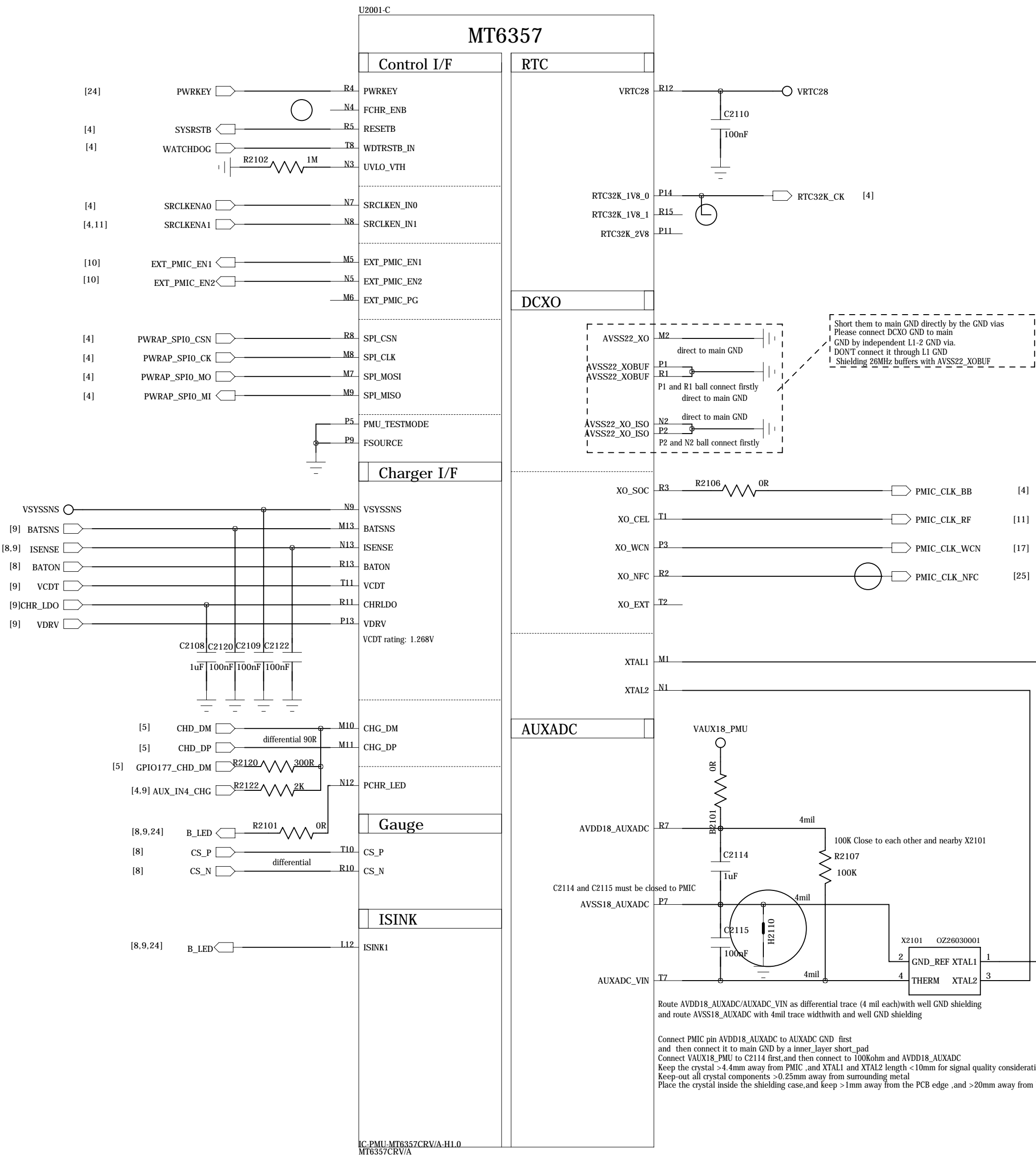
POWER\_MT6357\_II

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

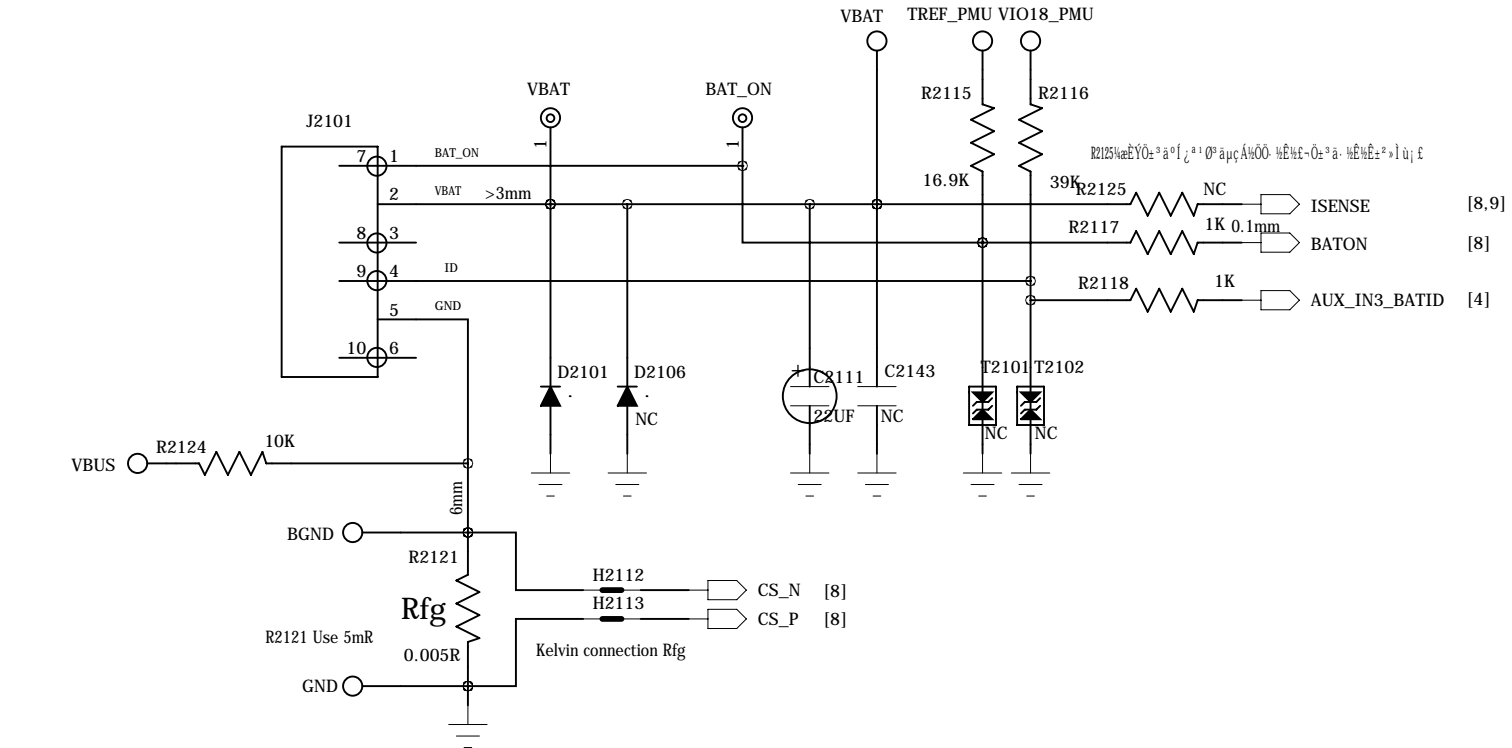
PMU\_AUDIO



PMU\_CLK



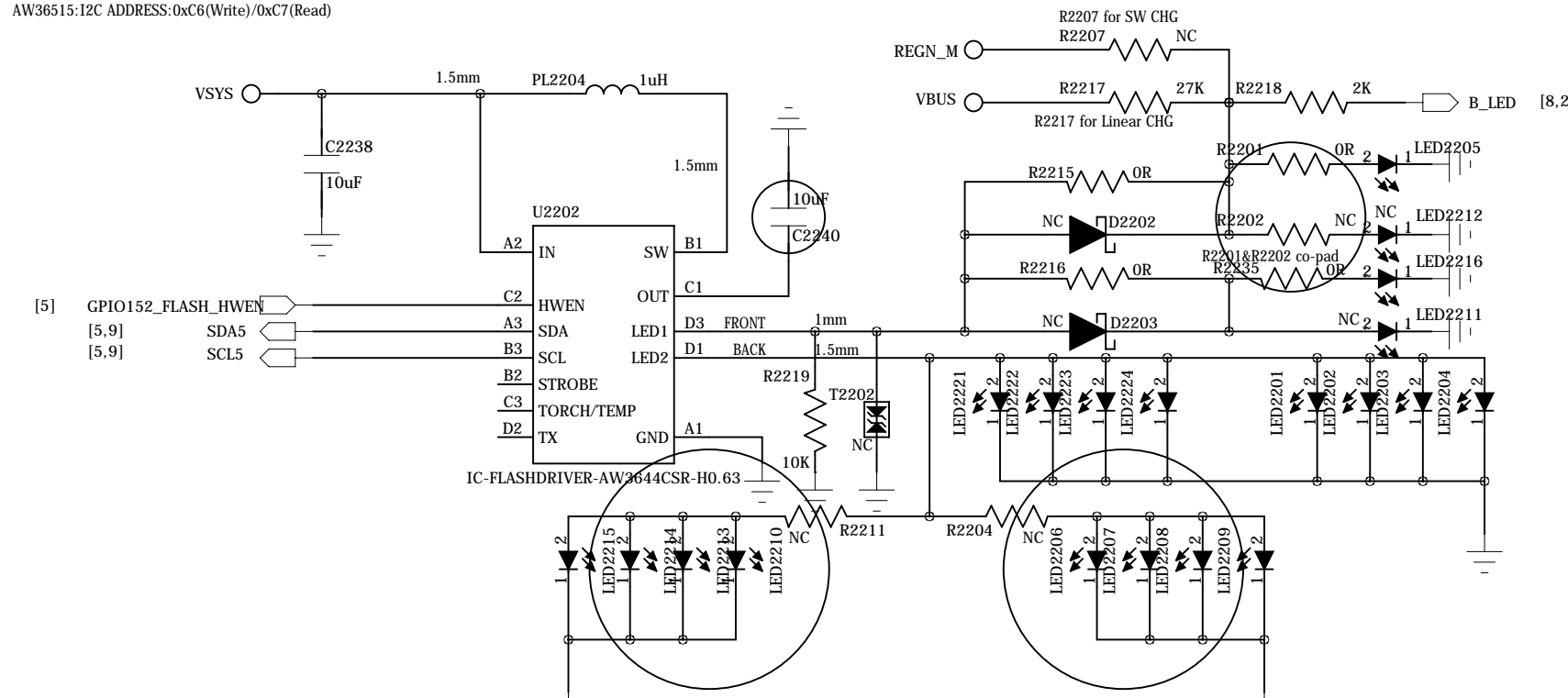
BATTERY CONNECTOR



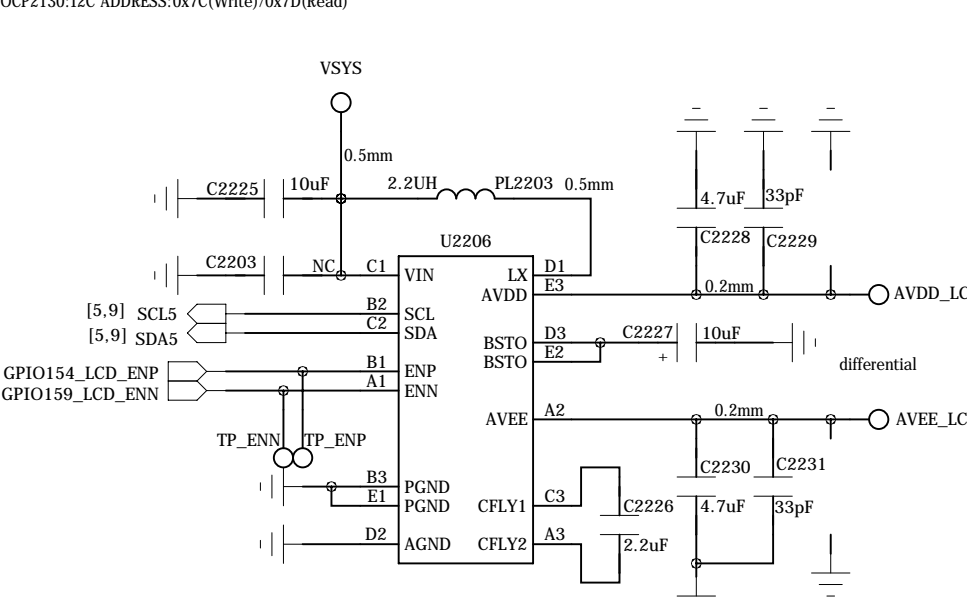
COMPANY: TRANSSION HOLDINGS				MODEL: H6218		Modified Date: 2020/10/23	
DRAWN	DJF/TS	DATED	20201021	TITLE: 21_POWER_MT6357_II		VERSION: V1.0	SHEET: 8 OF 25
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		



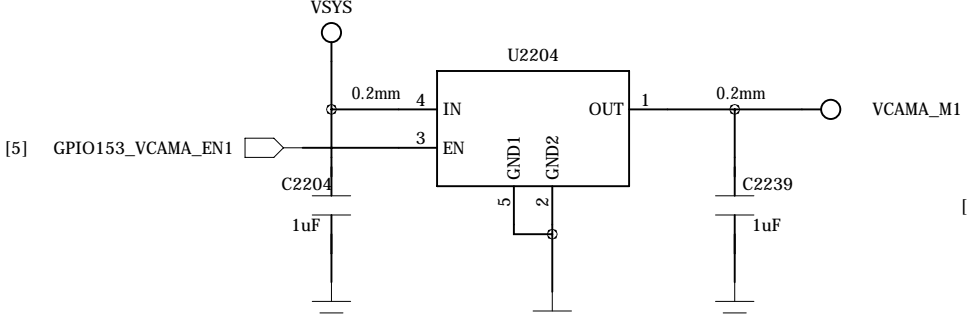
# POWER\_THIRD-PARTY\_I Flash Driver&LED



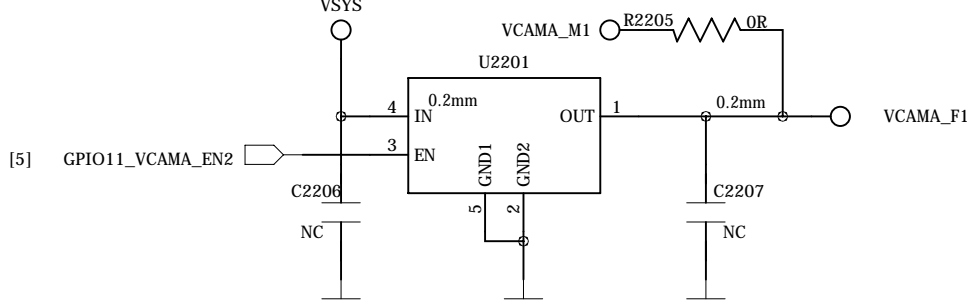
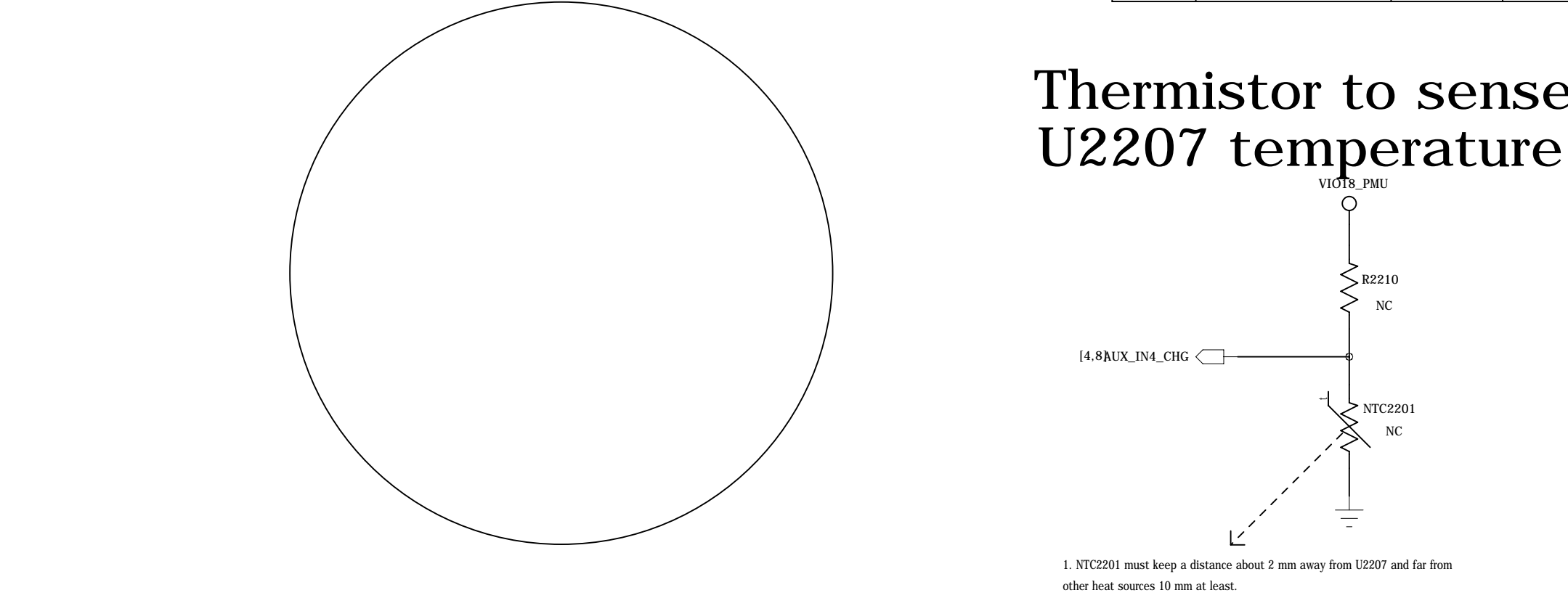
# LCD--BIAS



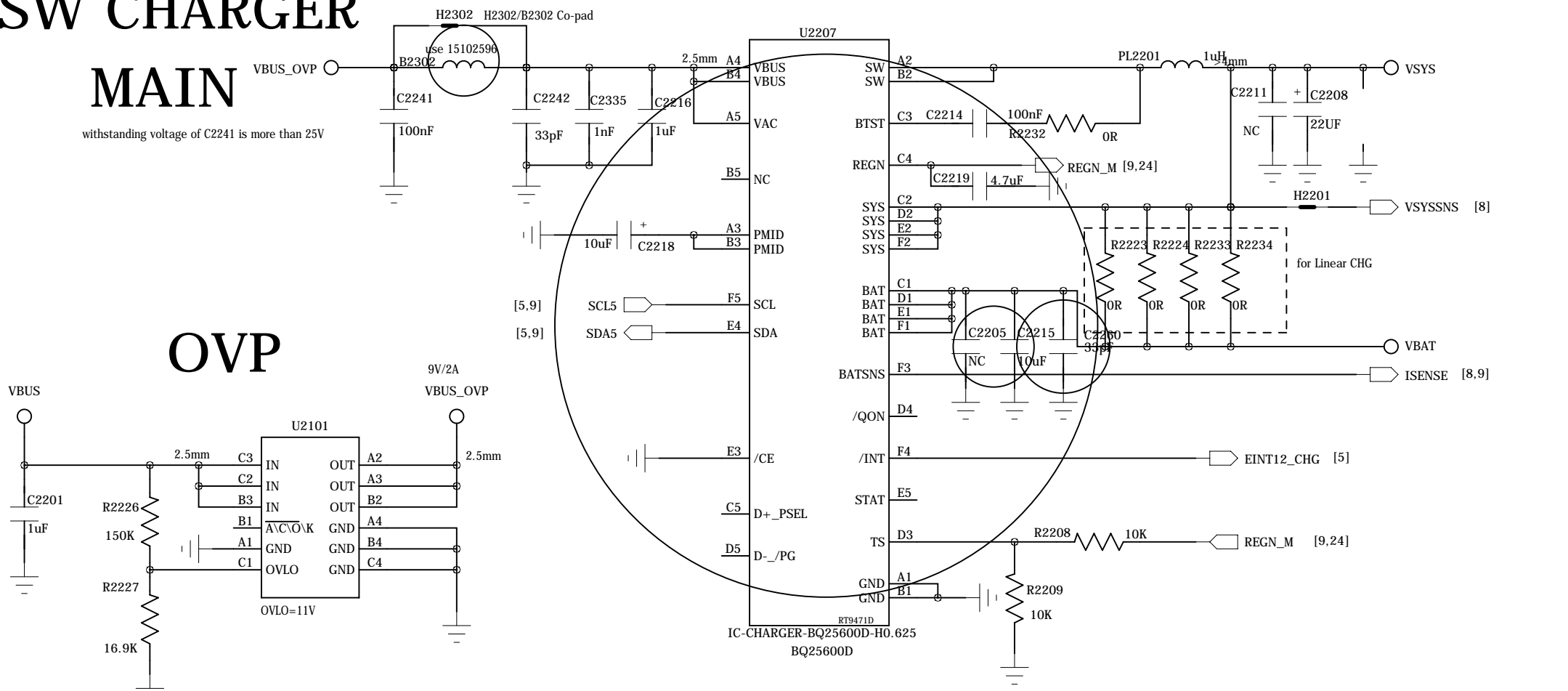
## VCAMA M1 (2.8V)



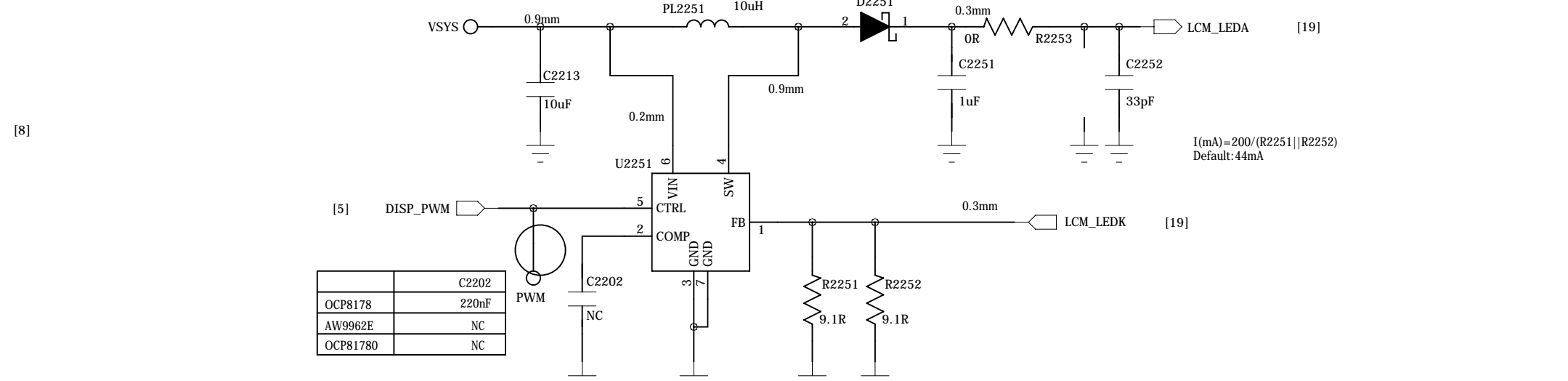
## VCAMA F1 (2.8V)

SW CHARGER  
SUB

SW CHARGER  
MAIN VBUS\_OVP ○



# Backlight and face flash

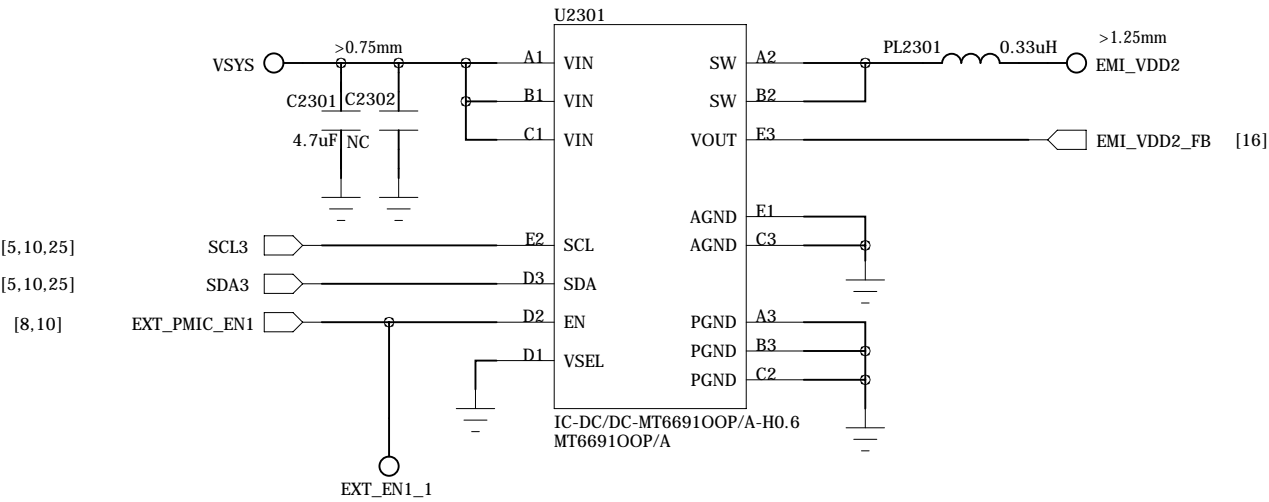


COMPANY: TRANSSION HOLDINGS				MODEL: H6218		Modified Date: 2020/10/23	
DRAWN	DJF/TS	DATED	20201021	TITLE: 22_POWER_THIRD-PARTY_I		VERSION: V1.0	SHEET: 9 OF 25
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

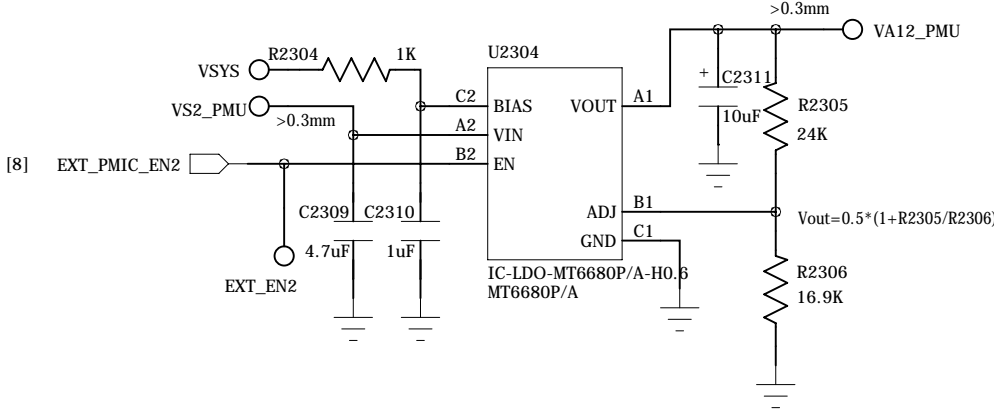
POWER\_THIRD-PARTY\_II

Ext. buck LP4X VDRAM

HL7593WL02 / Ext. buck LP4X VDRAM (VDD2)Default  
MT6691OOP/A / Ext. buck LP4X VDRAM (VDD2) Reserve  
I2C address: 0X57 (Write:0xAE, Read:0xAF)

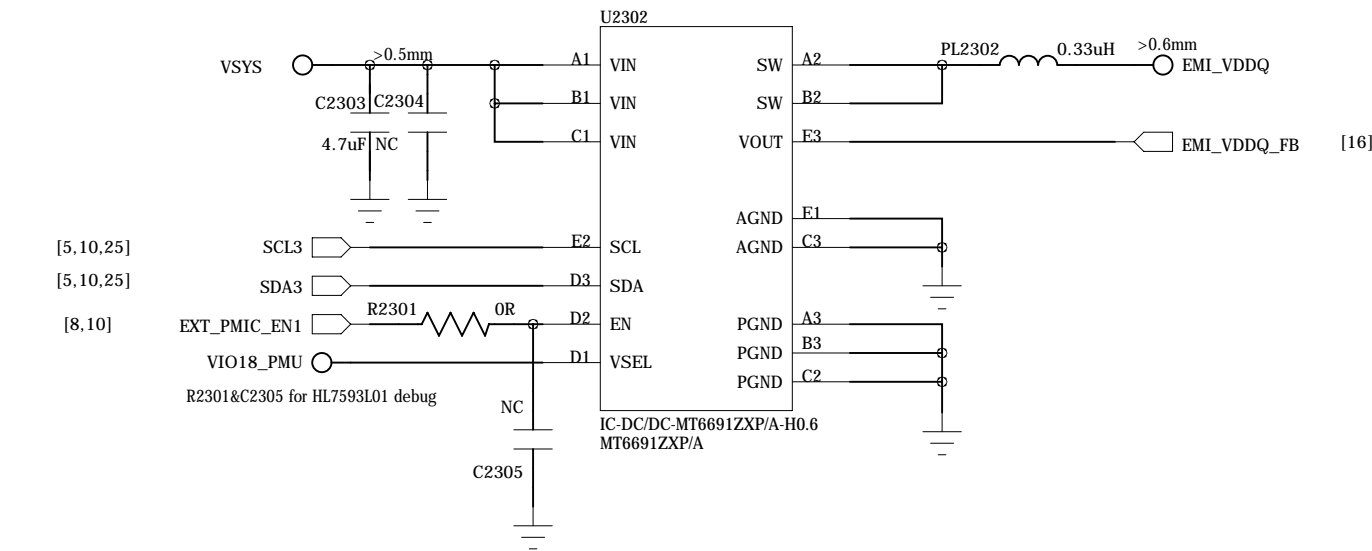


LDO 1.2V for VA12

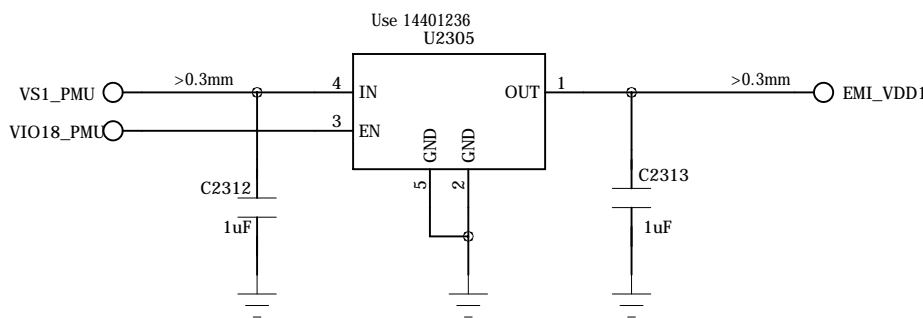


Ext. buck LP4X VDDQ

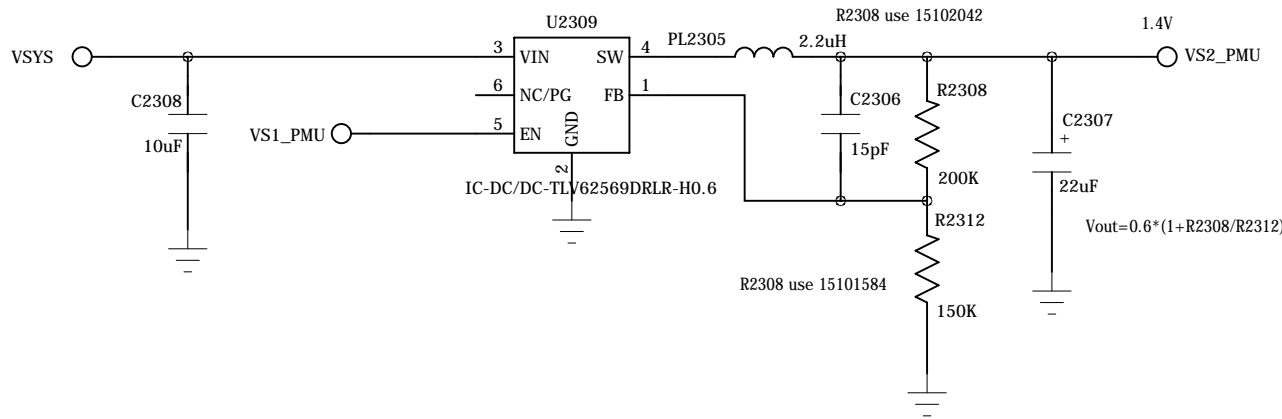
HL7593WL01 / Ext. buck LP4X VDRAM (VDDQ)Default  
MT6691ZXP/A / Ext. buck LP4X VDRAM (VDDQ)Reserve  
I2C address: 0x50 (Write:0xA0, Read:0xA1)



LPDDR4X VDD1 1.8V LDO

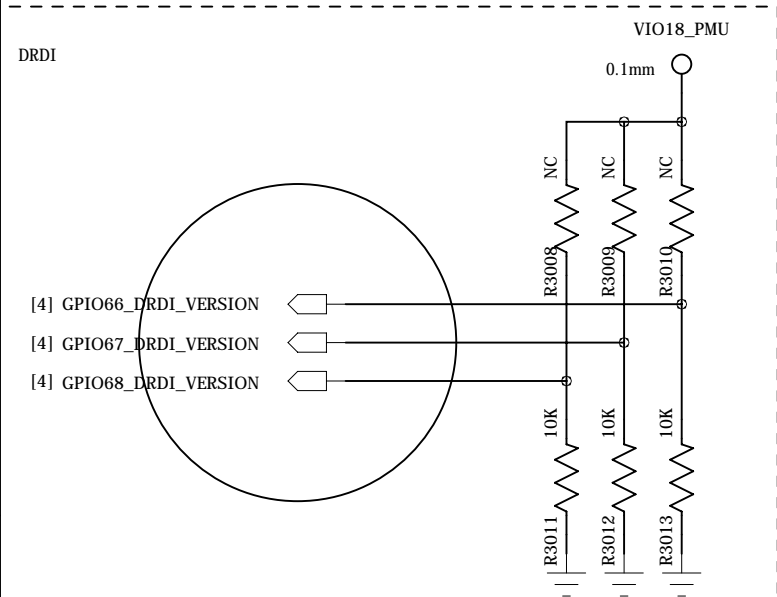


buck for VS2\_PMU



COMPANY: TRANSSION HOLDINGS				MODEL: H6218		Modified Date: 2020/10/23	
DRAWN	DJF/TS	DATED	20201021	TITLE: 23_POWER_THIRD-PARTY_II		VERSION: V1.0	SHEET: 10 OF 25
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

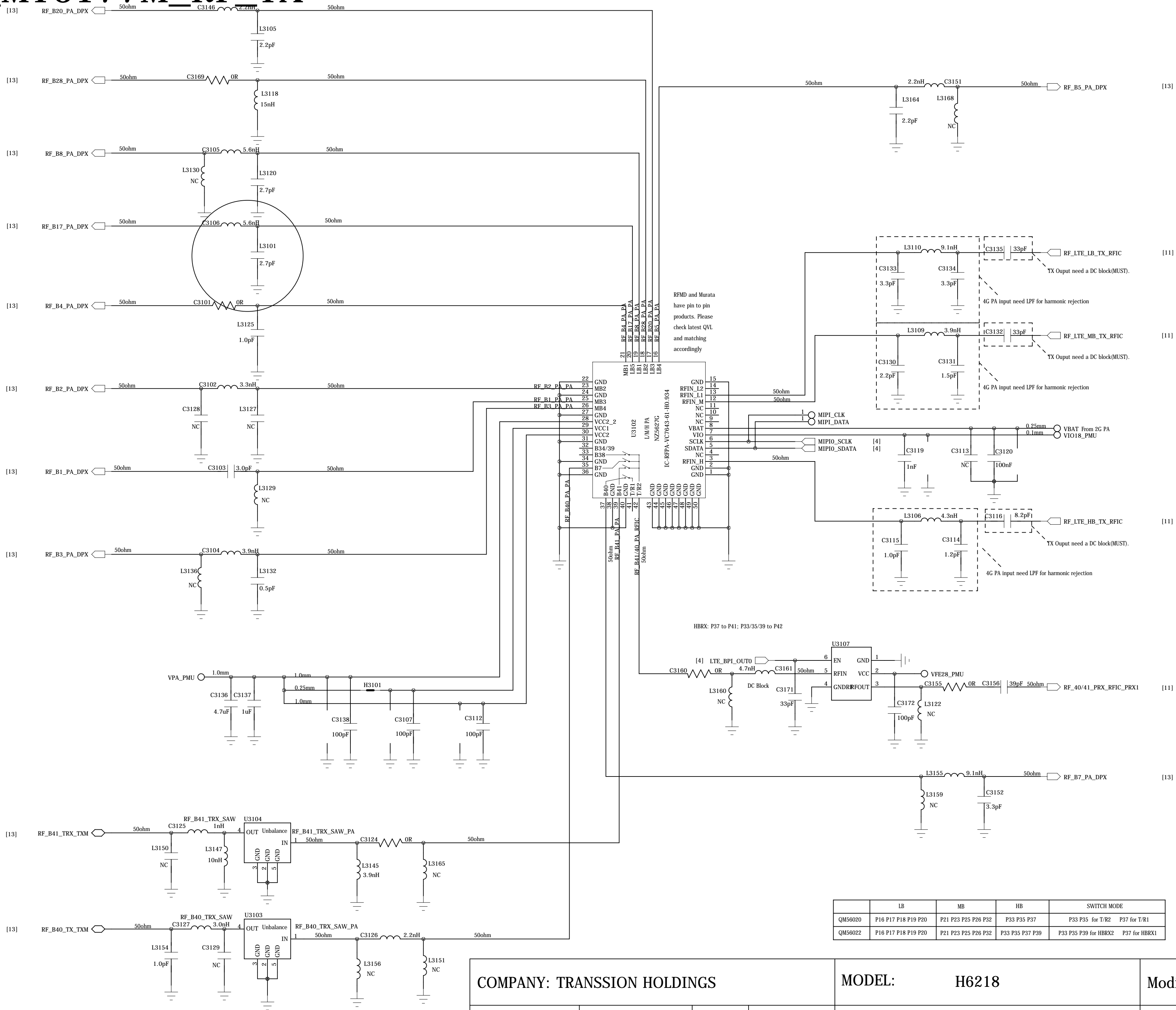
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



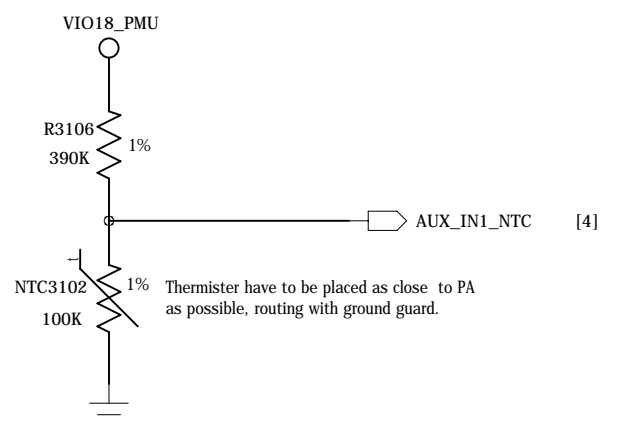
COMPANY: TRANSSION HOLDINGS				MODEL: H6218		Modified Date: 2020/10/23	
DRAWN	DJF/TS	DATED	20201021	TITLE: 30_RF_MT6177M_PIN_OUT		VERSION: V1.0	SHEET: 11 OF 25
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

## RF\_MT6177M\_RF\_TX

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



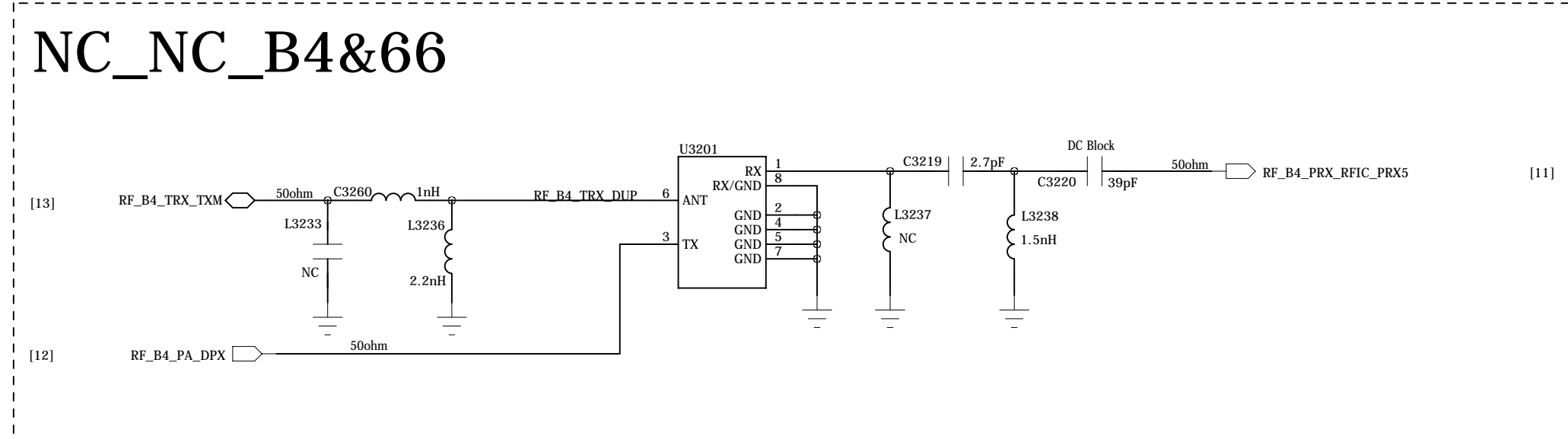
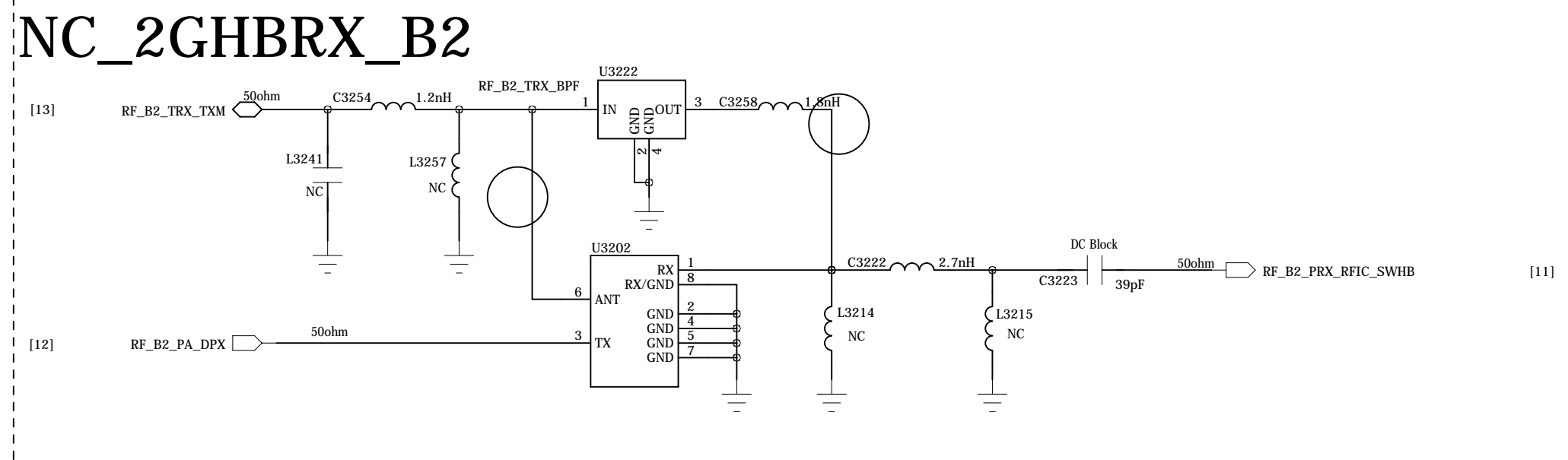
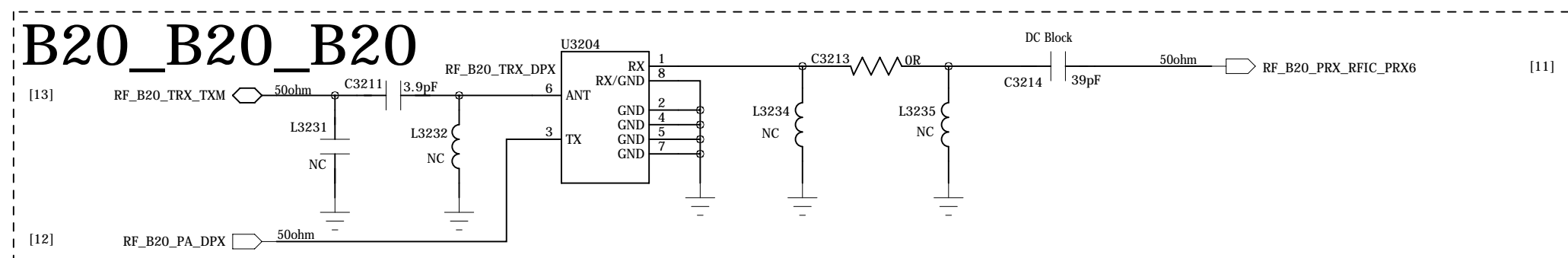
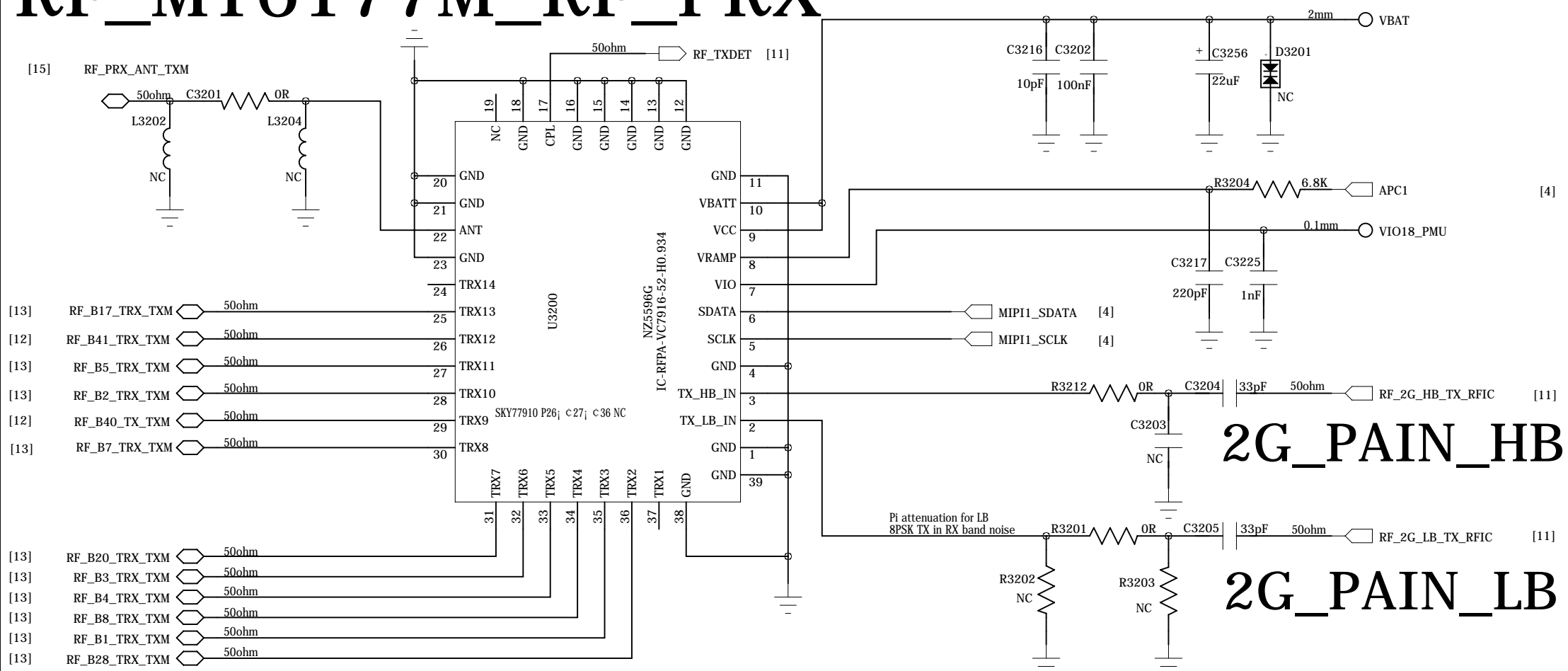
# Temp Sensor



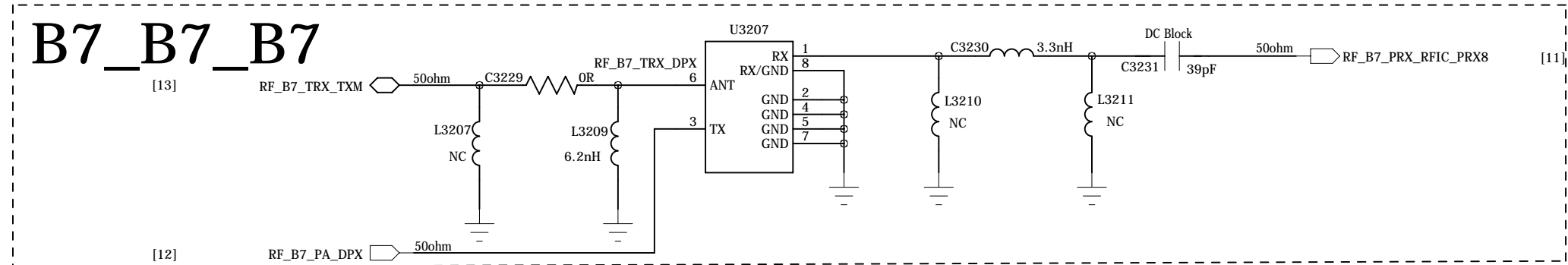
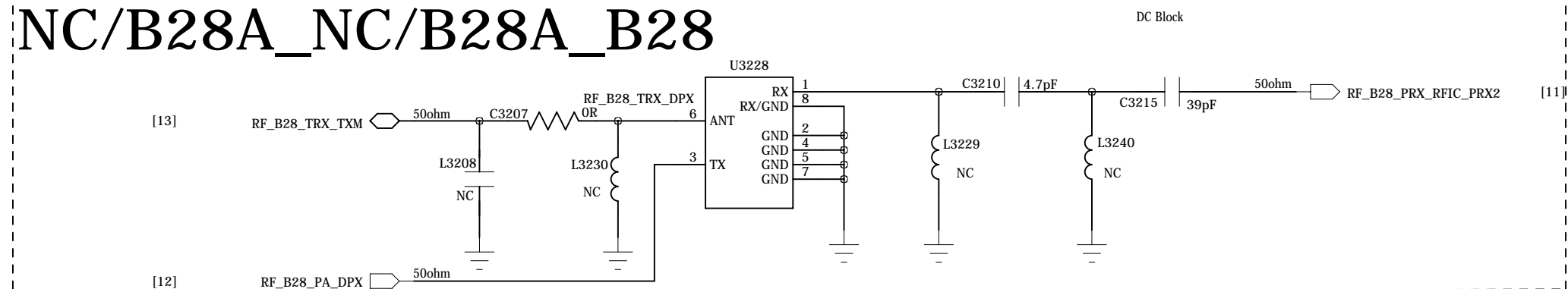
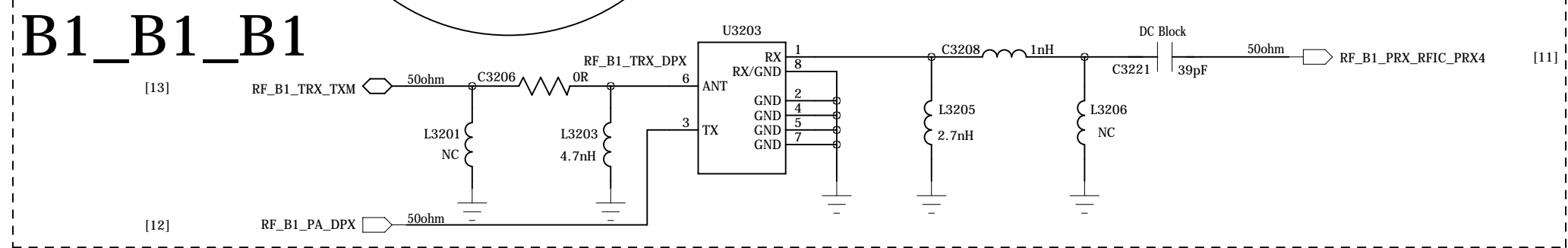
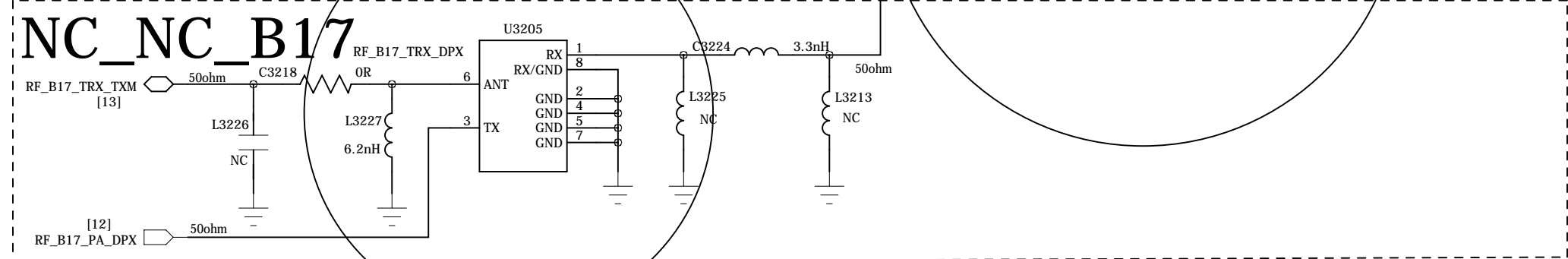
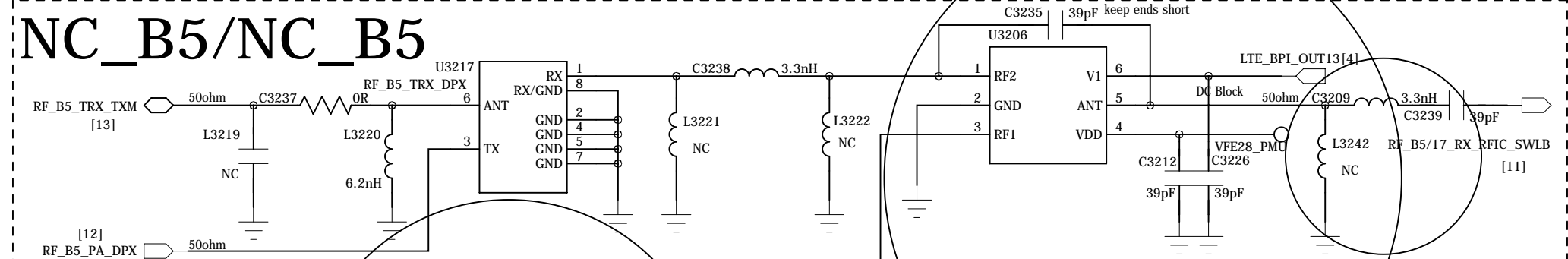
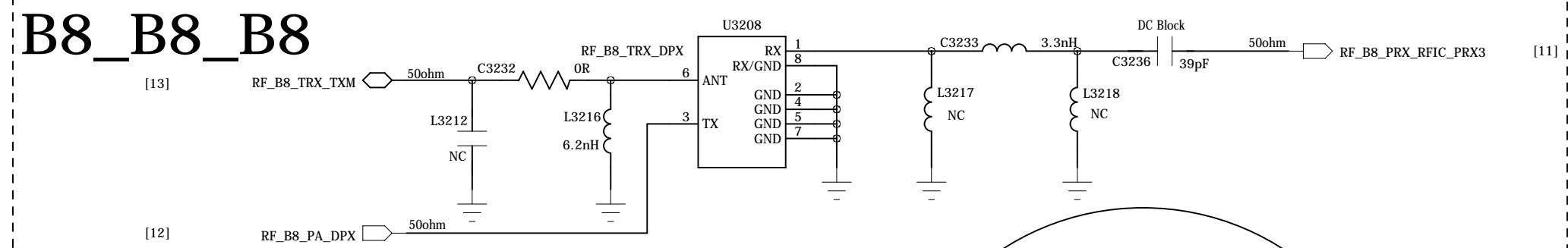
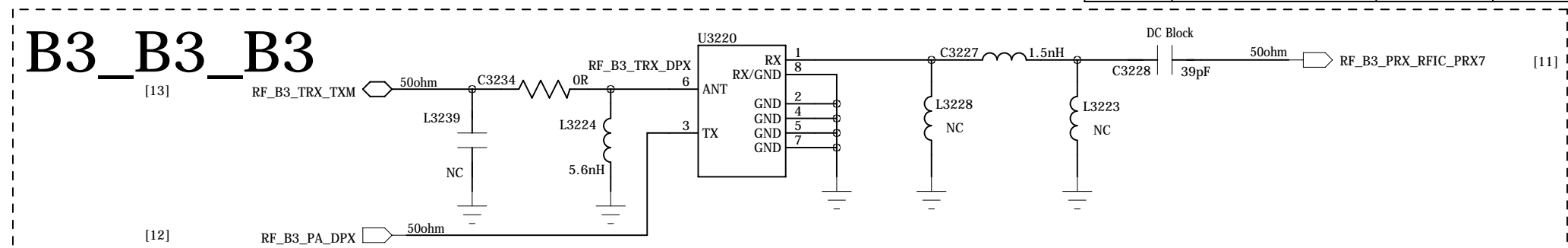
COMPANY: TRANSSION HOLDINGS				MODEL: H6218		Modified Date: 2020/10/23	
DRAWN	DJF/TS	DATED	20201021	TITLE: 31_RF_MT6177M_RF_TRX		VERSION: V1.0	SHEET: 12 OF 25
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

## RF MT6177M RF PRX

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

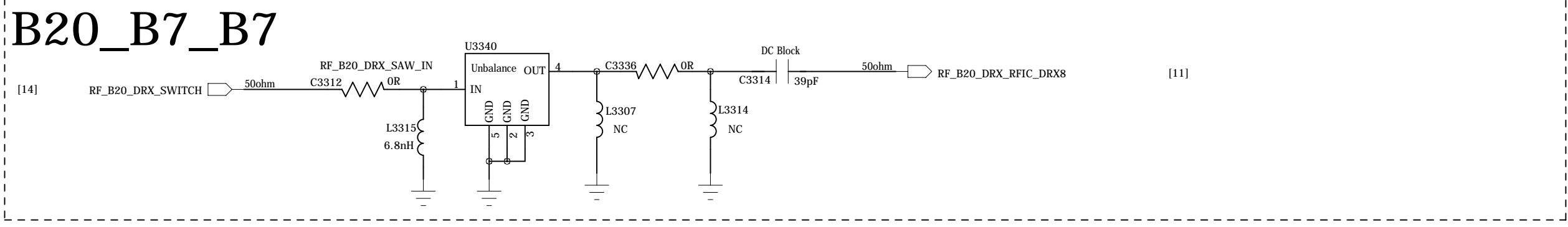
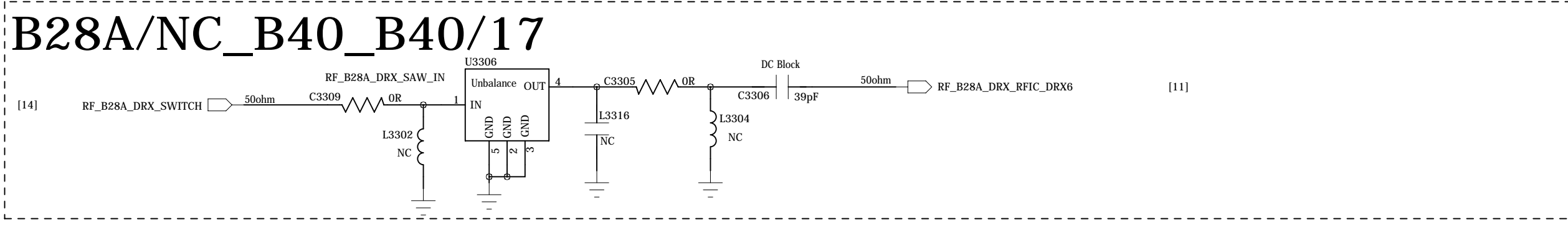
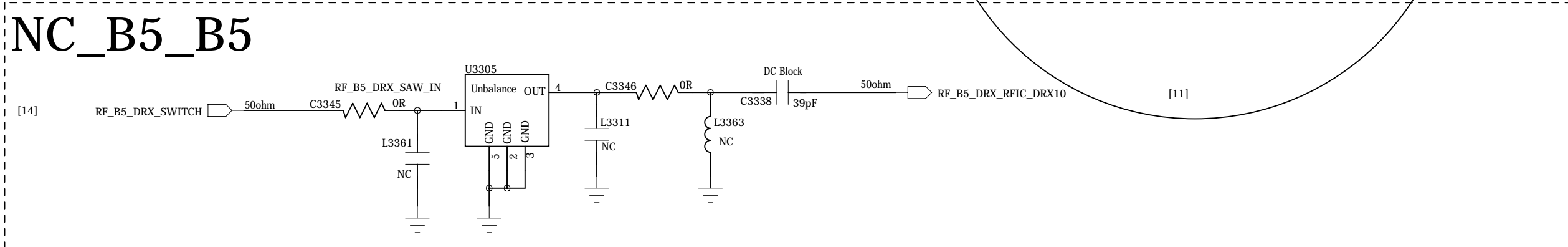
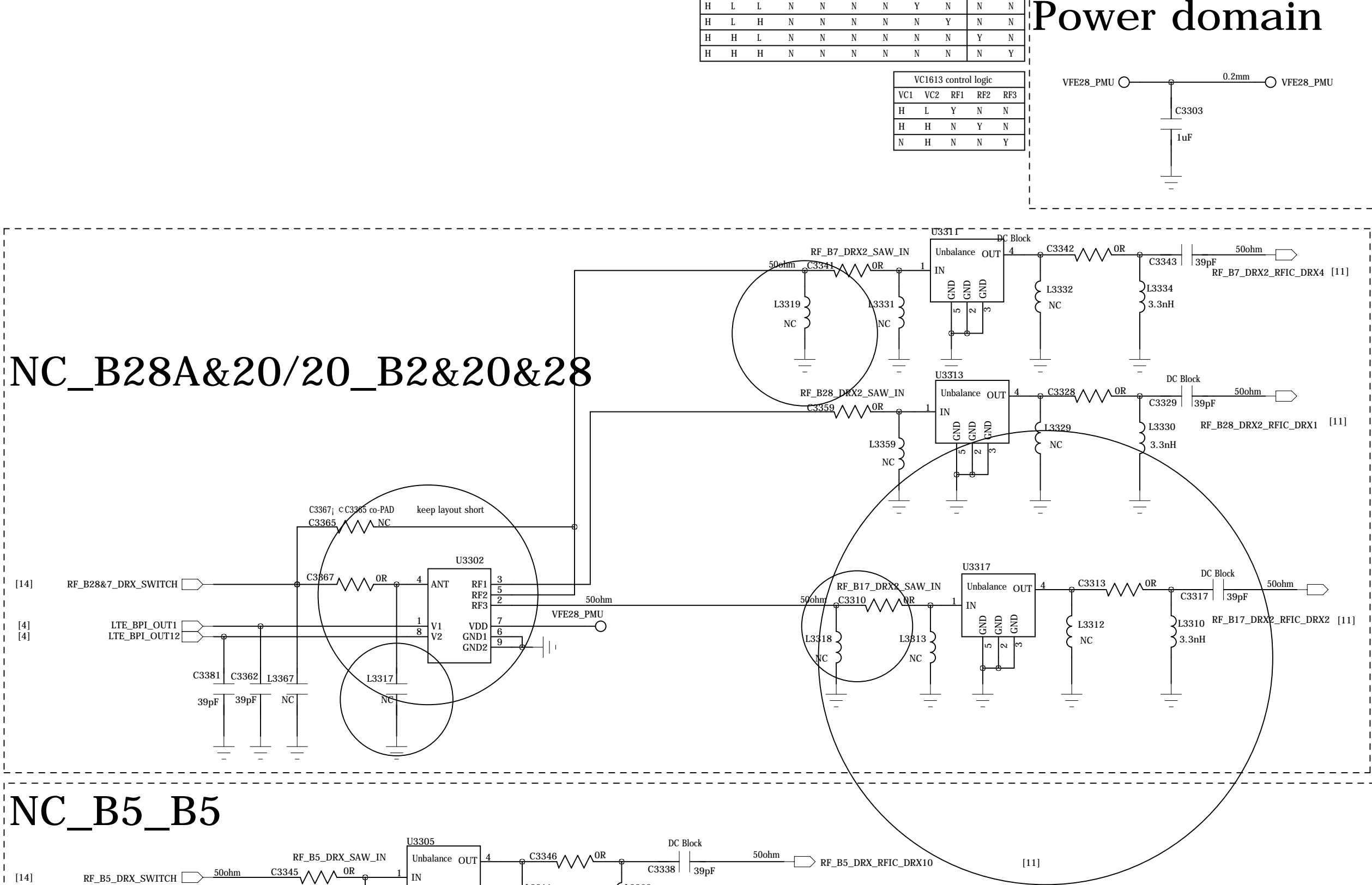
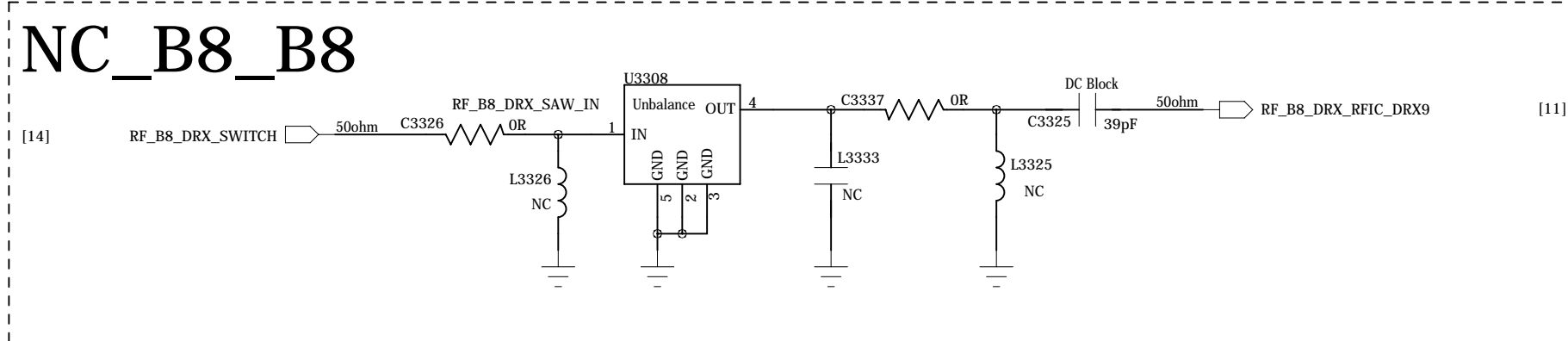
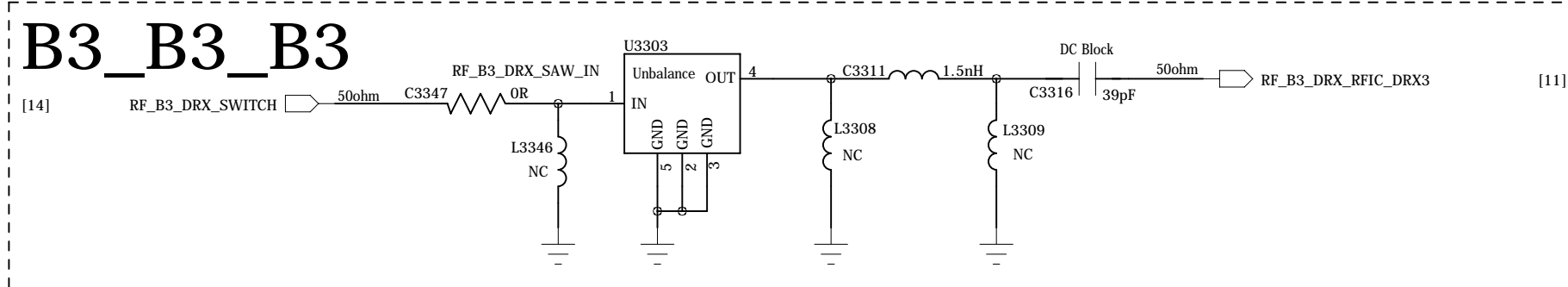
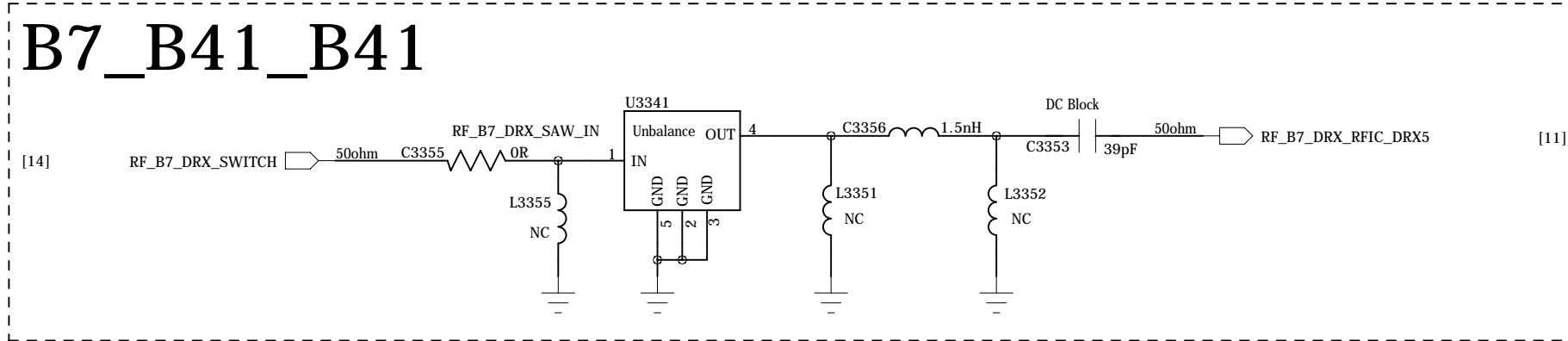
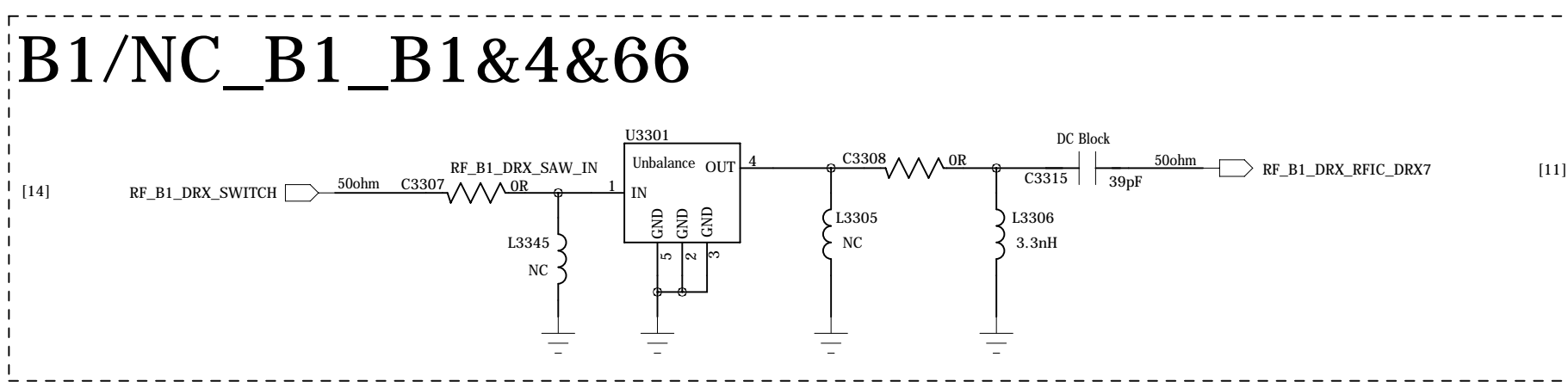
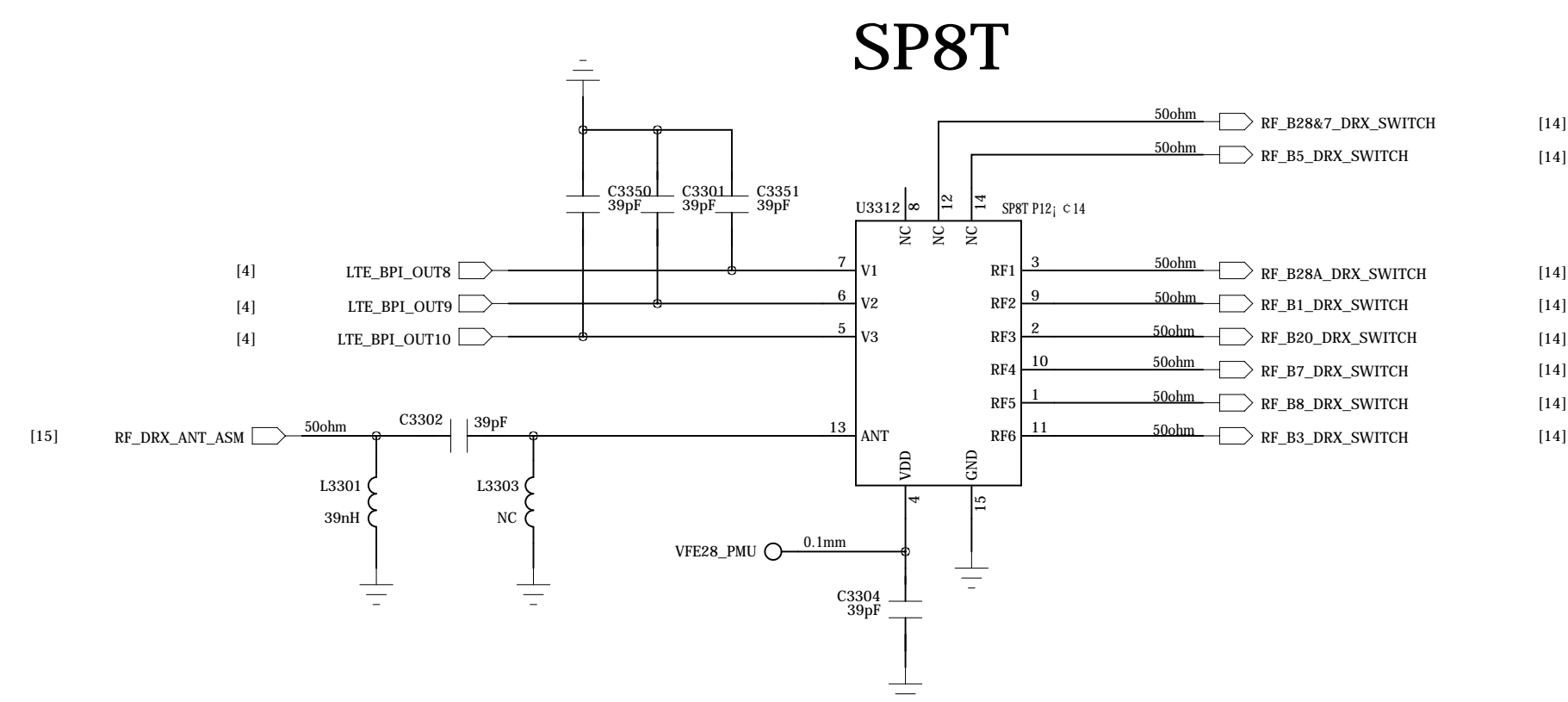


Notice:  
NC\_PCS\_B2:Afica Bom NC;India Bom PCS;South America BOM B2;



COMPANY: TRANSSION HOLDINGS				MODEL: H6218		Modified Date: 2020/10/23	
DRAWN	DJF/TS	DATED	20201021	TITLE: 32_RF_MT6177M_RF_PRX		VERSION: V1.0	SHEET: 13 OF 25
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

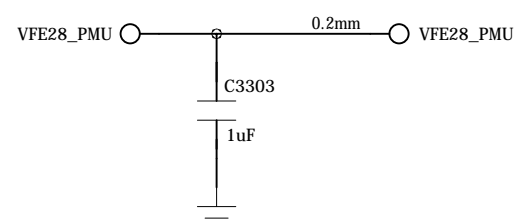
## RF\_MT6177M\_RF\_DRX



SP8T control logic										
SP6T control logic										
V1	V2	V3	RF1	RF2	RF3	RF4	RF5	RF6	RF7	RF8
L	L	L	Y	N	N	N	N	N	N	N
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	Y	N	N	N
H	L	H	N	N	N	N	N	Y	N	N
H	H	L	N	N	N	N	N	N	Y	N
H	H	H	N	N	N	N	N	N	N	Y

VC1613 control logic				
VC1	VC2	RF1	RF2	RF3
H	L	Y	N	N
H	H	N	Y	N
N	H	N	N	Y

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

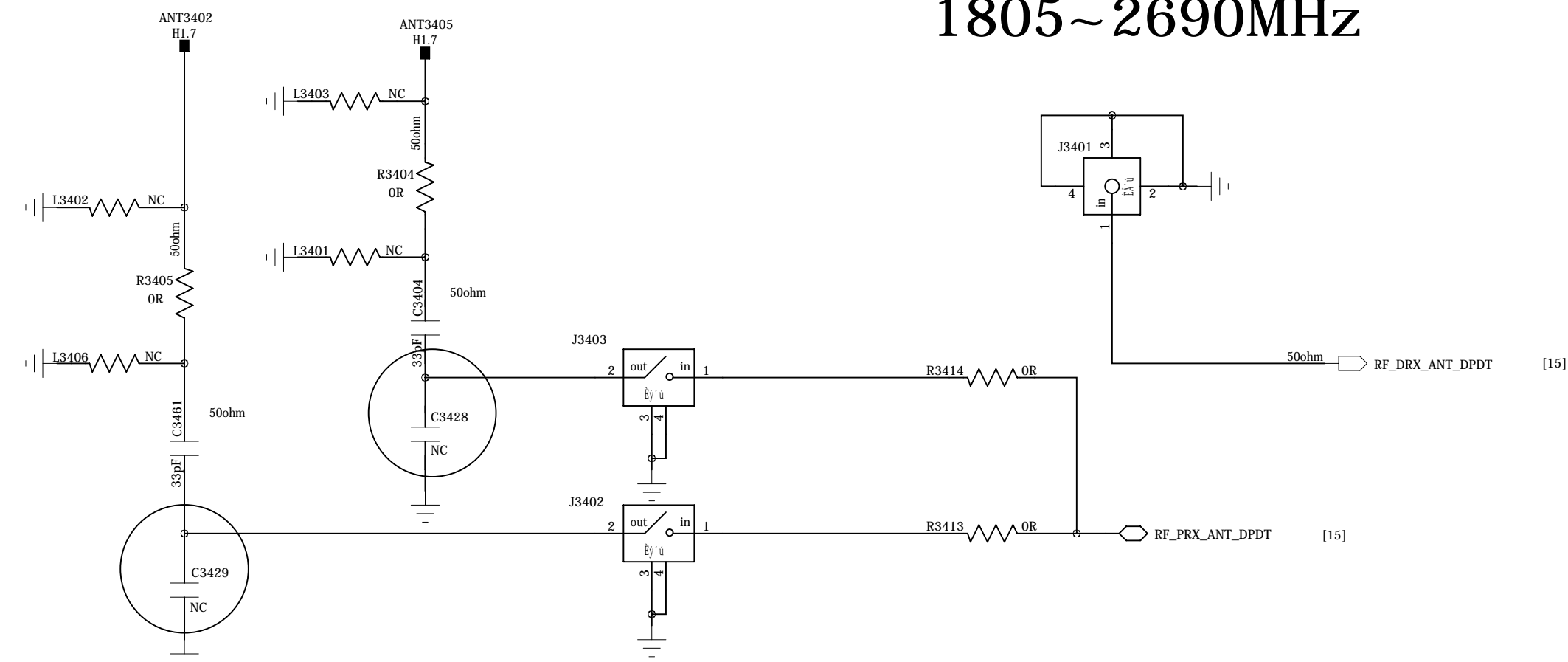


## Power domain

COMPANY: TRANSSION HOLDINGS				MODEL: H6218		Modified Date: 2020/10/23	
DRAWN	DJF/TS	DATED	20201021	TITLE: 33_RF_MT6177M_RF_DRX		VERSION: V1.0	SHEET: 14 OF 25
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

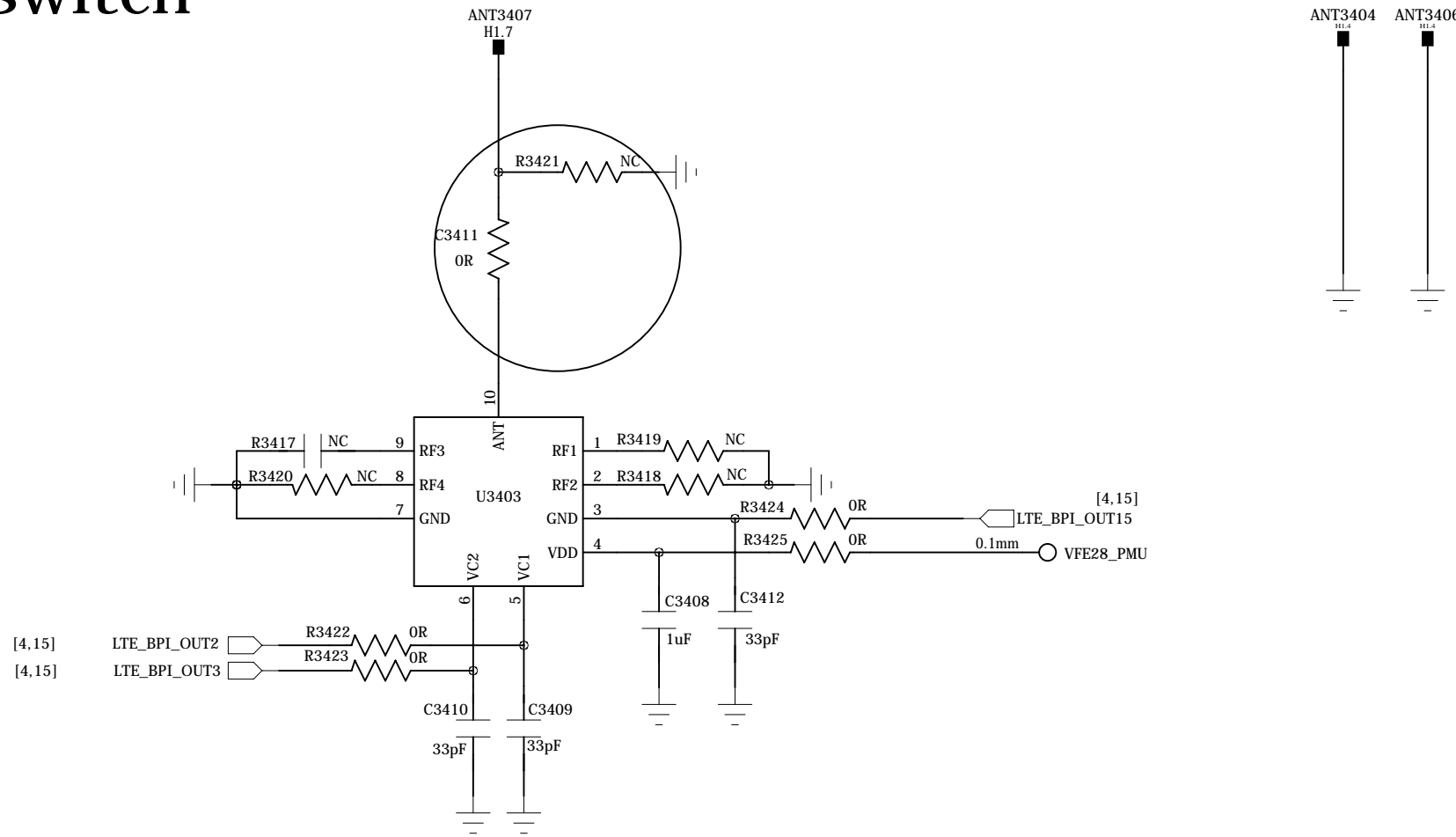
RF\_MT6177M\_RF\_ANT

ASM\_Main  
791~960MHz + 1710~2690MHz

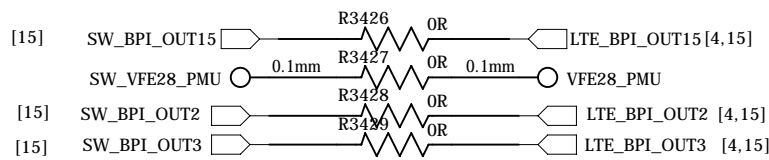


DRX ANT  
791~821MHz  
1805~2690MHz

ANT switch



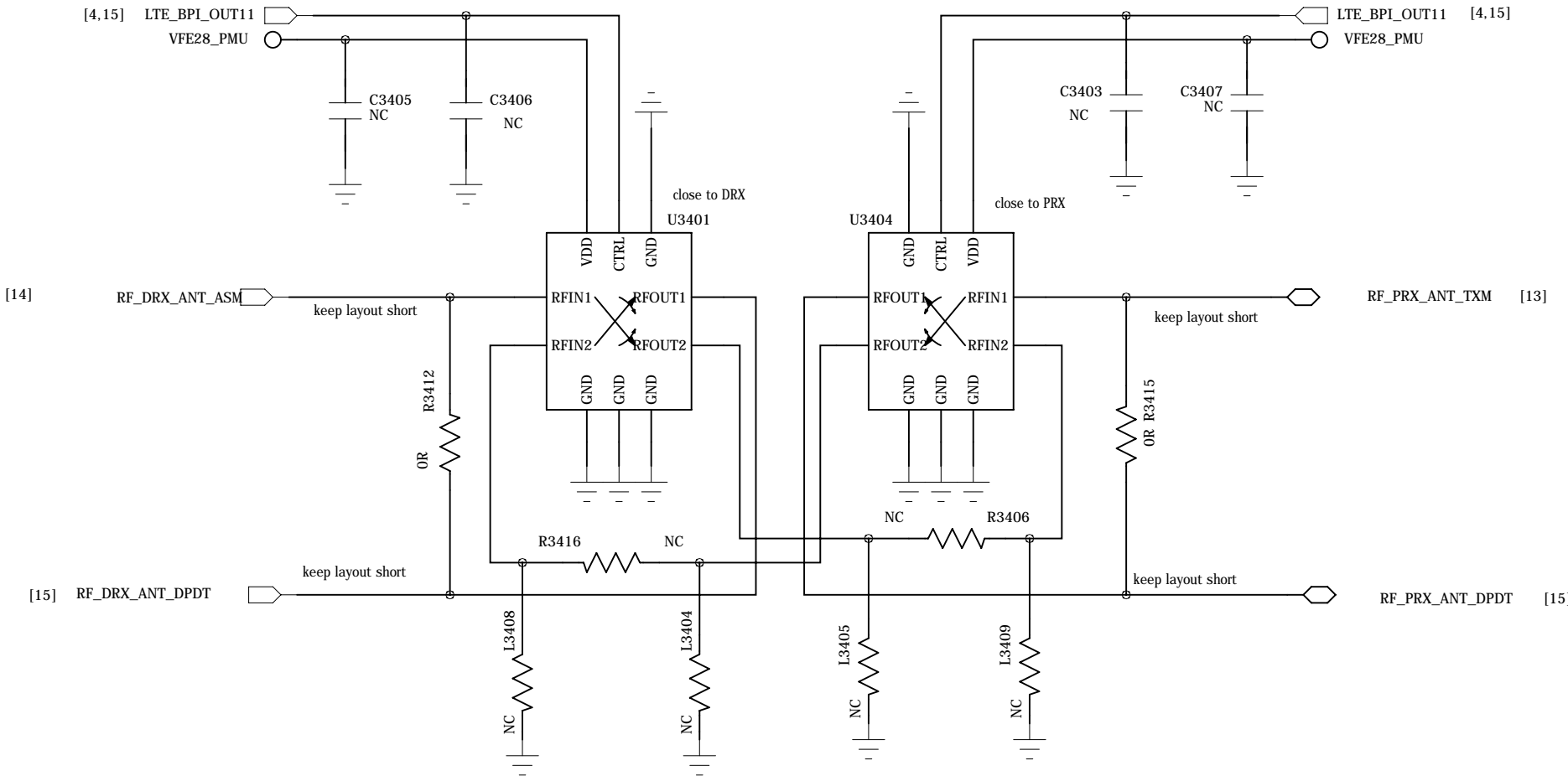
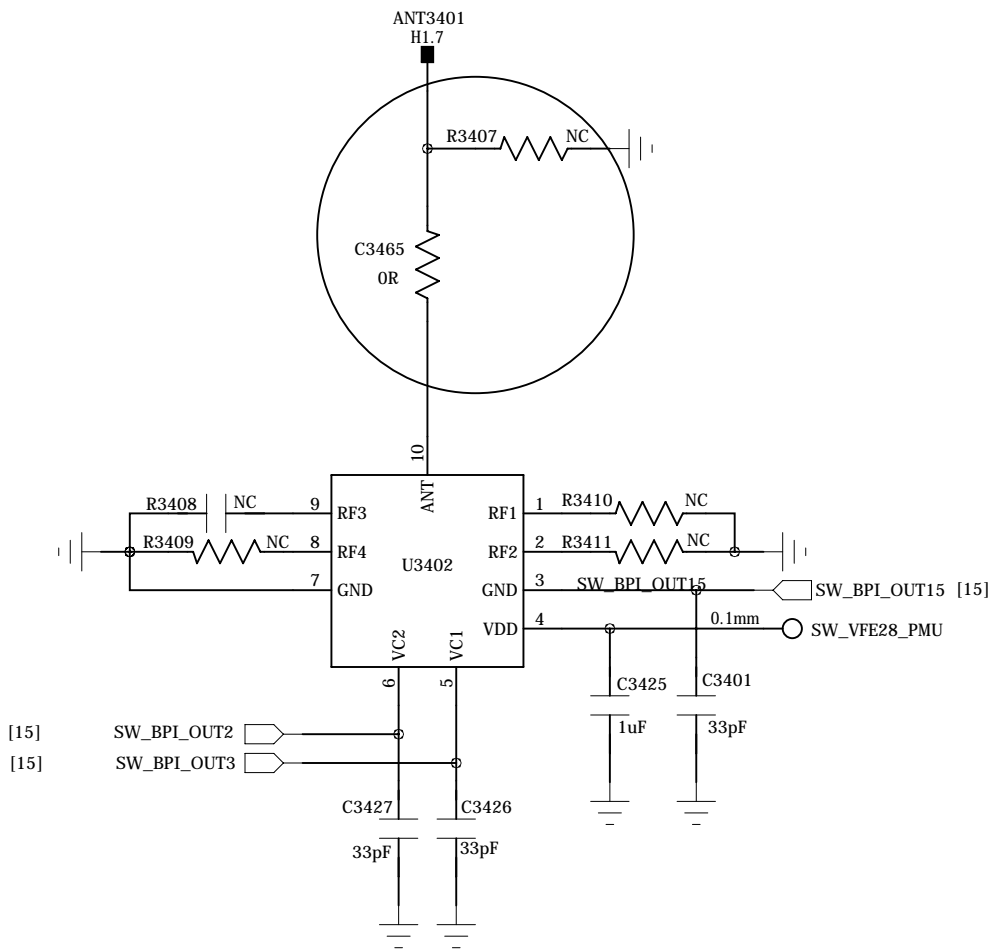
ANT switch



RF1119A & RF1694 control logic					
VC1	VC2	RF1	RF2	RF3	RF4
L	L	Y	N	N	N
L	H	N	Y	N	N
H	L	N	N	Y	N
H	H	N	N	N	Y

DPDT

C3405,C3407,C3403,C3406,R3406,R3416,R3417,U3401,U3404		R3412,R3415
Without DPDT		With Material
DPDT		Without Material



COMPANY: TRANSSION HOLDINGS

MODEL: H6218

Modified Date: 2020/10/23

DRAWN

DJF/TS

DATED

20201021

TITLE: 34\_RF\_ANT\_CONTROLLER

VERSION: V1.0

SHEET: 15 OF 25

CHECKED

<CHECKED>

DATED

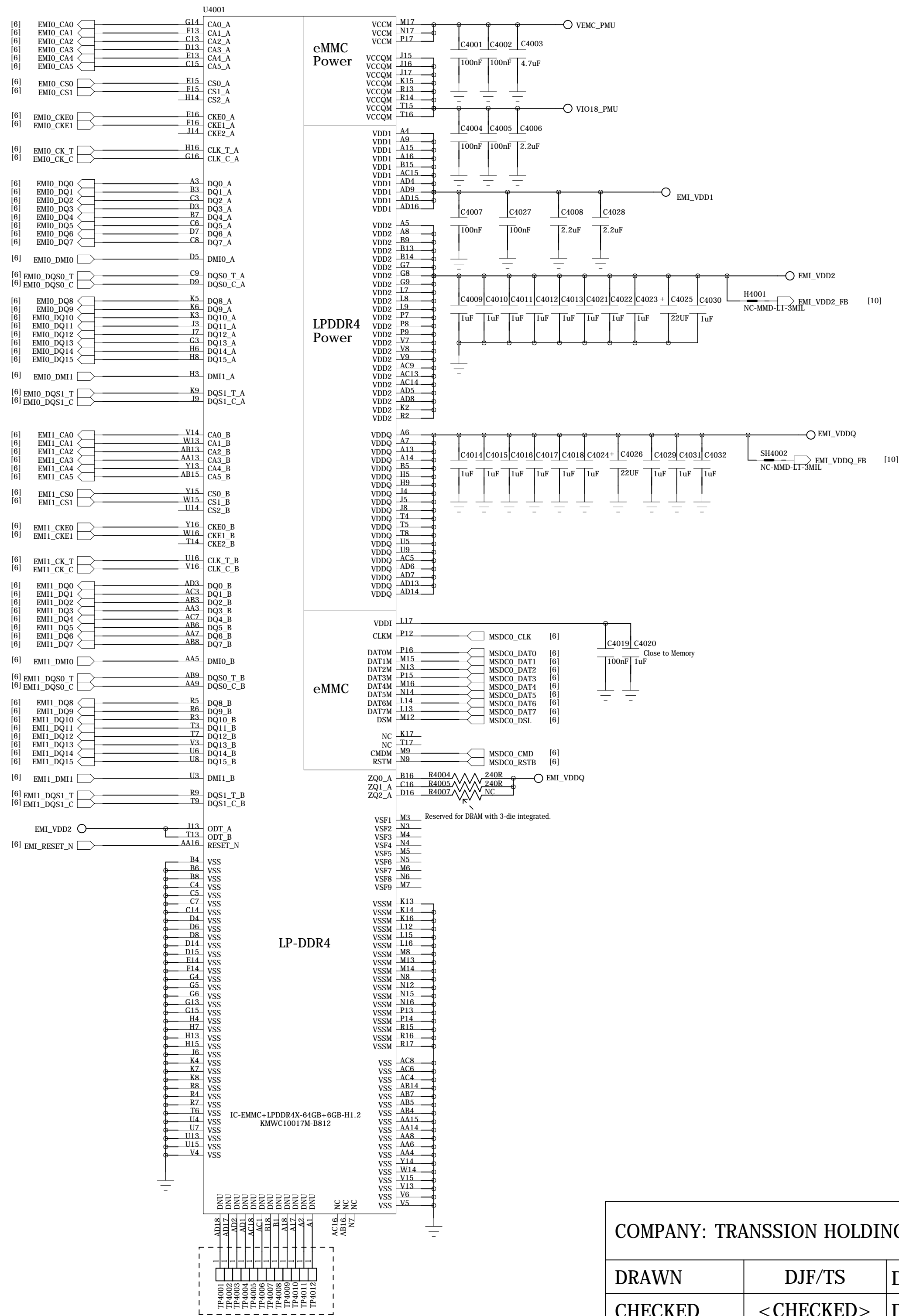
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Confidentiality

CONFIDENTIAL

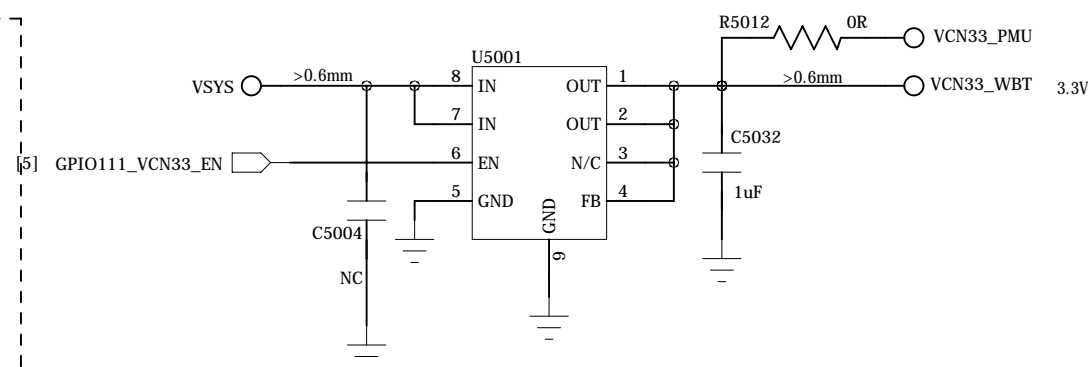
# MEMORY\_eMMC\_LPDDR4/4X

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:





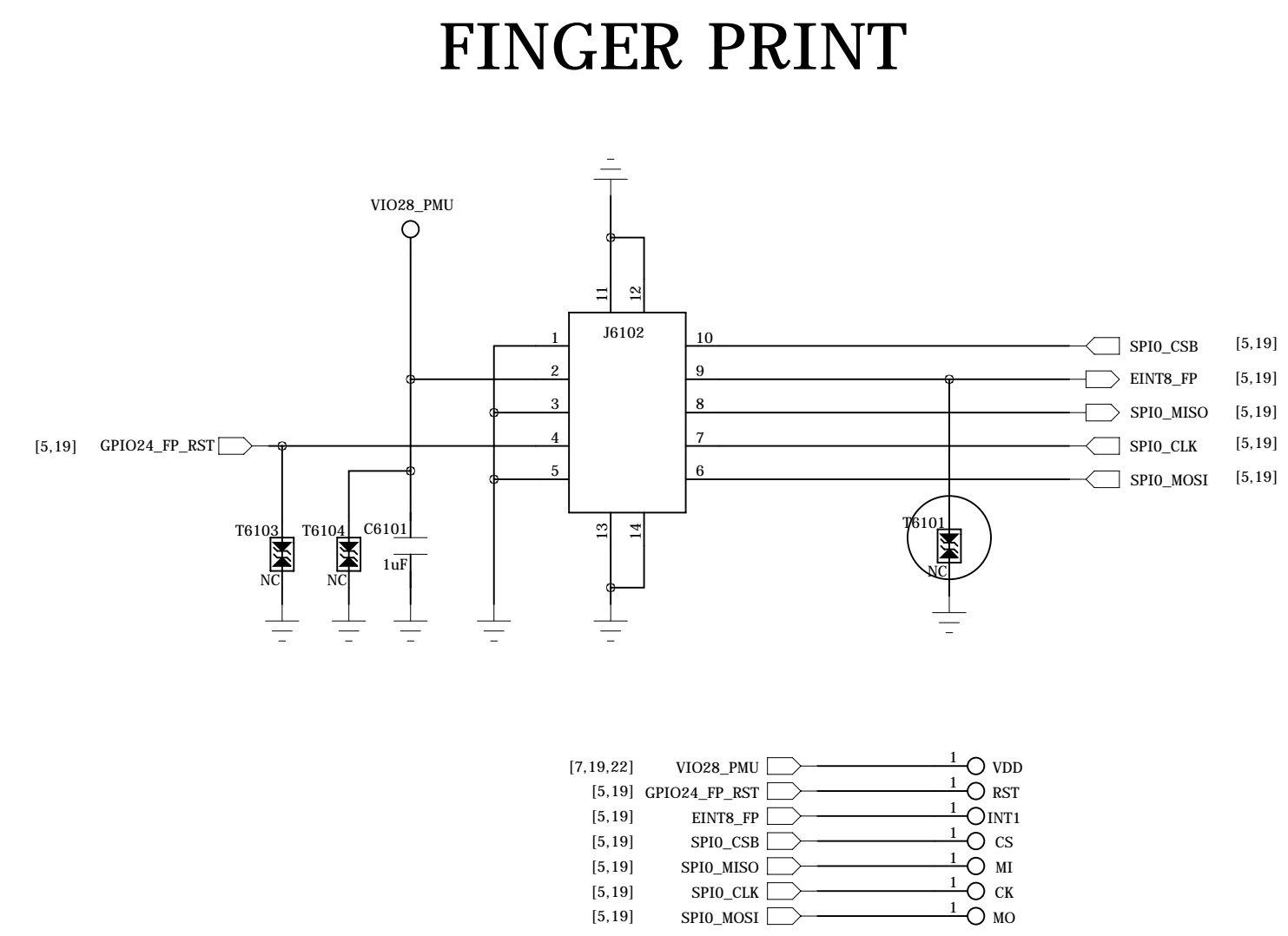
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



COMPANY: TRANSSION HOLDINGS				MODEL: H6218		Modified Date: 2020/10/23	
DRAWN	DJF/TS	DATED	20201021	TITLE: 50_CONNECTIVITY_MT6631		VERSION: V1.0	SHEET: 17 OF 25
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		



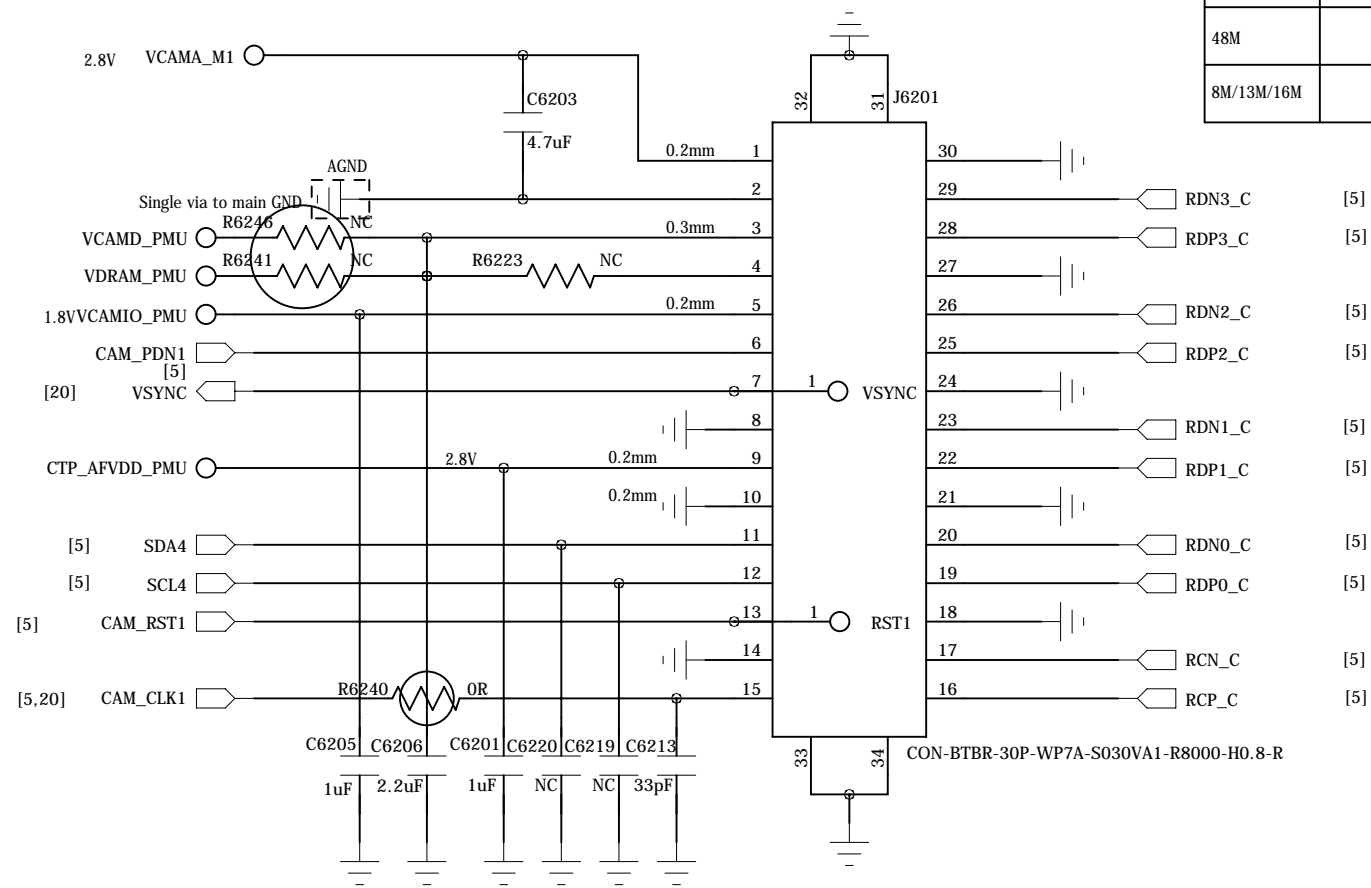
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



COMPANY: TRANSSION HOLDINGS				MODEL: H6218		Modified Date: 2020/10/23	
DRAWN	DJF/TS	DATED	20201021	TITLE: 61_PERI_LCM_CTP_FP		VERSION: V1.0	SHEET: 19 OF 25
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

# PERI\_REAR\_CAMERA

## REAR CAMERA I (Max 48M+AF)



	R6223/R6241	R6246
48M	OR	NC
8M/13M/16M	NC	OR

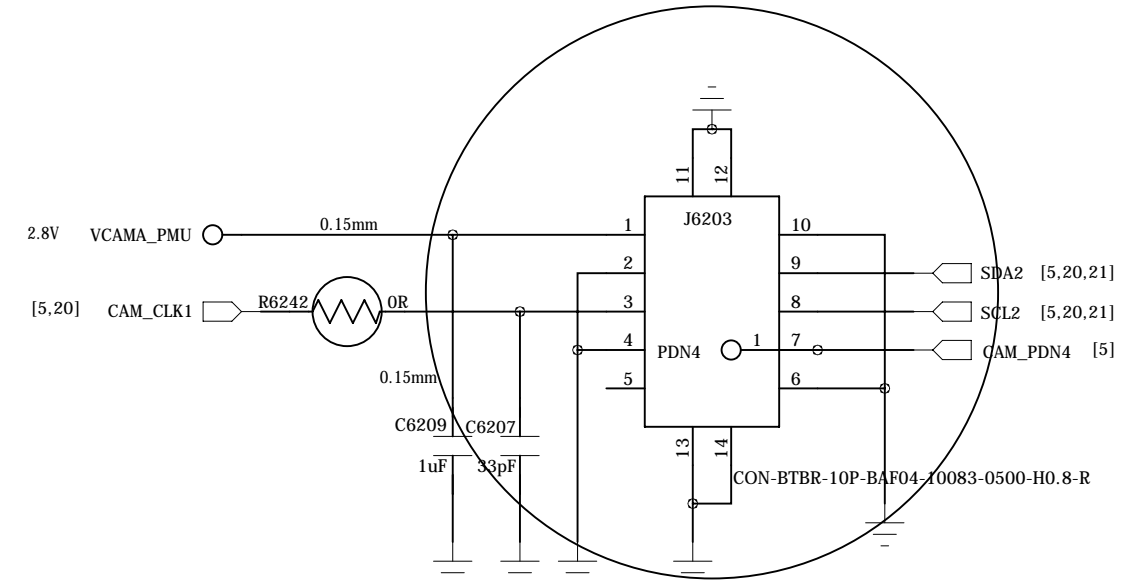
	SENSOR	I2C Address
8M	SENSOR(GC8034-MCFD0) MOTOR(DW9714P)	Write: 0x6F Read: 0x6F Write: 0x18 Read: 0x19
13M	SENSOR(SSK316X003-FCX9) MOTOR(DW9718T) EEPROM(P24C64E-C4H-MIR)	Write: 0x20 Read: 0x21 Write: 0x18 Read: 0x19 Write: 0xA0 Read: 0xA1
16M	SENSOR(OV16B10) MOTOR(DW9718T) EEPROM(P24C64F-A4H-MIR)	Write: 0x20 Read: 0x21 Write: 0x18 Read: 0x19 Write: 0xA0 Read: 0xA1
48M	SENSOR(OV48B20-CA5A-Z) MOTOR(DW9800V) EEPROM(P24C128E-C4H-MIR)	Write: 0x20 Read: 0x21 Write: 0x18 Read: 0x19 Write: 0xA0 Read: 0xA1

SENSOR	VCAMA	VCAMD	VCAMIO	AFVDD
GC8034-MCFD0	2.8V 35mA	1.25V 140mA	1.8V 10mA	2.8V 120mA
SSK3L6X0X0X-FCX9	2.8V 60mA	1.05V 200mA	1.8V 1mA	2.8V 123mA
OV16B10	2.8V 52mA	1.05V 200mA	1.8V 5mA	2.8V 100mA
OV48B2Q-CA5A-Z	2.8V 58.5mA	1.15V 461.5mA	1.8V 3.9mA	2.8V 100mA

## REAR CAMERA III

### Depth/Macro

SENSOR	VCAMA	I2C Address
GC6153	2.8V 20mA	Write:0x80 Read:0x81

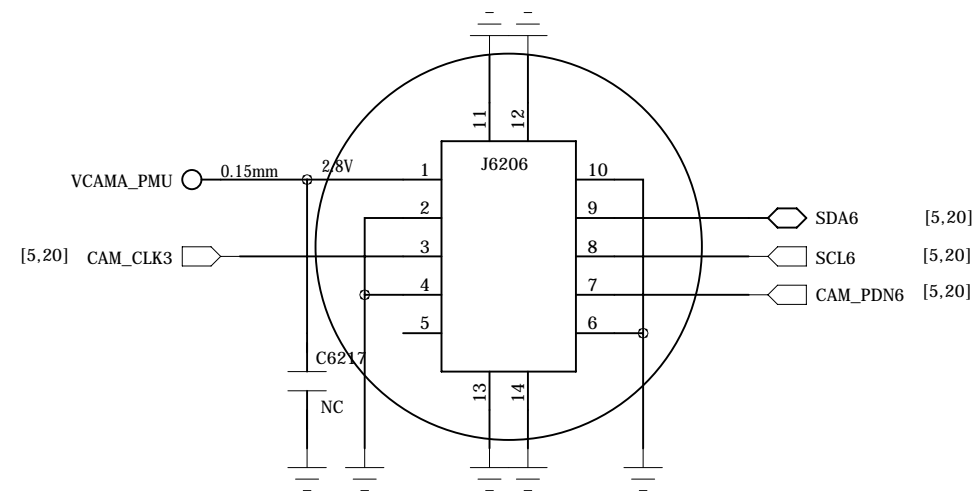
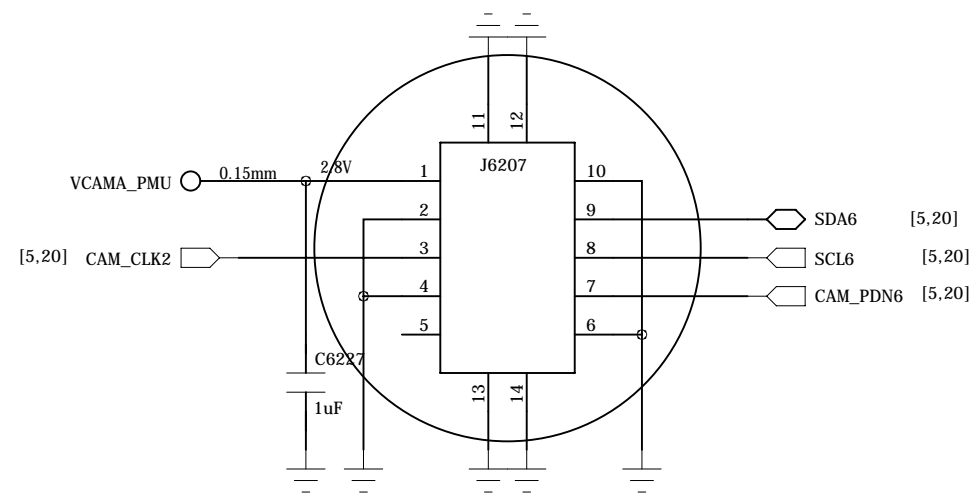


## REAR CAMERA V(8W)

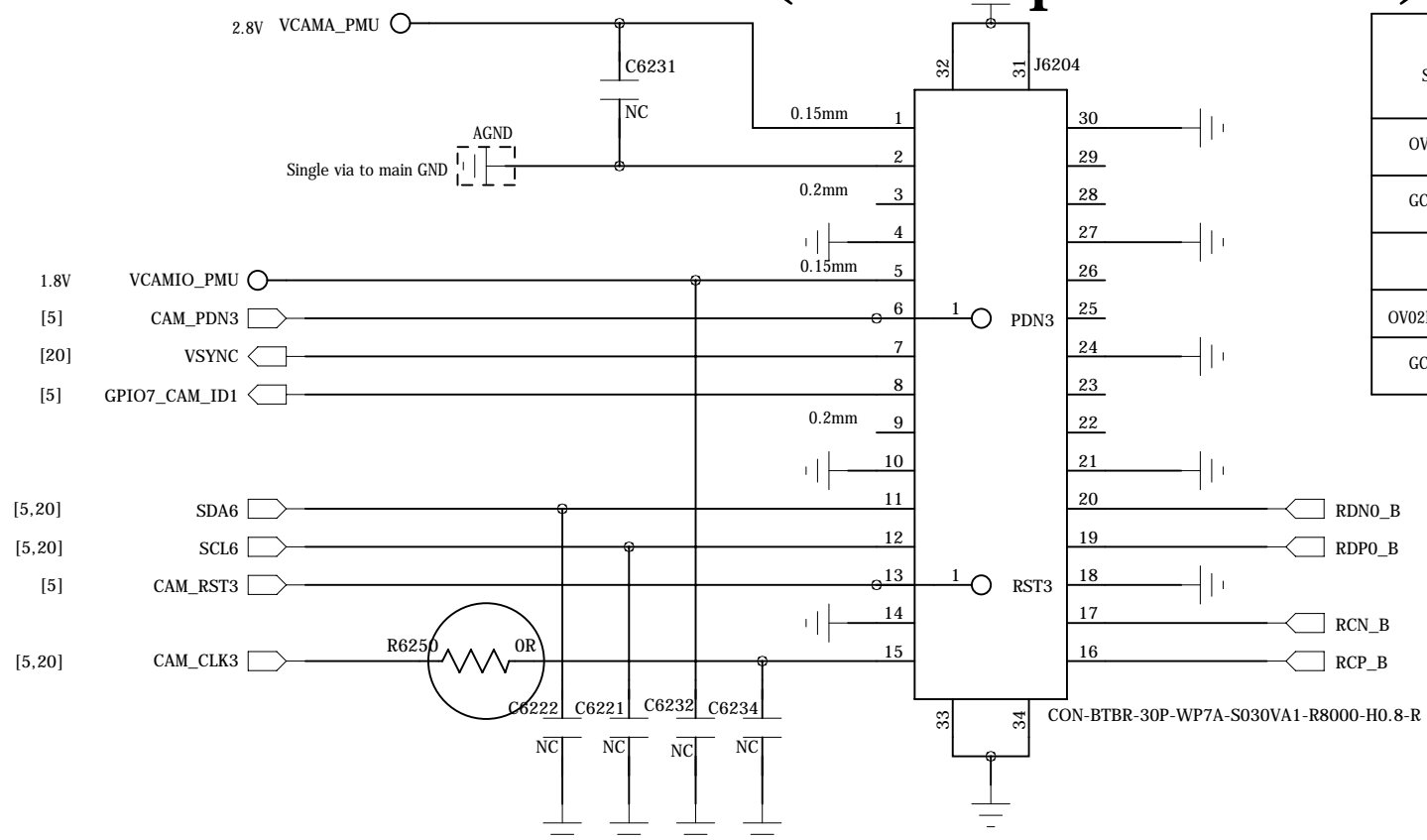
SENSOR	VCAMA	I2C Address
GC6153	2.8V 20mA	Write:0x80 Read:0x81

## REAR CAMERA VI(8W)

SENSOR	VCAMA	I2C Address
GC6153	2.8V 20mA	Write:0x80 Read:0x81



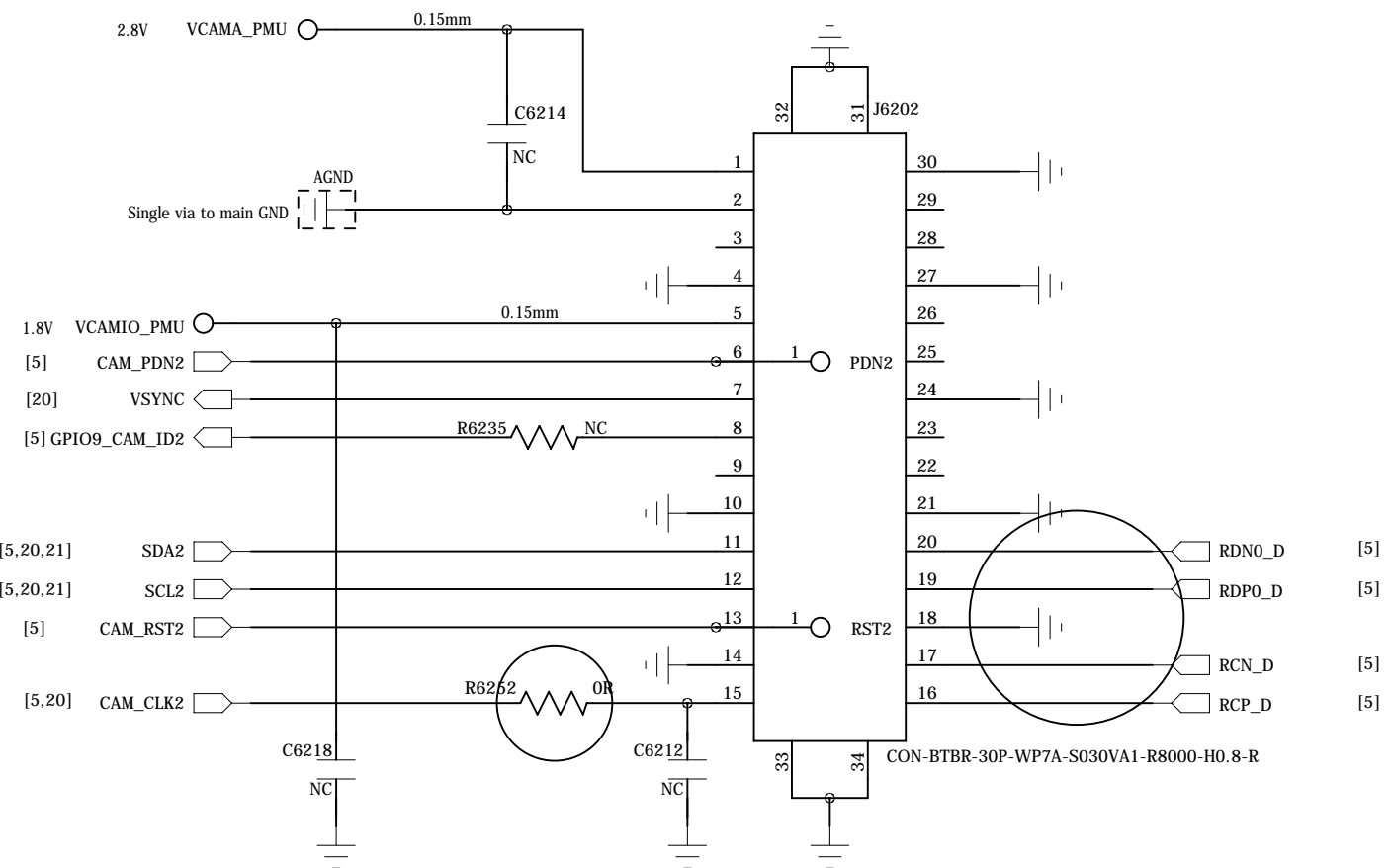
## REAR CAMERA II (2M Depth/Macro)



SENSOR	VCAMA	VCAMD	VCAMIO	I2C Address
OV02B1B	2.8V 40mA	NC	1.8V 70mA	Write: 0x7A Read: 0x7B
GC02M1B-C24Y0	2.8V 40mA	NC	1.8V 70mA	Write: 0x20 Read: 0x21
OV02B10-A25A-001A	2.8V 35mA	NC	1.8V 45mA	Write: 0x78 Read: 0x79
GC02M1-C24YA	2.8V 40mA	NC	1.8V 70mA	Write: 0x20 Read: 0x21



SENSOR	VCAMA	VCAMD	VCAMIO	I2C Address
OV02B10-A25A-001A	2.8V 35mA	NC	1.8V 45mA	Write:0x78 Read:0x79
GC02M1-C24YA	2.8V 40mA	NC	1.8V 70mA	Write:0x20 Read:0x21

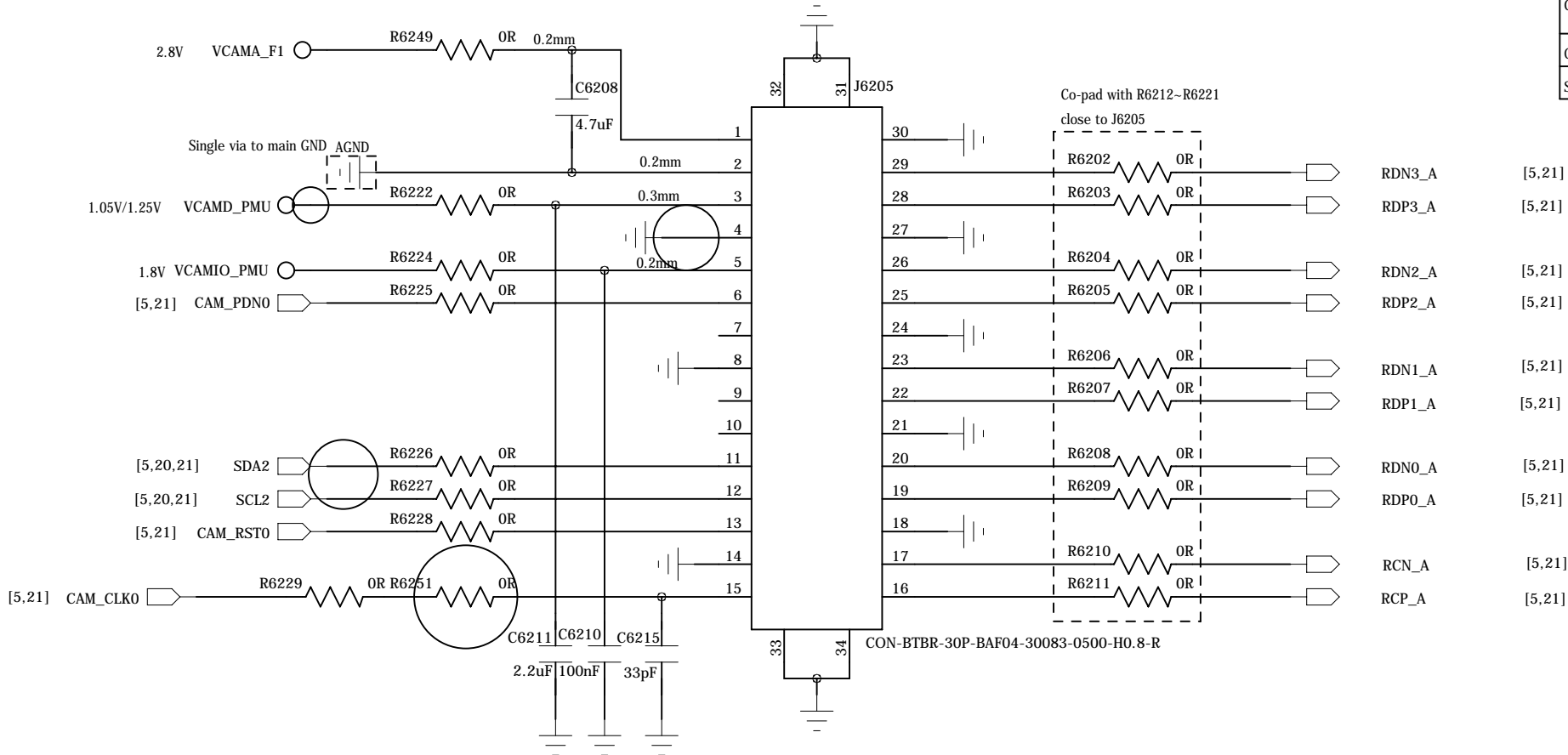


COMPANY: TRANSSION HOLDINGS				MODEL: H6218		Modified Date: 2020/10/23	
DRAWN	DJF/TS	DATED	20201021	TITLE: 62_PERI_REAR_CAMERA		VERSION: V1.0	SHEET: 20 OF 25
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

PERI\_FRONT\_CAMERA

FRONT MAIN CAMERA (MAX 16M+ FF)

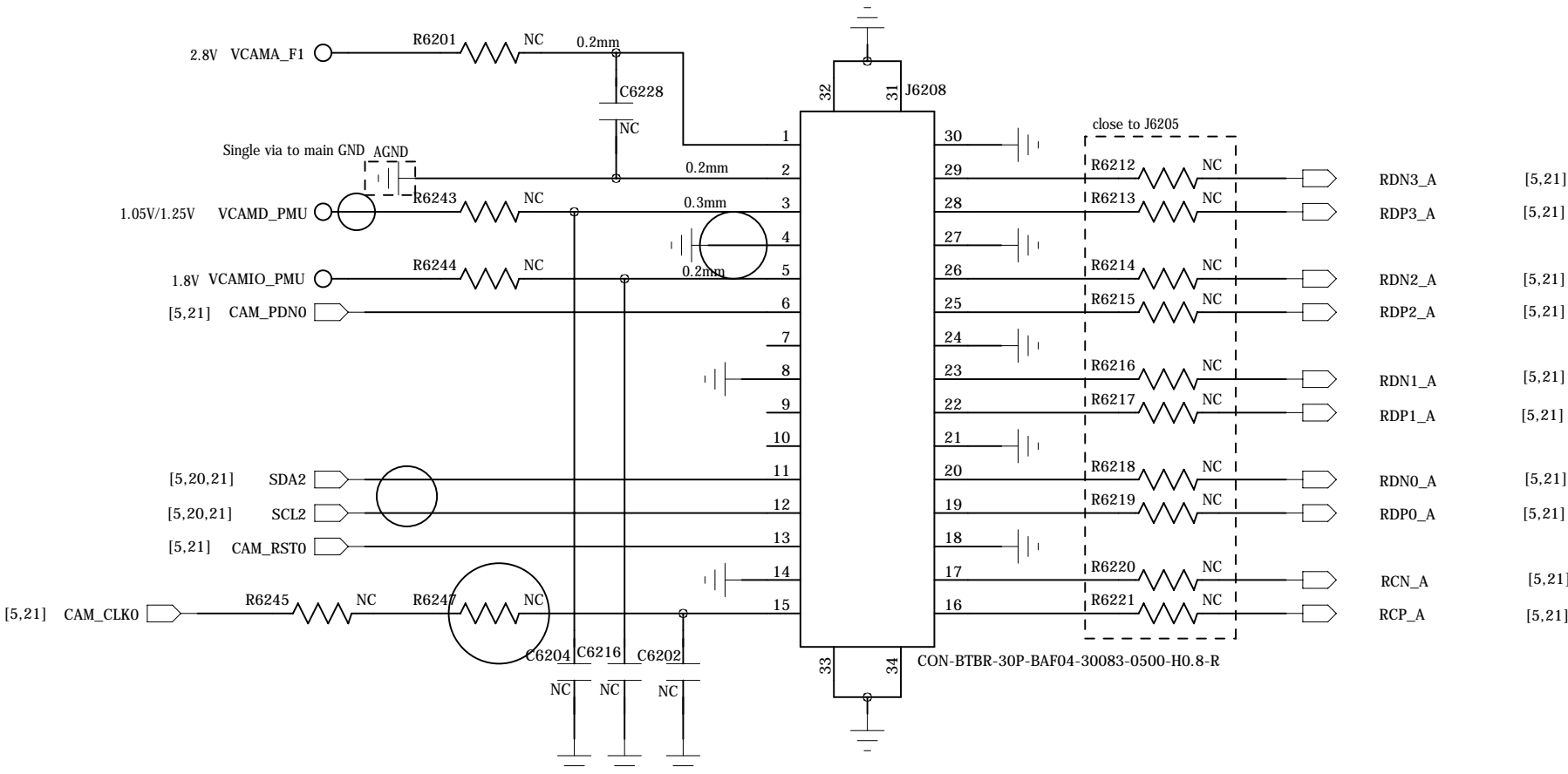
For Drop



	SENSOR	I2C Address
5M	GC5035-MCHD0	Write:0x6E Read:0x6F
8M	GC8034-WC1X0	Write:0x6E Read:0x6F
16M	S5K3P9SX04-FGX9 P24C64E-C4H-MIR P24S64E-C4H-MIR	Write:0x5A Read:0x5B Write:0xA2 Read:0xA3 Write:0xA2 Read:0xA3

SENSOR	VCAMA	VCAMD	VCAMIO
GC5035-MCHD0	2.8V 35mA	1.2V 80mA	1.8V 3mA
GC8034-WC1X0	2.8V 35mA	1.25V 140mA	1.8V 10mA
S5K3P9SX04-FGX9	2.8V 57.5mA	1.05V 159.9mA	1.8V 0.5mA

For Blind



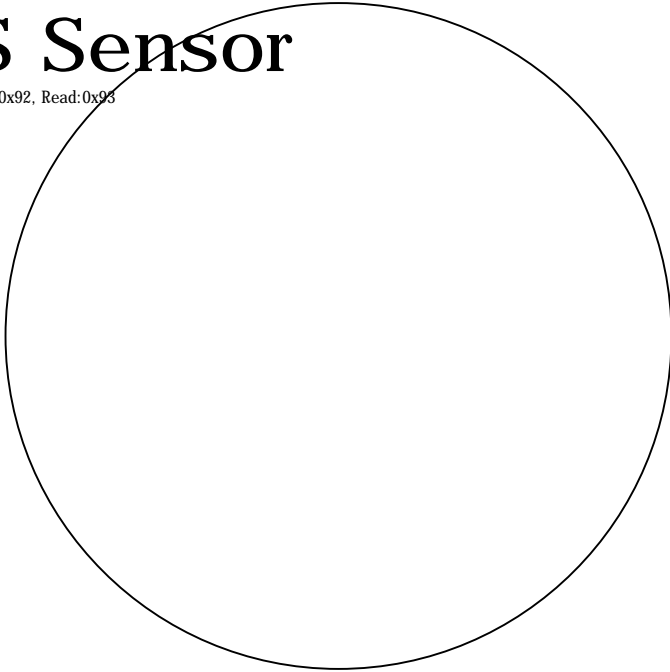
COMPANY: TRANSSION HOLDINGS				MODEL: H6218		Modified Date: 2020/10/23	
DRAWN	DJF/TS	DATED	20201021	TITLE: 62_PERI_FRONT_CAMERA		VERSION: V1.0	SHEET: 21 OF 25
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

PERI\_SENSORS

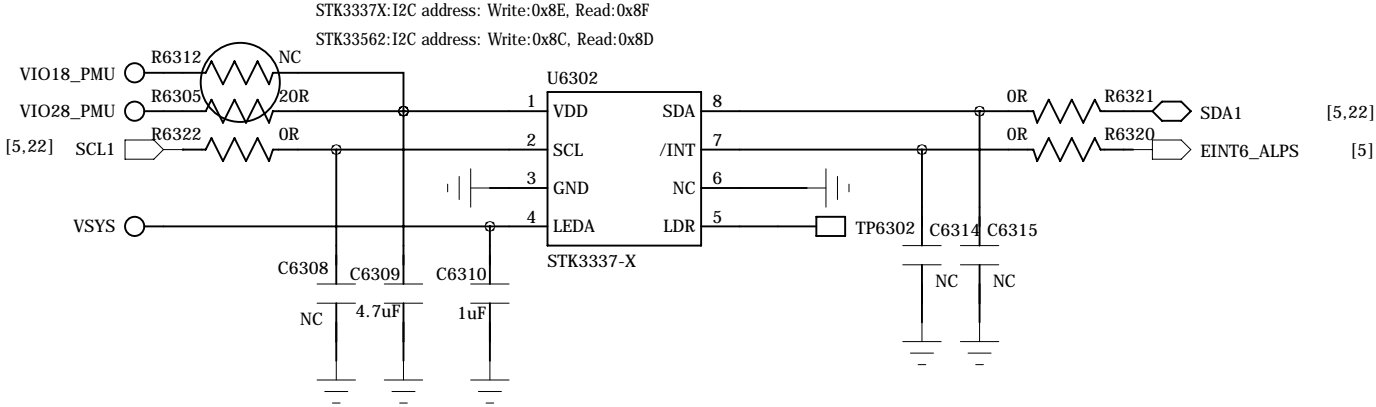
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

AL& PS Sensor

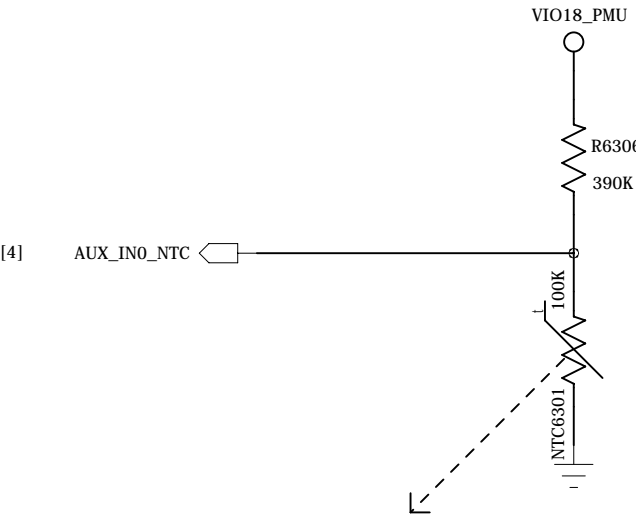
MN28233LKDn: I2C address: Write: 0x92, Read: 0x93



ALPS



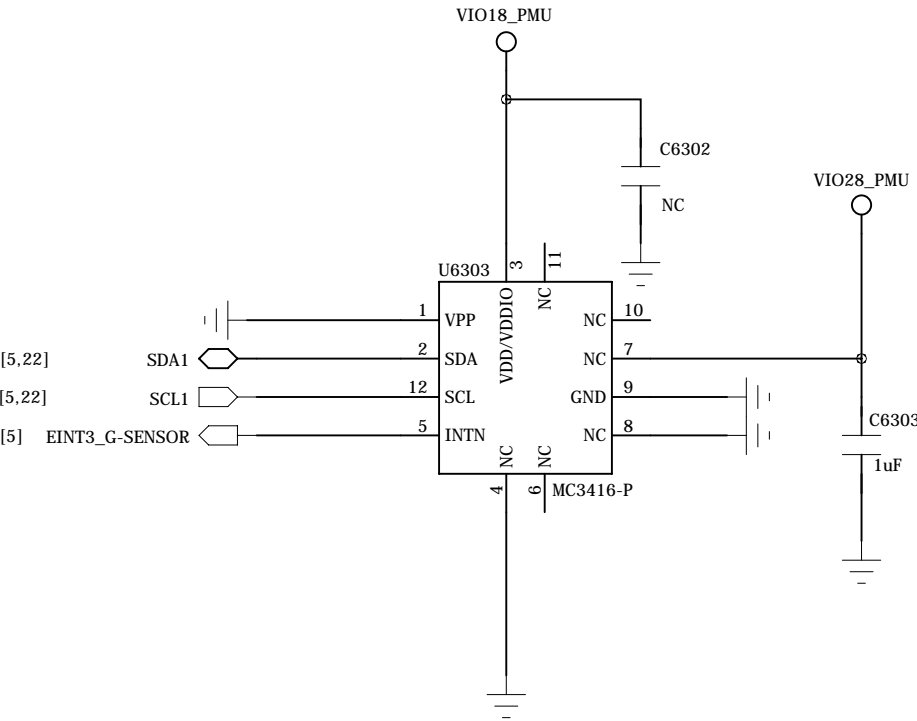
Thermistor to sense AP temperature



- 1. NTC6301 must keep a distance about 6~8 mm away from AP and far from other heat sources 10 mm at least.
- 2. The distance is the shortest distance from package edge to edge.

G-Sensor

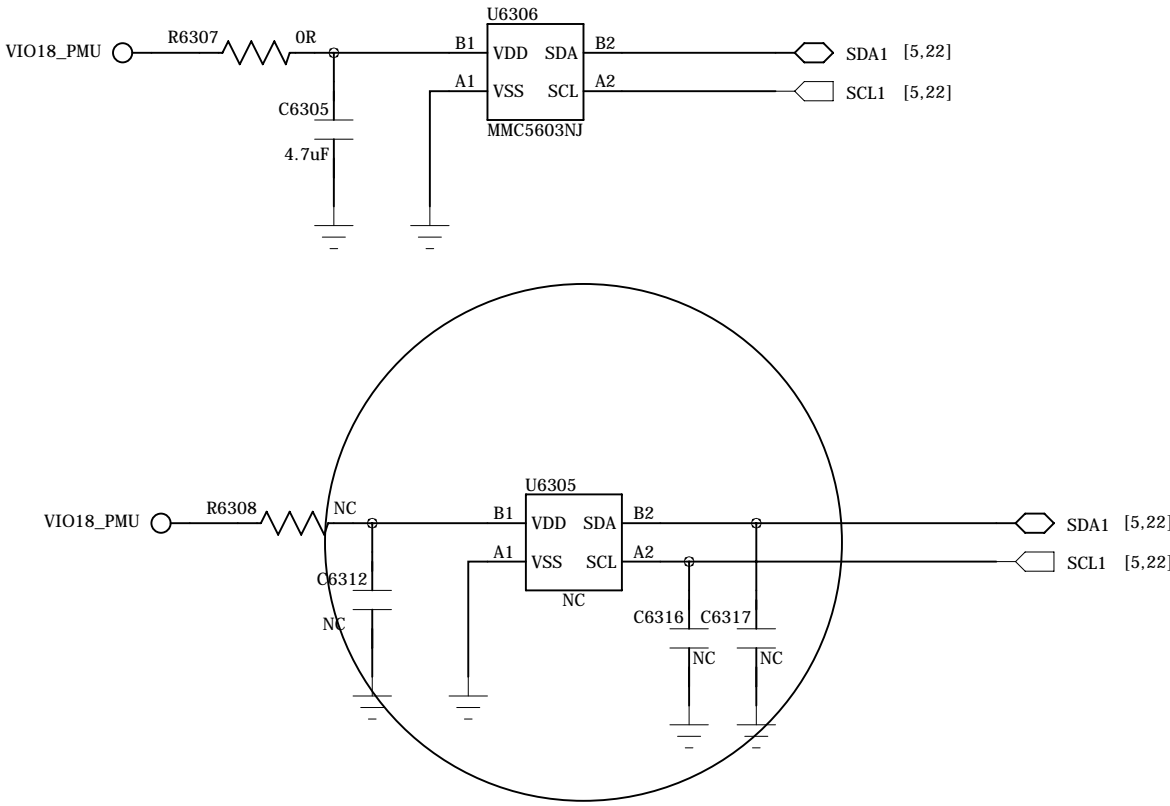
MXC6655XA: ADDRESS: 0x2A (Write) / 0x2B (Read) default  
STK8BA50-S/SC7A20: ADDRESS: 0x30 (Write) / 0x31 (Read) Reserve



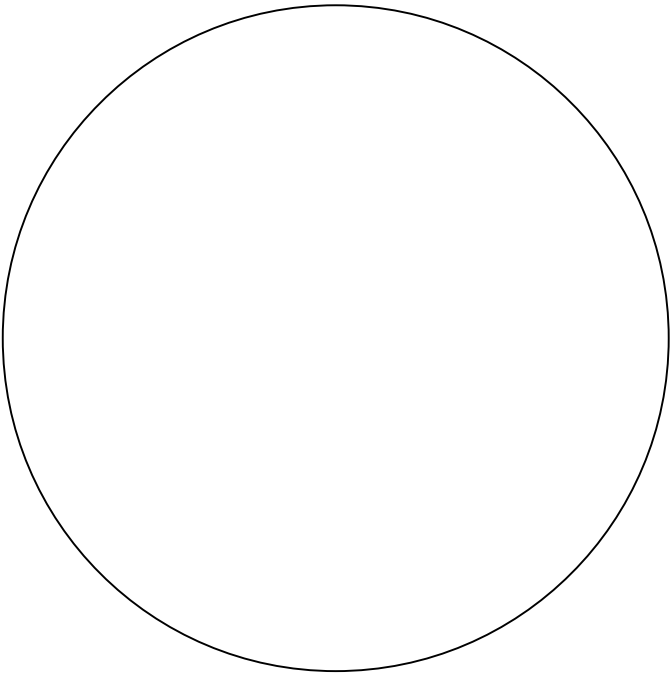
component	MXC6655XA	SC7A20	STK8BA50-S
C6302	NC	100nF	1uF
C6303	1uF	100nF	1uF

M-Sensor (COMPASS)

MMC5603NJL: I2C ADDRESS: 0x60 (Write) / 0x61 (Read) Default



G-Sensor + Gyro Sensor



COMPANY: TRANSSION HOLDINGS				MODEL: H6218		Modified Date: 2020/10/23	
DRAWN	DJF/TS	DATED	20201021	TITLE: 63_PERI_SENSORS		VERSION: V1.0	SHEET: 22 OF 25
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

# PERI\_IO\_VIB

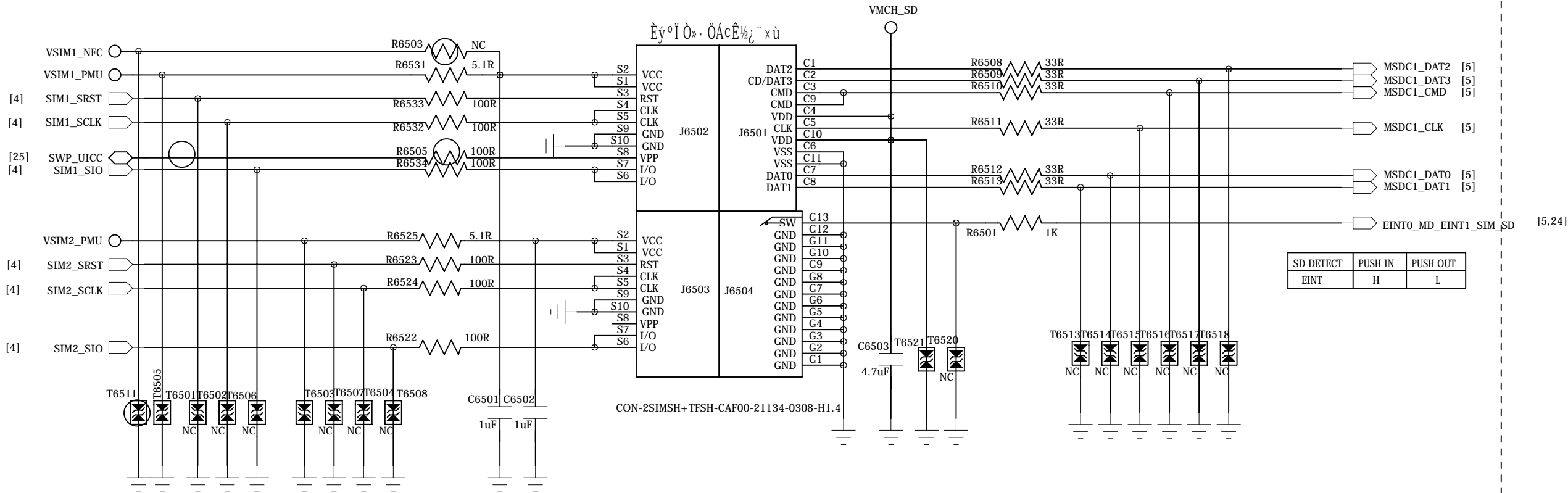
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

COMPANY: TRANSSION HOLDINGS				MODEL: H6218		Modified Date: 2020/10/23	
DRAWN	DJF/TS	DATED	20201021	TITLE: 64_PERI_IO_VIB		VERSION: V1.0	SHEET: 23 OF 25
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

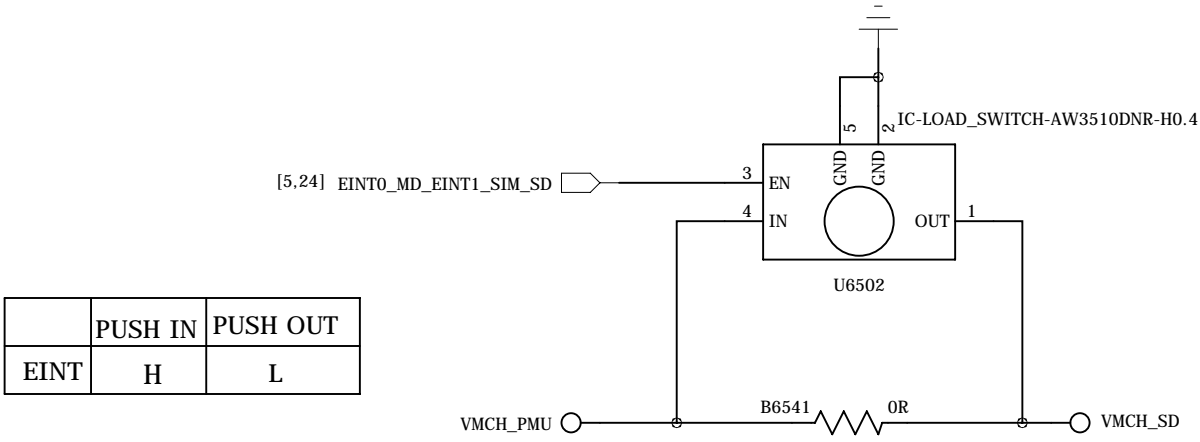
PERI\_SIM\_SD\_LED

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

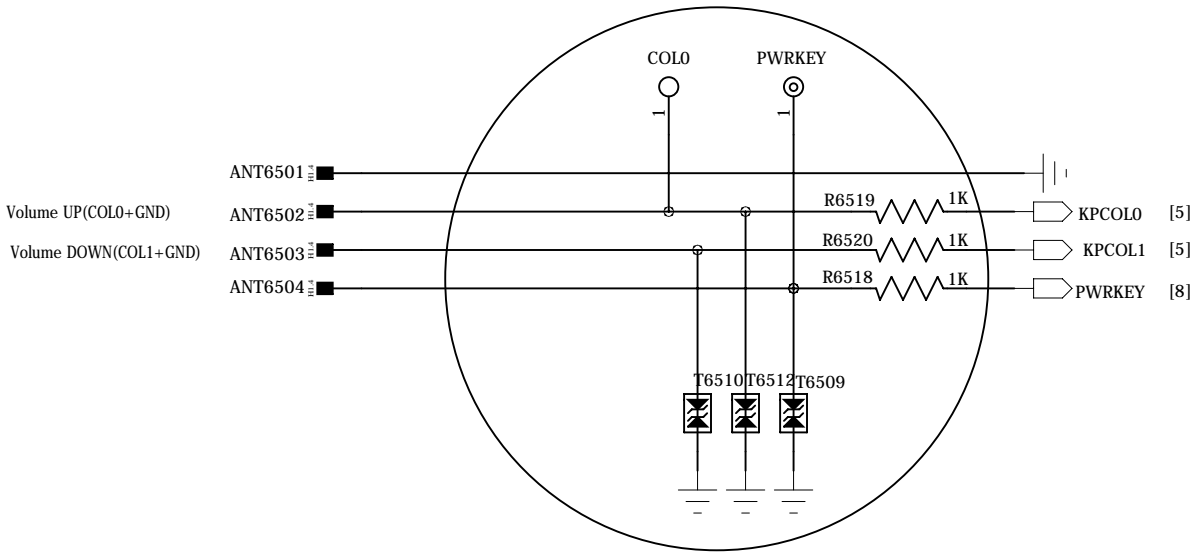
SIM/SD CARD



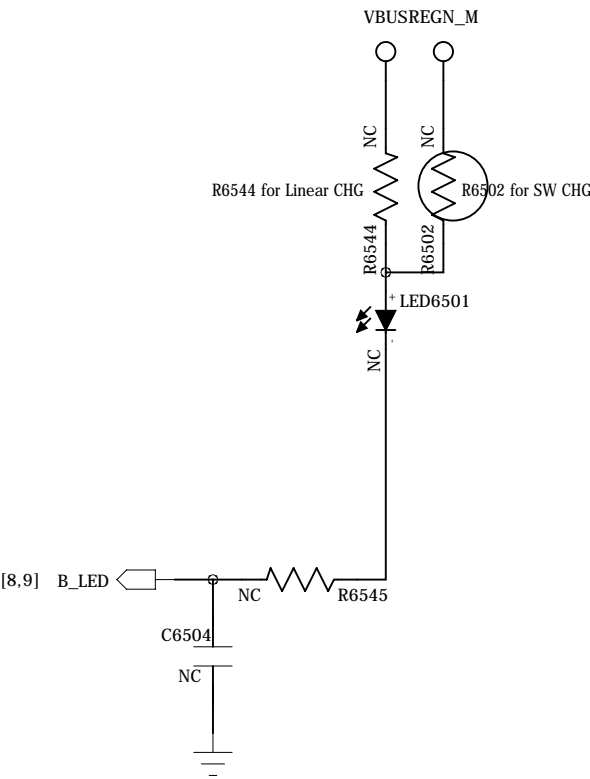
SD POWER CONTROL



SIDEKEY



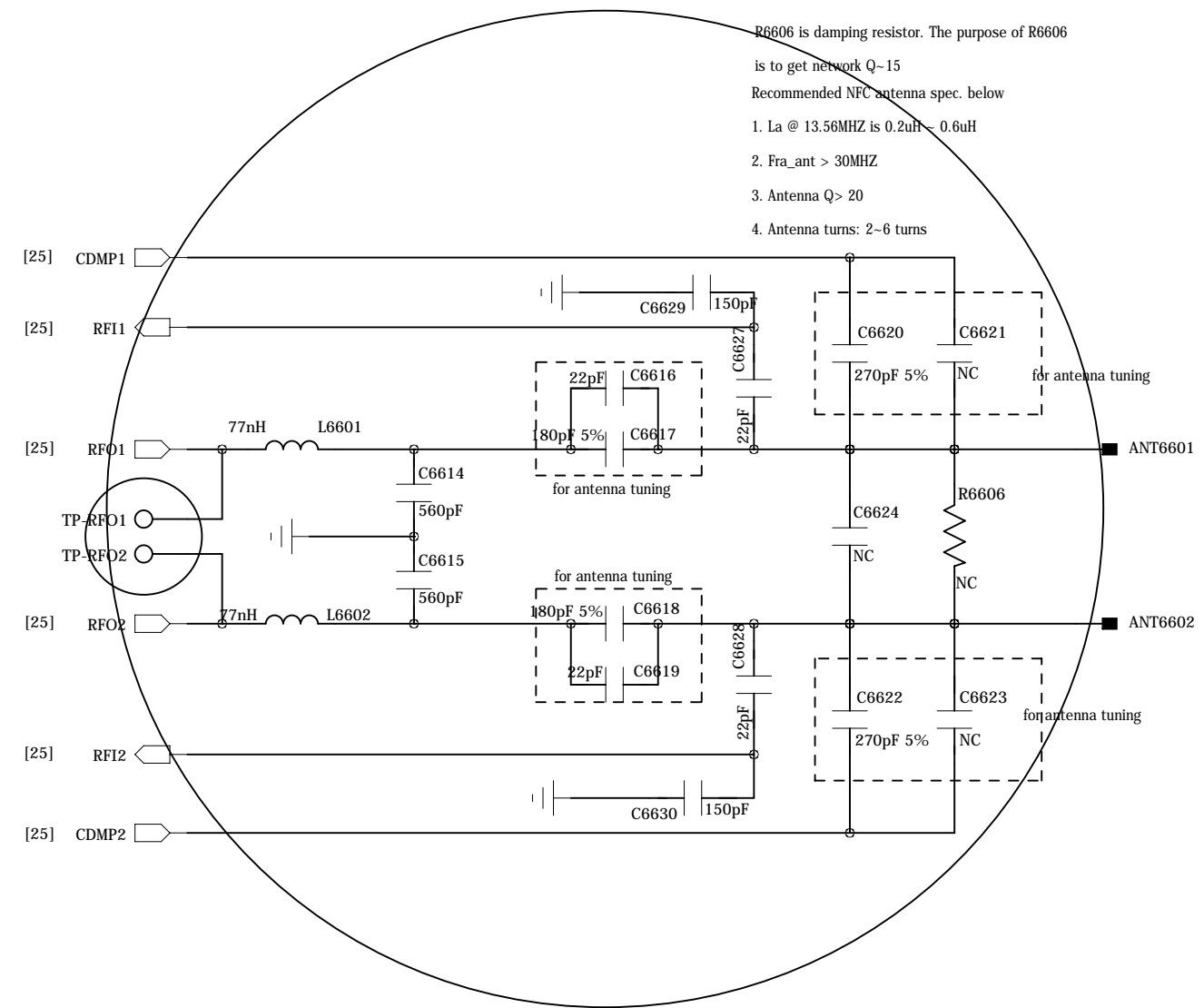
Indicator LED1



COMPANY: TRANSSION HOLDINGS				MODEL: H6218		Modified Date: 2020/10/23	
DRAWN	DJF/TS	DATED	20201021	TITLE: 65_PERI_SIM_SD_LED_SIDEKEY		VERSION: V1.0	SHEET: 24 OF 25
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		



REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



COMPANY: TRANSSION HOLDINGS				MODEL: H6218		Modified Date: 2020/10/23	
DRAWN	DJF/TS	DATED	20201021	TITLE: 66_PERI_NFC		VERSION: V1.0	SHEET: 25 OF 25
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		