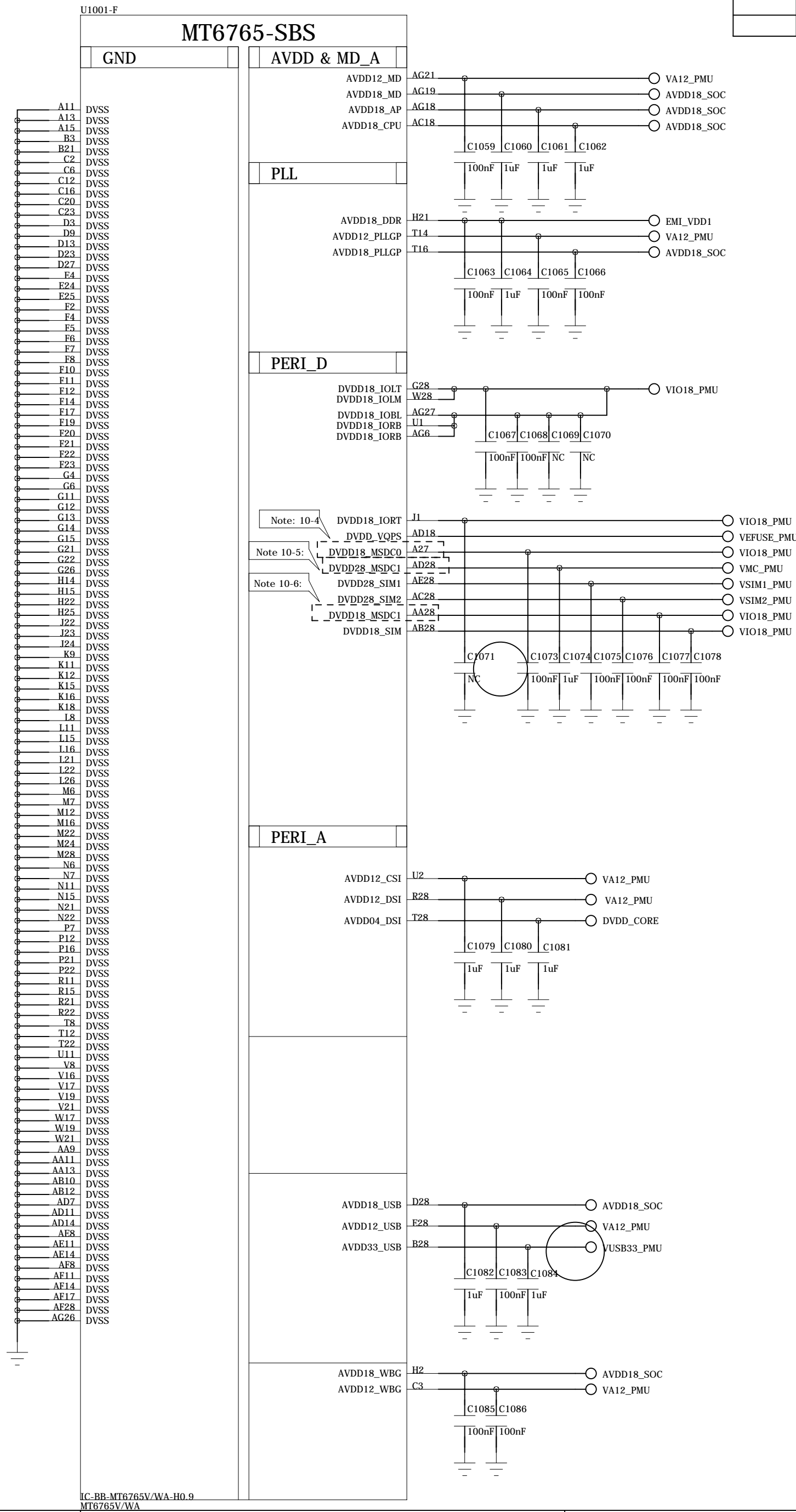


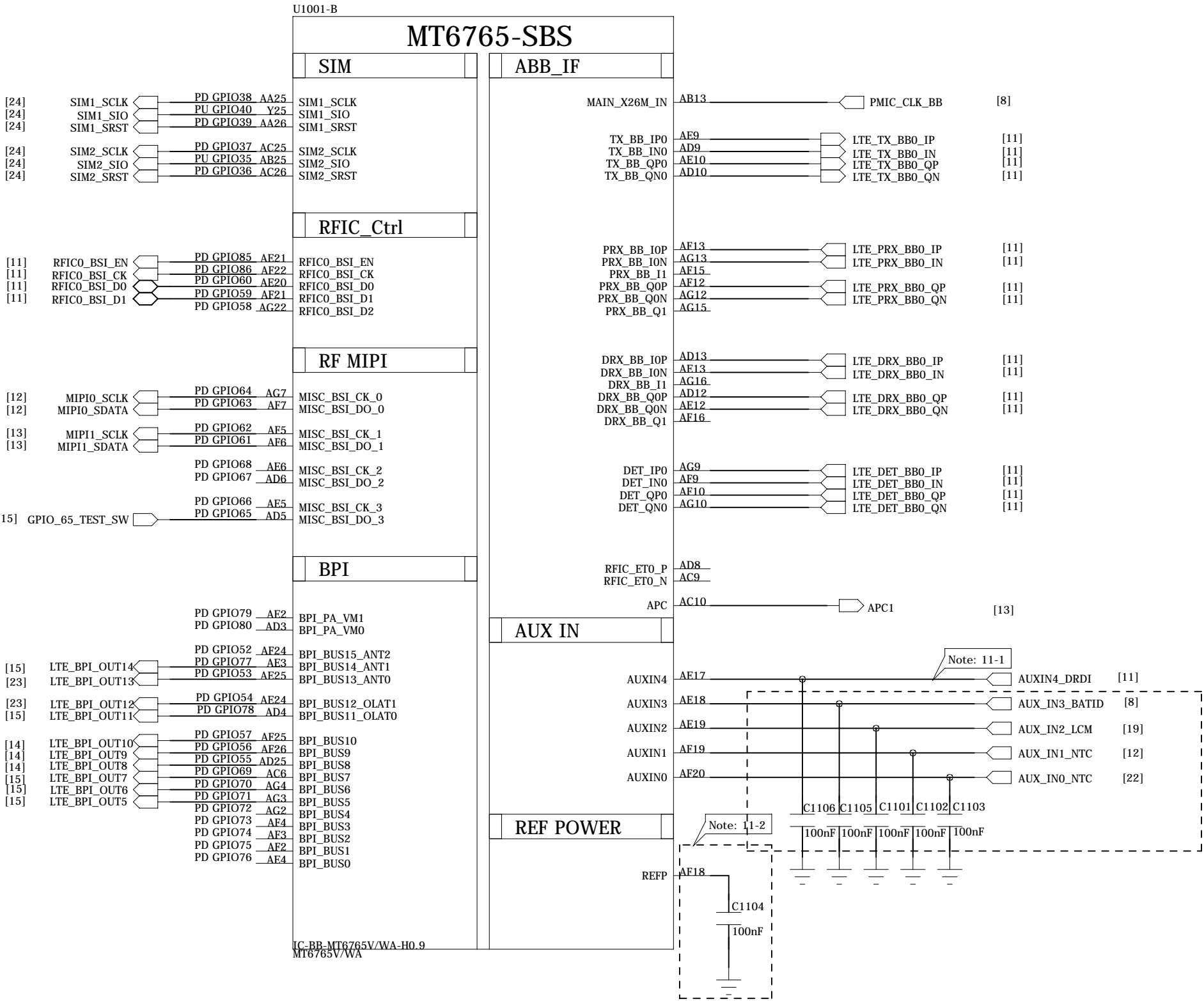
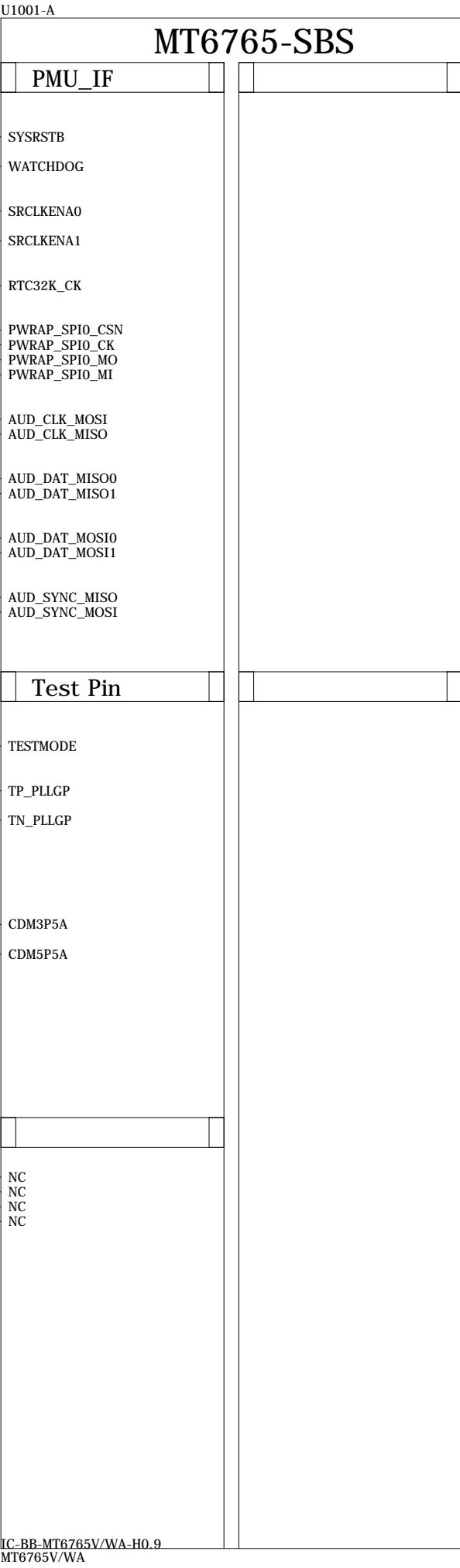
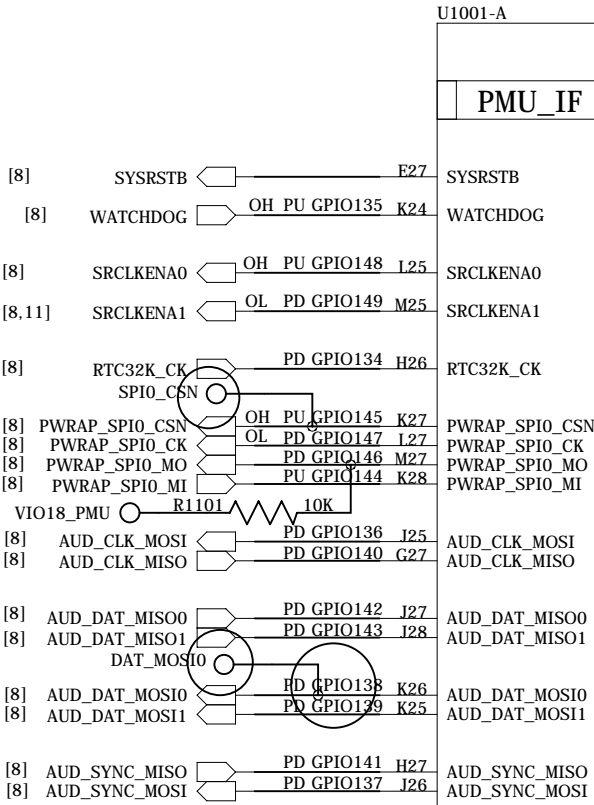
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



COMPANY: TRANSSION HOLDINGS				MODEL: H624		Modified Date: 2018/11/13	
DRAWN	DJF/TS	DATED	20180822	TITLE: 10_BB_POWER		VERSION: V1.0	SHEET: 3 OF 24
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

	LPDDR4(discrete)	LPDDR4X  EMCP
R1101	10K	NC



"PWRAP\_SPI0\_CSN" and "AUD\_DAT\_MOSI0" are bootstrap pin to slect which interface will be the JTAG pin out.

	PWRAP_SPI0_CSN	AUD_DAT_MOSI0	AP_JTAG	IO_JTAG
Default	(PU) HI	(PD) LO	N/A	N/A
	HI	HI (by ext. PS)	SPI_CSB/SPI_CLK/SPI_MO/SPI_MI/EINT8	N/A
	LO (by ext. PS)	LO	SPI_CSB/SPI_CLK/SPI_MO/SPI_MI/EINT8	SPI1+SPI3
	LO (by ext. PS)	HI (by ext. PS)	MSDC1_CLK/CMD/DAT0/DAT1/DAT2	N/A

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

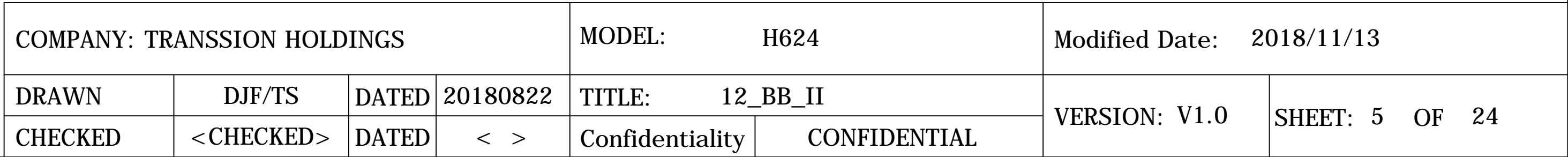
	PWRAP_SPI0_MI	Bootting interface	
	Default=PU	DDR	MSDC0 pin mux
	LO (by ext. PS)	LPDDR3	follow LP3 Ref SCH.
Default	HI	LPDDR4X	follow LP4X Ref SCH.

COMPANY: TRANSSION HOLDINGS				MODEL: H624		Modified Date: 2018/11/13	
DRAWN	DJF/TS	DATED	20180822	TITLE: 11_BB_I		VERSION: V1.0	SHEET: 4 OF 24
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

Schematic design notice of "11\_BB\_I" page.

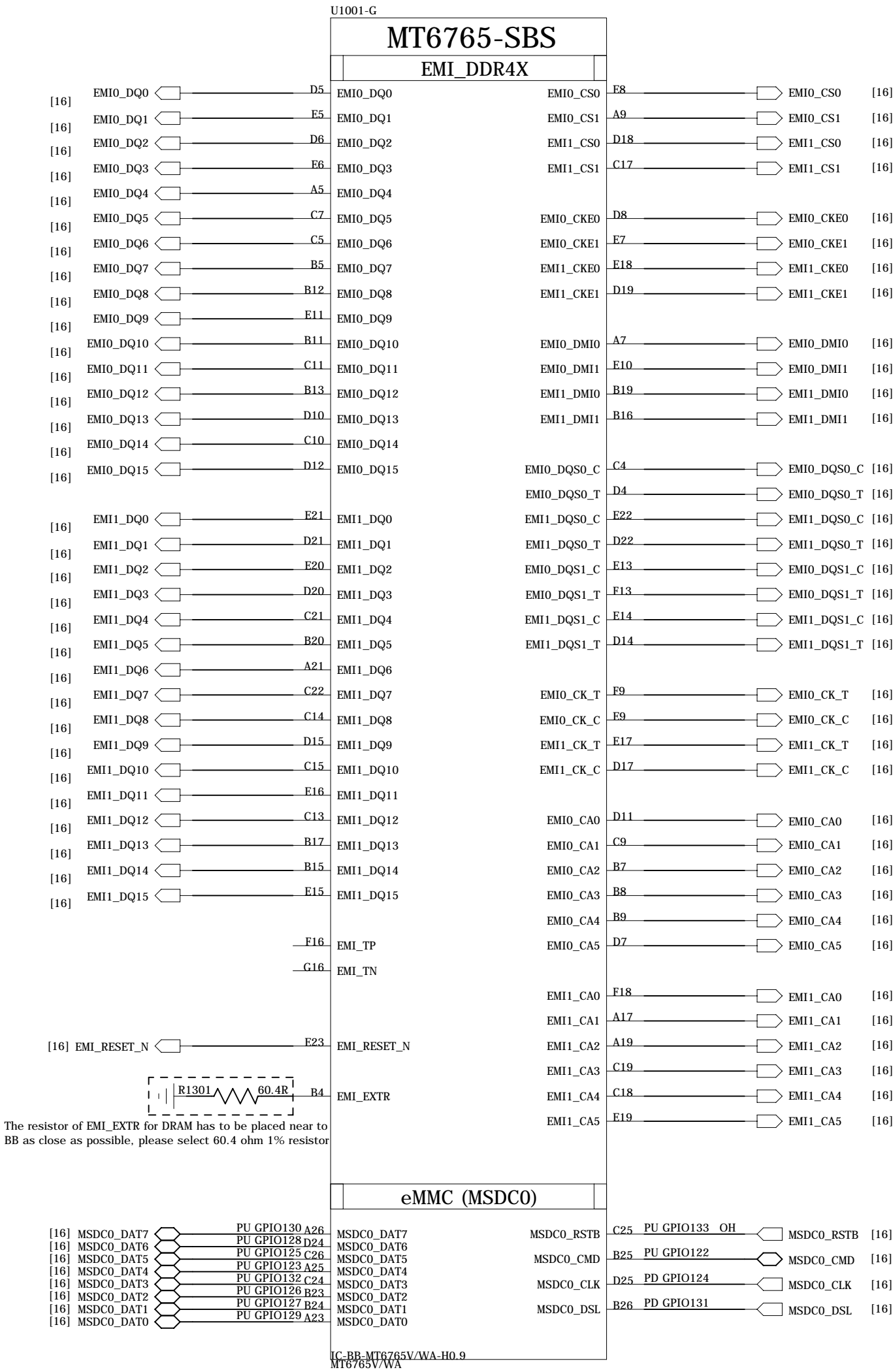
Note 11-1: To shunt a 1uF capacitor in the AUXIN ADC input to prevent noise coupling. It should be placed as close to BB as possible. Connect the unused AUX ADC input to GND.

Note 11-2: The de-coupling cap. for REFP (AF18 ball) have to be placed as close to BB as possible.



REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

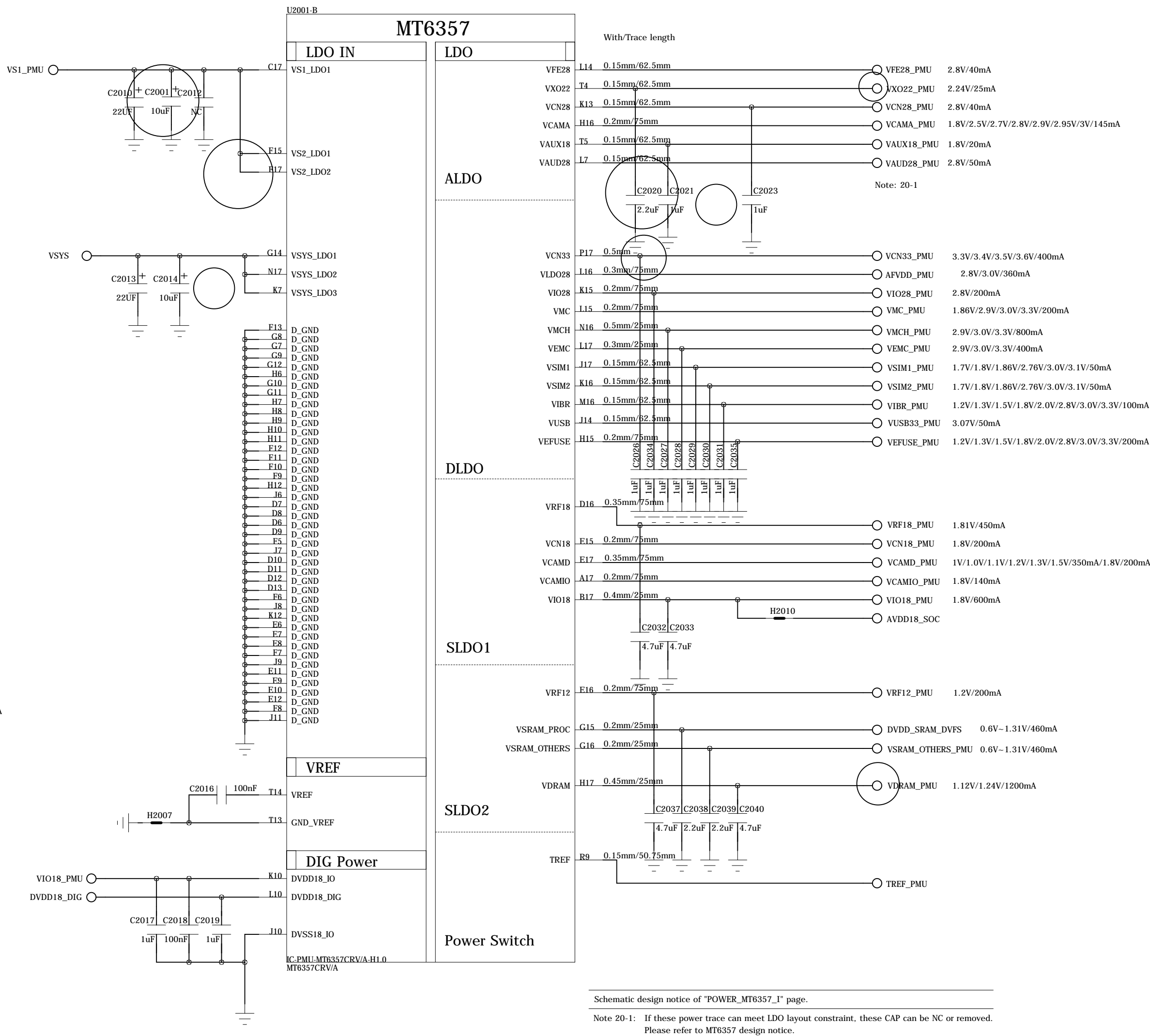
LPDDR4X\_EMI\_IF



COMPANY: TRANSSION HOLDINGS				MODEL: H624		Modified Date: 2018/11/13	
DRAWN	DJF/TS	DATED	20180822	TITLE: 13_BB_III		VERSION: V1.0	SHEET: 6 OF 24
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

## PMU\_LDO

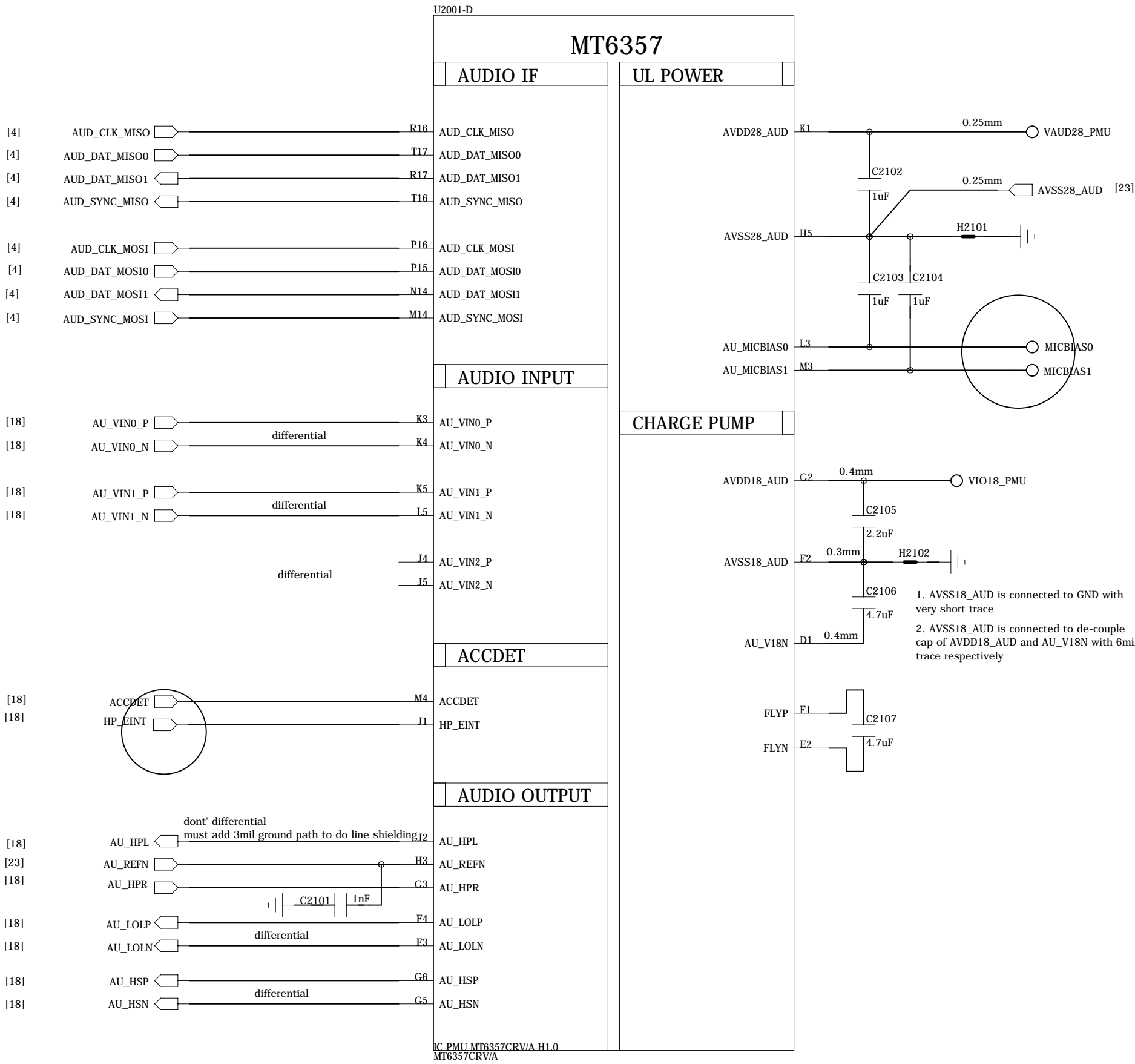


COMPANY: TRANSSION HOLDINGS				MODEL: H624		Modified Date: 2018/11/13	
DRAWN	DJF/TS	DATED	20180822	TITLE: 20_POWER_MT6357_I		VERSION: V1.0	SHEET: 7 OF 24
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

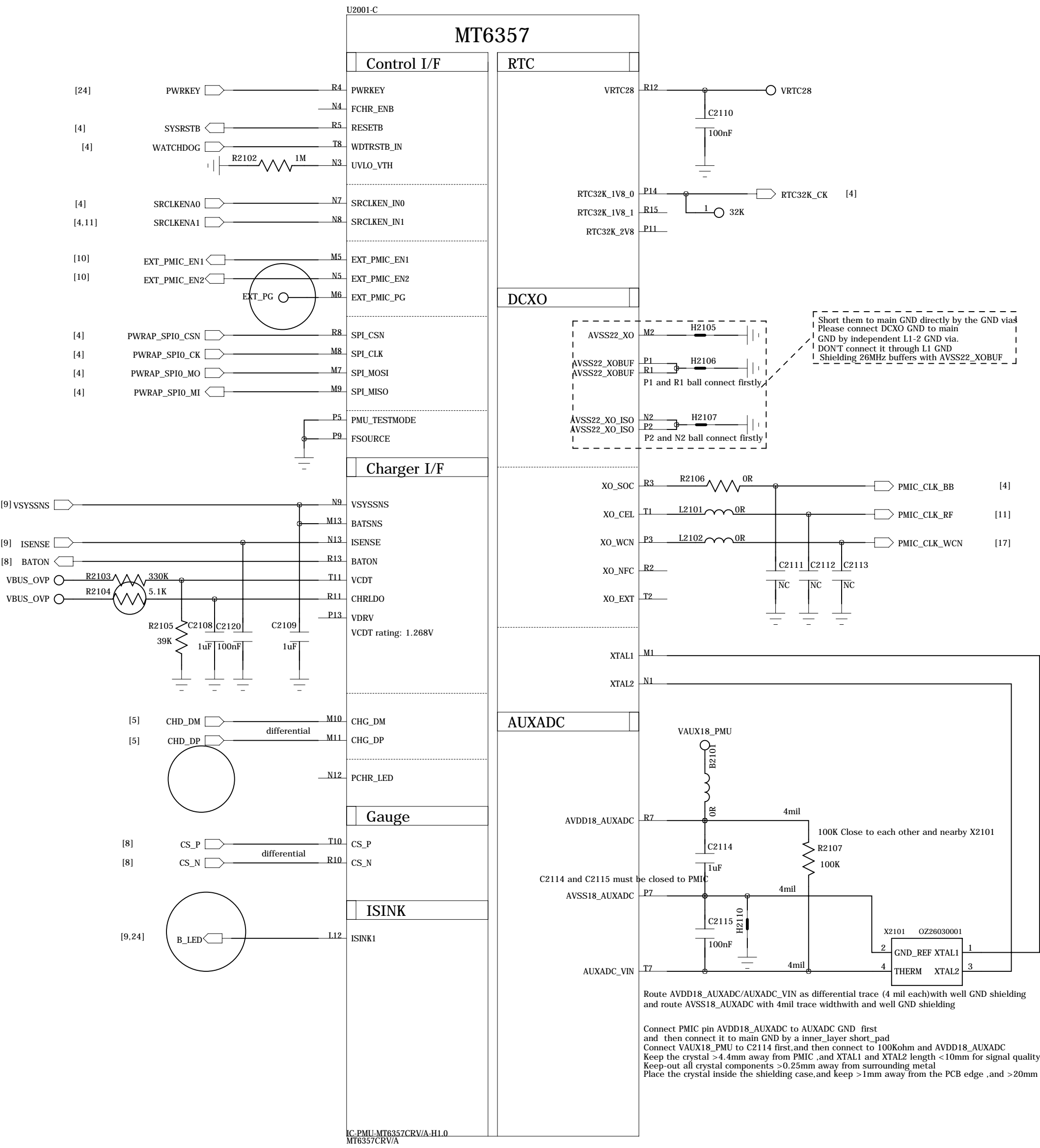
POWER\_MT6357\_II

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

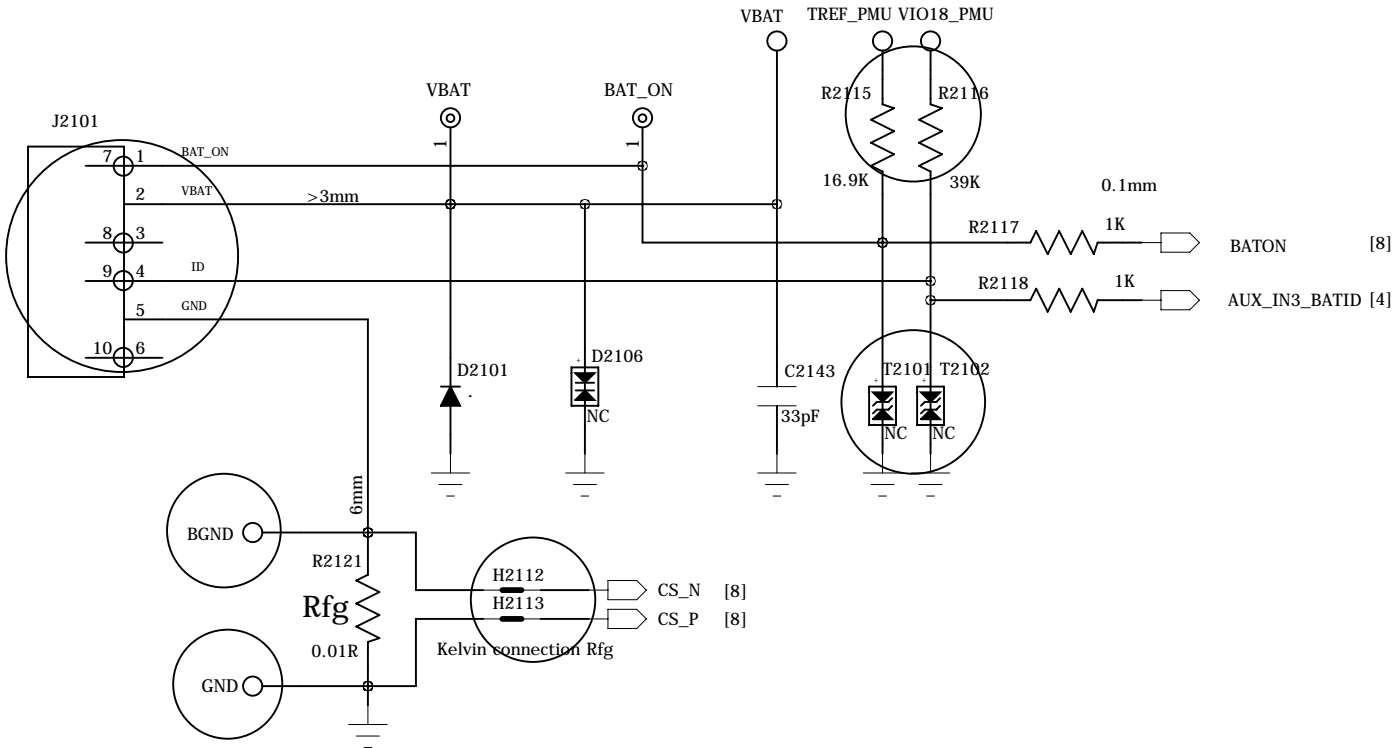
PMU\_AUDIO



PMU\_CLK



BATTERY CONNECTOR



COMPANY: TRANSSION HOLDINGS				MODEL: H624		Modified Date: 2018/11/13	
DRAWN	DJF/TS	DATED	20180822	TITLE: 21_POWER_MT6357_II		VERSION: V1.0	SHEET: 8 OF 24
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

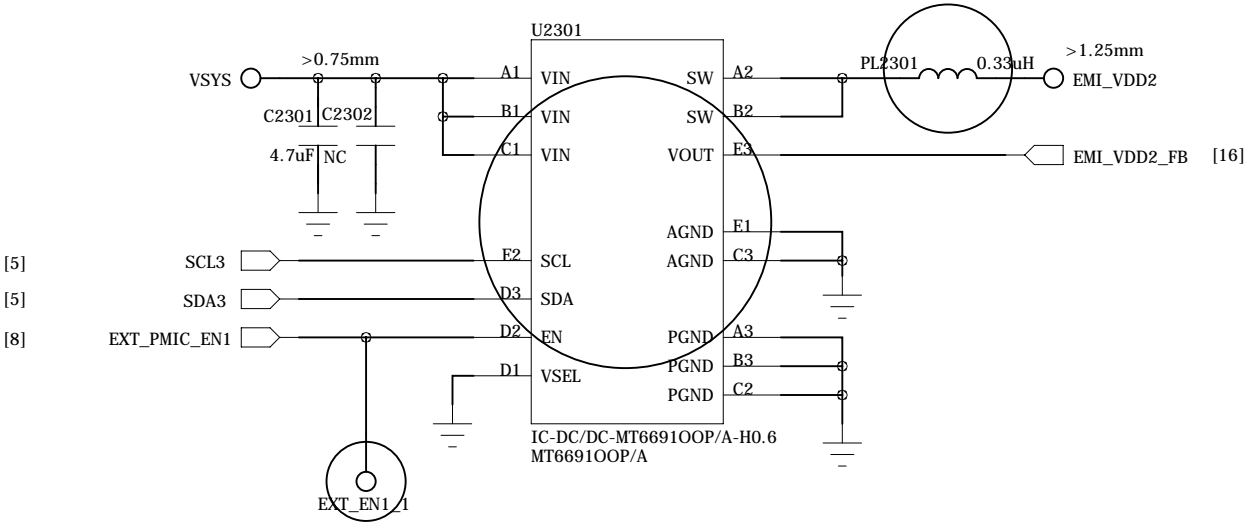


POWER\_THIRD-PARTY\_II

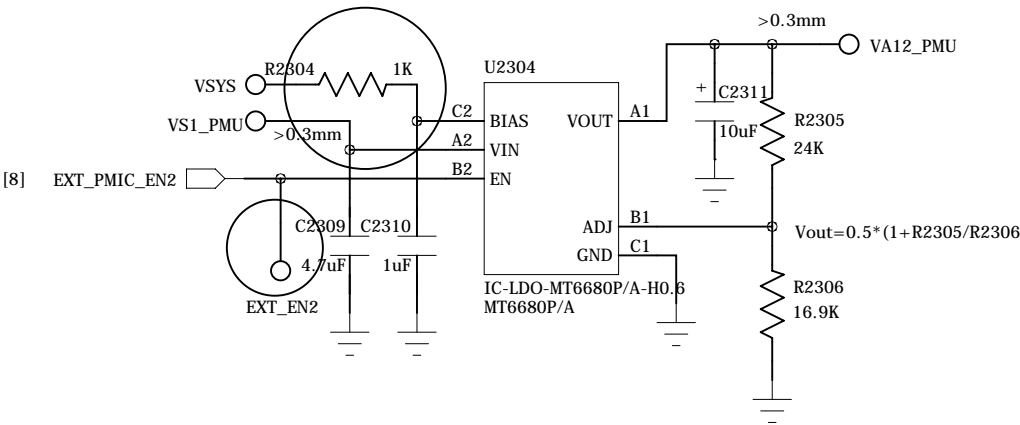
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

Ext. buck LP4X VDRAM

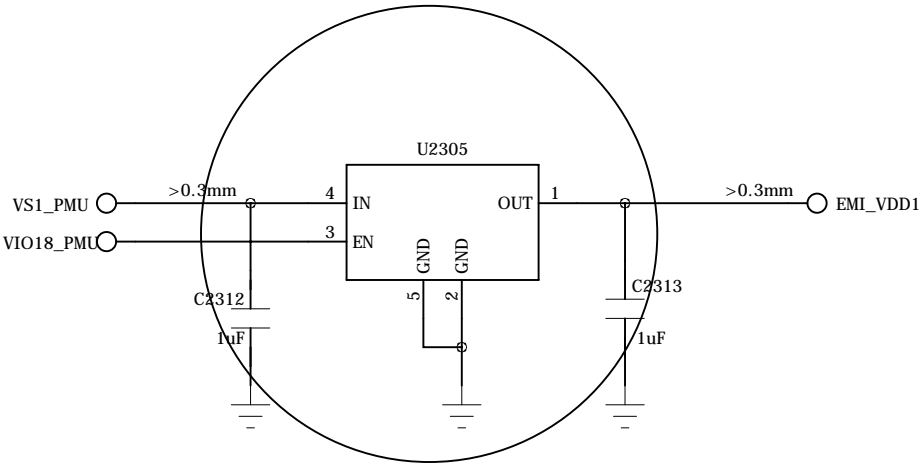
MT6691OOP/A / Ext. buck LP4X VDRAM (VDD2)  
I2C address: 0X57 (Write:0xAE, Read:0xAF)



LDO 1.2V for VA12



LPDDR4X VDD1 1.8V LDO



Ext. buck LP4X VDDQ

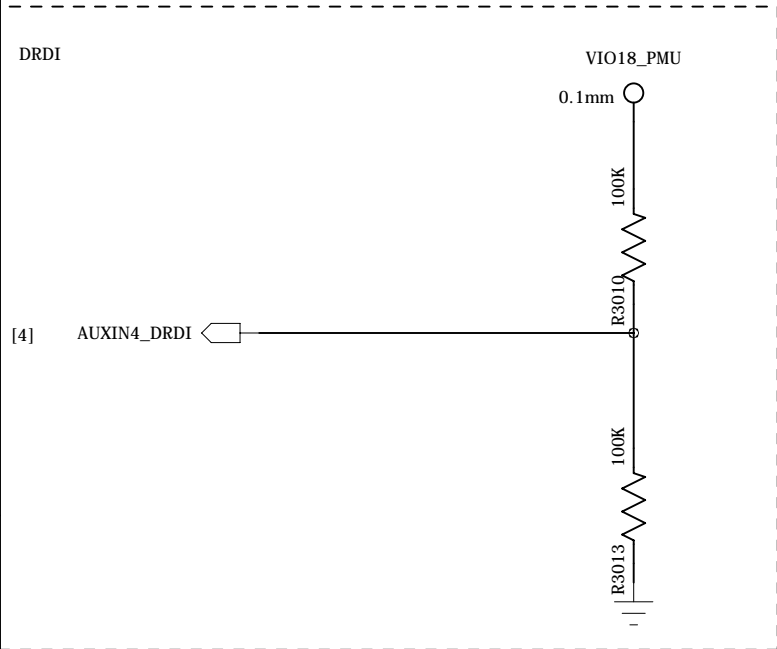
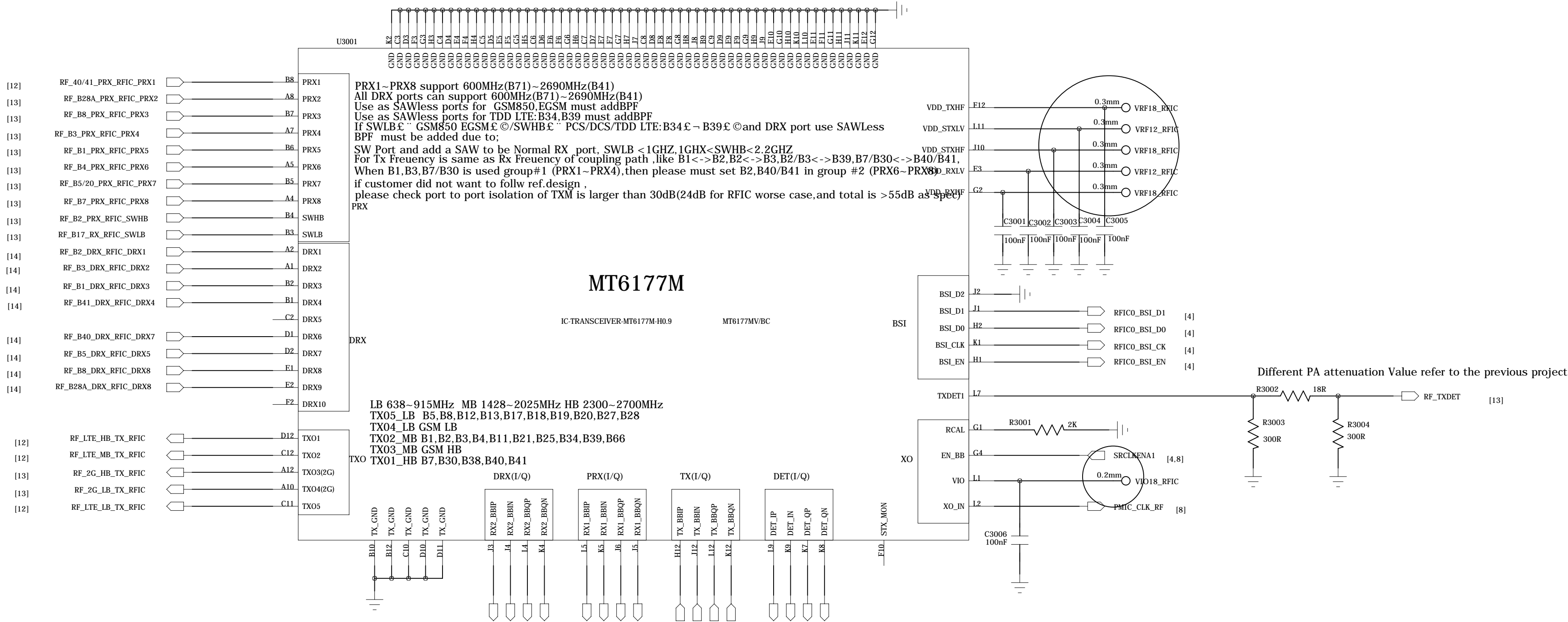
MT6691ZXP/A / Ext. buck LP4X VDRAM(VDDQ)  
I2C address: 0x50 (Write:0xA0, Read:0xA1)

COMPANY: TRANSSION HOLDINGS				MODEL: H624		Modified Date: 2018/11/13	
DRAWN	DJF/TS	DATED	20180822	TITLE: 23_POWER_THIRD-PARTY_II		VERSION: V1.0	SHEET: 10 OF 24
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

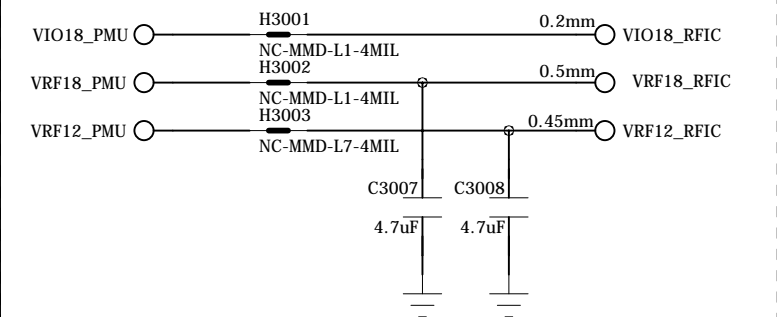


RF\_MT6177M\_PIN\_OUT

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



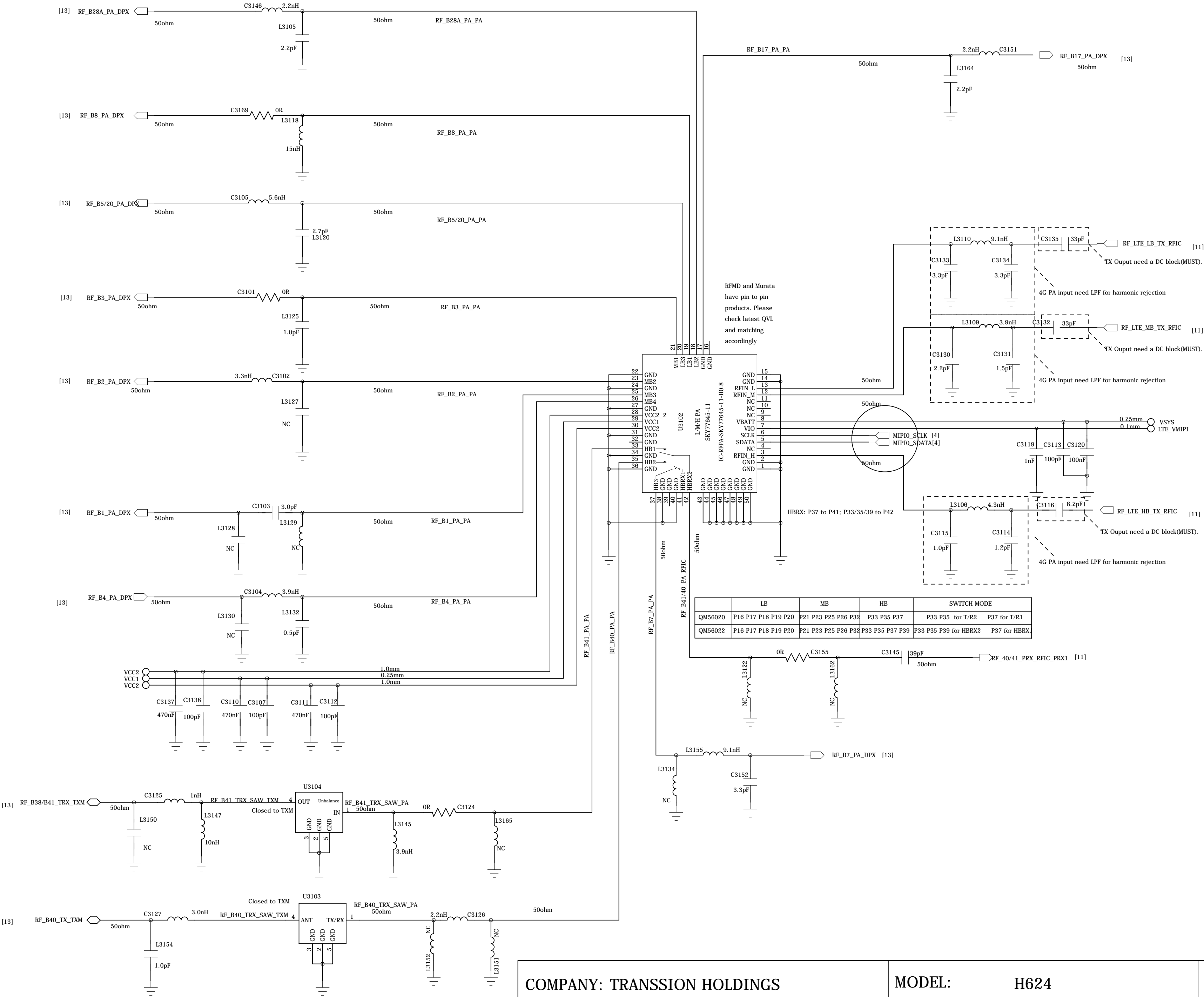
Power domain of MT6177M



COMPANY: TRANSSION HOLDINGS				MODEL: H624		Modified Date: 2018/11/13	
DRAWN	DJF/TS	DATED	20180822	TITLE: 30_RF_MT6177M_PIN_OUT		VERSION: V1.0	SHEET: 11 OF 24
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

RF\_MT6176\_RF\_TX

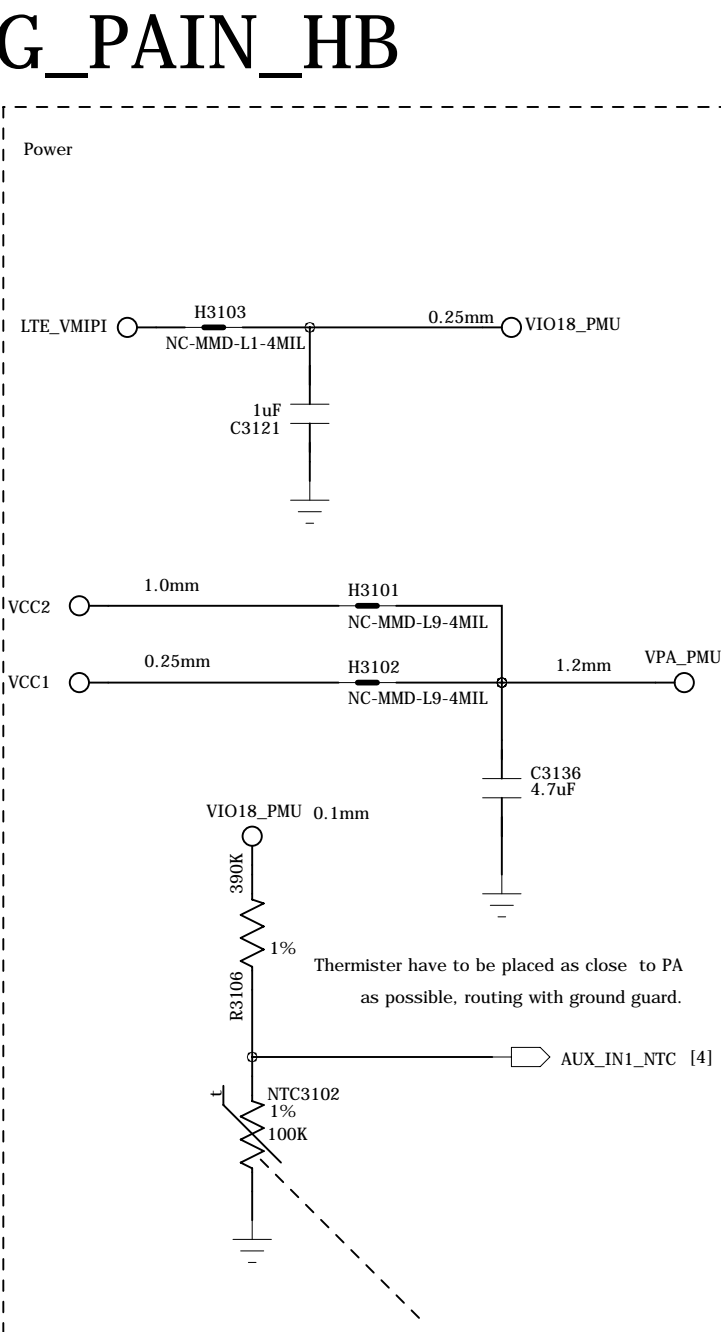
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



3/4G\_PAIN\_LB

3/4G\_PAIN\_MB

3/4G\_PAIN\_HB



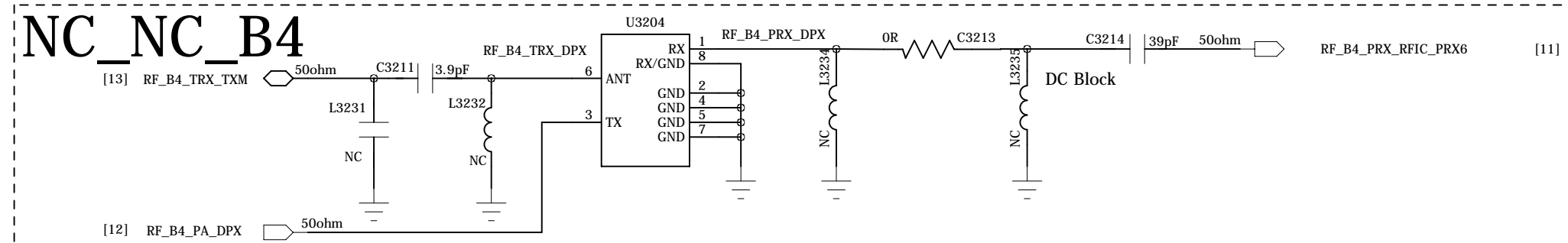
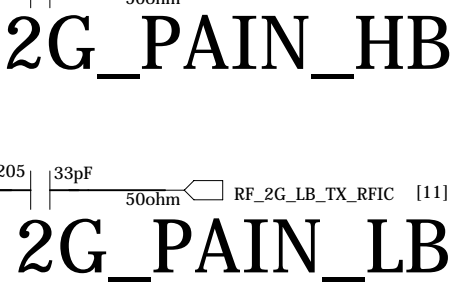
COMPANY: TRANSSION HOLDINGS				MODEL:	H624
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Modified Date:		2018/11/13	
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DRAWN	DJF/TS	DATED	20180822	TITLE:	31_RF_MT6177M_RF_TRX
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL

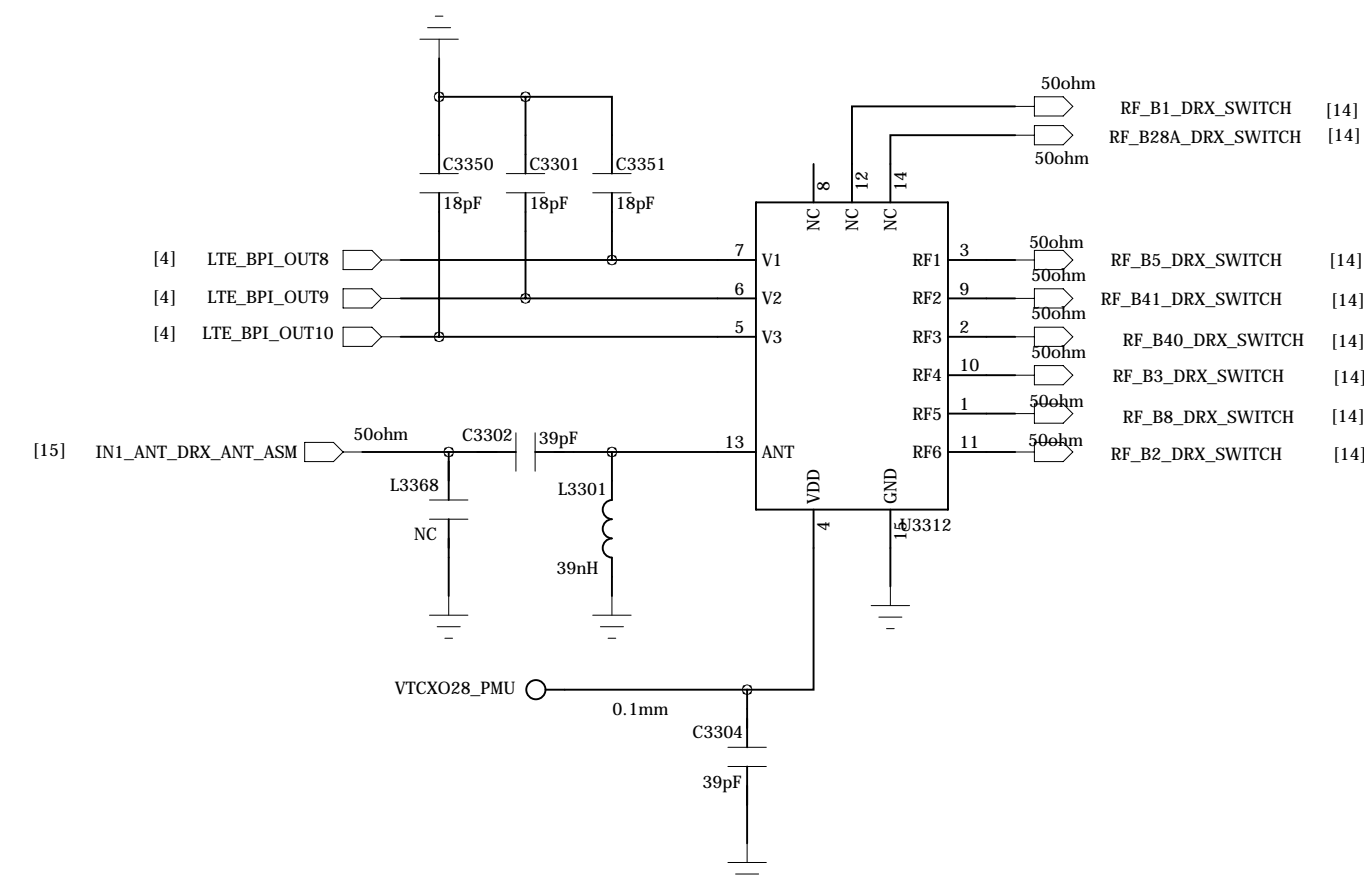
VERSION: V1.0	SHEET: 12 OF 24
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REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



COMPANY: TRANSSION HOLDINGS				MODEL: H624		Modified Date: 2018/11/13	
DRAWN	DJF/TS	DATED	20180822	TITLE: 32_RF_MT6177M_RF_PRX		VERSION: V1.0	SHEET: 13 OF 24
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

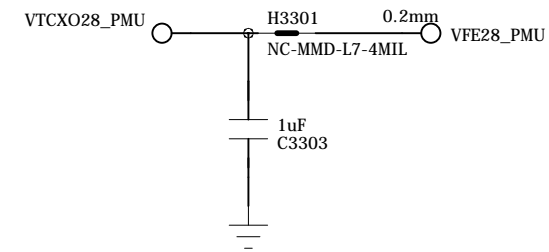
## SP8T



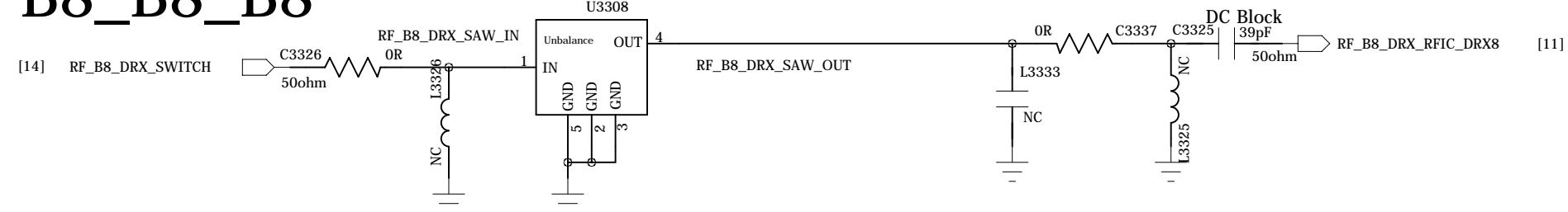
SP8T control logic										VC1613 control logic					
SP6T control logic											VC1	VC2	RF1	RF2	RF3
V1	V2	V3	RF1	RF2	RF3	RF4	RF5	RF6	RF7	RF8	H	L	Y	N	N
L	L	L	Y	N	N	N	N	N	N	N	H	L	Y	N	N
L	L	H	N	Y	N	N	N	N	N	N	H	H	N	Y	N
L	H	L	N	N	Y	N	N	N	N	N	N	H	N	N	Y
L	H	H	N	N	N	Y	N	N	N	N	N	N	N	N	N
H	L	L	N	N	N	N	Y	N	N	N	N	N	N	N	N
H	L	H	N	N	N	N	N	Y	N	N	N	N	N	N	N
H	H	L	N	N	N	N	N	N	Y	N	N	N	N	N	N
H	H	H	N	N	N	N	N	N	N	Y	N	N	N	N	Y

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

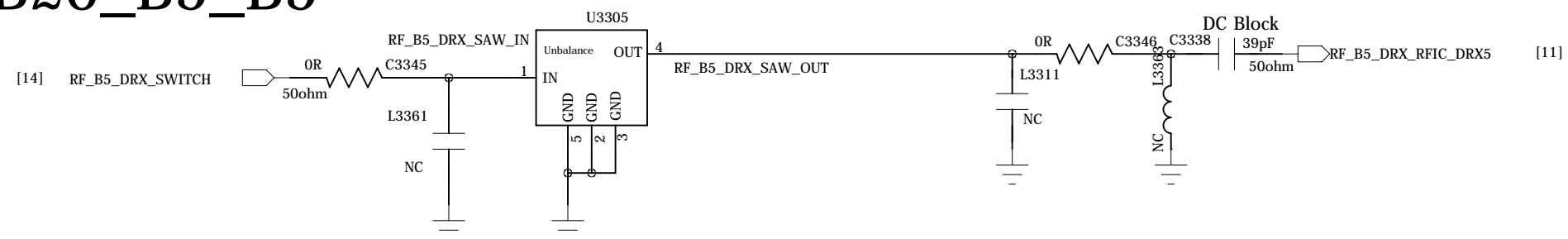
Power



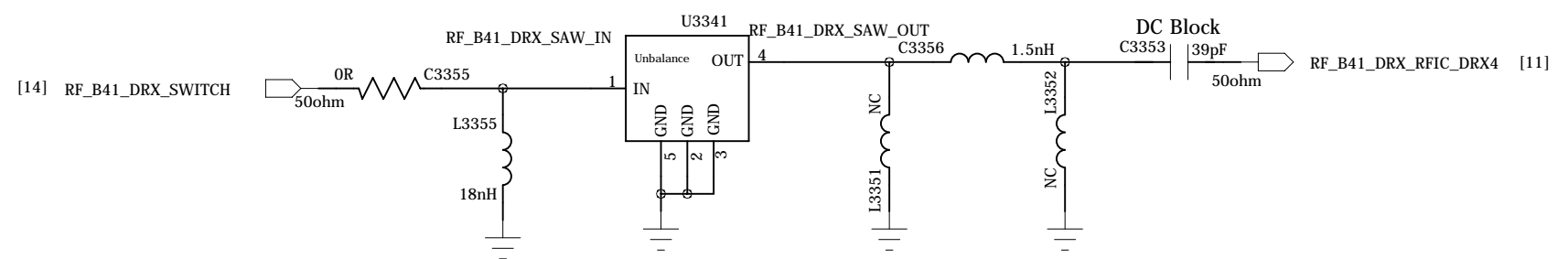
B8\_B8\_B8



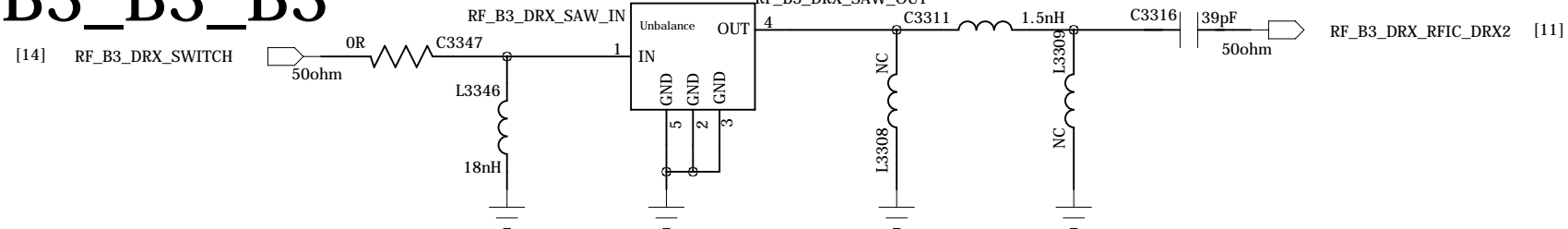
B20\_B5\_B5



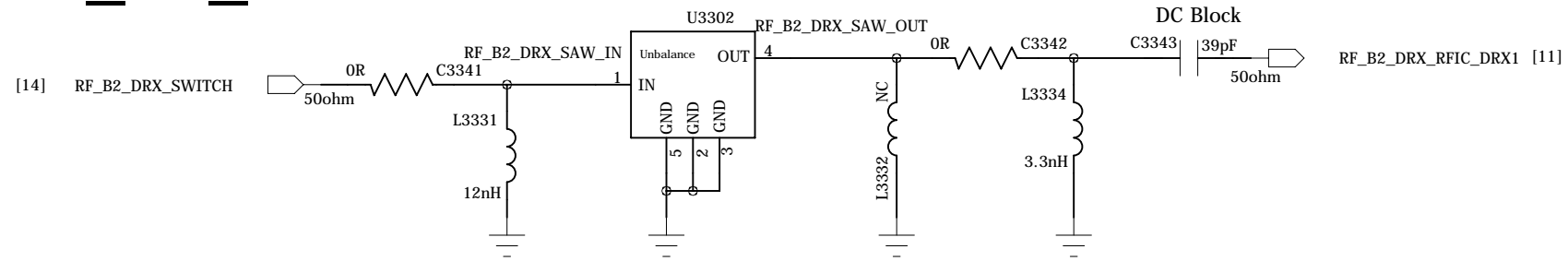
B7\_B41\_B7



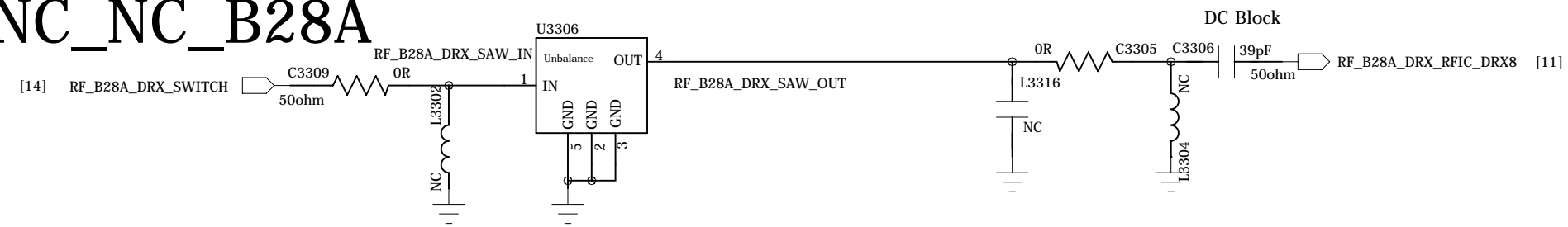
B3\_B3\_B3



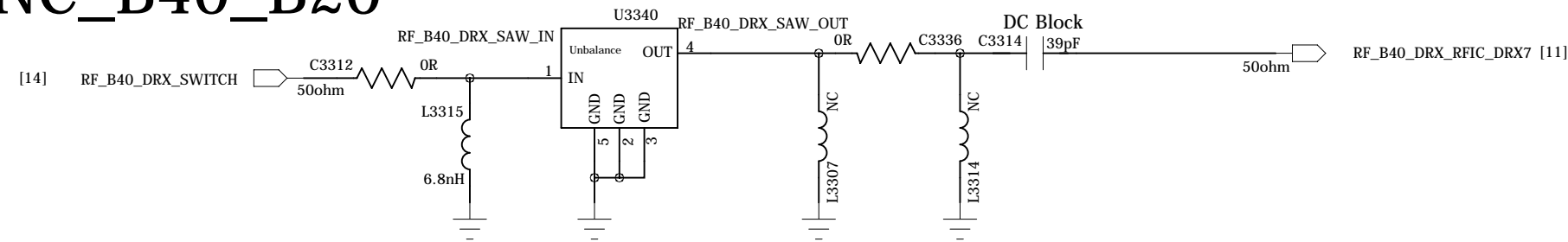
## NC\_B1\_B1/4



NC\_NC\_B28A



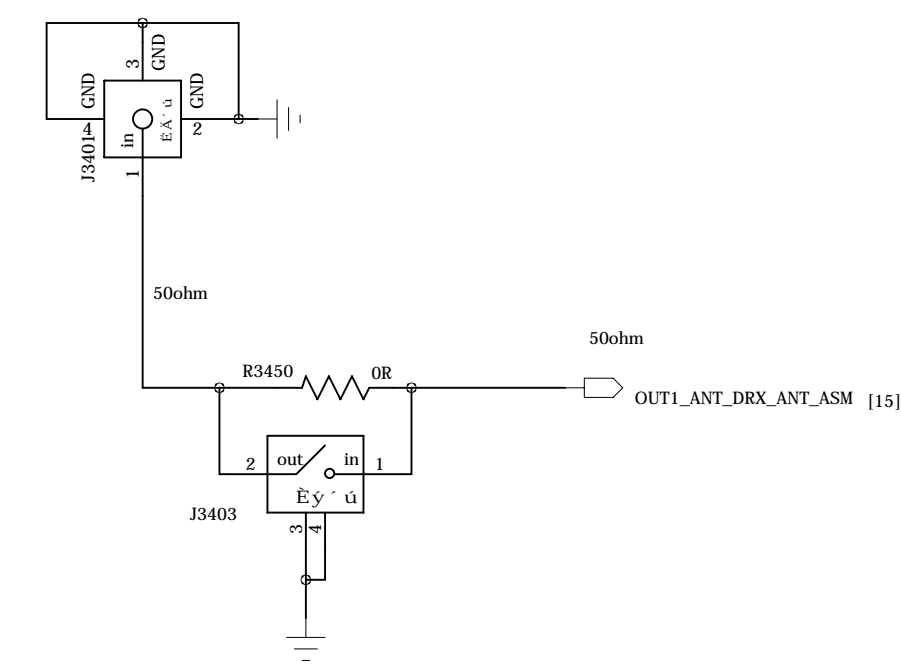
## NC\_B40\_B20



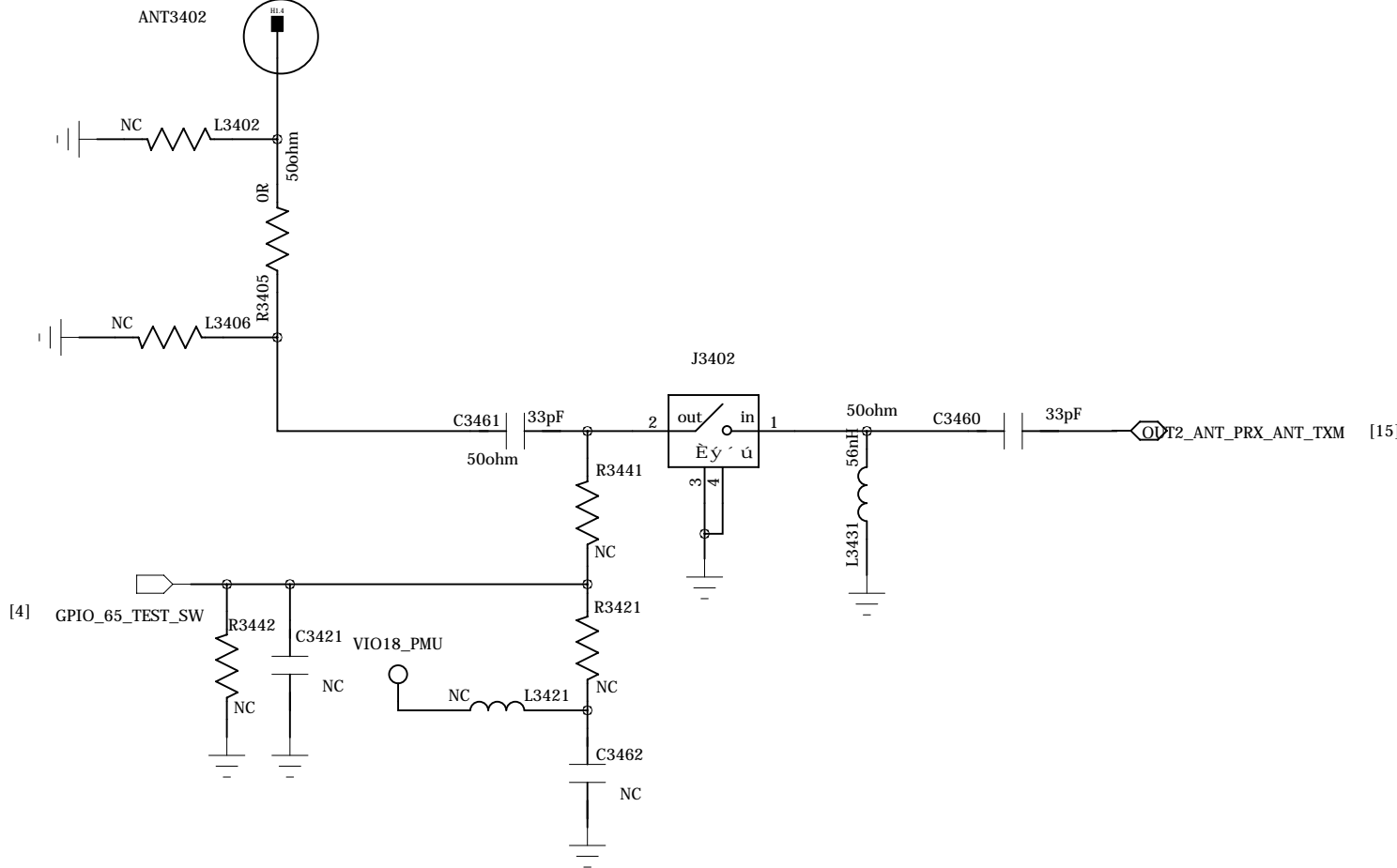
COMPANY: TRANSSION HOLDINGS				MODEL: H624		Modified Date: 2018/11/13	
DRAWN	DJF/TS	DATED	20180822	TITLE: 33_RF_MT6177M_RF_DRX		VERSION: V1.0	SHEET: 14 OF 24
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

RF\_MT6177M\_RF\_ANT

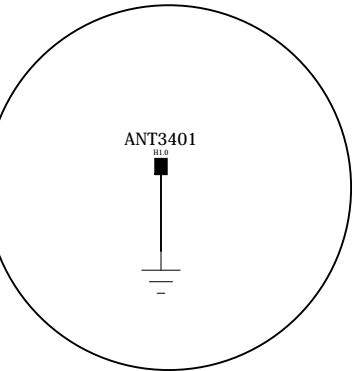
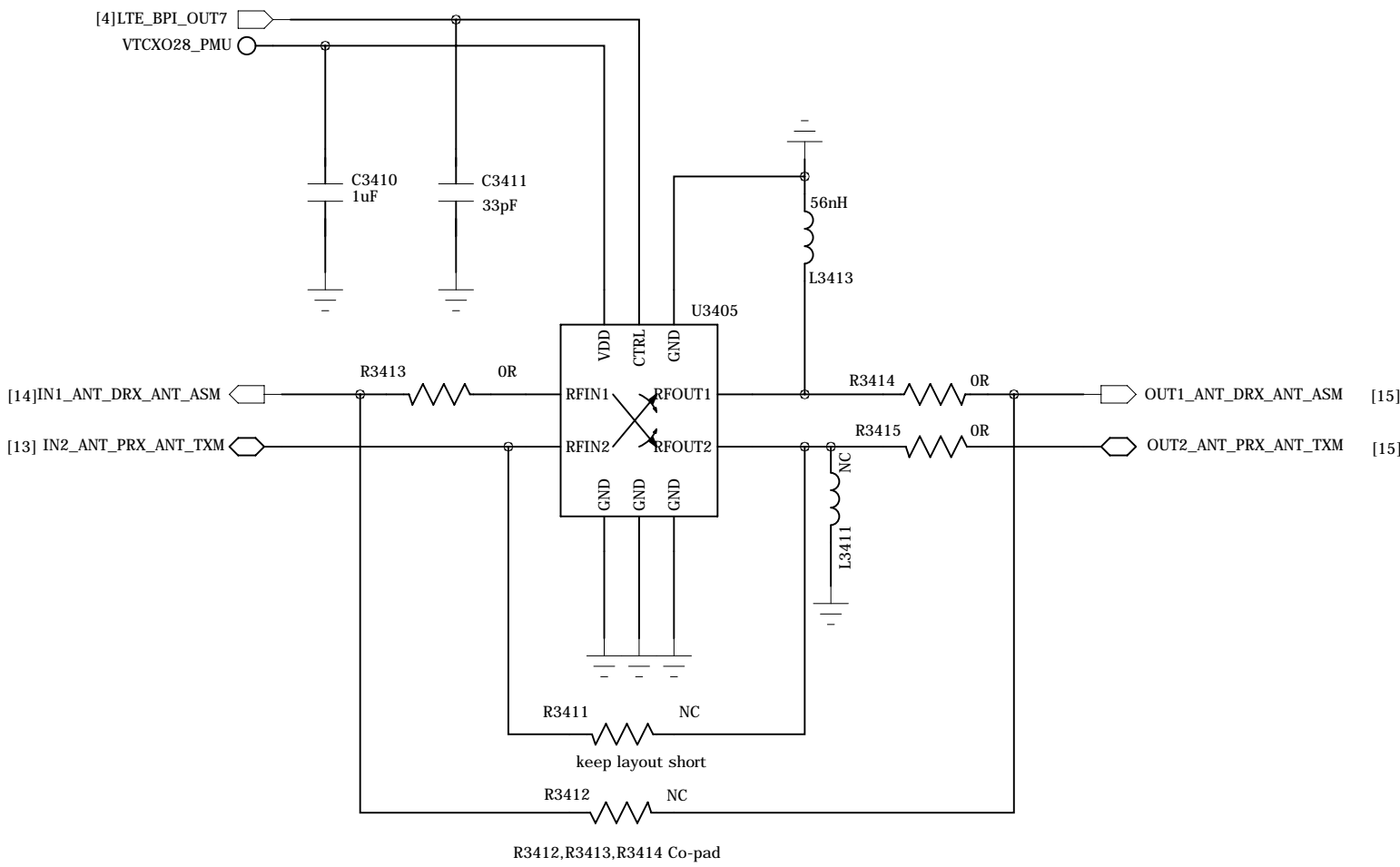
DRX ANT  
791~821MHz + 1805~2690MHz



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

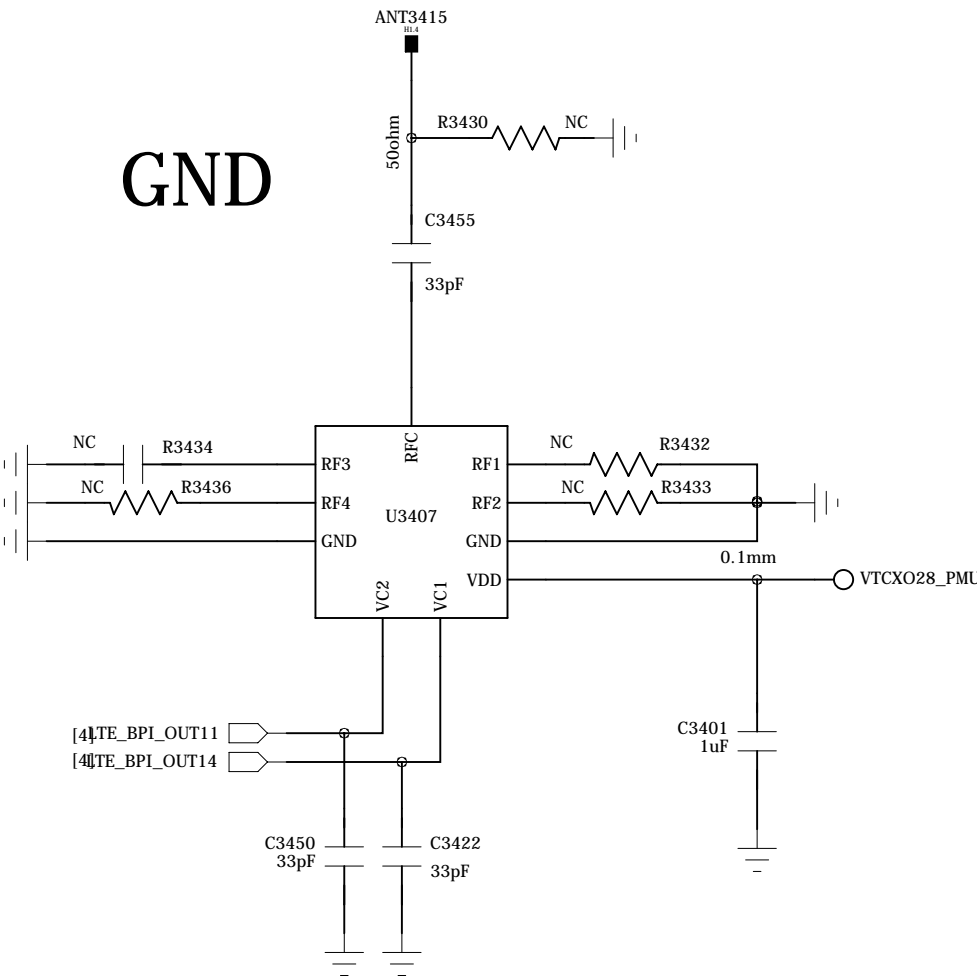


DPDT

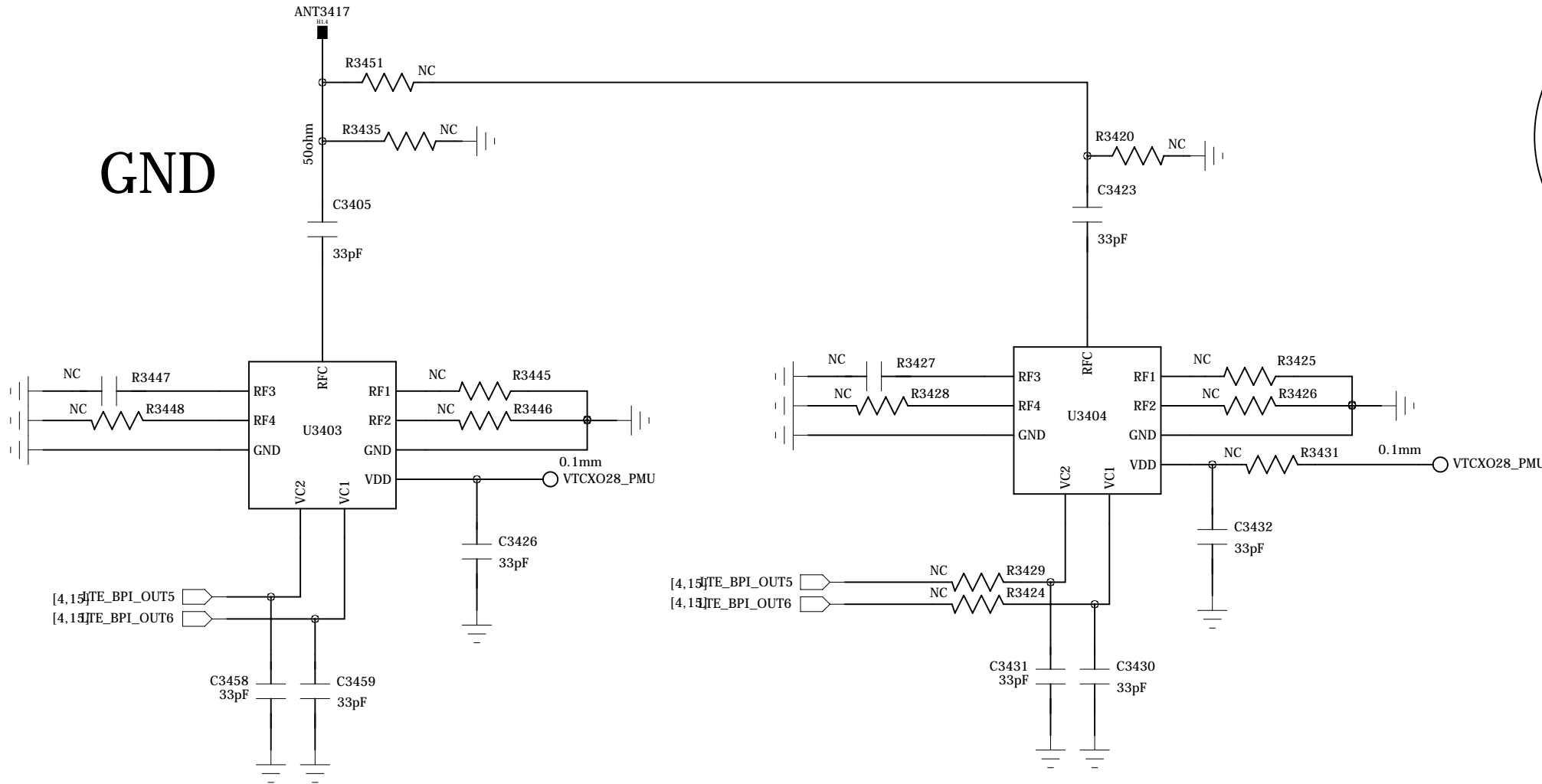


ANT switch

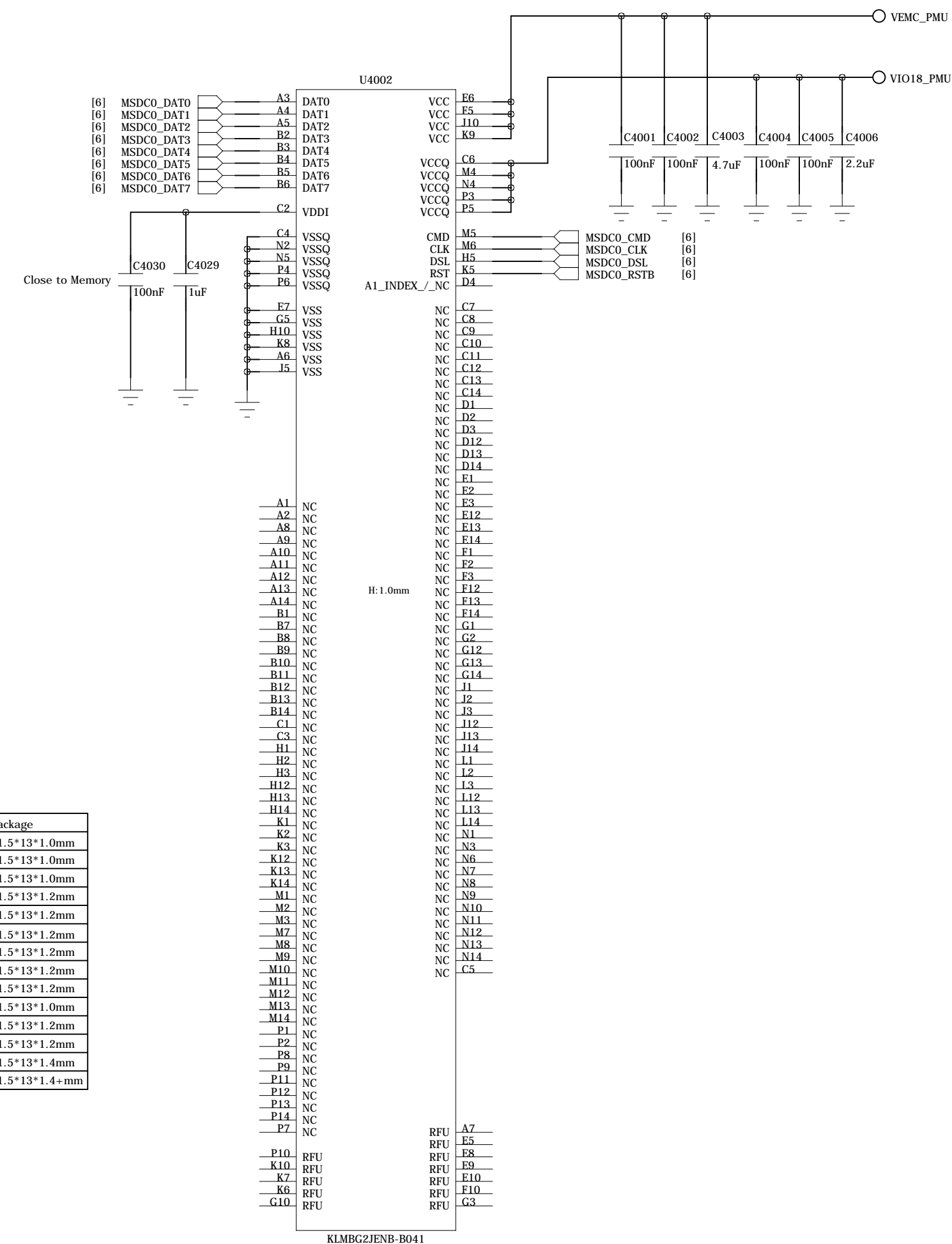
RF1119A & RF1694 control logic					
VC1	VC2	RF1	RF2	RF3	RF4
L	L	Y	N	N	N
L	H	N	Y	N	N
H	L	N	N	Y	N
H	H	N	N	N	Y



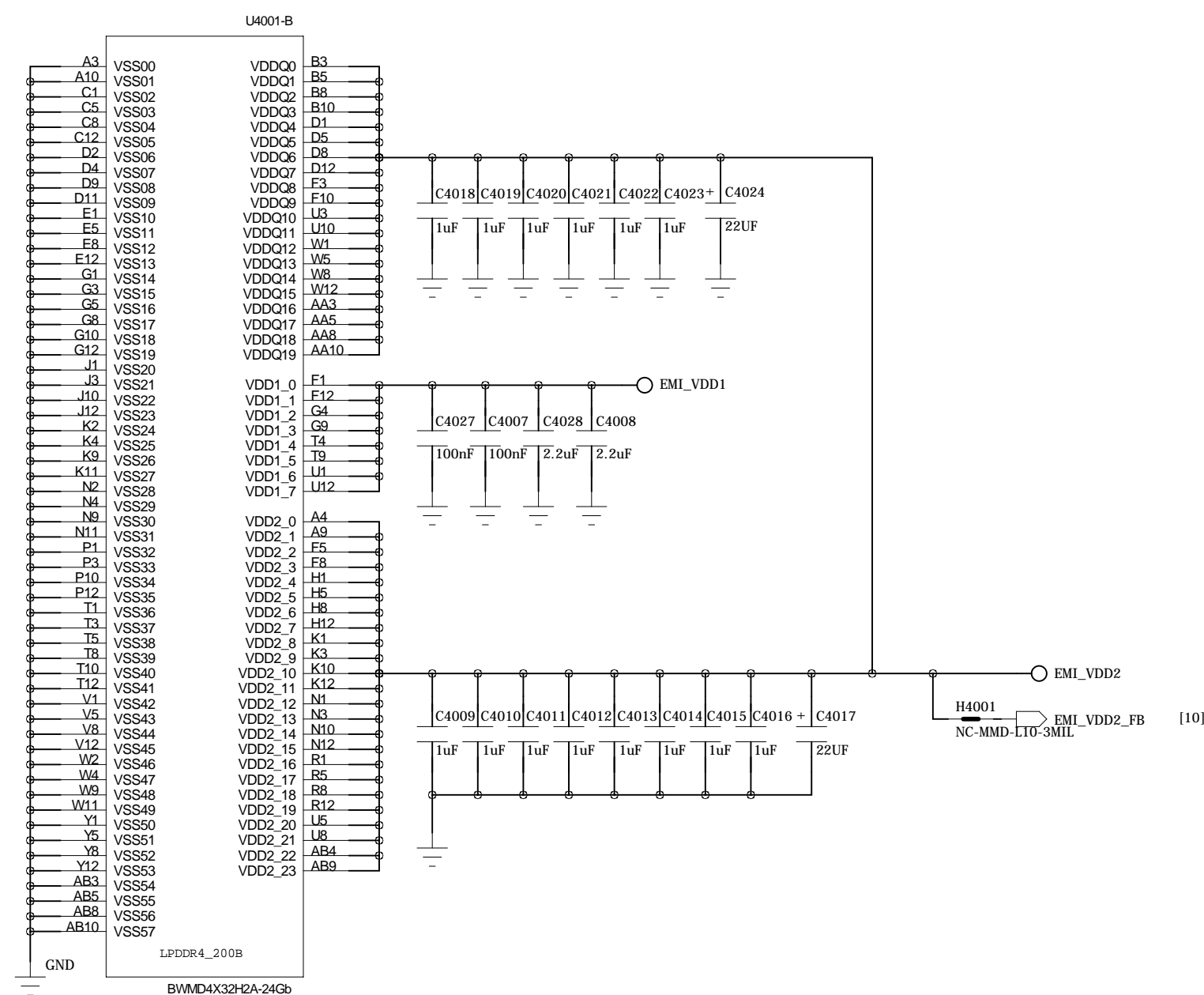
GND



## MEMORY\_eMMC

153 ball eMMC

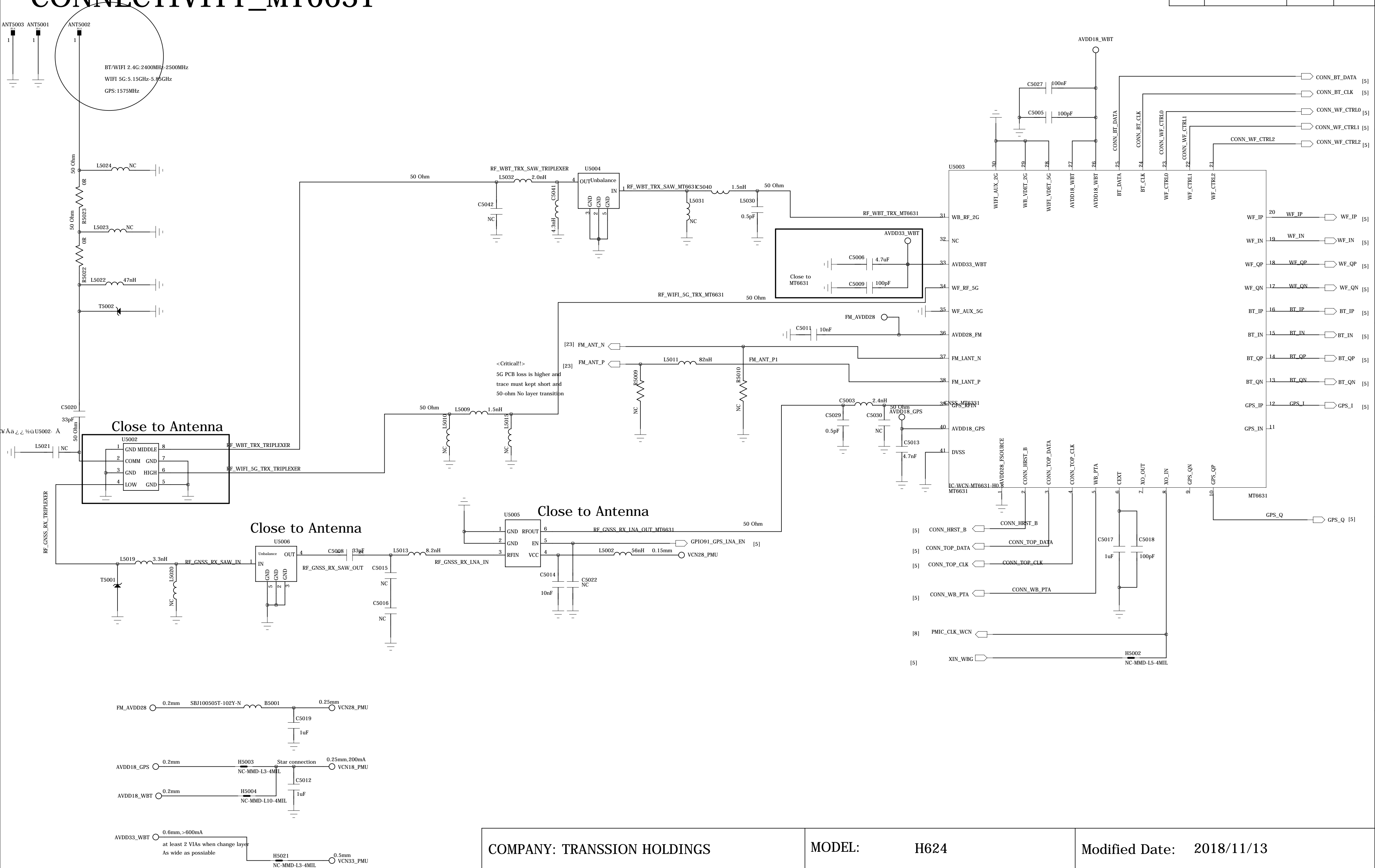
Type	Density	Package
EMMC 153Ball	8GB	11.5*13*1.0mm
	16GB	11.5*13*1.0mm
	32GB	11.5*13*1.0mm
	64GB	11.5*13*1.2mm
	128GB	11.5*13*1.2mm
LPDDR4 254Ball	8Gb	11.5*13*1.2mm
	16Gb	11.5*13*1.2mm
	24Gb	11.5*13*1.2mm
	32Gb	11.5*13*1.2mm
EMCP4 254Ball	16Gb+8Gb	11.5*13*1.0mm
	16Gb+16Gb	11.5*13*1.2mm
	32Gb+16Gb	11.5*13*1.2mm
	32Gb+24Gb	11.5*13*1.4mm
	64Gb+32Gb	11.5*13*1.4mm



COMPANY: TRANSSION HOLDINGS				MODEL: H624		Modified Date: 2018/11/13	
DRAWN	DJF/TS	DATED	20180822	TITLE: 40_MEMORY_EMMC_LPDDR4		VERSION: V1.0	SHEET: 16 OF 24
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

CONNECTIVITY\_MT6631

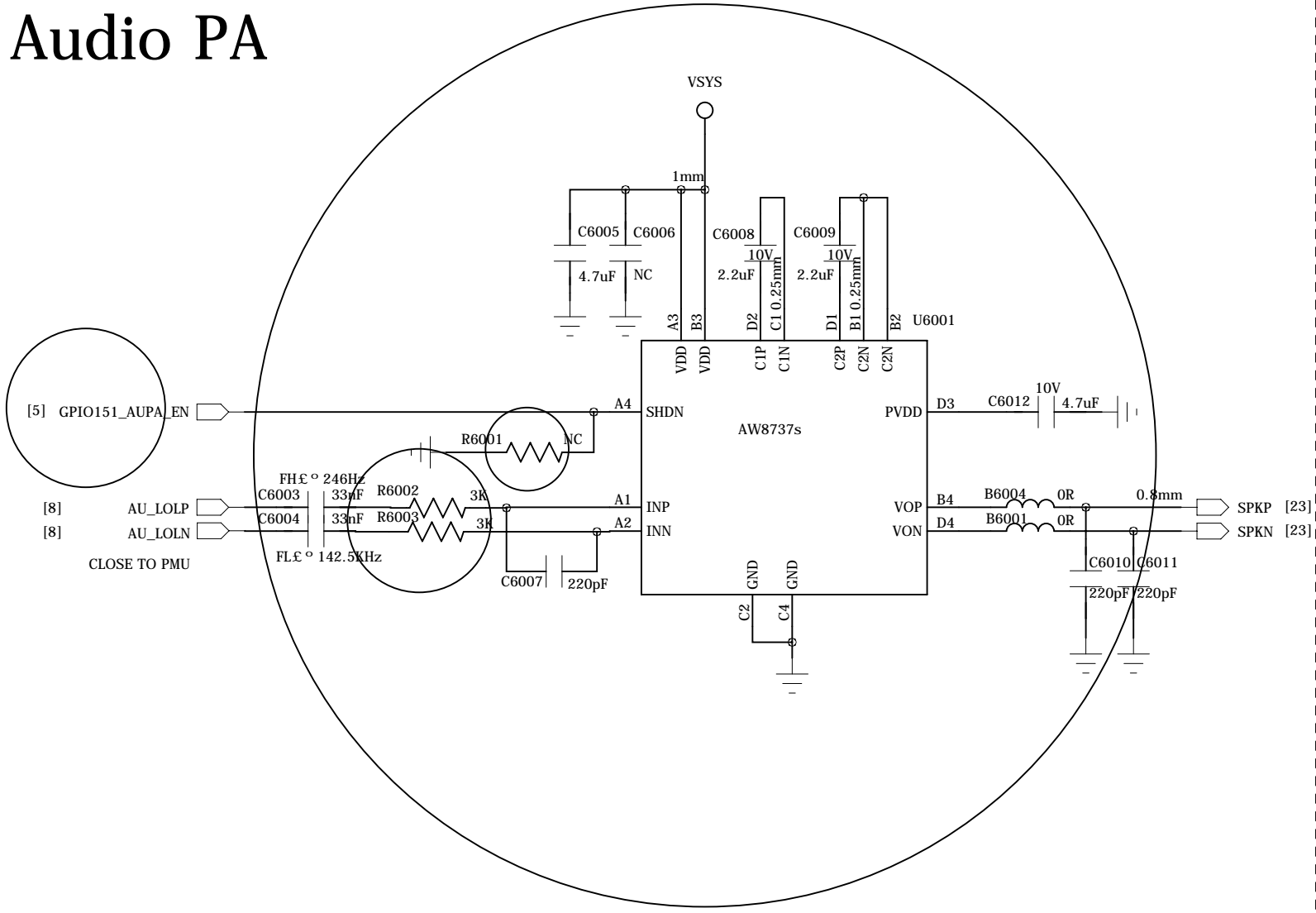
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



COMPANY: TRANSSION HOLDINGS				MODEL: H624		Modified Date: 2018/11/13	
DRAWN	DJF/TS	DATED	20180822	TITLE: 50_CONNECTIVITY_MT6631		VERSION: V1.0	SHEET: 17 OF 24
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

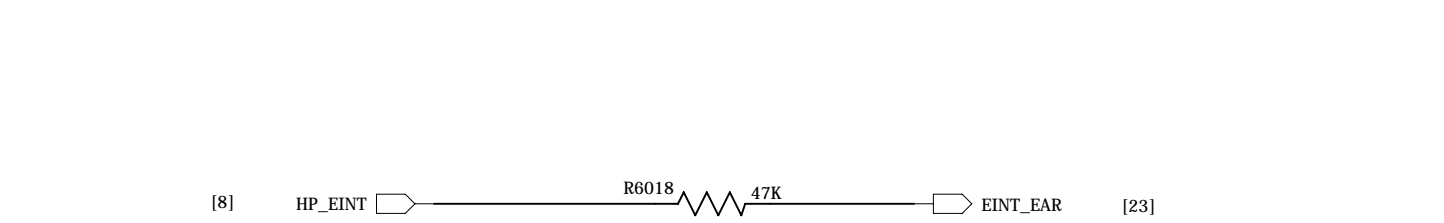
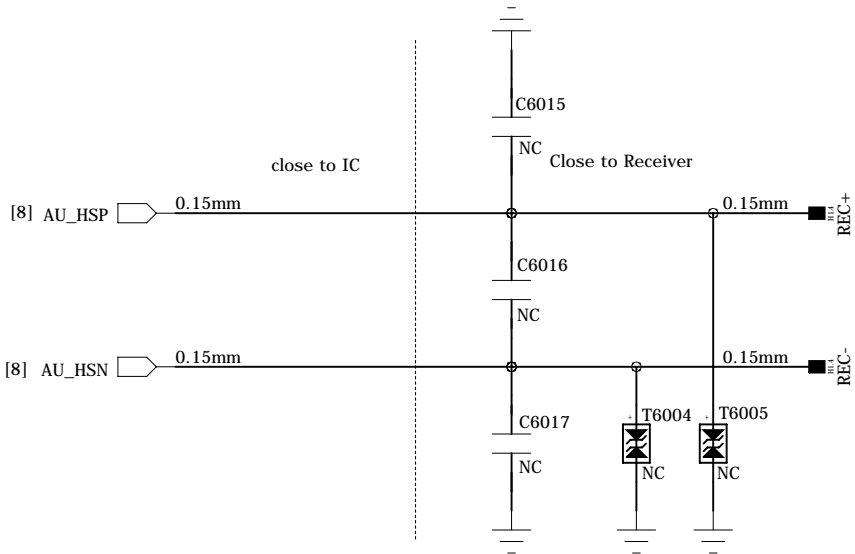
PERI\_AUDIO\_IO

Audio PA

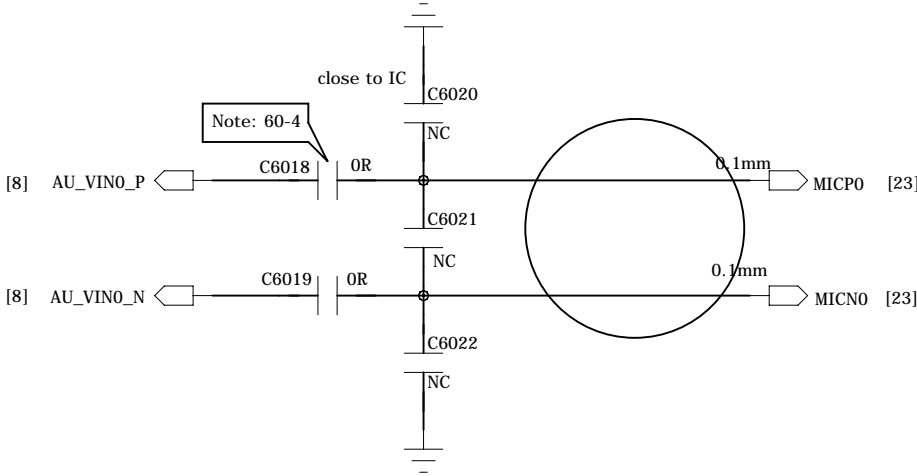


SPK

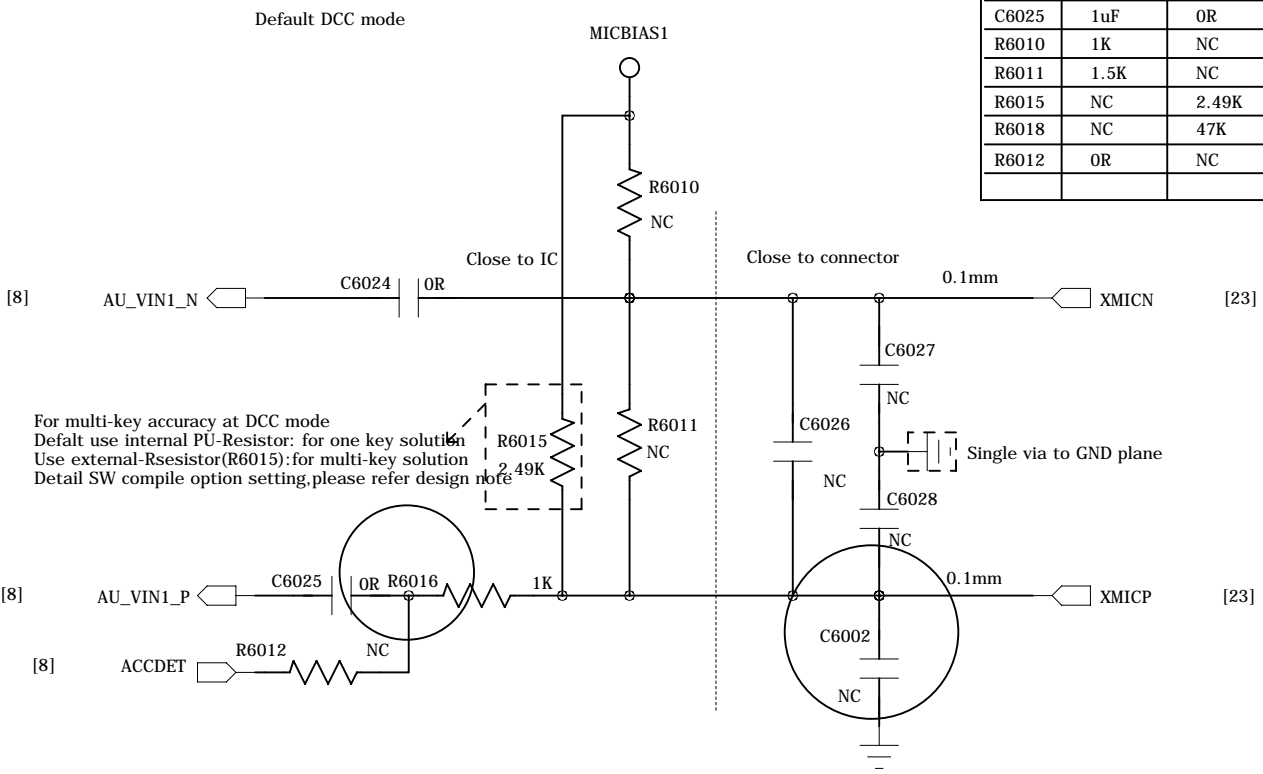
Receiver



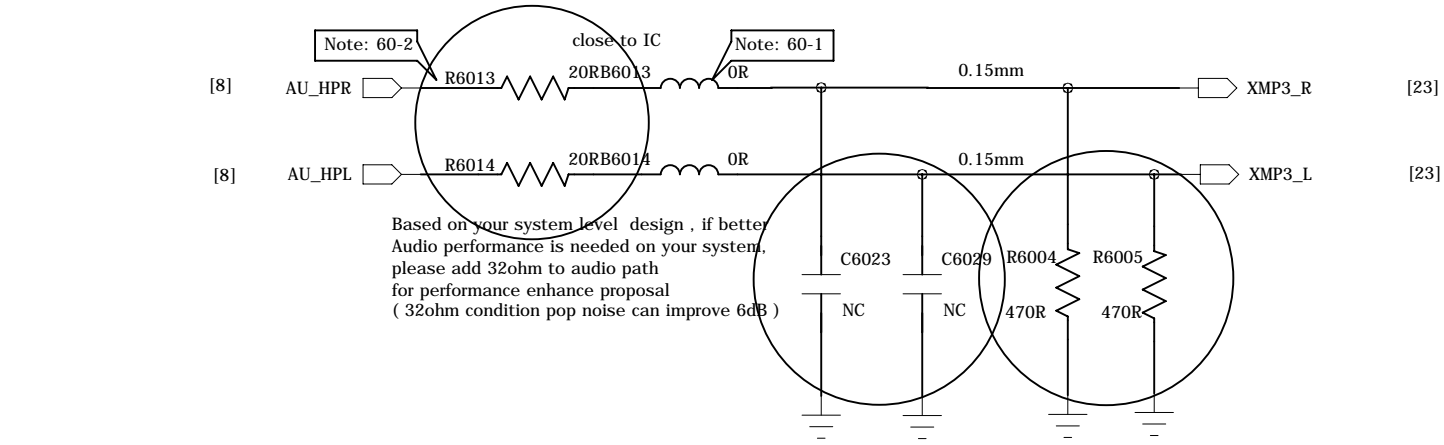
Main MICPHONE



Earphone MICPHONE



Earphone Receiver



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).OR for DCC mode.			

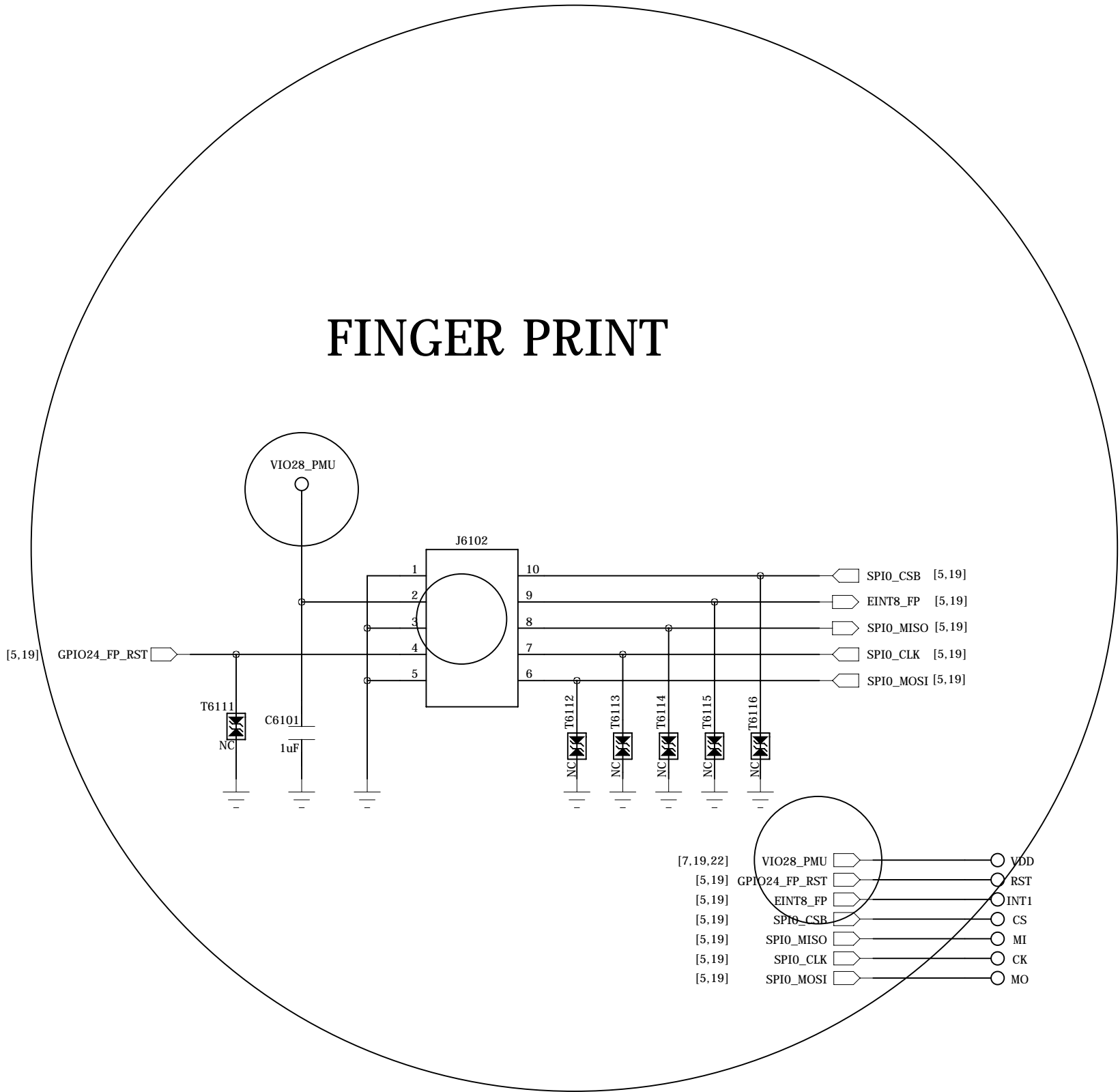
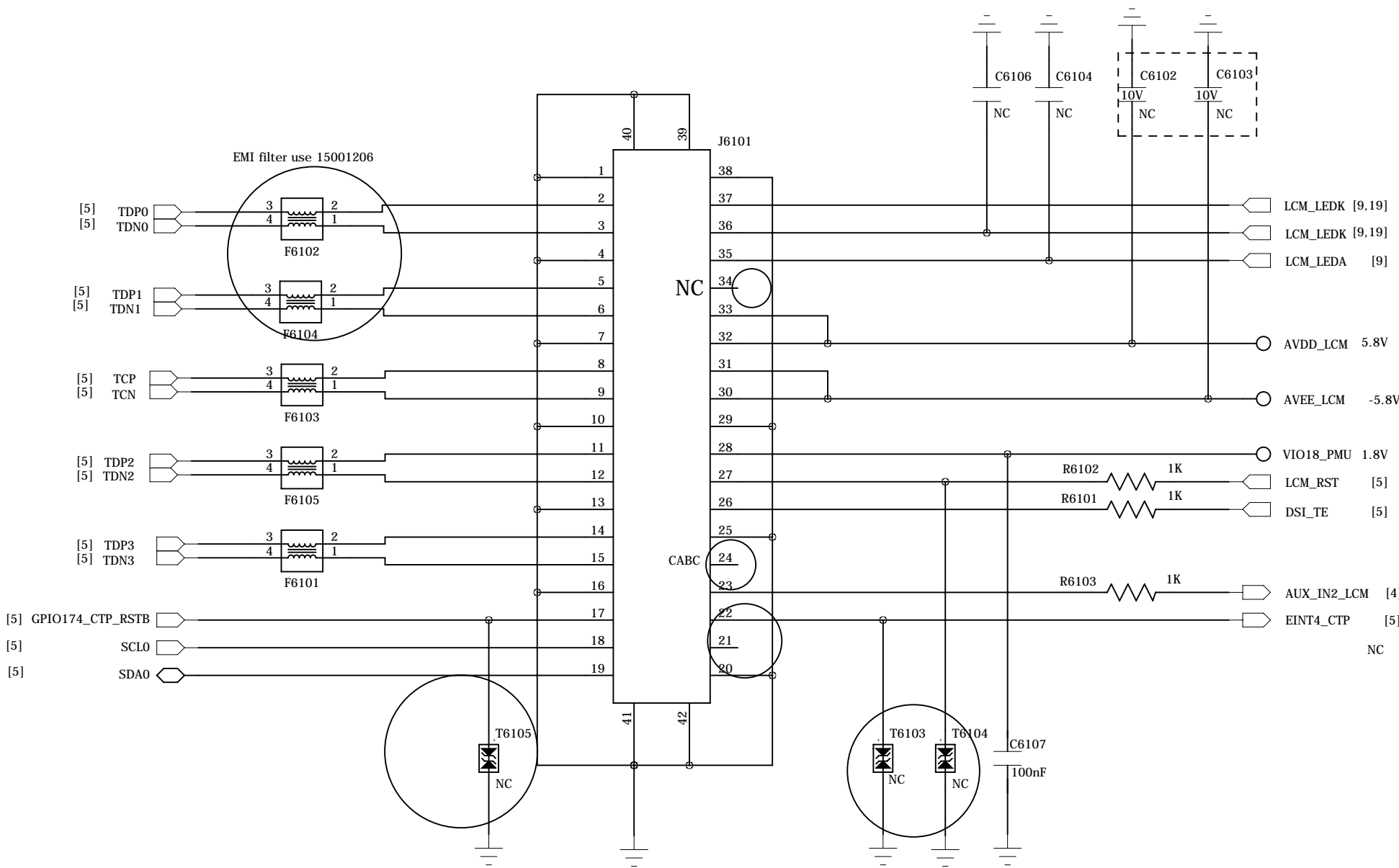
COMPANY: TRANSSION HOLDINGS				MODEL: H624		Modified Date: 2018/11/13	
DRAWN	DJF/TS	DATED	20180822	TITLE: 60_PERI_AUDIO		VERSION: V1.0	SHEET: 18 OF 24
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		



REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

LCD\_CTP\_INTERFACE      6.19HD+

CTP (NT35672) I2C address: 0X01 (Write:0x02, Read:0x03)



COMPANY: TRANSSION HOLDINGS				MODEL:            H624		Modified Date:    2018/11/13	
DRAWN	DJF/TS	DATED	20180822	TITLE:     61_PERI_LCM_CTP_FP		VERSION: V1.0	SHEET: 19   OF   24
CHECKED	<CHECKED>	DATED	<   >	Confidentiality	CONFIDENTIAL		

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

		SENSOR	I2C Address
8M		SENSOR(GC8034W) MOTOR(DW9714P)	Write: 0x6E Read: 0x6F Write: 0x18 Read: 0x19
16M		SENSOR(S5K2P7SQ03-FCX9) MOTOR(DW9718S) EEPROM(BL24SA64- CS)	Write: 0x20 Read: 0x21 Write: 0x18 Read: 0x19 Write: 0xA0 Read: 0xA1
13M	Sunvin	SENSOR(S5K3L6XX03-FCX9) MOTOR(DW9718S) EEPROM(P24C64E-C4H-MIR)	Write: 0x20 Read: 0x21 Write: 0x18 Read: 0x19 Write: 0xA0 Read: 0xA1
	Truly SHINETECH	SENSOR(S5K3L6XX03-FCX9) MOTOR(DW9718S) EEPROM(BL24SA64- CS)	Write: 0x20 Read: 0x21 Write: 0x18 Read: 0x19 Write: 0xA0 Read: 0xA1

## REAR CAMERA Tele (8M+FF)

The diagram shows the electrical connection between the VCAMA\_M2 module and the CON-BTBR-30P-ASE5S3010-H0.8-R module. The VCAMA\_M2 module includes a 2.8V power supply (VCAMA\_PMU) connected to pin 1 through a 0R resistor (R6201) and a 4.7uF capacitor (C6217). A 1.2V power supply (VCAMD) is connected to pin 2 via a single via to the main GND. A 1.8V power supply (VCAMIO\_PMU) is connected to pin 3 through a 100nF capacitor (C6219). The AGND pin is connected to pin 4. The CAM\_PDN2 pin is connected to pin 6 through a 100nF capacitor (C6221). The VSYNC pin is connected to pin 7 through a 0.2mm trace. The SDA4 pin is connected to pin 11 through a 0.2mm trace. The SCL4 pin is connected to pin 12 through a 0.2mm trace. The CAM\_RST2 pin is connected to pin 13 through a 0.2mm trace. The CAM\_CLK2 pin is connected to pin 15 through a 0R resistor (R6214) and a 33pF capacitor (C6223). The CON-BTBR-30P-ASE5S3010-H0.8-R module includes pins 1 through 34, with pins 1, 6, 13, and 15 connected to the VCAMA\_M2 module. The module also includes a 32-pin connector (J6202) and a 31-pin connector (J6202).

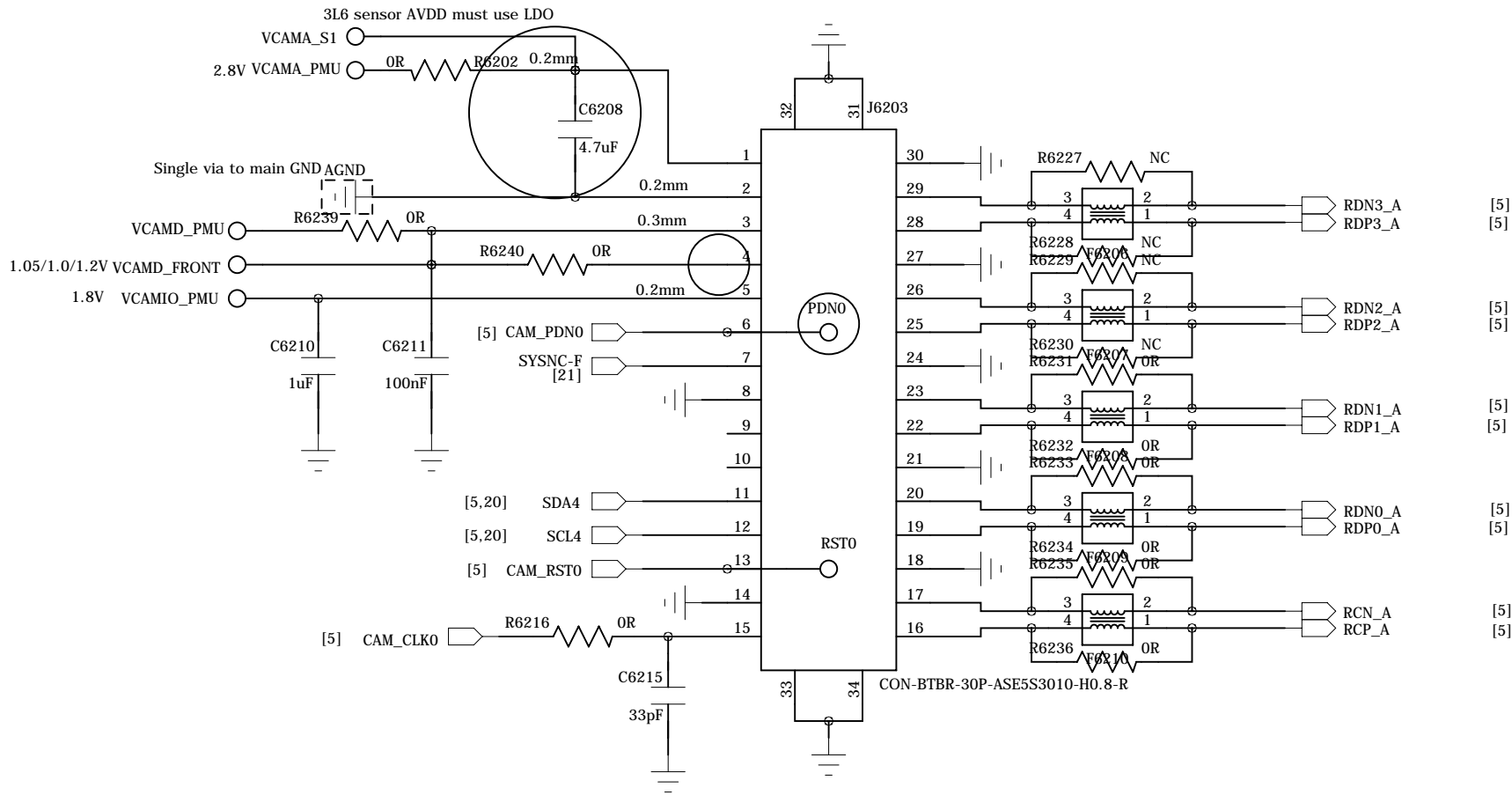
[illegible]

COMPANY: TRANSSION HOLDINGS				MODEL: H624		Modified Date: 2018/11/13	
DRAWN	DJF/TS	DATED	20180822	TITLE: 62_PERI_REAR_CAMERA		VERSION: V1.0	SHEET: 20 OF 24
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

PERI\_FRONT\_CAMERA

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

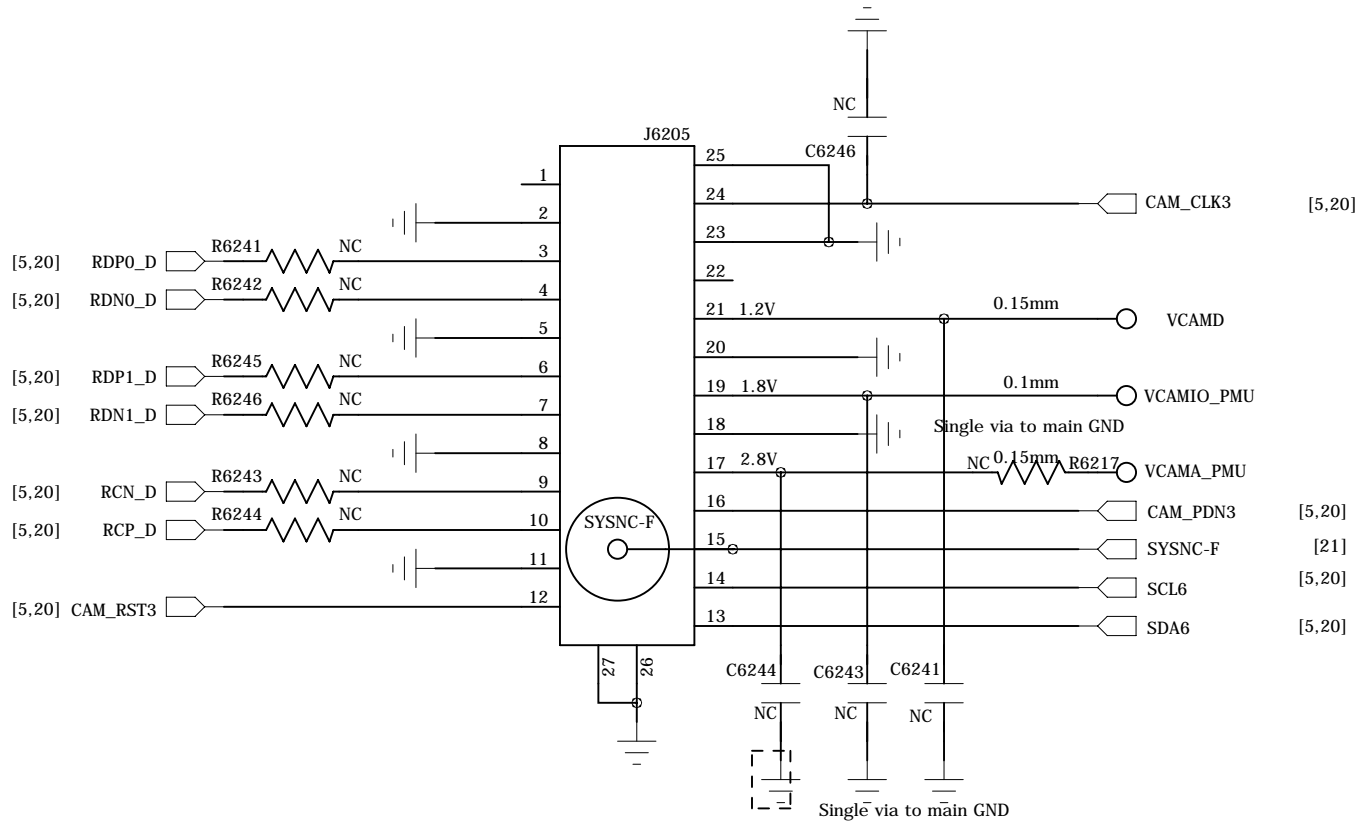
FRONT MAIN CAMERA (MAX 32M+ FF)



	SENSOR	I2C Address
8M	GC8C34W	Write:0x6C Read:0x6D
13M	S5K3L6XX03-FGX9 P24C64E-C4H-MIR	Write:0x5A Read:0x5B Write:0xA2 Read:0xA3
16M	S5K3P9SP04-FGX9 BL24SA64-CS	Write:0x5A Read:0x5B Write:0xA2 Read:0xA3
20M	S5K2T7SP04-FGX9 FM24C64D-CT-T-G-A0	Write:0x5A Read:0x5B Write:0xA2 Read:0xA3
24M Ofilm	S5K2X7SP03-FGX9 FM24C64D-CT-T-G-A0	Write:0x5A Read:0x5B Write:0xA2 Read:0xA3
24M SUNNY	S5K2X7SP03-FGX9 BL24SA64	Write:0x5A Read:0x5B Write:0xA0 Read:0xA1
32M	S5KGD1SP FM24C64D-CT-T-G-A0	Write:0x5A Read:0x5B Write:0xA2 Read:0xA3

SENSOR	VCAMA	VCAMD	VCAMIO
GC8C34W	2.8V 35mA	1.2V 140mA	1.8V 10mA
S5K3L6XX03-FGX9	2.8V 60mA	1.05V 200mA	1.8V 1mA
S5K3P9SP04-FGX9	2.8V 36.24mA	1.05V 112.3mA	1.8V 0.97mA
S5K2T7SP04-FGX9	2.8V 60mA	1.0V 220mA	1.8V 5mA
S5K2X7SP03-FGX9	2.8V 60mA	1.05V 245mA	1.8V 15.6mA
S5KGD1SP	2.8V 60mA	1.05V 245mA	1.8V 15.6mA

FRONT SUB CAMERA (VGA/2M+ FF)  
Reserve for FRONT main CAMERA (8M+ FF)



one front 8M camera use J6205

SENSOR	VCAMA	VCAMD	VCAMIO	I2C Address
SP0A09	2.8V ??	1.2V ??	1.8V ??	Write:0x42 Read:0x43
SP250A	2.8V 18mA	NC	1.8V 30mA	Write:0x78 Read:0x79
GC8C34W(MAIN)	2.8V 35mA	1.2V 140mA	1.8V 10mA	Write:0x6C Read:0x6D

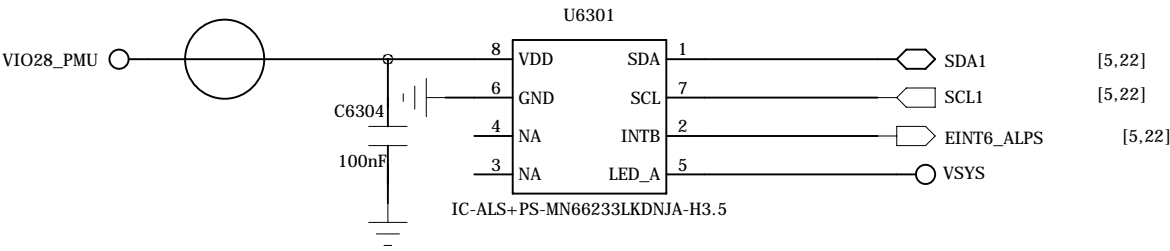
COMPANY: TRANSSION HOLDINGS				MODEL: H624		Modified Date: 2018/11/13	
DRAWN	DJF/TS	DATED	20180822	TITLE: 62_PERI_FRONT_CAMERA		VERSION: V1.0	SHEET: 21 OF 24
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

PERI\_SENSORS

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

Notch  
AL& PS Sensor

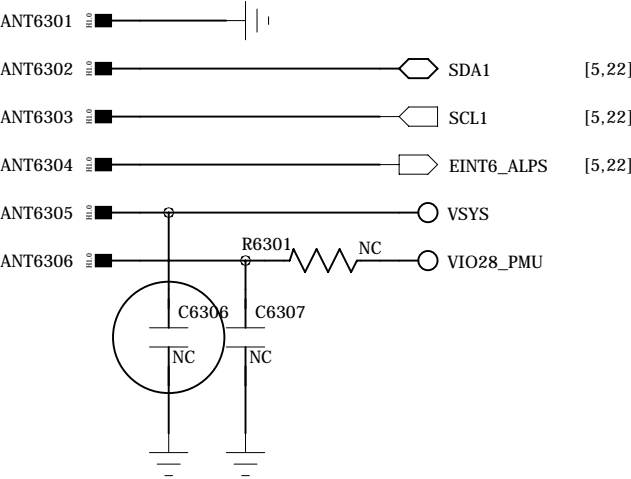
MN66233LKDN: I2C address: Write:0x92, Read:0x93



	Notch LCM	drop
ALS&PS	MN66233LKDN	STK3332 + CM32183A3OG

STK3332--ALPS

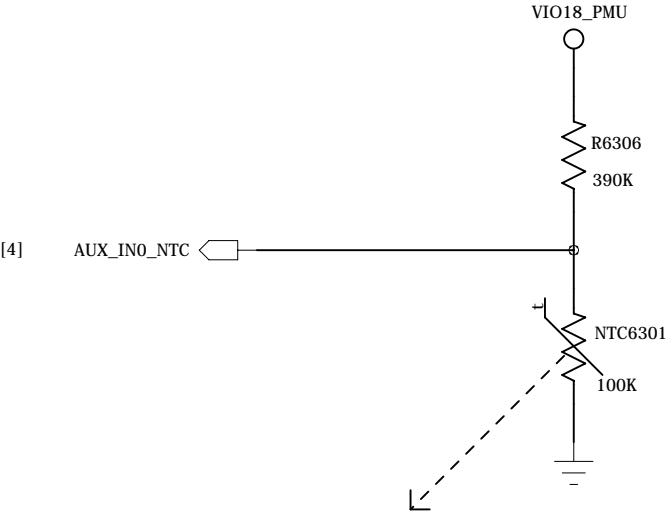
STK3332: I2C address: Write:0x8E, Read:0x8F



CM32183A3OG--ALS

CM32183A3OG: I2C address: Write:0x52, Read:0x53

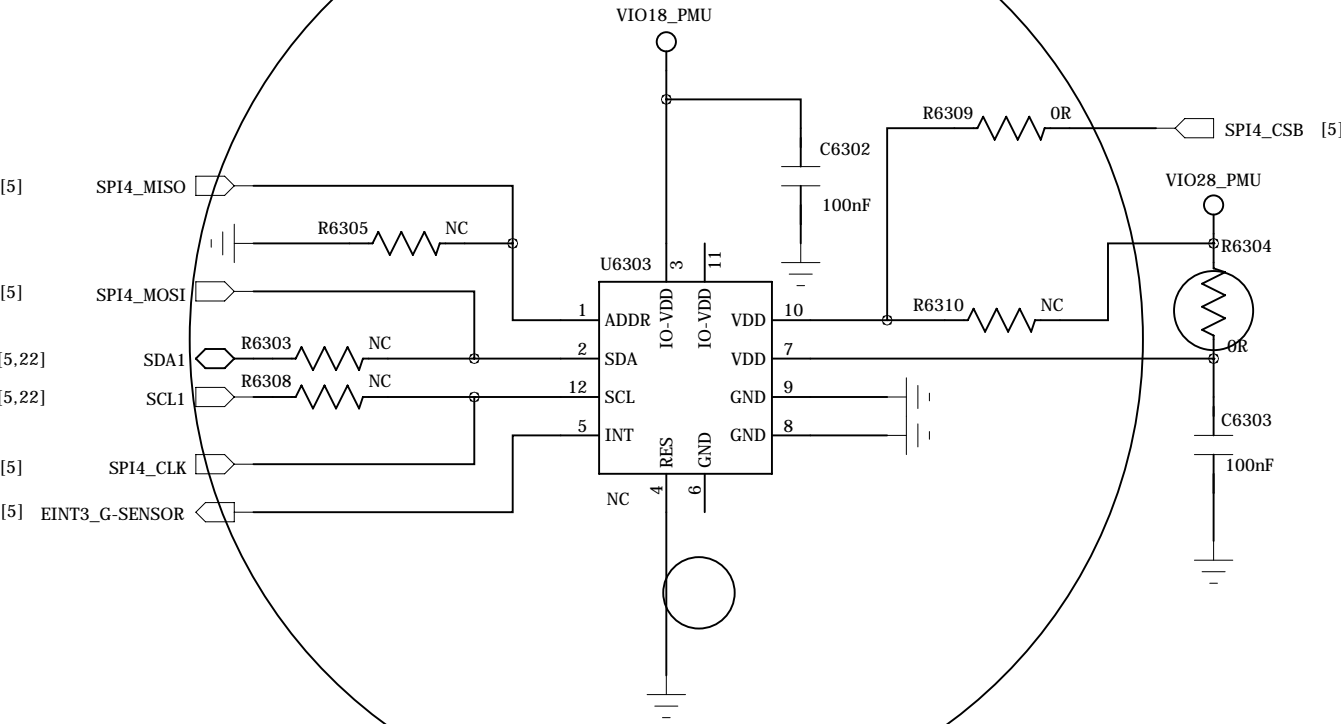
Thermistor to sense AP  
temperature



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

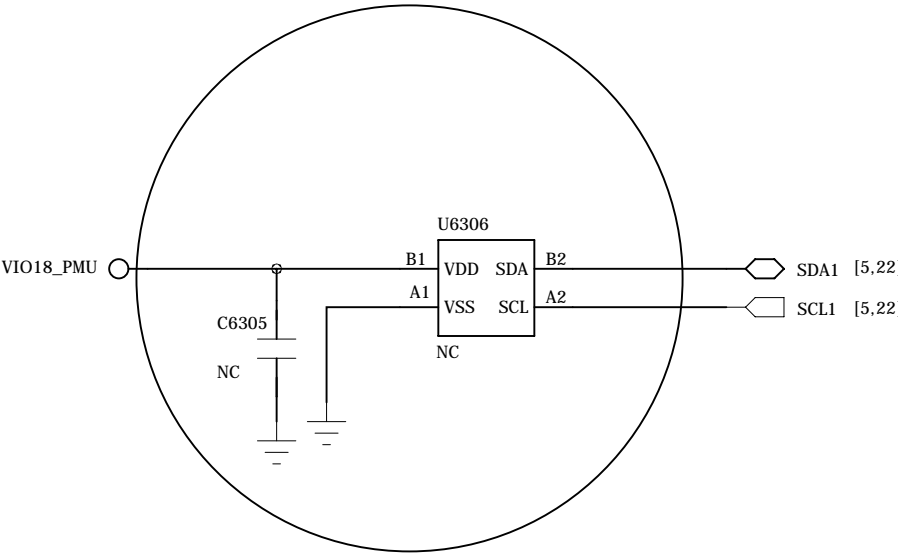
DA218-B: ADDRESS: 0x4E (Write) / 0x4F (Read)  
MC3416-P: ADDRESS: 0x98 (Write) / 0x99 (Read)



component	DA218-B	MC3416-P	STK8321	E2DM
C6302	100nF	100nF	1uF	100nF
R6304	OR	NC	OR	OR
C6303	100nF	NC	1uF	100nF

M-Sensor (COMPASS)

AK09918C-L: I2C ADDRESS: 0x18 (Write) / 0x19 (Read)

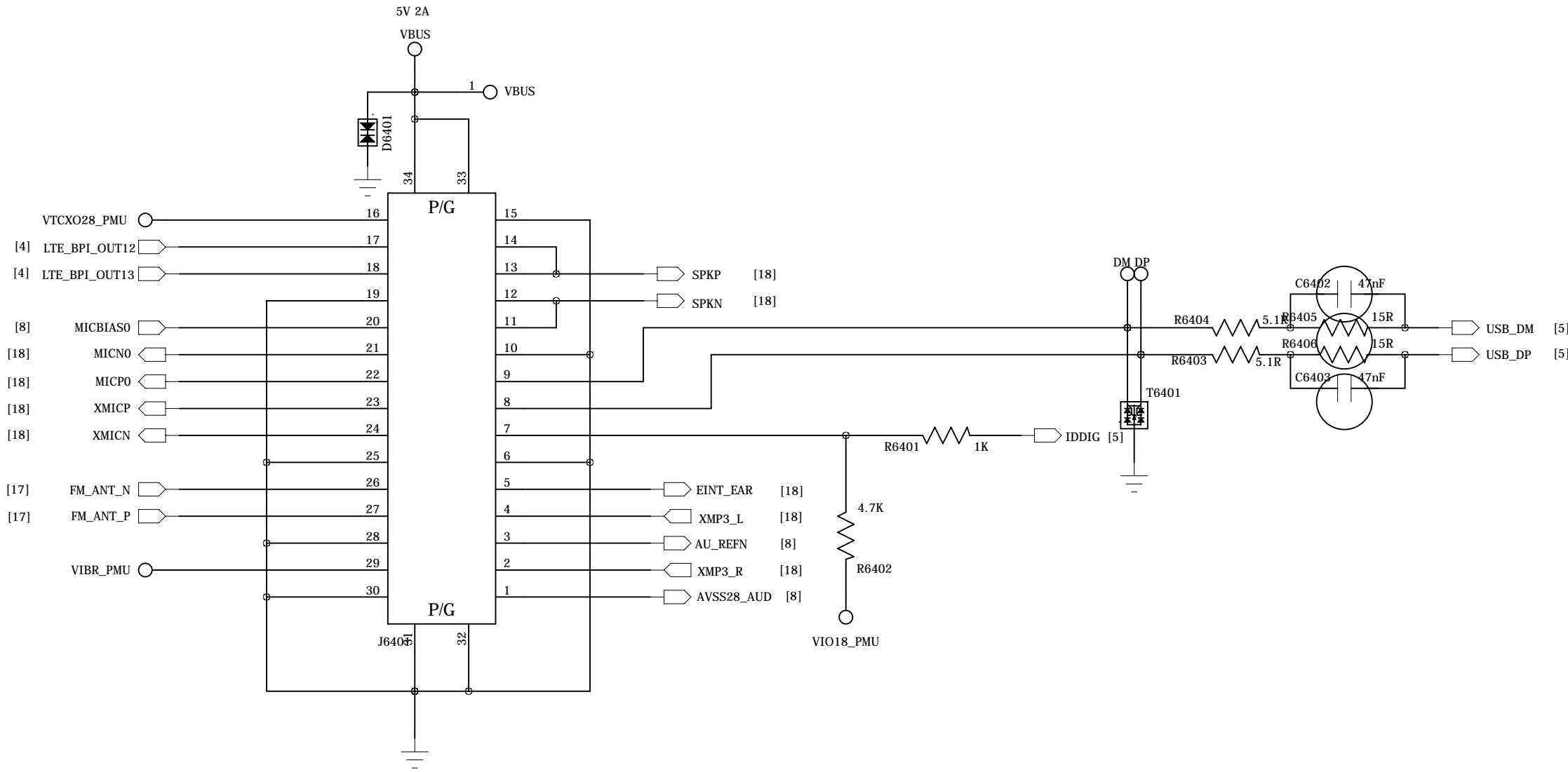


Unipolar HALL

COMPANY: TRANSSION HOLDINGS				MODEL: H624		Modified Date: 2018/11/13	
DRAWN	DJF/TS	DATED	20180822	TITLE: 63_PERI_SENSORS		VERSION: V1.0	SHEET: 22 OF 24
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

PERI\_IO\_VIB

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

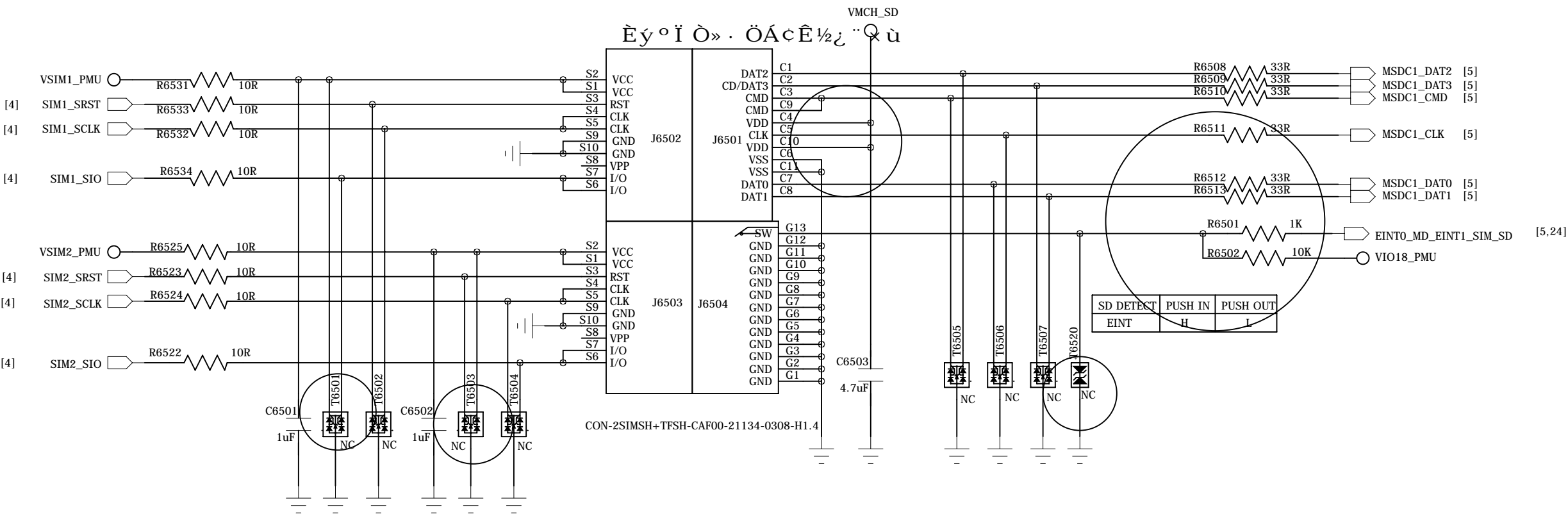


COMPANY: TRANSSION HOLDINGS				MODEL: H624		Modified Date: 2018/11/13	
DRAWN	DJF/TS	DATED	20180822	TITLE: 64_PERI_IO_VIB		VERSION: V1.0	SHEET: 23 OF 24
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		

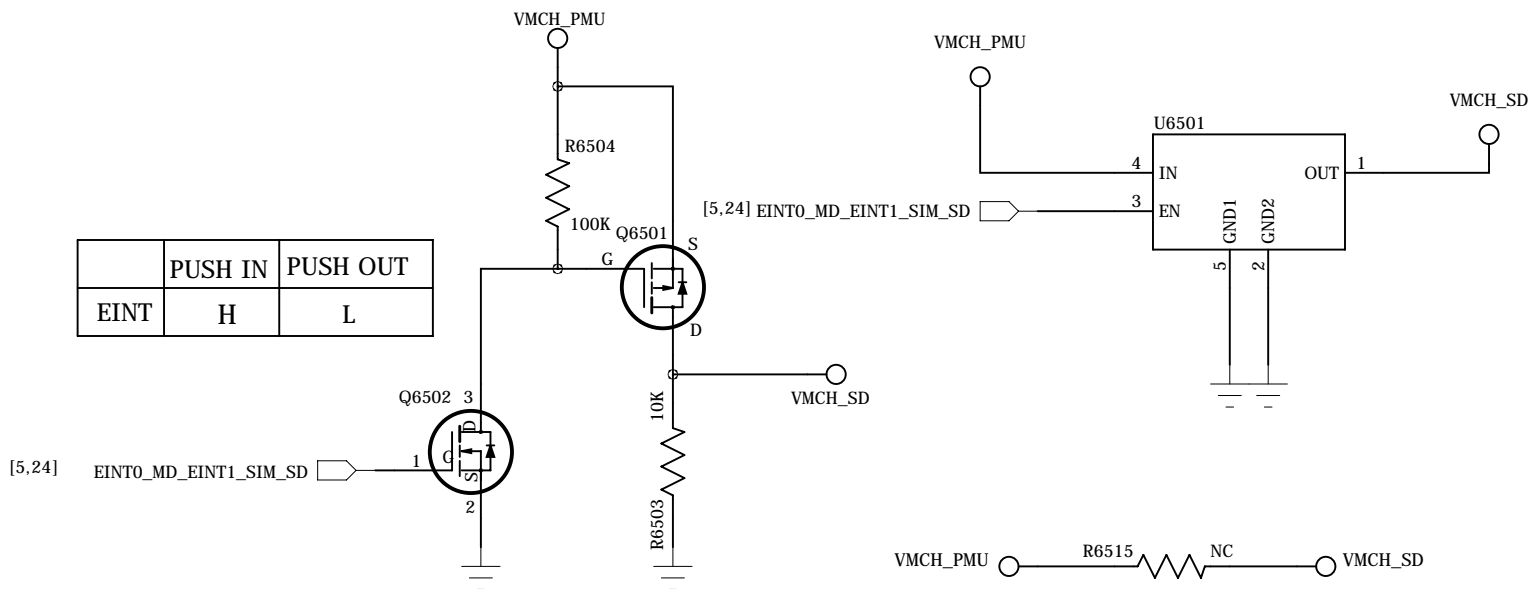
PERI\_SIM\_SD\_LED

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

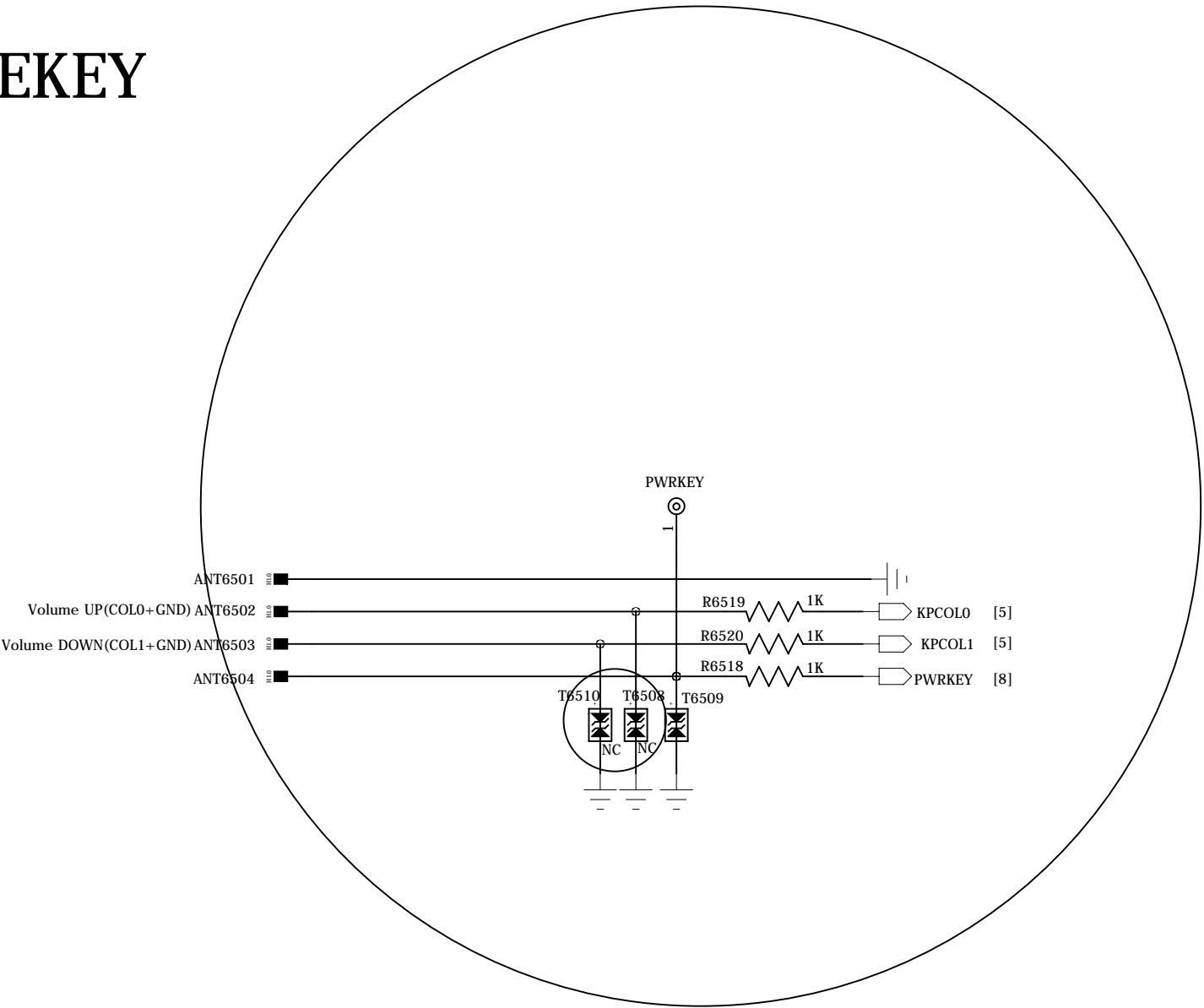
SIM/SD CARD



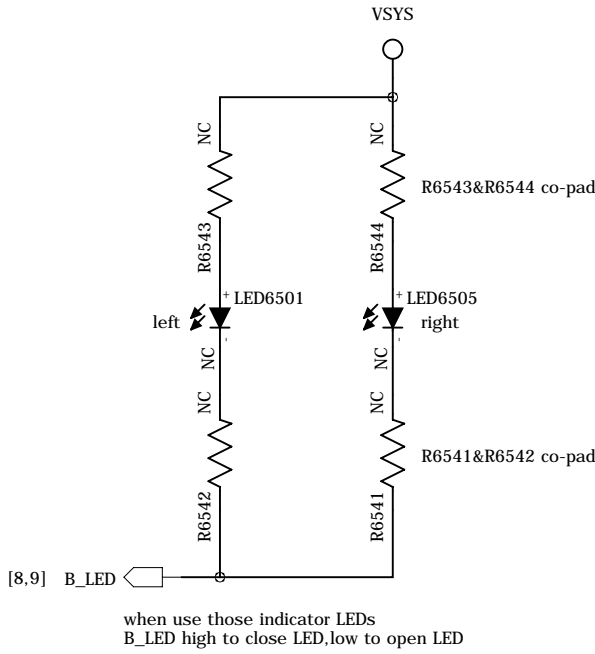
SD POWER CONTROL



SIDEKEY



FP Indicator LEDs



COMPANY: TRANSSION HOLDINGS				MODEL: H624		Modified Date: 2018/11/13	
DRAWN	DJF/TS	DATED	20180822	TITLE: 65_PERI_SIM_SD_LED_SIDEKEY		VERSION: V1.0	SHEET: 24 OF 24
CHECKED	<CHECKED>	DATED	< >	Confidentiality	CONFIDENTIAL		