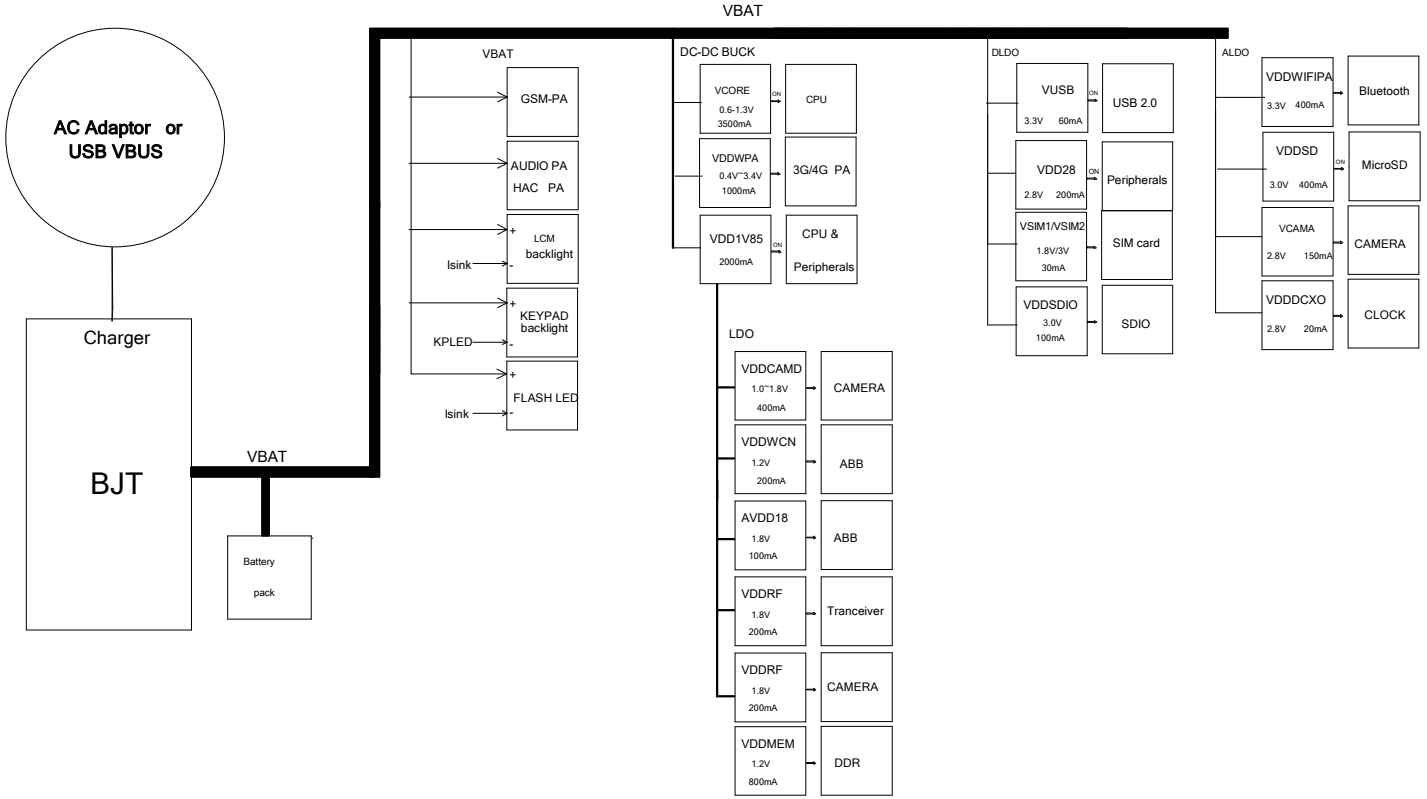
UMS9117-L PMU:SC2720A



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COMPANY				
TITLE				
DRAWN	DATED			
CHECKED	DATED	CODE	SIZE A0	DRAWING NO. REV.
QUALITY CONTROL	DATED			
RELEASED	DATED	SCALE	SHEET 24	

RF BLOCK DIAGRAM

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GPIO Configuration For T117_1_IRD_A_V1.0.0_Informal

Note: the unused GPIO is NU

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Change_Note

V1.0.0

V0.1	20221102	CREATED	DDONGHUA

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DOCUMENT NO.:

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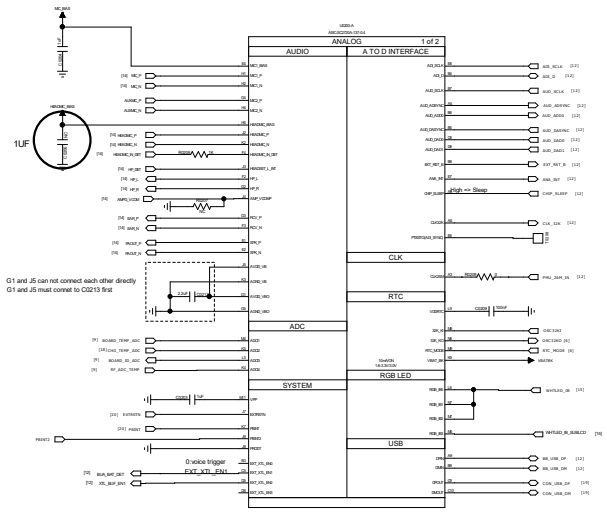
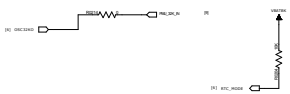
PMU_ANALOG



BKBT

RTC



RTC mode select:1(32K-less);0(crystal)

RTC Mode	R0204	R0203	X0200	C0201	C0202	R0202	R0214	
32K Crystal	NF	0R	Crystal	8.2pF	8.2pF	0R	NF	
32K-less	10K	NF	NF	NF	NF	NF	0R	

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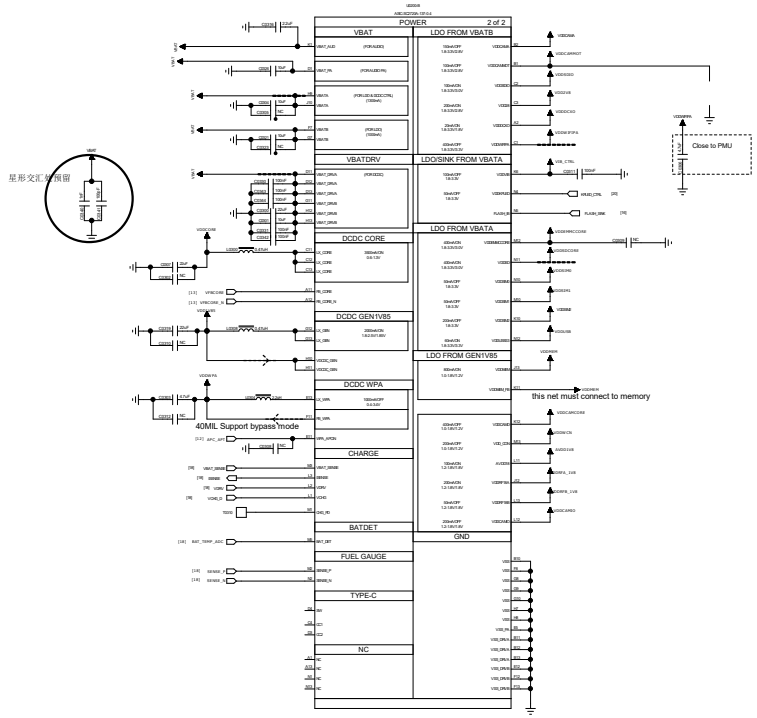
PMU_POWER



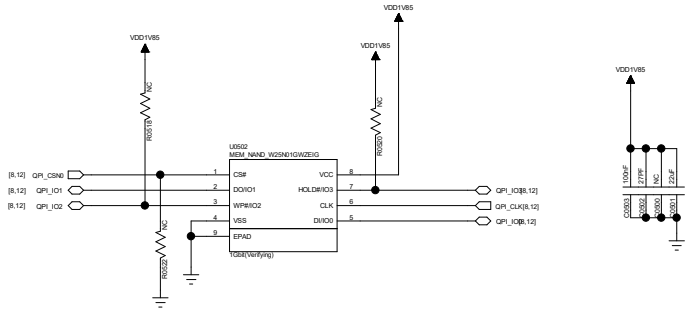
SC2720 DCDC output

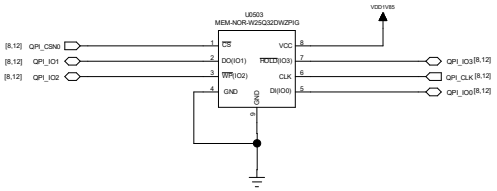
Input Power	Power Name	Output Voltage (V)	Output Current	Default Voltage	Default
VBAT	DCDCCORE	0.4-1.4	3500mA	0.9V	ON
	DCDCGEN1V8	1.6-2.1	2000mA	1.85V	ON
	DCDCWPA	0.4-3.4 2x and 2.5x ramp	1000mA		OFF

SC2720 LDO output

Input Power	Power Name	Output Voltage (V)	Output Current	Default Voltage	Default
LDO from VBAT	VDDCAMA	1.8-3.3	150mA	2.8V	OFF
	VDDCAMMOT	1.8-3.3	100mA	2.8V	OFF
	VDDSIM0	1.8-3.3	50mA		OFF
	VDDSIM1	1.8-3.3	50mA		OFF
	VDDSIM2	1.8-3.3	200mA		OFF
	VDDEMMCCORE	1.8-3.3	400mA	3.0V	ON
	VDDSD	1.8-3.3	400mA	3.0V	ON
	VDDSDIO	1.8-3.3	400mA	3.0V	ON
	VDD28	1.8-3.3	200mA	2.8V	ON
	VBATBK	1.8-3.3	10mA	3.0V	ON
	VDDVIB	1.8-3.3	100mA		OFF
	VDDKPLED	1.8-3.3	50mA		OFF
	VDDWIFIPA	1.8-3.3	400mA	3.3V	OFF
	VDDDCXO	1.8-3.3	20mA	1.8V	ON
	VDDUSB33	1.8-3.3	60mA	3.3V	ON
LDO from DCDCGEN	VDD_MEM	1.0-1.8	800mA	1.2V	ON
	VDDCAMD	1.0-1.8	400mA	1.2V	OFF
	VDDRFB	1.2-1.8	50mA	1.8V	OFF
	VDD_CON	1.0-1.8	200mA	1.2V	OFF
	VDDCAMIO	1.2-1.8	200mA	1.8V	OFF
	AVDD18	1.2-1.8	100mA	1.8V	ON
	VDDRFA	1.2-1.8	200mA	1.8V	ON

SPI FLASH





NAND Flash(Backup)

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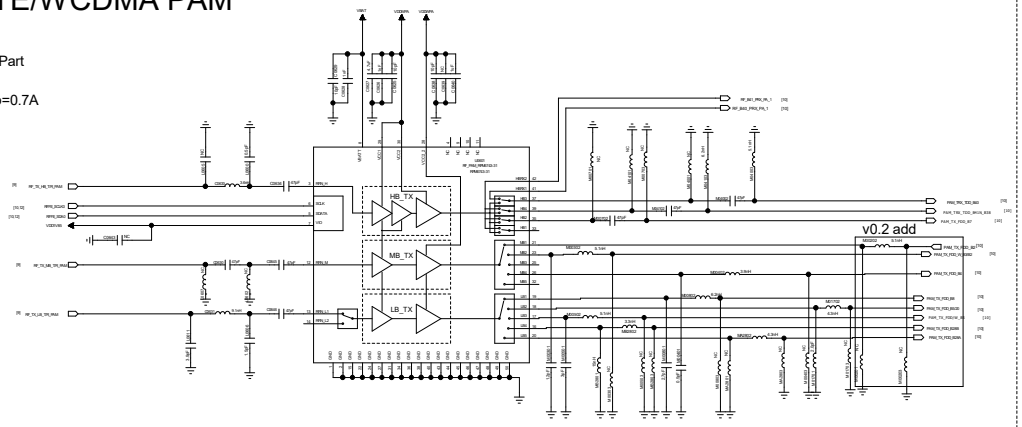
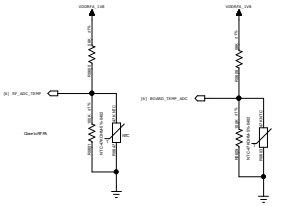
LTE/WCDMA PAM

PA Part

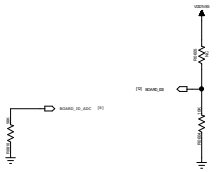
Ipp=0.7A



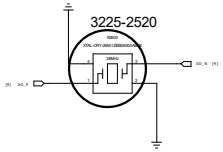
NTC

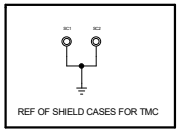


Band info



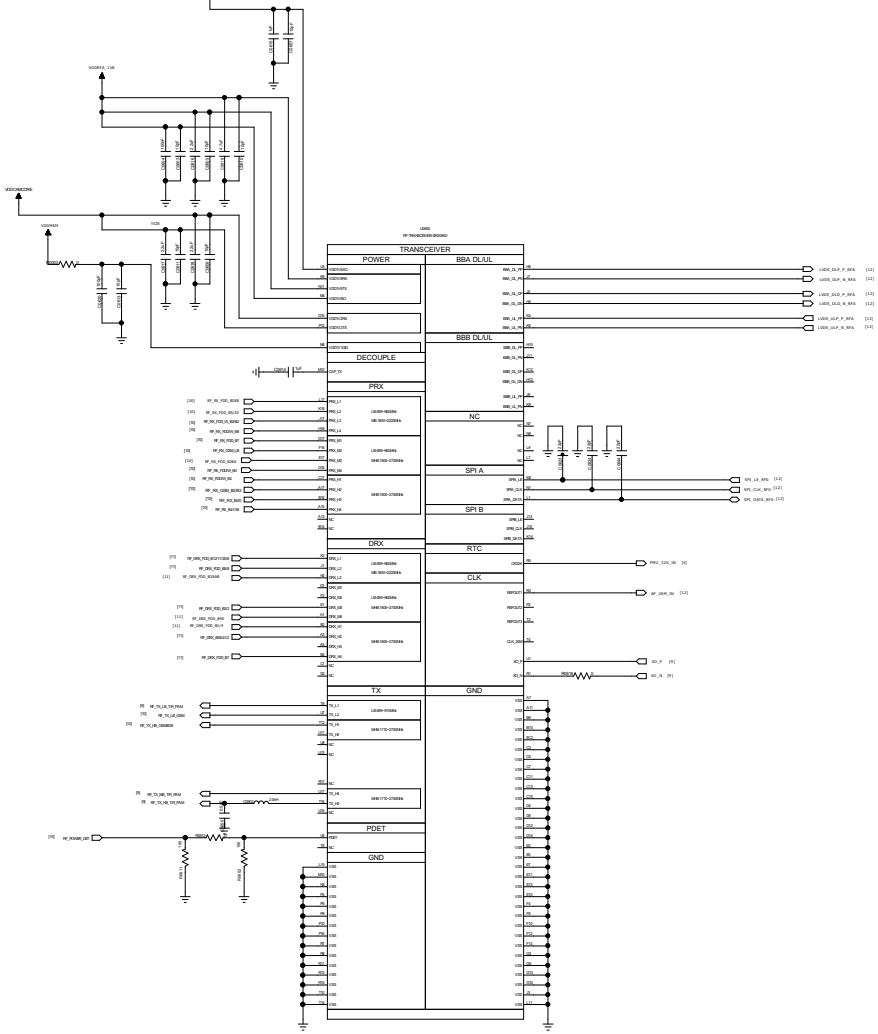
DCXO





Tranceiver

严格星型走线，各电容单独靠近对应pin脚



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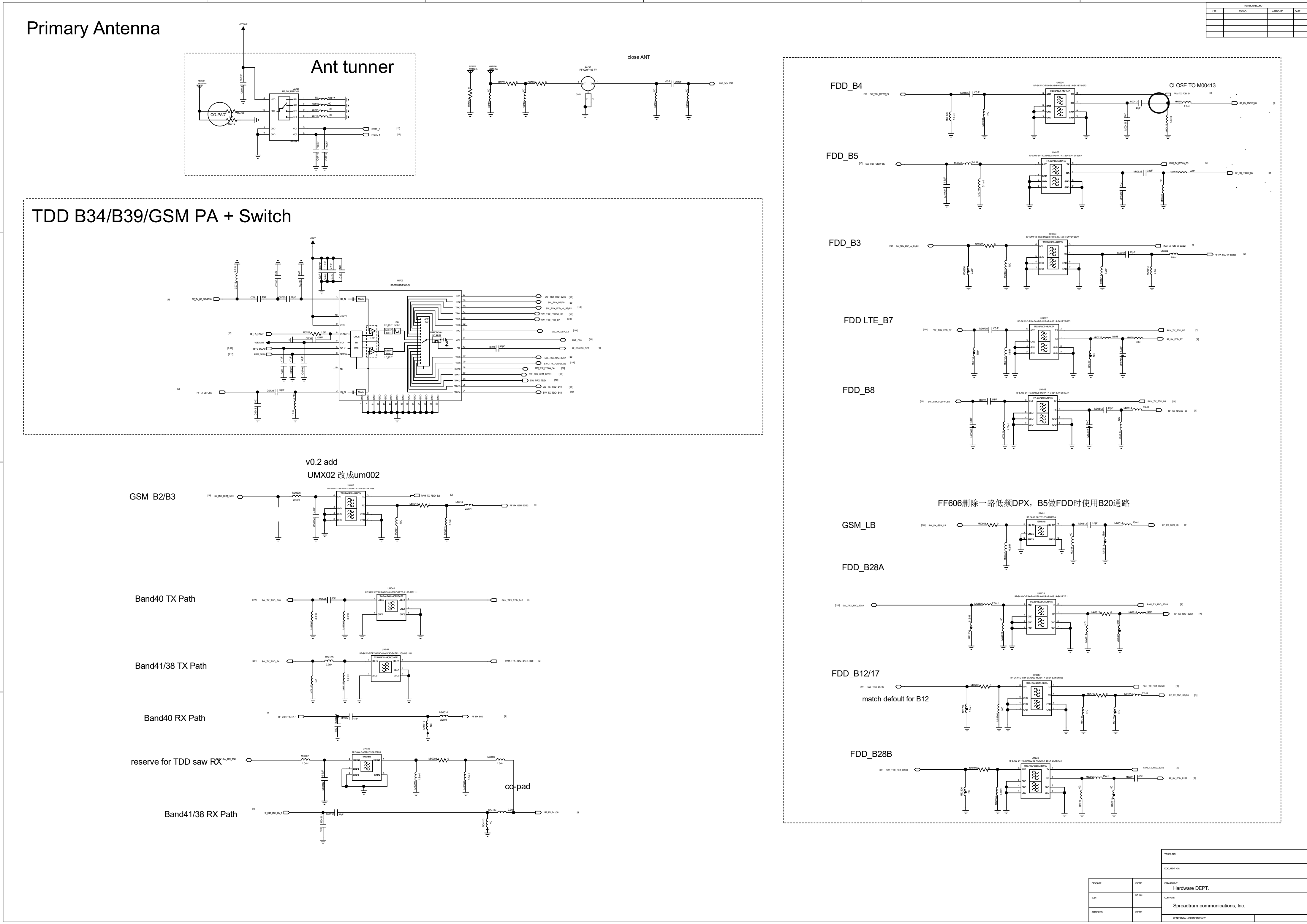

Primary Antenna
Ant tunner
CO-PAD
close ANT
TDD B34/B39/GSM PA + Switch
v0.2 add
UMX02 改成um002
GSM_B2/B3
Band40 TX Path
Band41/38 TX Path
Band40 RX Path
reserve for TDD saw RX
co-pad
Band41/38 RX Path
FDD_B4
CLOSE TO M00413
FDD_B5
FDD_B3
FDD LTE_B7
FDD_B8
FF606删除一路低频DPX，B5做FDD时使用B20通路
GSM_LB
FDD_B28A
FDD_B12/17
match defoult for B12
FDD_B28B
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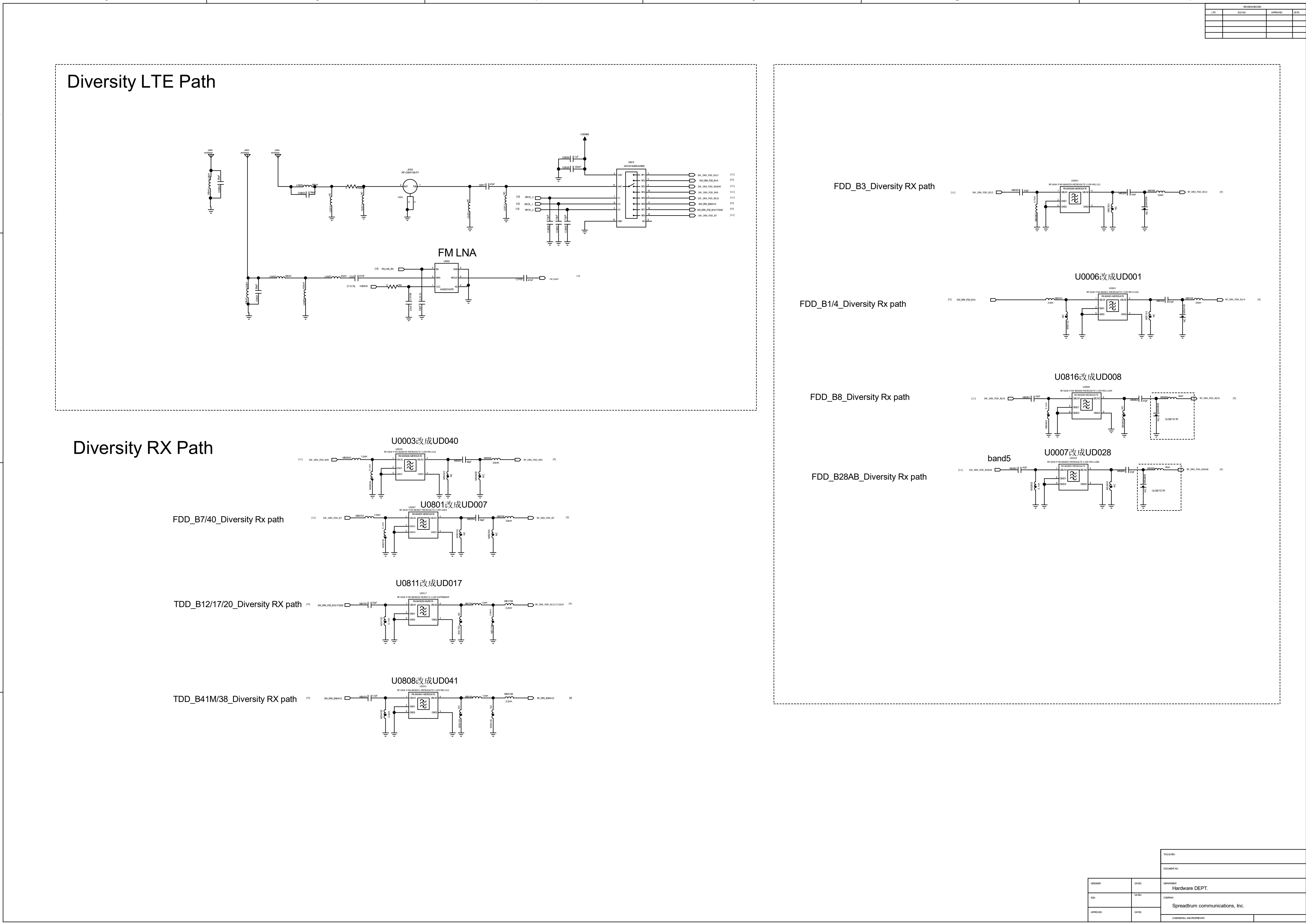
Diversity LTE Path
FM LNA
Diversity RX Path
U0003改成UD040
FDD_B7/40_Diversity Rx path
U0801改成UD007
U0811改成UD017
TDD_B12/17/20_Diversity RX path
U0808改成UD041
TDD_B41M/38_Diversity RX path
FDD_B3_Diversity RX path
U0006改成UD001
FDD_B1/4_Diversity Rx path
U0816改成UD008
FDD_B8_Diversity Rx path
band5
U0007改成UD028
FDD_B28AB_Diversity Rx path
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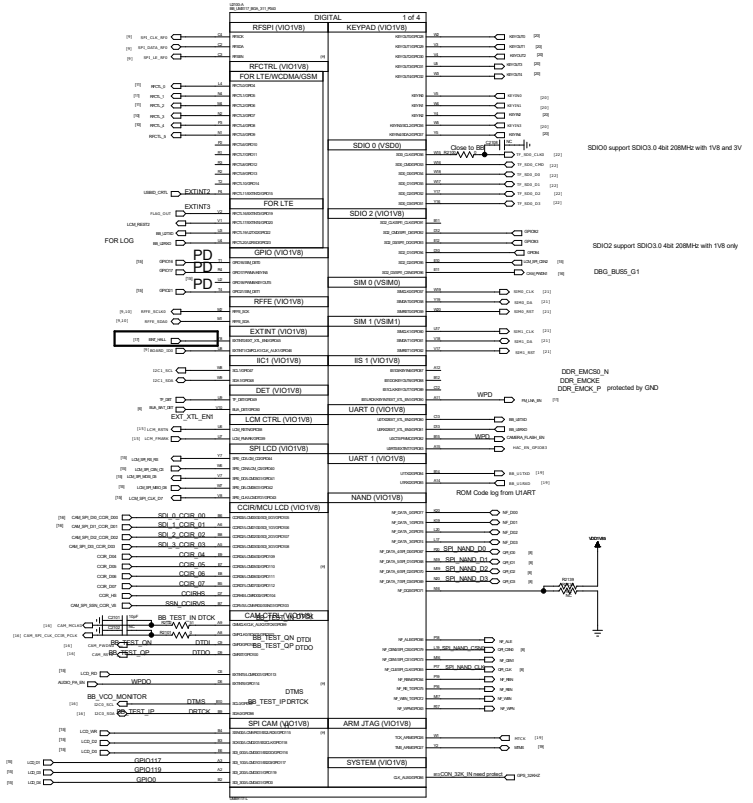
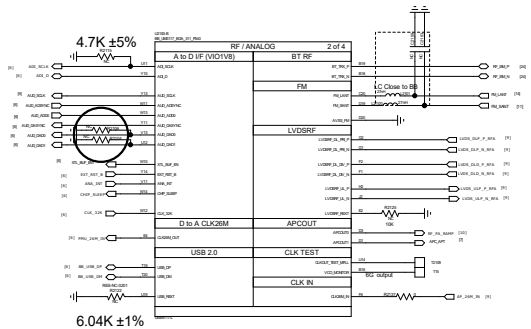
Spreadtrum communications, Inc.

DIGITAL



BB strapping pin



boot mode	R2108	R2104
SPI NAND	NF	4K7
并口NAND	NF	NF
SD MODE	4K7	NF

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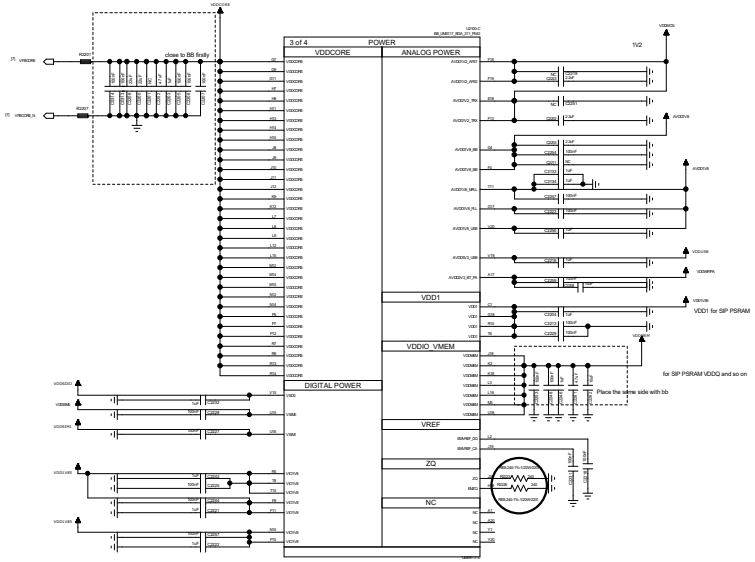
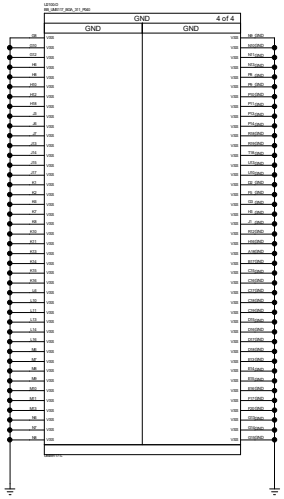
POWER



GND



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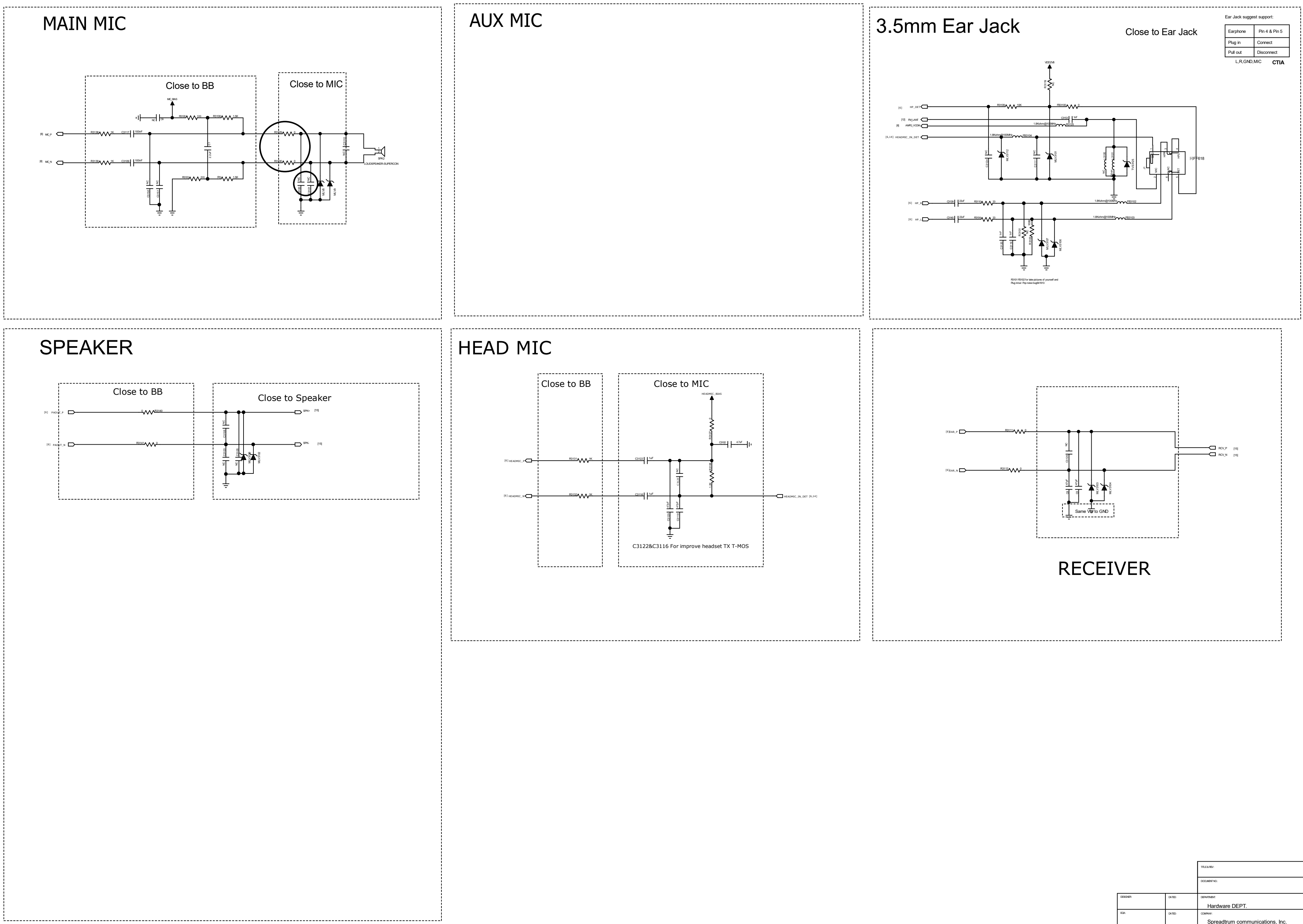

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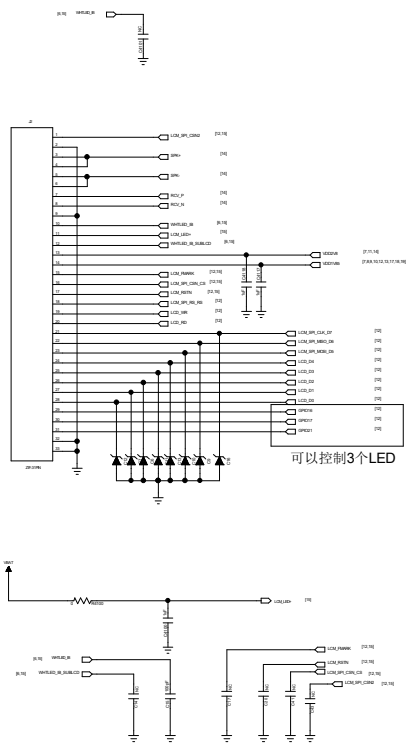

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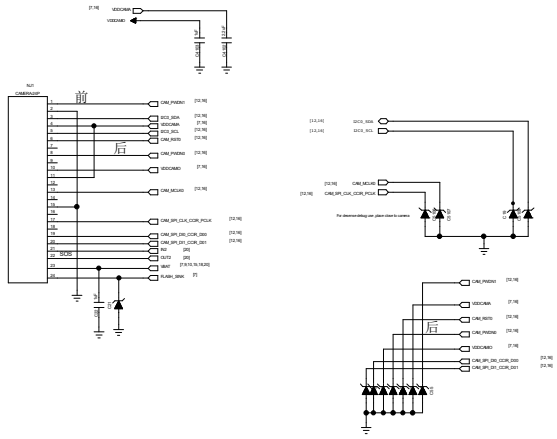
0.3M Sensor



FLASH LED

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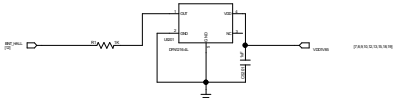
HALL



芯片中间有地PAD

Accelerometer: BMA253(backup)

I2C ADDRESS

	Manufacturer	MPN	Address
A sensor	BOSCH	BMA253	0b0011001 (SDO=1)

PIN	Definition
VDD	1.62V - 3.6V
VDDIO	1.2V - 3.6V
SDO	Address select
SCx	SCL for I2C
SDx	SDA for I2C
PS	Protocal Selection:H—I2C
INT1	Interrupt PIN
INT2	Interrupt PIN
CSB	Chip select:H—I2C

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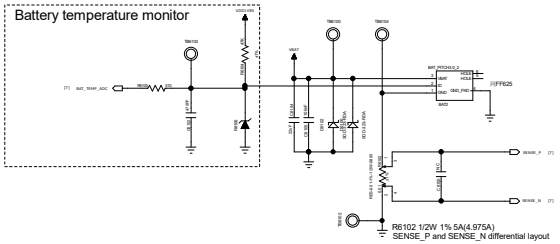
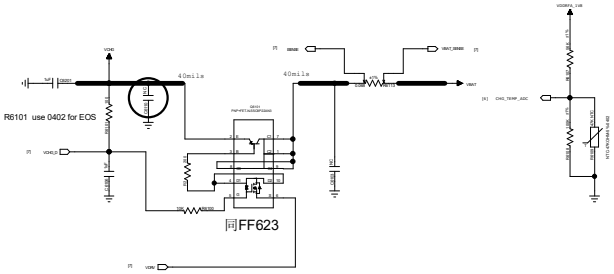
BATTERY AND USB Charger



0805&1/2W	5A(4.975A)
0805&1/4W	3.5A(3.5179A)



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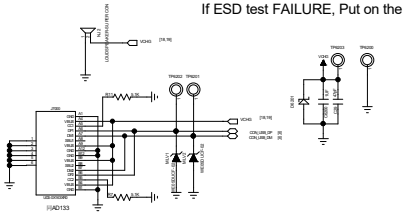
5pin Micro USB

USB BOOT CONTROL

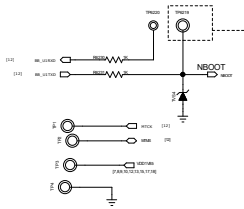
NBOOT = 1----->UART DOWNLOAD

NBOOT = 0 ------>USB DOWNLOAD

If ESD test FAILURE, Put on the MLVs and TVSs



Test Points



MARK POINT

Dbgmode0

1.Low power debug

2.RF LVDS debug

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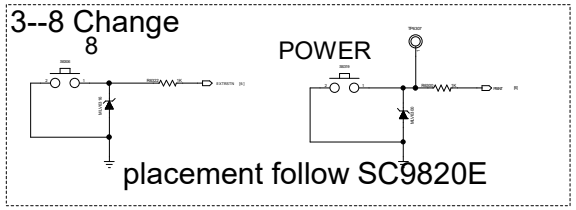
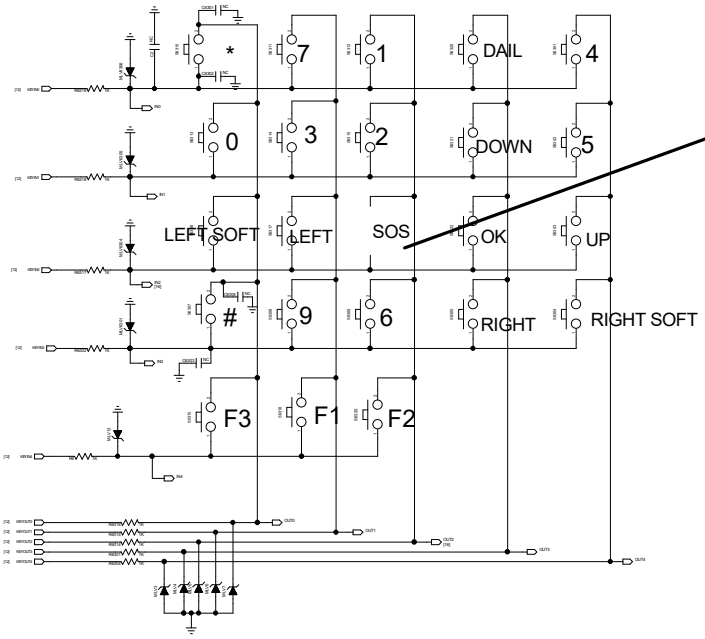
KEYPAD



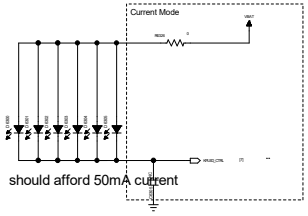
placement follow SC9820E



SOS 放在CAMERA FPC上

Press KEYIN0+KEYOUT0 when power up
will make the phone boot from USB

KEYPAD LED



Support 2 mode,Choose any one,and then delete 0ohm select resistor

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6	5	4	3	2	1

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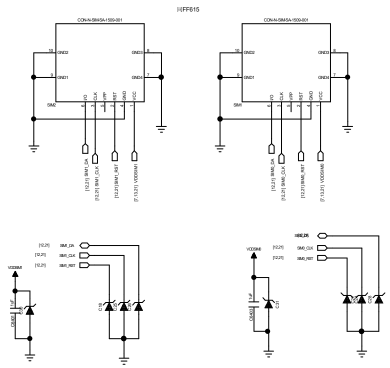
SIM0 & SIM1



Test

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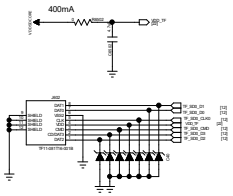
T_Flash



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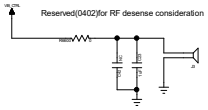
VIBRATOR



should afford 200mA current

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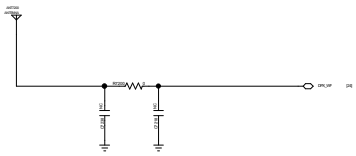
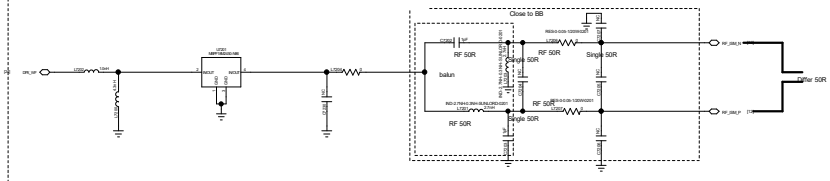
LTR	ECO NO	APPROVED	DATE

BT ANT



BT SAW



		TITLE & NO:
		DRAWING NO.:
DESIGNER:	DATE:	DEPARTMENT: Hardware DEPT.
RER:	DATE:	COMPANY: Spreadtrum communications, Inc.
APPROVED:	DATE:	CONFIDENTIAL AND PROPRIETARY