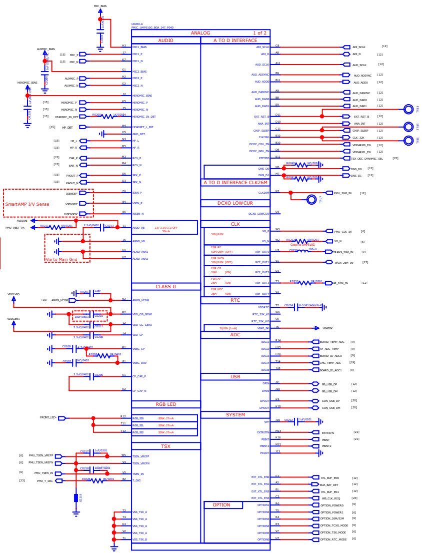
LTR.	ECO NO:	APPROVED:	DATE:

REVISION RECORD

PMU_ANALOG



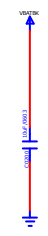
	R0211
内D	NC
外K	0R

	R0240	R0241
UMS512	NF	NF
UMS312	0R	0R

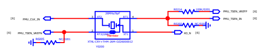
UMP510G 6 Interrupt Input IO

UMP510G			Platform	note
1st function	2nd function	3rd function	UMS512	
EXT-XTL-EN0	NA		CP	
EXT-XTL-EN1	VBATDET_OK		BUA	
EXT-XTL-EN2	NA	NA	Sensor Hub	
EXT-XTL-EN3	NA		UMW2652	
PTESTO	EXT_XTL_EN4	T_SEL	T_SEL	T_SEL use for select Temp-sensor from TSX or OSC
DCDCGPU-EN	EXT_XTL_EN5			

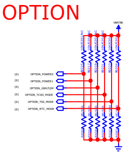
BKBT



TSX（PMU）



OPTION

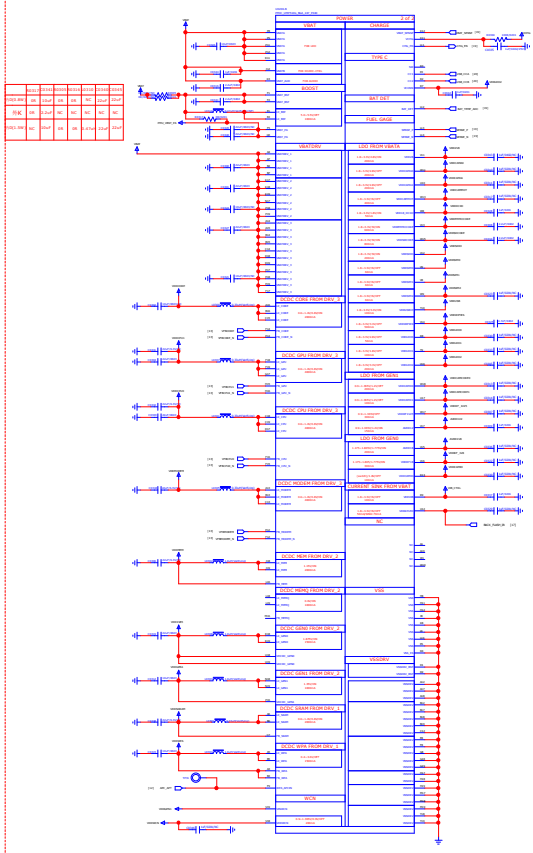


Item	Scenario	Option1	Option2
0	UMS512+UMP510G	0	0
1	UMS512+UMP510G+DCDC	0	1
2		1	0
3	UMS512+UMP510G+DCDC+LPDDR3/4VDDMEMQ power supply for SDRAM	1	1

Scenario	Option3(26M/52M)	Option4(TCXO_MODE)	Option5(TSX_MODE)	Option6(RTC_MODE)
26M TCXO+32K Crystal	0	1	0	0
26M TSX+32K Crystal	0	0	1	0
26M TSX+32K-less from PMIC internal	0	0	1	1
26M DCXO+32K-less from PMIC internal	0	1	1	1
26M DCXO+32K Crystal	0	1	1	0

DESIGNER:	DATED:	TITLE & REV:
EQA:	DATED:	DOCUMENT NO.:
APPROVED:	DATED:	DEPARTMENT:
		COMPANY:
		CONFIDENTIAL AND PROPRIETARY

PMU_POWER

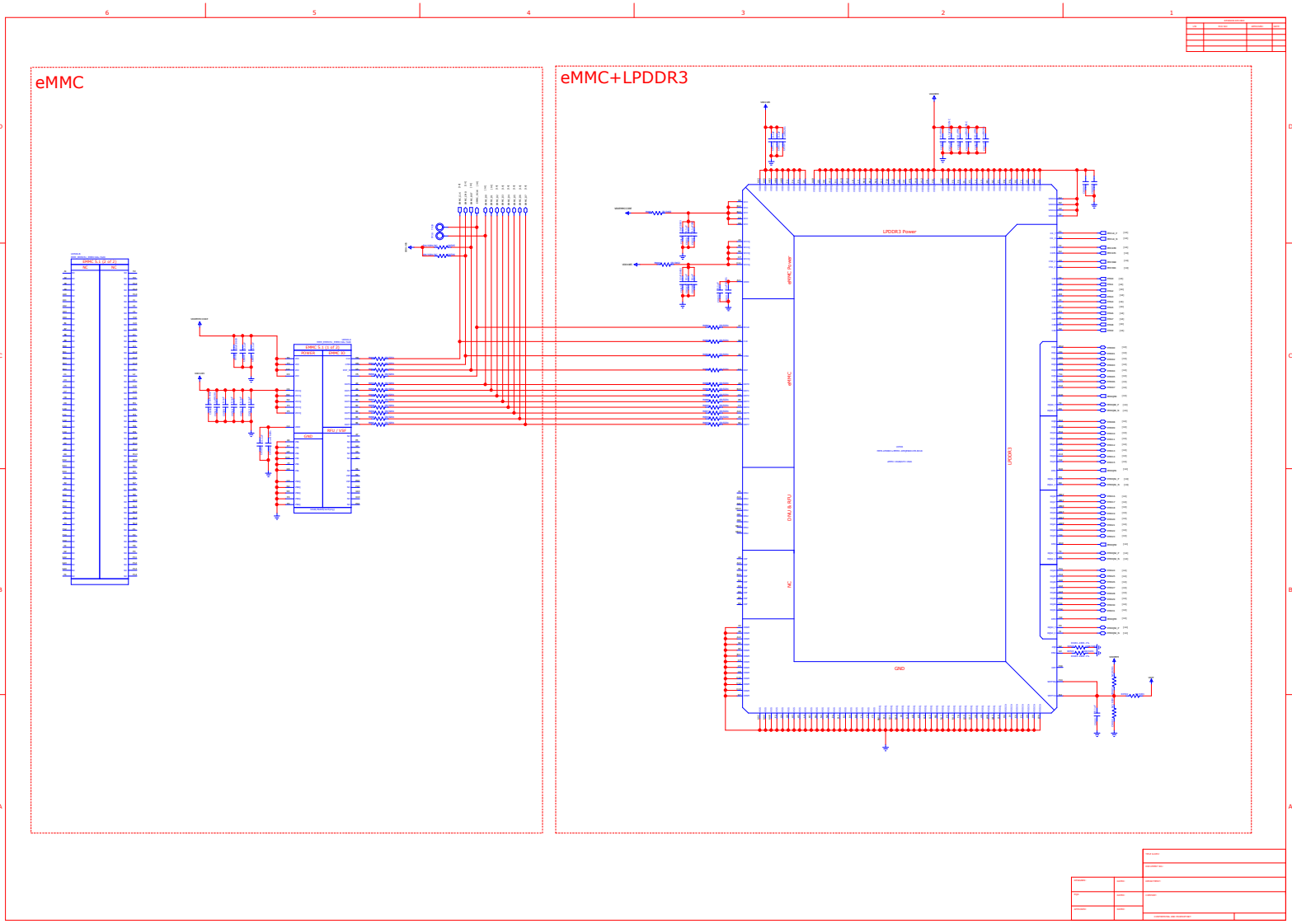


UMP510G DCDC output

Input Power	Power Name	Output Voltage (V)	Output Current (mA)	Default Voltage (V)	Default
VBAT	DCDC CORE	0.3-1.3	2000	0.8	ON
	DCDC GPU	0.3-1.3	4000	0.8	ON
	DCDC CPU	0.3-1.3	4000	0.8	ON
	DCDC MODEM	0.3-1.3	4000	0.8	ON
	DCDC MEM	0.25-1.25	2000	1.15	ON
	DCDC MEMQ	0.25-1.25	1000	0.6	ON
	DCDC GEN0	1.8-2.5	1500	1.85	ON
	DCDC GEN1	0.6-1.5	1000	1.3	ON
	DCDC SRAM	0.3-1.3	2000	0.8	ON
	DCDC WPA	0.6-3.3	1500	/	OFF

UMP510G LDO output

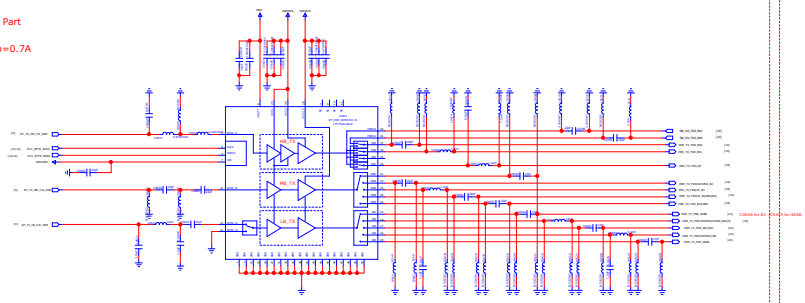
Input Power	Power Name	Output Voltage (V)	Output Current (mA)	Default Voltage (V)	Default
VBAT	VDD28	1.8-3.3	200	2.8	ON
	VDDCAMA0	1.8-3.3	200	2.8	OFF
	VDDCAMA1	1.8-3.3	200	2.8	OFF
	VDDCAMMOT	1.8-3.3	400	3	OFF
	VDD18_DCXO	1.8-3.3	50	1.8	ON
	VDDEMMCCORE	1.8-3.3	600	3	ON
	VDDSDCORE	1.8-3.3	800	3	ON
	VDDSDIO	1.8-3.3	200	3	ON
	VDDSIM0	1.8-3.3	60	3	OFF
	VDDSIM1	1.8-3.3	60	3	OFF
	VDDSIM2	1.8-3.3	60	3	OFF
	VDDUSB33	1.8-3.3	100	3.3	ON
	VDDWIFIPA	1.8-3.3	500	3.3	OFF
	VDDLDO0	1.8-3.3	50	2.8	OFF
	VDDLDO1	1.8-3.3	100	3.3	OFF
	VDDLDO2	1.8-3.3	200	3.3	OFF
GEN1	VDDCAMD0	1.0-1.25	400	1.1	OFF
	VDDCAMD1	1.0-1.25	200	1.1	OFF
	VDDRF1V25	1.0-1.25	300	1.25	OFF
	AVDD12	1.0-1.25	150	1.2	ON
GEN0	AVDD18	1.2-1.8	200	1.8	ON
	VDDRF18	1.2-1.8	300	1.8	ON
	VDDCAMIO	1.2-1.8	100	1.8	OFF
GEN1	WCN	1.0-1.6	200	1	OFF

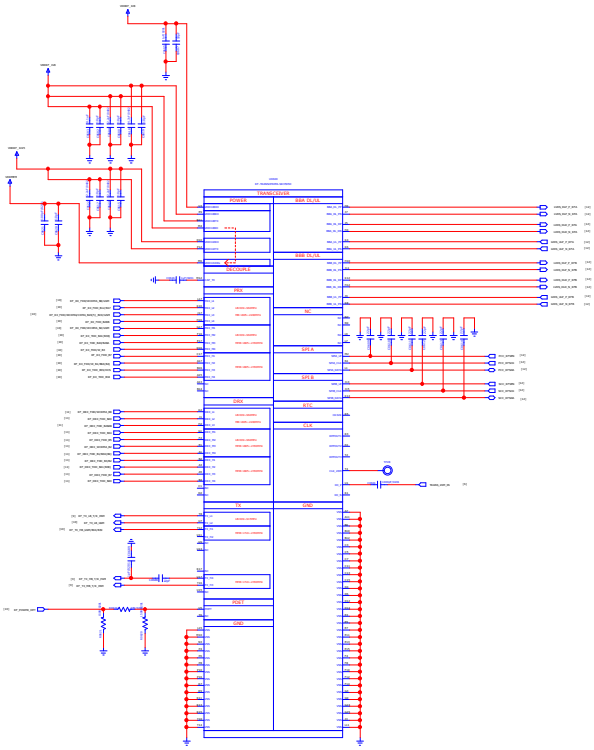

eMMC
eMMC+LPDDR3
LPDDR3 Power
eMMC Power
eMMC
DRAM & REFU
NC
GND
LPDDR3

LTE/WCDMA PAM

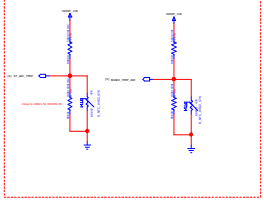
PA Part

Ipp=0.7A

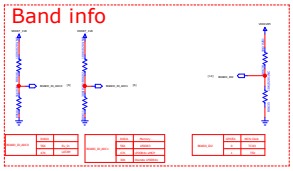


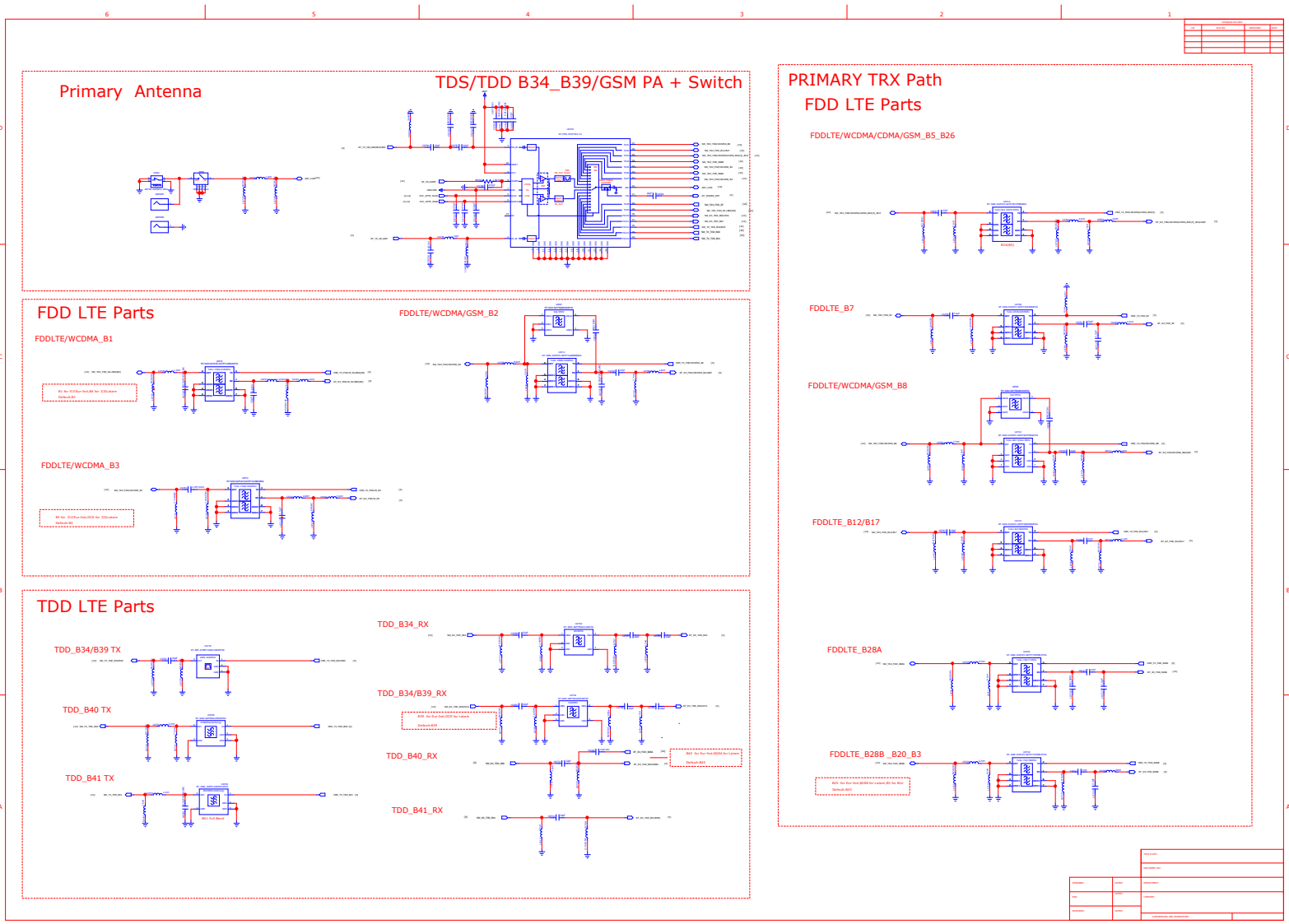


NTC

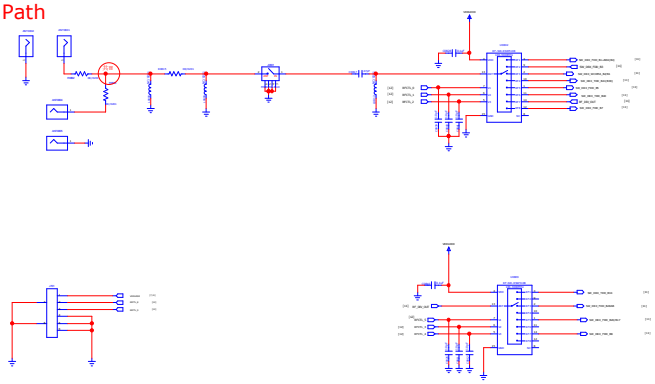


Band info



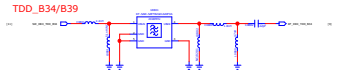

Primary Antenna
TDS/TDD B34_B39/GSM PA + Switch
PRIMARY TRX Path
FDD LTE Parts
FDDLTE/WCDMA/CDMA/GSM_B5_B26
FDDLTE_B7
FDDLTE/WCDMA/GSM_B8
FDDLTE_B12/B17
FDDLTE_B28A
FDDLTE_B28B _B20_B3
FDD LTE Parts
FDDLTE/WCDMA_B1
FDDLTE/WCDMA/GSM_B2
FDDLTE/WCDMA_B3
TDD LTE Parts
TDD_B34/B39 TX
TDD_B40 TX
TDD_B41 TX
TDD_B34_RX
TDD_B34/B39_RX
TDD_B40_RX
TDD_B41_RX

Diversity LTE Path

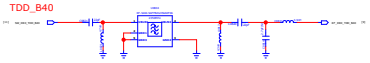


Diversity RX Path

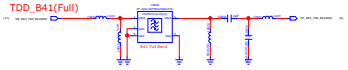
TDD_B34/B39



TDD_B40

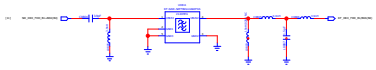


TDD_B41(Full)

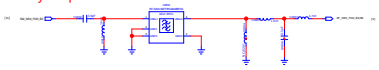


Diversity RX Path

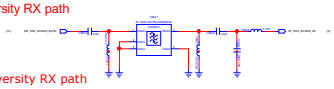
FDD_B1+B66(B4)_Diversity RX path



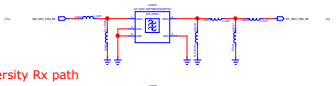
FDD_B3_Diversity RX path



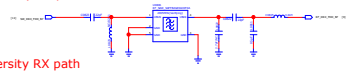
FDD_B2_Diversity RX path



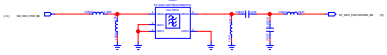
FDD_B5_Diversity RX path



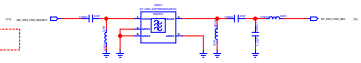
FDD_B7_Diversity Rx path



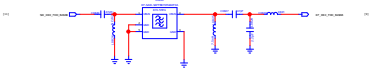
FDD_B8_Diversity RX path



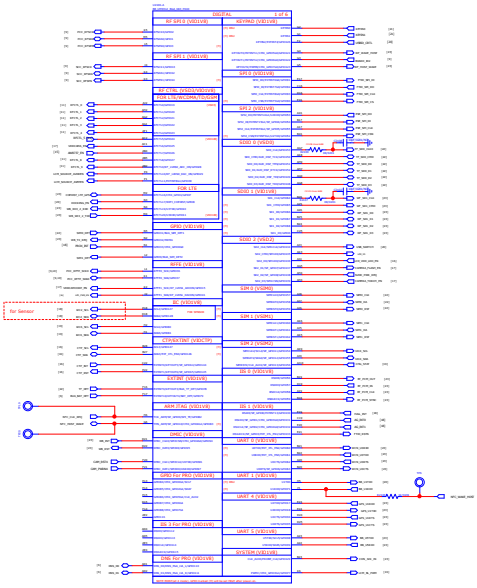
FDD_B12/B17_Diversity RX path

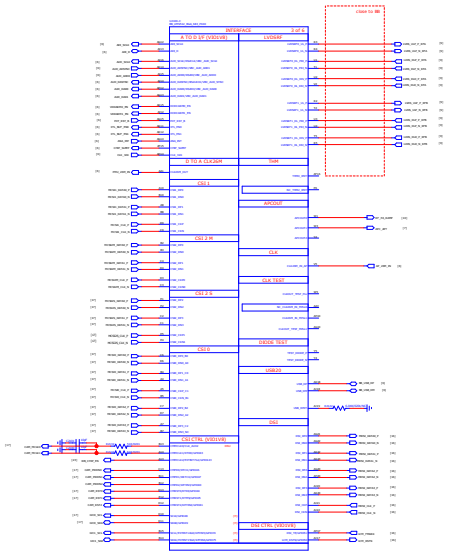


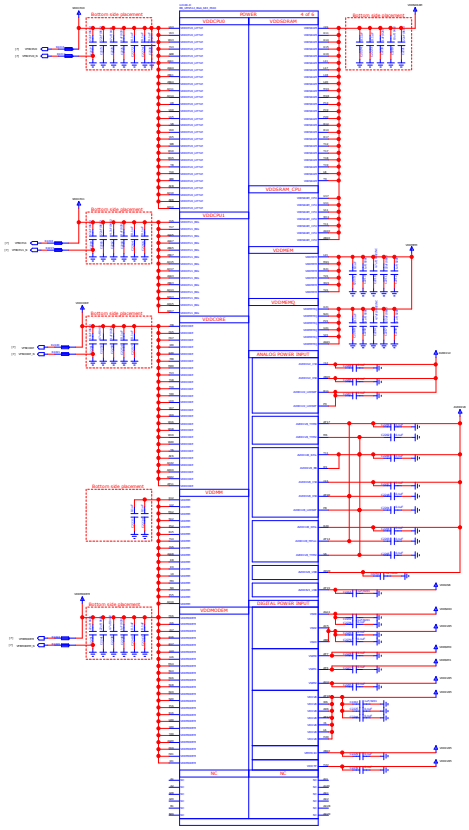
FDD_B28A/B_Diversity RX path

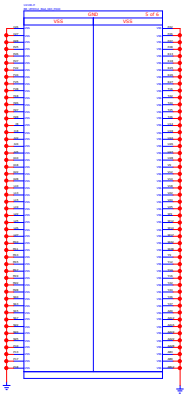


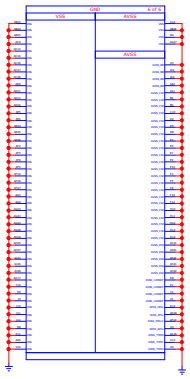
DIGITAL


DIGITAL 1 of 6
RF SPI 0 (VD1V8)
RF SPI 1 (VD1V8)
RF CTRL (VD1V8/VD3V3)
FOR LTE/WCDMA/TD-SCDMA
FOR LTE
GPIO (VD1V8)
BIFE (VD1V8)
BC (VD1V8)
CONSTANT (VD1V8)
RF TRF (VD1V8)
ARM JTAG (VD1V8)
DMIC (VD1V8)
GPIO for PRO (VD1V8)
DTM for PRO (VD1V8)
KEYPAD (VD1V8)
SPI 0 (VD1V8)
SPI 2 (VD1V8)
SSD0 0 (VD1V8)
SSD0 1 (VD1V8)
SSD0 2 (VD1V8)
SIM 0 (VD3V3)
SIM 1 (VD3V3)
SIM 2 (VD3V3)
DS 0 (VD1V8)
DS 1 (VD1V8)
UART 0 (VD1V8)
UART 1 (VD1V8)
UART 4 (VD1V8)
UART 5 (VD1V8)
SYSTEM (VD1V8)
for Sensor

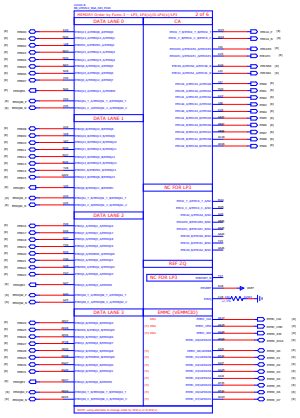

INTERFACE 2 of 6
A TO D I/F (VD1V8)
LVDERF
I2 TO A CLKGEN
SWR
CSI 1
APCOUT
CSI 2 M
CLK
CLK TEST
CSI 2 S
DIODE TEST
CSI 0
USB2.0
DSI
CSI CTRL (VD1V8)
DSI CTRL (VD1V8)
close to
for Sensor

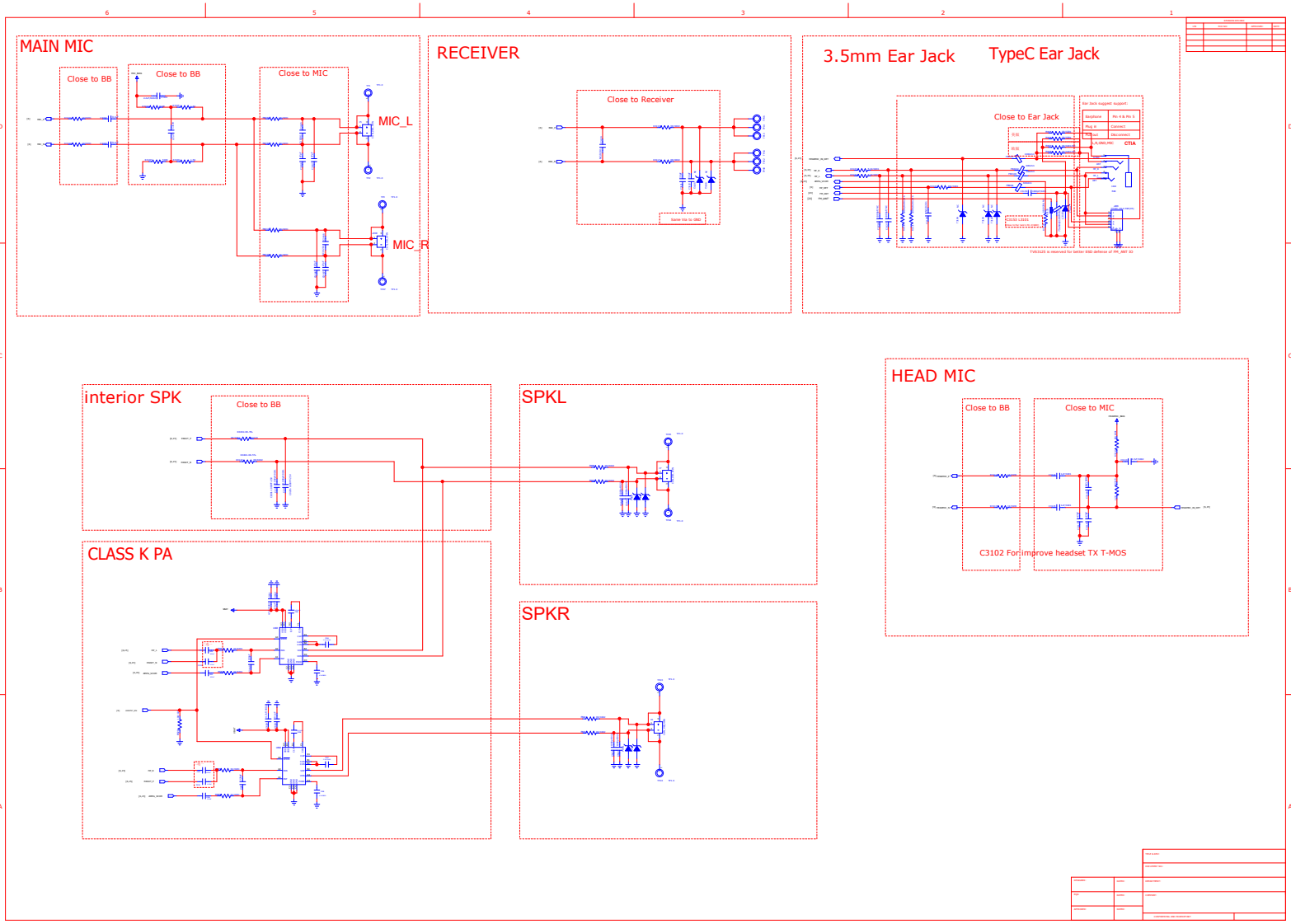

POWER
4 of 6
VDDCPUD
VDDGENAM
VDDGRAM_CPU
VDDCPUS
VDDMEM
VDDMEMQ
VDDCORE
ANALOG POWER INPUT
VDDPMP
DIGITAL POWER INPUT
VDDPROGEN
NC

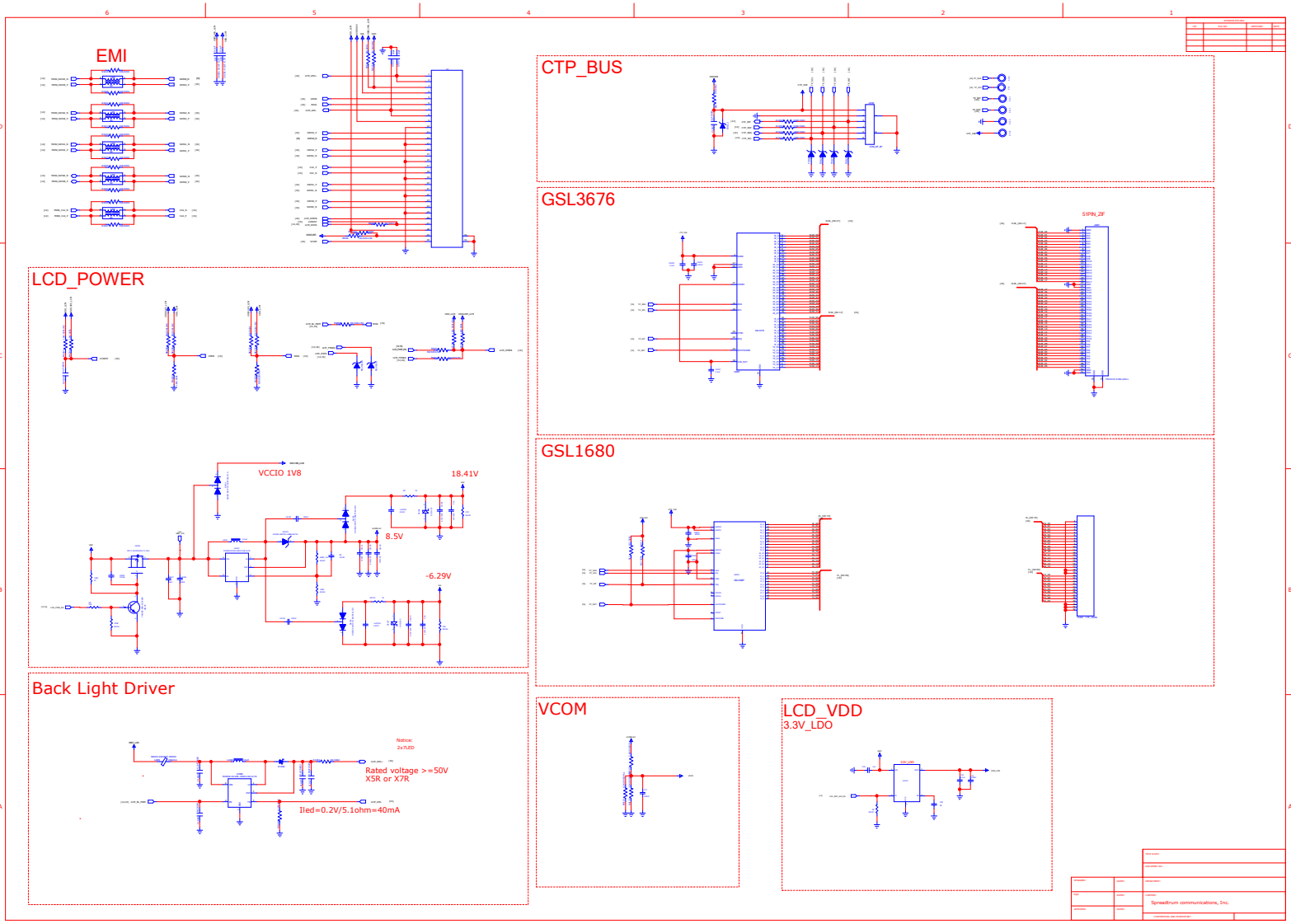

GND
5 of 6
VSS
VSS


GND
6 of 6
VSS
AVSS
AVSS

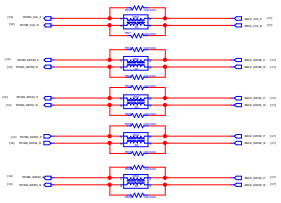
MEMORY


DATA LANE 0
CA
DATA LANE 1
NC FOR LP2
DATA LANE 2
RIF PQ
NC FOR LP2
DATA LANE 3
DMMC (VDMMC33)

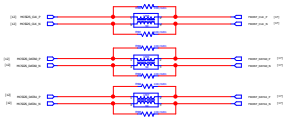

MAIN MIC
Close to BB
Close to BB
Close to MIC
MIC_L
MIC_R
RECEIVER
Close to Receiver
same via to GND
3.5mm Ear Jack
TypeC Ear Jack
Close to Ear Jack
Ear Jack suggest support:
Telephone
Pin 4 & Pin 5
Plug in
Connect
Pull out
Disconnect
CTIA
C3103 L3101
TVS3525 is reserved for better ESD defense of FM_ANT ID
interior SPK
Close to BB
SPKL
HEAD MIC
Close to BB
Close to MIC
C3102 For improve headset TX T-MOS
CLASS K PA
SPKR

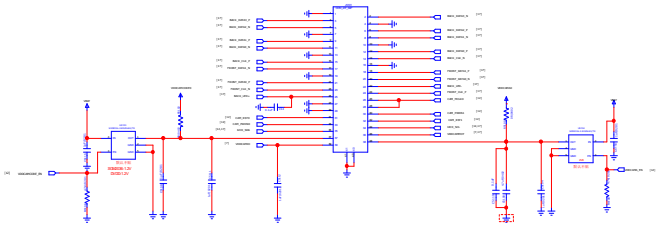

EMI
CTP_BUS
GSL3676
51PIN_2F
LCD_POWER
VCCIO 1V8
18.41V
8.5V
-6.29V
GSL1680
Back Light Driver
Notice:
2x7LED
Rated voltage >=50V
X5R or X7R
Iled=0.2V/5.1ohm=40mA
VCOM
LCD_VDD
3.3V_LDO
Spreadtrum communications, Inc.

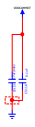
Rear Camera 0: Main 32M



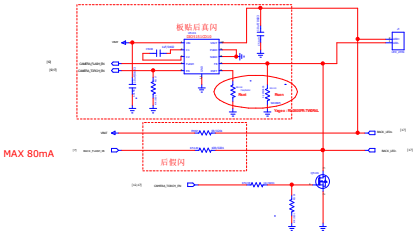
Front Camera 2:8M



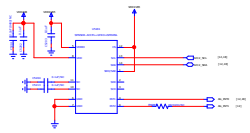




Back FLASH LED

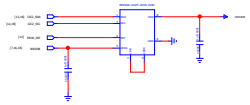


Accelerometer:

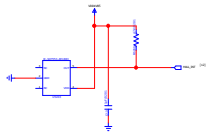


T5210 for ICM20600 FSYNC
R5216 not NF for ICM20600 when FSYNC not connected
R5216 NF for LSM6DSL/BME160
R5215&R5214 NF for BME160& ICM20600
C5213 NF for LSM6DSL/BME160
C5213 not NF for ICM20600

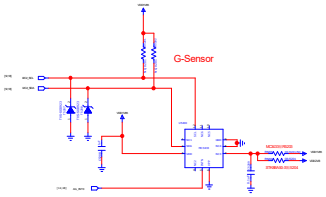
ALS & PROX



HALL



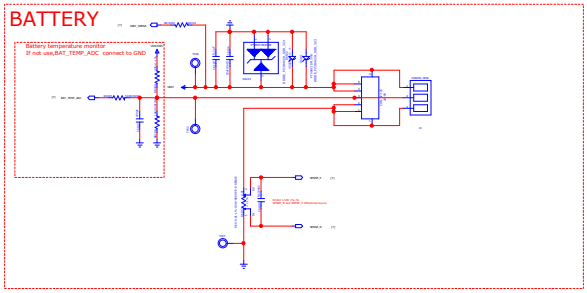
G Sensor

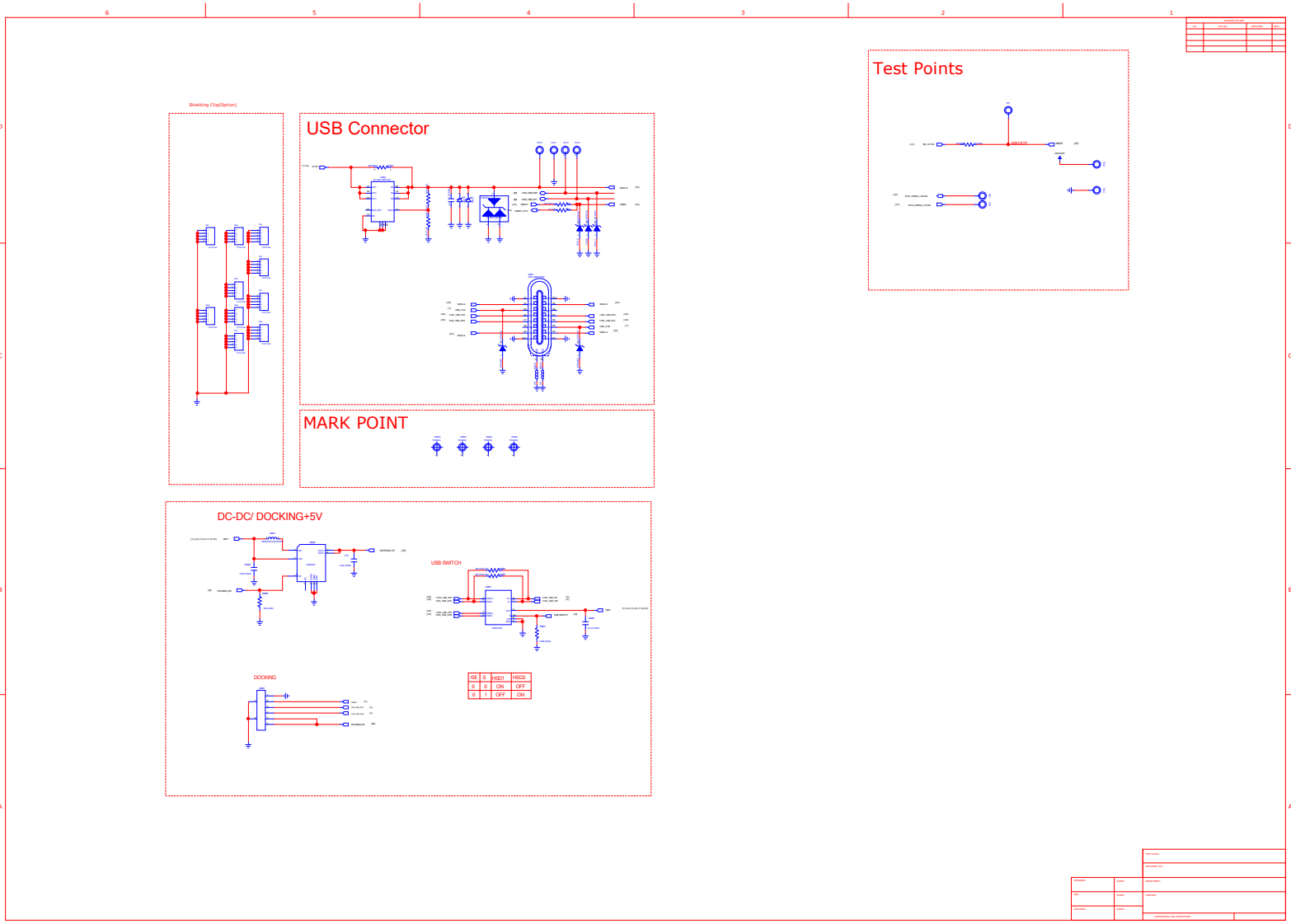


FingerPrint ID

REVISION HISTORY			
ITEM	FROM REV	CHANGE REQUEST	NOTES

BATTERY

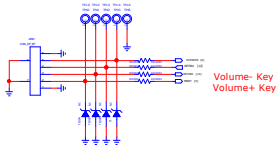

Battery temperature monitor
If not use,BAT_TEMP_ADC connect to GND
BAT_TEMP_ADC
BAT_TEMP
VBAT
VBUS
BAT_TEMP
BAT_ID
BAT_ID_ADC
BAT_ID
BAT_ID_ADC
BAT_ID
BAT_ID_ADC



SE	S	HSD1	HSD2
0	0	ON	OFF
0	1	OFF	ON

Volume Key + POWER KEY

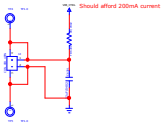
Two keys Reset :EXTRSTN+PBINT



apport two keys 7S reset ,also support single key 7S reset with UMP510G

Two keys :EXTRSTN+PBINT

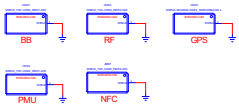
VIBRATOR



KEYPAD LED(Reserved)

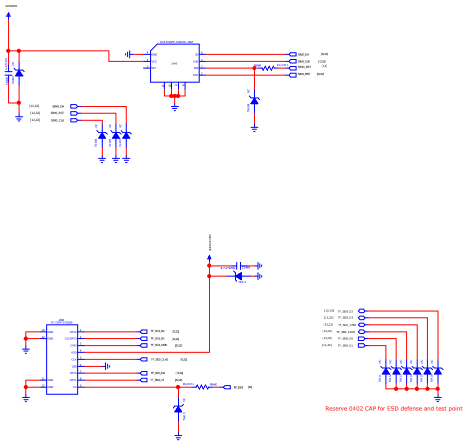
RGB

SHIELDING



SIM0 & SIM1 & T_Flash

	R6403	R6404	R6408	R6407	R6405	R6406
with NFC	0R	NF	0R	NF	0R	0R
No NFC	NF	0R	NF	0R	NF	NF



Tray	Tray DET Value
Without Tray	L
Tray Inserted	H

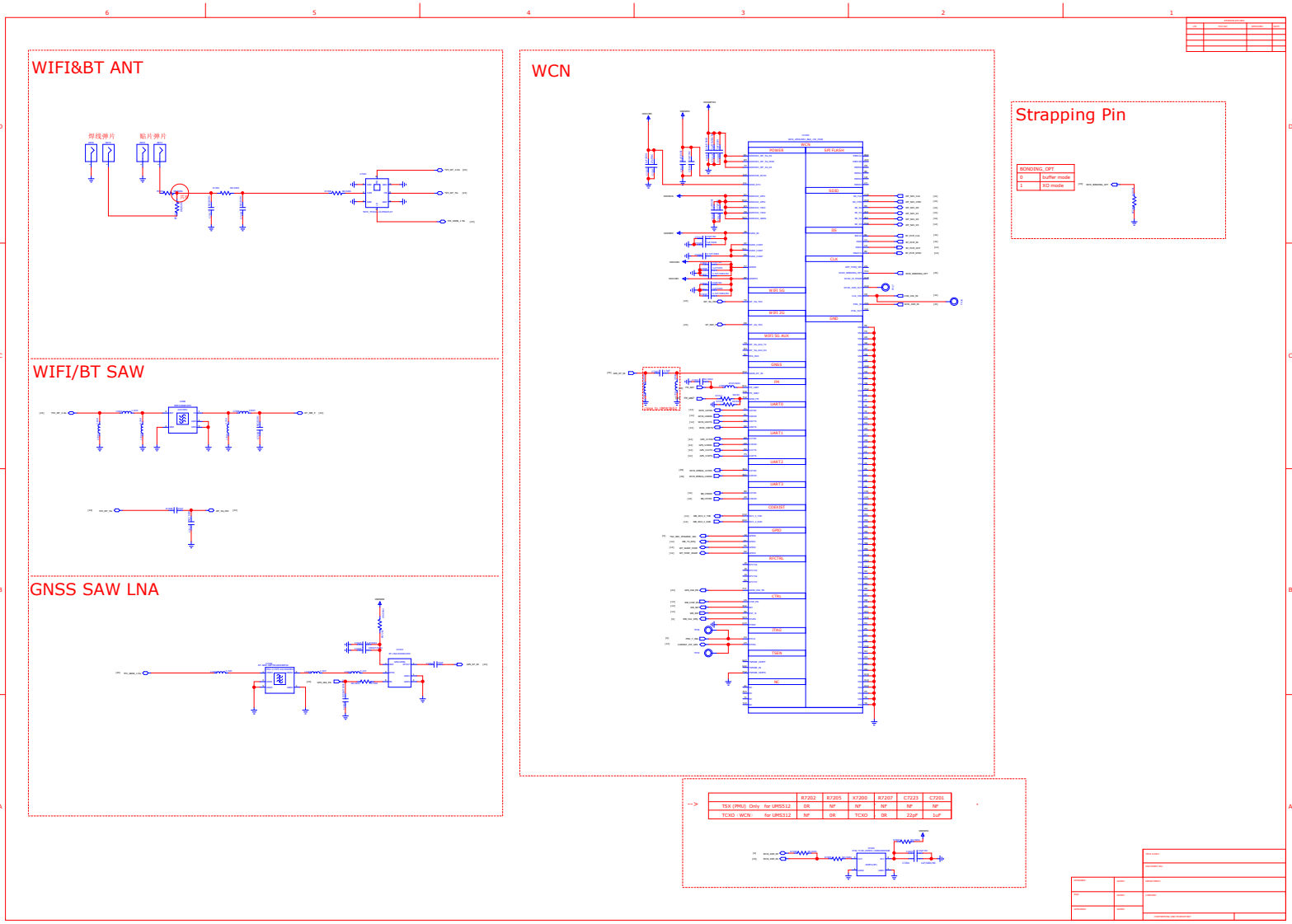
REVISION RECORD

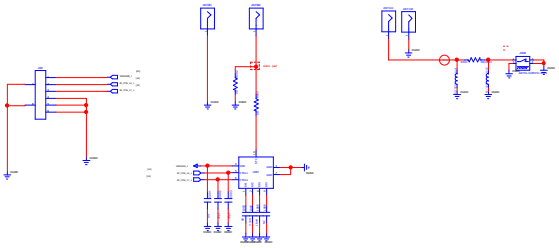
LTR:	ECO NO:	APPROVED:	DATE:

DESIGNER:	DATED:	DEPARTMENT:
EQA:	DATED:	COMPANY:
APPROVED:	DATED:	CONFIDENTIAL AND PROPRIETARY

TITLE & REV:

DOCUMENT NO.:


WIFI&BT ANT
WIFI/BT SAW
GNSS SAW LNA
WCN
Strapping Pin
BONDING_OPT
0 buffer mode
1 XO mode
R7202 R7205 X7200 R7207 C7223 C7201
TSX (PMU) Only for UMS512 0R NF NF NF NF NF
TCXO (WCN) for UMS312 NF 0R TCXO 0R 22pF 1uF


J1
GND
VCC
SCL
SDA
GND
VCC
SCL
SDA
GND
VCC
SCL
SDA