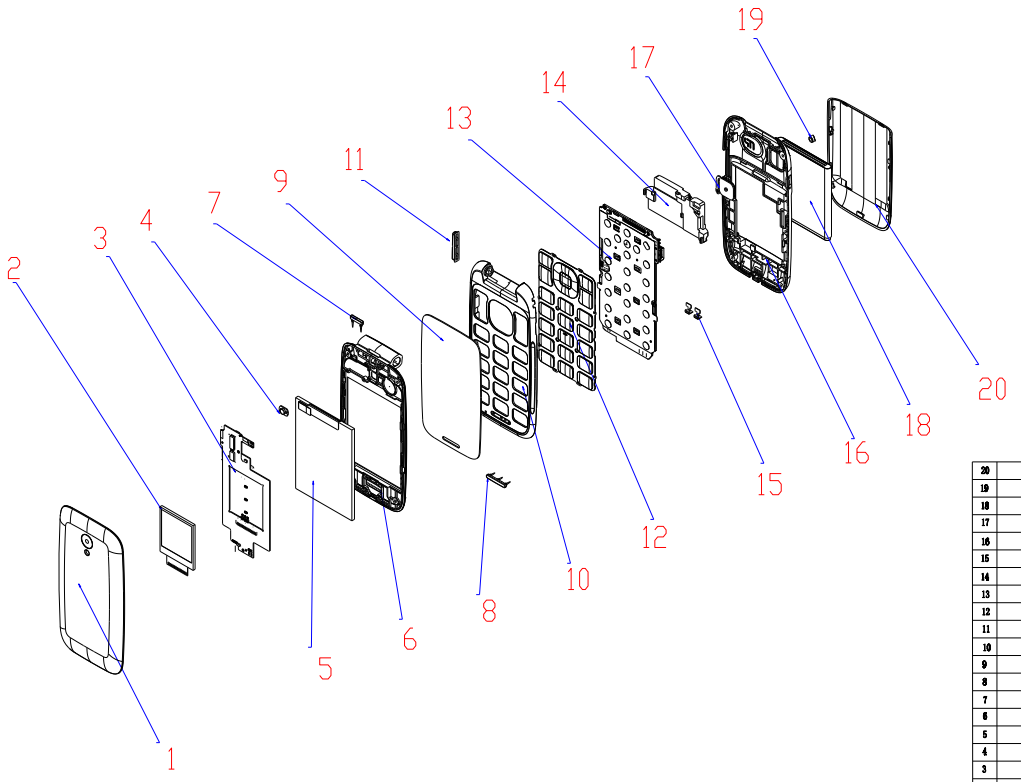

S/N	CP	PN	Qty	RS
20		Fshell		
19		decorative		
18		Battery		
17		key		
16		D shell		
15		Shrapnel	1	
14		Loudspeaker	1	
13		Mainboard	1	
12		key	1	
11		key	1	
10		C shell	1	
9		lens	1	
8		Silicone gel	1	
7		Silicone gel	1	
6		B shell	1	
5		display	1	
4		Lens	1	
3		Mainboard	1	
2		display	1	
1		A shell	1	

CL8700

CL8700 Service Part List			
Item	**Description**	**Unit**	**Price**
1	CL8700 E19 battery	1	Please contact our helpline
2	CL8700 rear-facing camera assembly	1	Please contact our helpline
3	CL8700 external charging port(s)	1	Please contact our helpline
4	CL8700 mechanical button(s)	1	Please contact our helpline
5	CL8700 main microphone(s)	1	Please contact our helpline
6	CL8700 speaker(s)	1	Please contact our helpline
7	CL8700 mechanical display folding mechanisr	1	Please contact our helpline
8	CL7800 hinge assembly	1	Please contact our helpline

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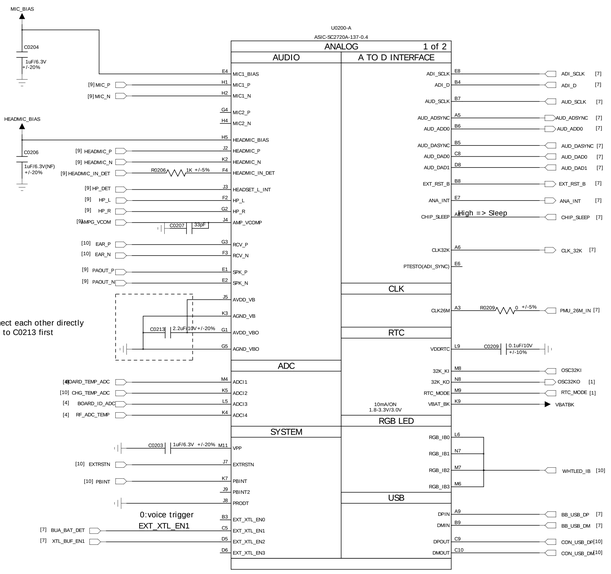
PMU_ANALOG



G1 and J5 can not connect each other directly
G1 and J5 must connet to C0213 first

BKBT

RTC

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

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CHECKED:	DATED:	TITLE:	
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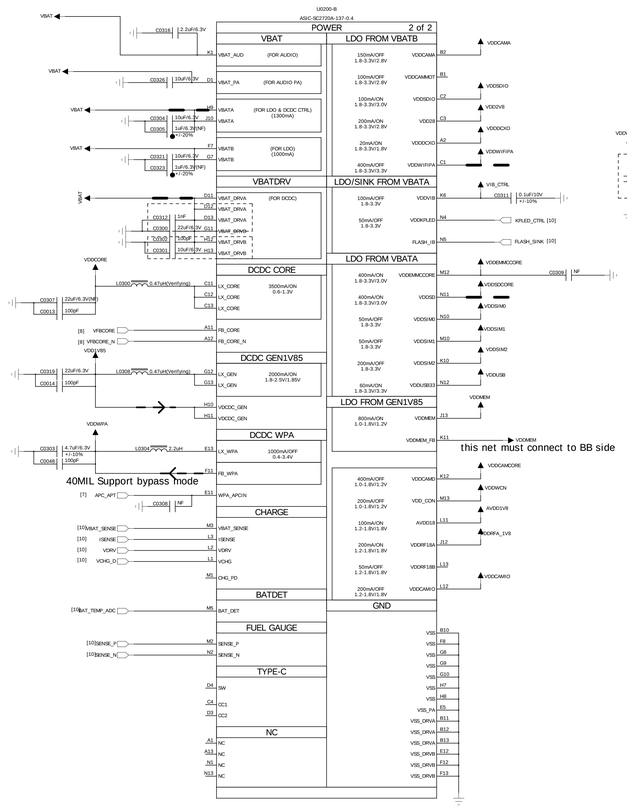
PMU_POWER



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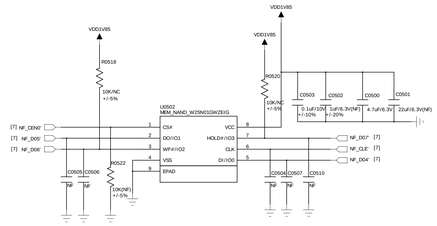
SPI FLASH(Default)

SPI_NAND_D0
SPI_NAND_D1
SPI_NAND_D2
SPI_NAND_D3

CO-PAD



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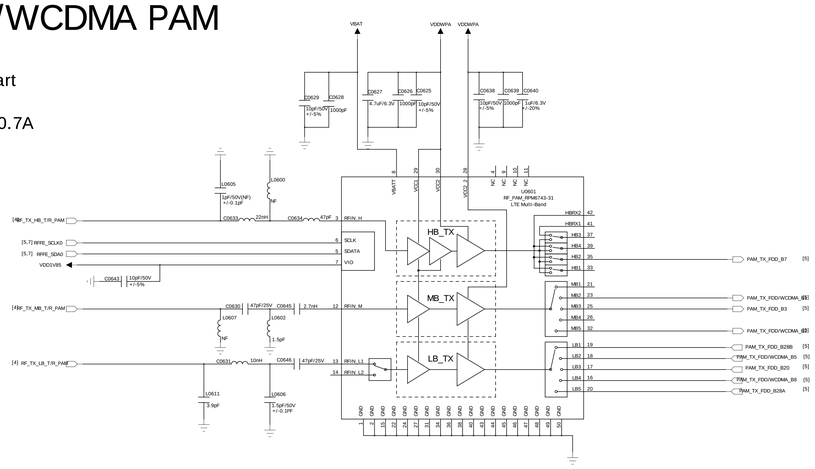
LTE/WCDMA PAM

PA Part

Ipp=0.7A


VBAT
VDDMPA
VDDMPA
C0629 10pF/50V +/-5%
C0628 1000pF
C0627 4.7uF/6.3V
C0626 1000pF
C0625 10pF/50V +/-5%
C0638 10pF/50V +/-5%
C0639 1000pF
C0640 4.7uF/6.3V +/-20%
L0605 1pF/50V(INF) +/-0.1pF
L0600 NF
C0633 22nH
C0634 47pF
3 RFIN_H
[4] RF_TX_HB_T/R_PAM
[5,7] RFFE_SCLKD
[5,7] RFFE_SDAD
VDD1V85
C0643 10pF/50V +/-5%
SCLK
SDATA
VIO
U0501
RF_PAM_RFM6743-31
LTE Multi-Band
HB_TX
MB_TX
LB_TX
HBRX2 42
HBRX1 41
HB3 37
HB4 39
HB2 35
HB1 33
MB1 21
MB2 23
MB3 25
MB4 25
MB5 32
LB1 19
LB2 18
LB3 17
LB4 16
LB5 20
PAM_TX_FDD_B7 [5]
PAM_TX_FDD/WCDMA_B5 [5]
PAM_TX_FDD_B3 [5]
PAM_TX_FDD/WCDMA_B8 [5]
PAM_TX_FDD_B28A [5]
[4] RF_TX_MB_T/R_PAM
C0630 47pF/25V
C0545 2.7nH
12 RFIN_M
L0607 NF
L0602 1.5pF
[4] RF_TX_LB_T/R_PAM
C0631 10nH
C0546 47pF/25V
13 RFIN_L1
14 RFIN_L2
L0611 3.9pF
L0606 3.9pF/50V +/-0.1PF
PDD GND GND GND

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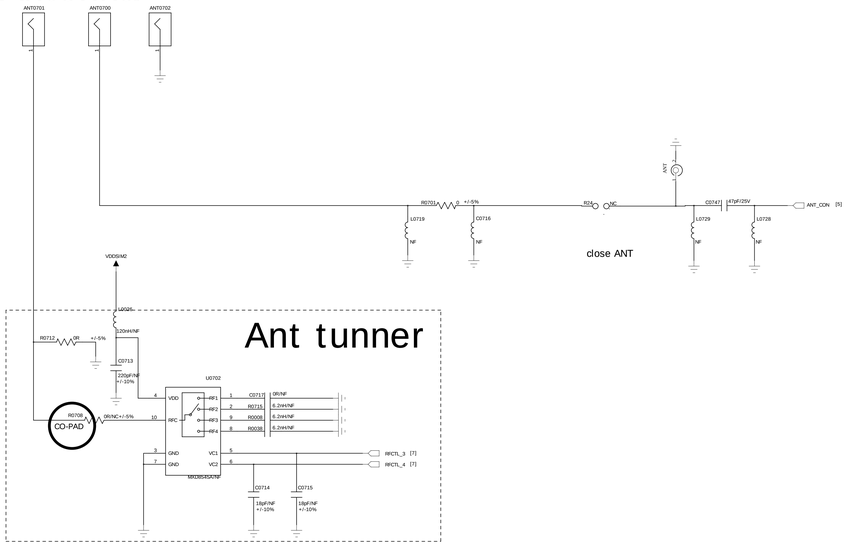
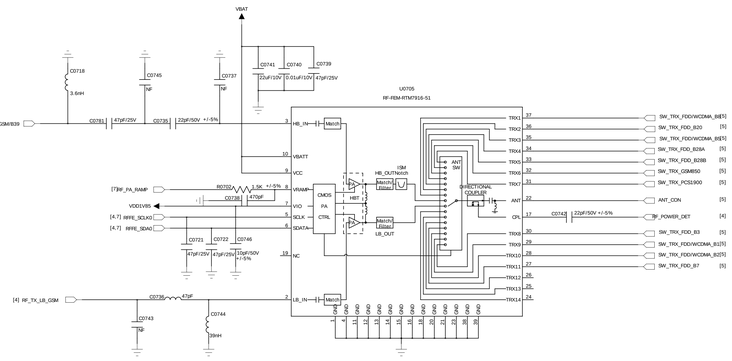
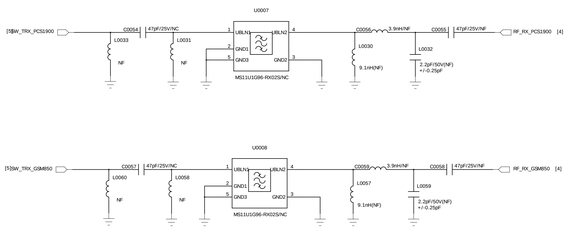
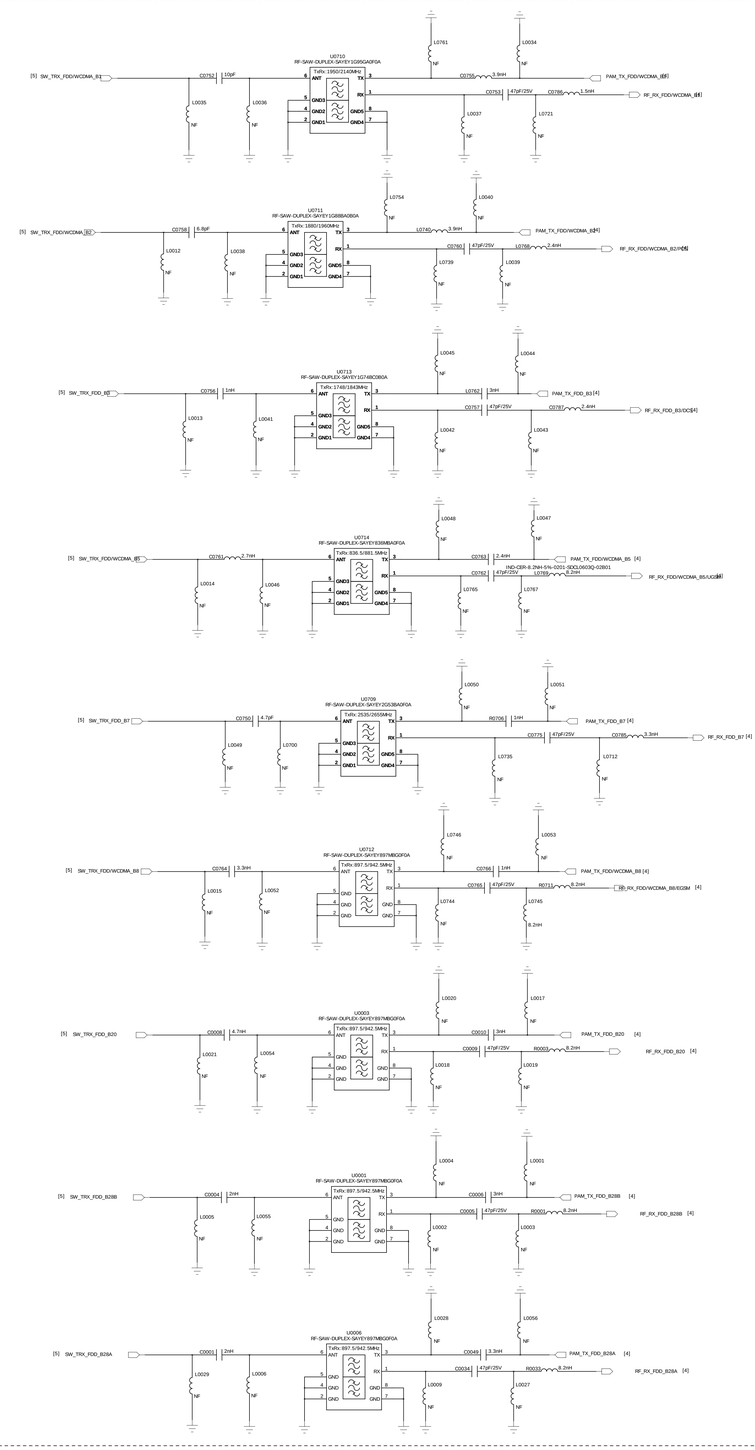
Primary Antenna



TDD B34/B39/GSM PA + Switch







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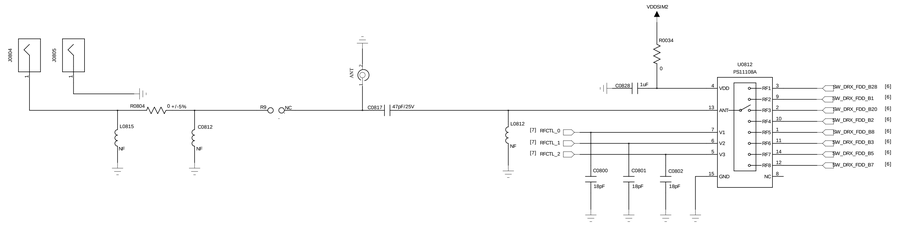
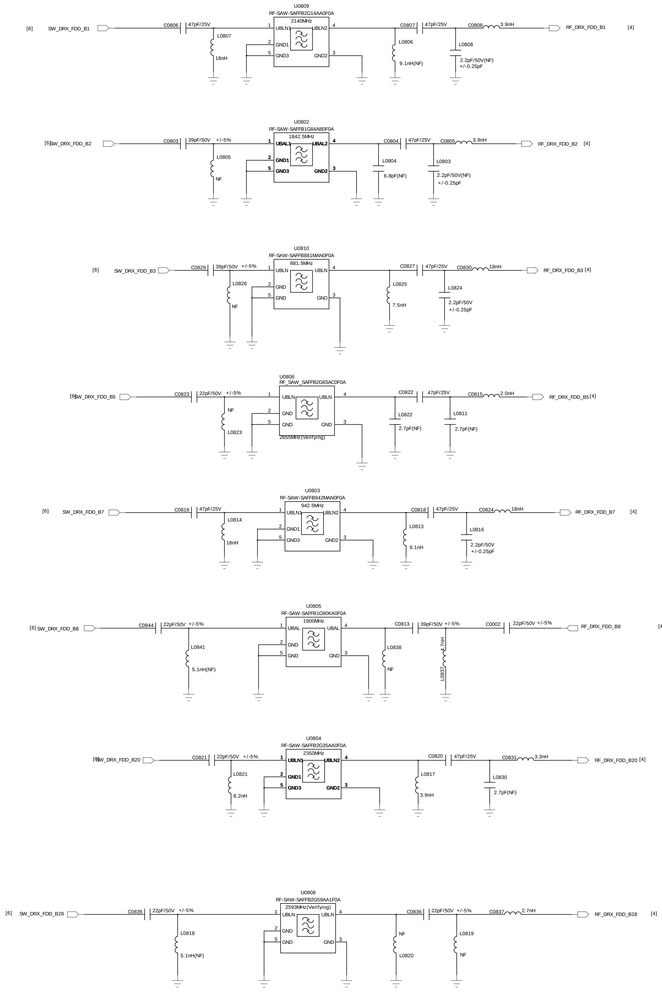
Diversity LTE Path





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QUALITY CONTROL:	DATED:
RELEASED:	DATED:

COMPANY: GEEMARC TELECOM			
TITLE:			
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SCALE:		SHEET: 6 OF 12	

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DIGITAL

U2100-A
BB_UMB9117_BGA_311_P040

DIGITAL 1 of 4

RFSPI (VIO1V8)

[4] SPI_CLK_RFG	C4	RFSCK
[4] SPI_DATA_RFG	C2	RFSDA
[4] SPI_LE_RFG	C3	RFSEN (H)

RFCTRL (VIO1V8)

FOR LTE/WCDMA/GSM

[6] RFCTL_0	L4	RFCTL0/GPIO4
[6] RFCTL_1	N4	RFCTL1/GPIO5
[6] RFCTL_2	M4	RFCTL2/GPIO6
[6] RFCTL_3	N2	RFCTL3/GPIO7
[6] RFCTL_4	P3	RFCTL4/GPIO8
	N1	RFCTL5/GPIO9
[11] RFCTL_6	P2	RFCTL6/GPIO10
[11] RFCTL_7	R1	RFCTL7/GPIO11
[11] WIFI_3.3V_EN	R3	RFCTL8/GPIO12
WIFI_OE	R2	RFCTL9/GPIO13
GPS_OE	T2	RFCTL10/GPIO14
[11] GPS_3.3V_EN	P4	RFCTL11/EXTINT2/GPIO15

EXTINT2

EXTINT3

FOR LTE

[10]GPIO19_REC_EN	V2	RFCTL16/EXTINT3/GPIO16
[10] EINT4_END	V1	RFCTL17/EXTINT4/GPIO20
[11] WIFI_U2TXD	U3	RFCTL19/U2TXD/GPIO22
[11] WIFI_U2RXD	U4	RFCTL20/U2RXD/GPIO23

GPIO (VIO1V8)

[10]GPIO16_SDM	T3	GPIO16/SIM_DET0
	R4	GPIO17/PWMX/KEYIN5
	U2	GPIO18/PWMB/KEYOUT5
[10]GPIO21_LCM_RSTN1	T4	GPIO21/SIM_DET1

RFFE (VIO1V8)

[4,5] RFFE_SCLK0	M2	RFFE_SCK
[4,5] RFFE_SDA0	M1	RFFE_SDA

EXTINT (VIO1V8)

	Y3	EXTINT0/EXT_XTL_EN0/GPIO45
	U6	EXTINT1/COMQUI1/CLK_AUX1/GPIO46
[10] EINT1_SOS		

IIC1 (VIO1V8)

	W8	SCL1/GPIO47
	W9	SDA1/GPIO48

DET (VIO1V8)

	U9	TF_DET/GPIO49
[1] BUA_BAT_DET	V10	BUA_DET/GPIO50

LCM CTRL (VIO1V8)

LCM reset output [10] LCM_RSTN	U5	LCM_RSTN/GPIO38
LCM frame mark input [10] LCM_FMARK	U7	LCM_FMARK/GPIO39

SPI LCD (VIO1V8)

[10] LCM_SPI_RS	V7	SPI0_CD/LCM_CD/GPIO44
SPI data and command output [10] LCM_SPI_CSN	W6	SPI0_CSN/LCM_CS/GPIO40
[10] LCM_SPI_DI	V7	SPI0_DO/LCMDO1/GPIO41
[10] LCM_SPI_DO	W7	SPI0_DI/LCMDO1/GPIO42
SPI data clock output [10] LCM_SPI_CLK	V8	SPI0_CLK/LCMD7G1/GPIO43

CCIR/MCU LCD (VIO1V8)

[10] CAM_SPI_DI0_CCIR_D00	B6	CCIR0/LCMD0G0/SDI_0G1/GPIO105
[10] CAM_SPI_DI1_CCIR_D01	A6	CCIR1/LCMD1G0/SDI_1G1/GPIO106
[10] CAM_SPI_DI2_CCIR_D02	B8	CCIR2/LCMD2G0/SDI_2G1/GPIO107
[10] CAM_SPI_DI3_CCIR_D03	A5	CCIR3/LCMD3G0/SDI_3G1/GPIO108
[10] CCIR_D04	E9	CCIR4/LCMD4G0/GPIO109
[10] CCIR_D05	E7	CCIR5/LCMD5G0/GPIO110 (H)
[10] CCIR_D06	E8	CCIR6/LCMD6G0/GPIO111
[10] CCIR_D07	B5	CCIR7/LCMD7G0/GPIO112
[10] CCIR_HS	D7	CCIR/HS/LCMRD0G0/GPIO104
[10] CAM_SPI_SSN_CCIR_VS	B7	CCIR/VS/LCMARG0/SSNG1/GPIO103

SDI_0_CCIR_00
SDI_1_CCIR_01
SDI_2_CCIR_02
SDI_3_CCIR_03
CCIR_04
CCIR_05
CCIR_06
CCIR_07
CCIRHS
SSN_CCIRVS

CAM CTRL (VIO1V8)

C2101 10pF/50V +/-5%		
[10] CAM_MCLK0 C4102 NC R2132 51	A9	CMCLK0/CLK_AUX2/DTDX/CSFI/BB_TEST_IND
[10]CAM_SPI_CLK_CCIR_PCLK	A8	CMPCLK0/SCK0G1/GPIO102/BB_TEST_QN_DTDI
[10] CAM_PWDN0	C9	CMPDI/GPIO101/BB_TEST_QP_DTDO
[10] CAM_RST0	D9	CMRST/GPIO100
[10] EINT5_PHLL	C6	EXTINT5/LCMRDG1/GPIO113
EINT6_CALL	D6	EXTINT6/GPIO114 (H)
[10] I2CI_SCL	B10	SCL4/GPIO97
[10] I2CI_SDA	B9	SDA4/GPIO98

DTMS
BB_TEST_IP DRTCK
WPU

SPI CAM (VIO1V8)

	B4	SSNG0/LCMWRG1/IIS2LRCK/GPIO115 (H)
	B3	SCKG0/LCMD2G1/IIS2CLK/GPIO118
	E6	SDI_0G0/LCMD0G1/IIS2DO/GPIO116
	A4	SDI_1G0/LCMD1G1/IIS2DI/GPIO117
[10]GPIO118_FLASH_EN	B2	SDI_2G0/LCMD3G1/GPIO119
[4] BOARD_ID2 GPIO117	A3	SDI_3G0/LCMD4G1/GPIO00
[4] BOARD_ID1 GPIO119	A2	
[4] BOARD_ID0 GPIO0	B2	

KEYPAD (VIO1V8)

	W2	KEYOUT0/GPIO28
	V3	KEYOUT1/GPIO29
	V4	KEYOUT2/GPIO30
	U5	KEYOUT3/GPIO31
	W3	KEYOUT4/GPIO32
	V5	KEYIN0
	W4	KEYIN1
	Y4	KEYIN2
	W5	KEYIN3/SCL2/GPIO36
	Y5	KEYIN4/SDA2/GPIO37

KEYOUT0 [10]
KEYOUT1 [10]
KEYOUT2 [10]
KEYOUT3 [10]
KEYOUT4 [10]
KEYIN0 [10]
KEYIN1 [10]
KEYIN2 [10]
KEYIN3 [10]
KEYIN4 [10]

SDIO 0 (VSD0)

	W13	SD0_CLK/GPIO56
	W14	SD0_CMD/GPIO53
	W18	SD0_D0/GPIO54
	W17	SD0_D1/GPIO55
	Y17	SD0_D2/GPIO52
	Y16	SD0_D3/GPIO51

Close to BB
R2133 0 +/-5%
TF_SD0_CLK0 [10]
TF_SD0_CMD [10]
TF_SD0_D0 [10]
TF_SD0_D1 [10]
TF_SD0_D2 [10]
TF_SD0_D3 [10]

SDIO0 support SDIO3.0 4bit 208MHz with 1V8 and 3V

SDIO 2 (VIO1V8)

	B11	SD2_CLK/SPI1_CLK/GPIO91
	D12	SD2_CMD/SPI1_DI/GPIO92
	E12	SD2_D0/SPI1_DO/GPIO93
	D10	SD2_D1/GPIO94
	E10	SD2_D2/GPIO95
	E11	SD2_D3/SPI1_CSN/GPIO96

SDIO2 support SDIO3.0 4bit 208MHz with 1V8 only

SIM 0 (VSIM0)

	W19	SIM0_CLK
	Y19	SIM0_DA
	W20	SIM0_RST

SIM0_CLK [10]
SIM0_DA [10]
SIM0_RST [10]

SIM 1 (VSIM1)

	U17	SIM1_CLK
	V18	SIM1_DA
	V17	SIM1_RST

SIM1_CLK [10]
SIM1_DA [10]
SIM1_RST [10]

IIS 1 (VIO1V8)

	A12	I2S1DI/KEYIN6/GPIO87
	B12	I2S1DO/KEYOUT6/GPIO88
	C12	I2S1CK/KEYOUT7/GPIO89
	A11	I2S1LRCK/KEYIN7/EXT_XTL_EN1/GPIO90

UART 0 (VIO1V8)

	C13	U0TXD/EXT_XTL_EN2/GPIO80
	D13	U0RXD/EXT_XTL_EN3/GPIO81
	B15	U0CTS/PWMC/GPIO82
	A15	U0RTS/EXTINT7/GPIO83

placed closed

GPS_U0TXD [11]
GPS_U0RXD [11]

UART 1 (VIO1V8)

	B14	U1TXD/GPIO84
	A14	U1RXD/GPIO85

BB_U1TXD [10]
BB_U1RXD [10]

ROM Code log from U1ART

NAND (VIO1V8)

	K20	NF_DATA_0/GPIO77
	K19	NF_DATA_1/GPIO78
	L20	NF_DATA_2/GPIO76
	L17	NF_DATA_3/GPIO74
	P20	NF_DATA_4/SPI_DI/GPIO67
	N19	NF_DATA_5/SPI_DI/GPIO68
	M19	NF_DATA_6/SPI_D2/GPIO70
	N20	NF_DATA_7/SPI_D3/GPIO69
	N18	NF_DQS/GPIO71

NF_D04 [3]
NF_D05 [3]
NF_D06 [3]
NF_D07 [3]

	P18	NF_ALE/GPIO66
	L19	NF_CEN0/SPI_CS0/GPIO79
	M16	NF_CEN1/SPI_CS1/GPIO73
	P17	NF_CLE/SPI_CLK/GPIO65
	R19	NF_RBN/GPIO64
	P16	NF_RE_T/GPIO75
	M17	NF_WEN_T/GPIO72
	R17	NF_WPN/GPIO63

NF_CEN7 [3]
NF_CLE [3]

NAND address latch enable
NAND command latch enable

ARM JTAG (VIO1V8)

	W1	TCK_ARM/GPIO26
	Y2	TMS_ARM/GPIO27

MTCK [7]
MTMS [7]

[7]MTCK
[7]MTMS

TP3 TP4

SYSTEM (VIO1V8)

	B13	CLK_AUX0/GPIO86

CON_32K_IN [11]

CON_32K_IN need protect

U2100-B
BB_UMB9117_BGA_311_P040

RF / ANALOG 2 of 4

A to D I/F (VIO1V8)

ADI synchronous clock [1] ADI_SCLK	U11	ADI_SCLK
[1] ADI_D	Y10	ADI_D
[1]AUD_SCLK	Y13	AUD_SCLK
[1]AUD_ADSYNC	W16	AUD_ADSYNC
[1] AUD_ADD0	W13	AUD_ADD0
[1]AUD_DASYNC	Y11	AUD_DASYNC
[1] AUD_DAD0	Y13	AUD_DAD0
[1] AUD_DAD1	U12	AUD_DAD1
[1] XTL_BUF_EN1	W10	XTL_BUF_EN
[1] EXT_RST_B	Y14	EXT_RST_B
[1] ANA_INT	V11	ANA_INT
[1] CHIP_SLEEP	W14	CHIP_SLEEP
[1] CLK_32K	W12	CLK_32K

R2113A 1.76(NF) +/-5%
R2104A NF +/-5%
R2105A NF +/-5%

D to A CLK26M

[1] PMU_26M_IN	E4	CLK26M_OUT

USB 2.0

[1] BB_USB_DP	T19	USB_DP
[1]BB_USB_DM	T20	USB_DM
R2122 6.04K RES-6.04K-1%-0402	U19	USB_REXT

BT RF

	B19	BT_TRX_P
	B18	BT_TRX_N

FM

	C20	FM_LANT
	D19	FM_SANT
	D20	AVSS_FM

LVDSRF

	G2	LVDSRF_DL_PRI_P
	G1	LVDSRF_DL_PRI_N
	F2	LVDSRF_DL_DIV_P
	F1	LVDSRF_DL_DIV_N
	H2	LVDSRF_UL_P
	J2	LVDSRF_UL_N
	E2	LVDSRF_REXT

close to BB
LVDS_DLP_P_RFA [4]
LVDS_DLP_N_RFA [4]
LVDS_DLD_P_RFA [4]
LVDS_DLD_N_RFA [4]
close to BB
LVDS_ULP_P_RFA [4]
LVDS_ULP_N_RFA [4]
R2112S 120(NF) +/-1%

LVDSRF0 TX data negative

APCOUT

	D3	APCOUT0
	D1	APCOUT1

IRF_PA_RAMP [5]
APC_APT [2]

CLK TEST

	U14	CLKOUT_TEST_MHLL
	B16	VCO_MONITOR

T2109:6G clock output
VCO_MONITOR [8]

CLK IN

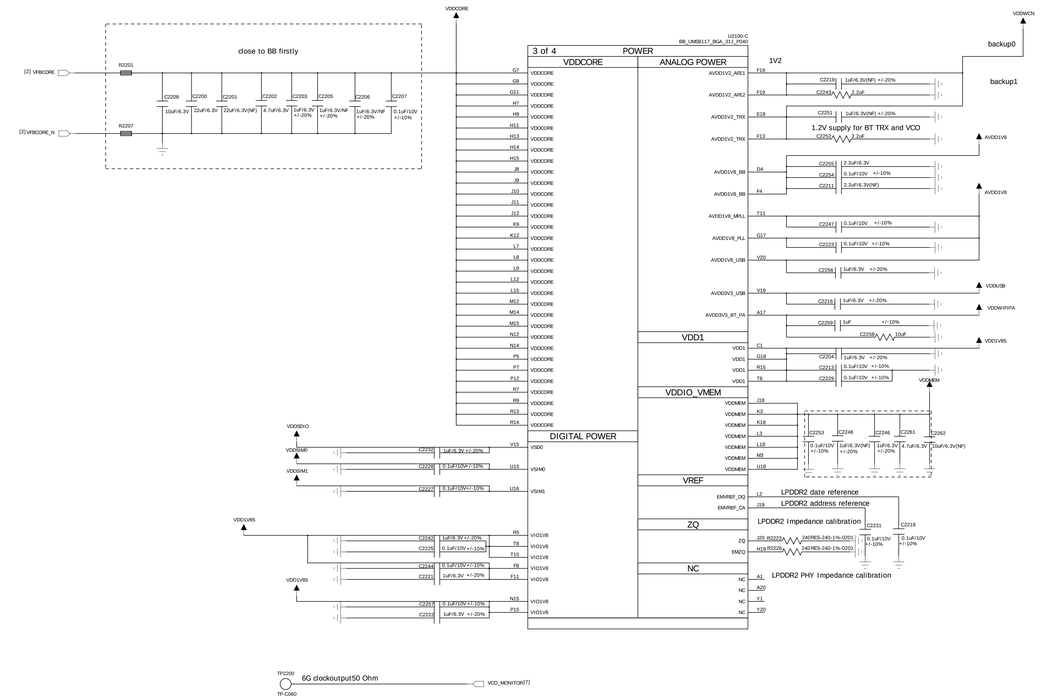
	F6	CLK26M_IN

R2113 0 +/-5%
AP_26M_IN [4]

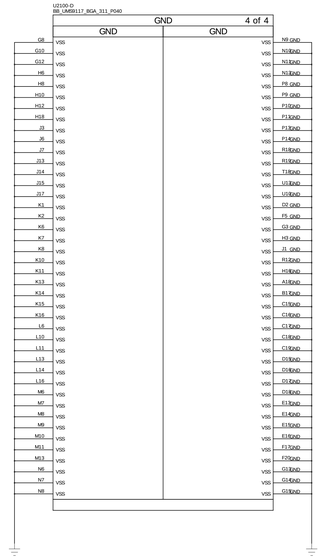
C3 1pF
L15 2.7nH
L5 1pF
C41 2.7nH
R4 NF
BT_ANT [11]
R13 NF
C32 NF
L7 27nH
L23 27nH
C51 NF
FM_LANT [9]

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

POWER



GND



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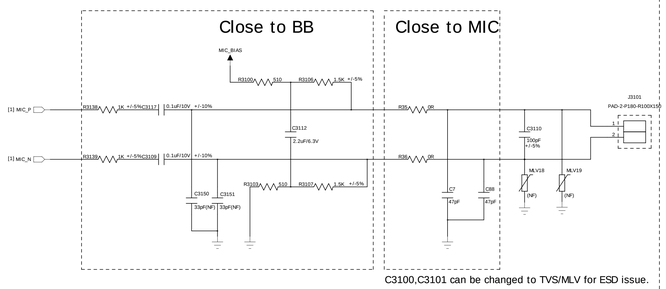
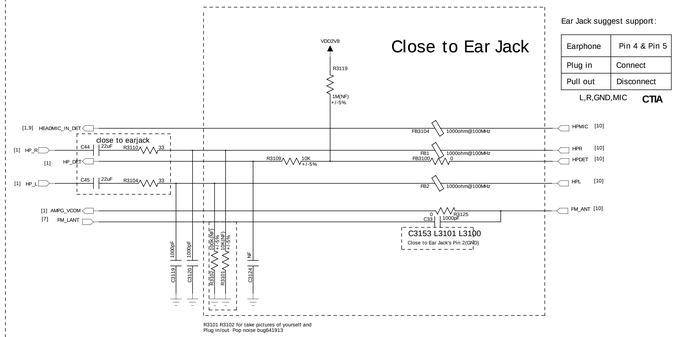
MAIN MIC



C3100,C3101 can be changed to TVS/MLV for ESD issue.

3.5mm Ear Jack



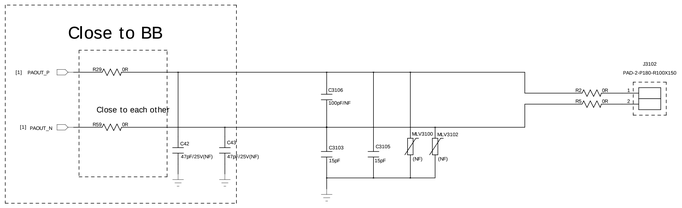
Ear Jack suggest support:

Earphone	Pin 4 & Pin 5
Plug in	Connect
Pull out	Disconnect

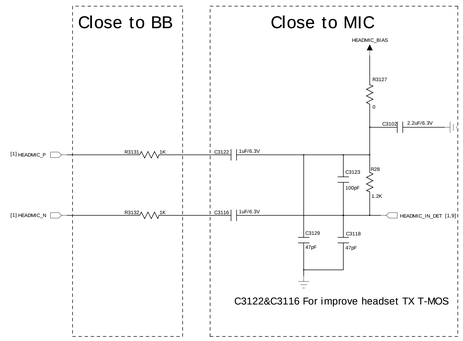
L,R,GND,MIC **CTIA**

R3101 R3102 for take pictures of yourself and Plug in/out Pop noise bug641913

SPEAKER



HEAD MIC



C3122&C3116 For improve headset TX T-MOS

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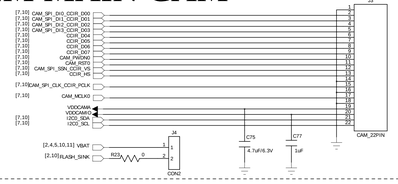
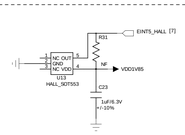
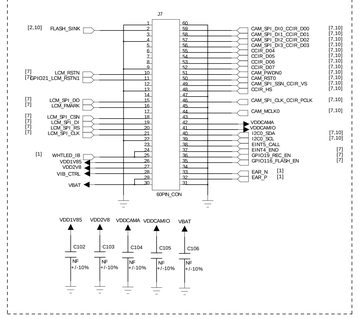
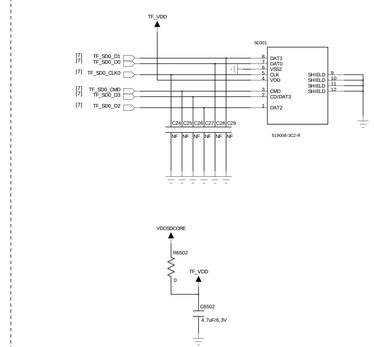
2M MAIN CAM

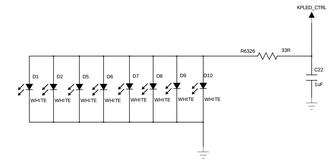








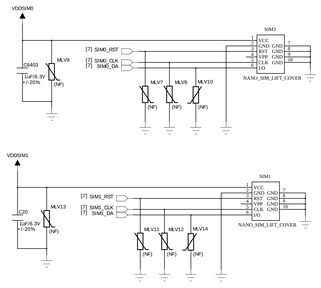
KEYPAD LED



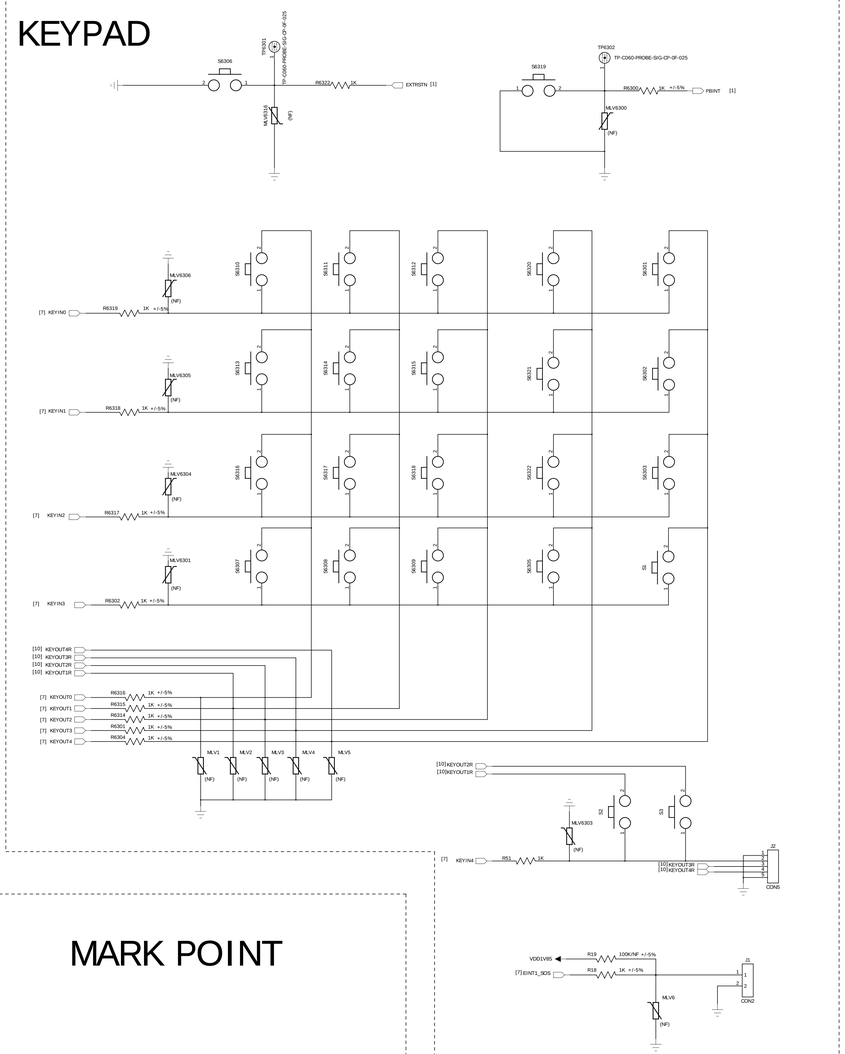
should afford 50mA current

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

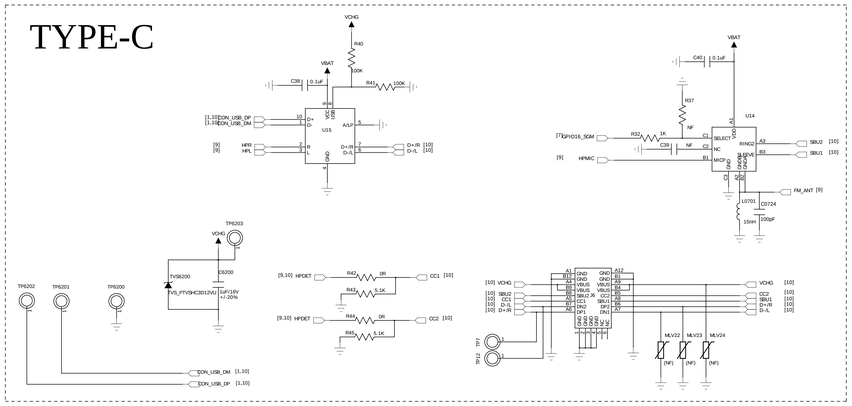
SIM0 & SIM1



KEYPAD

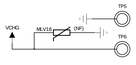


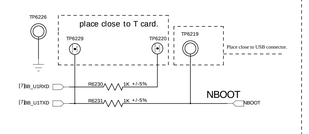
TYPE-C



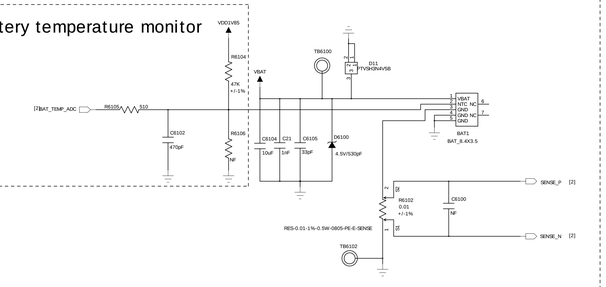
Test Points

Ball name	Signal name in boot code	Value	Descriptions	Default vale
U1TXD	USB_DLOAD_EN	0	USB downloaderin time out)	*(con't aspo)
		1	UART download	
AUD_DAD1	ARM_BOOT_MD0	00	00: Reserved	11/eMDB mat, USB-md1
		01	01: SLC SPI Nand(for, As Bins out)	
AUD_DAD0	ARM_BOOT_MD1	10	10: SLC SPI NAND Flash	
		11	11: SLC Parallel NAND Flash	
ADI_BCLK	ARM_BOOT_MD2	0	USB download, if EVTpot 3 "7/8" from PC through USB within timeout period	*(con't aspo)
		1	Normal Boot Flow	
PTEST	PTEST_FUNC_MODE	0	Normal mode	0
		1	Product Test Mode	

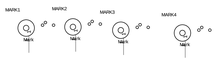


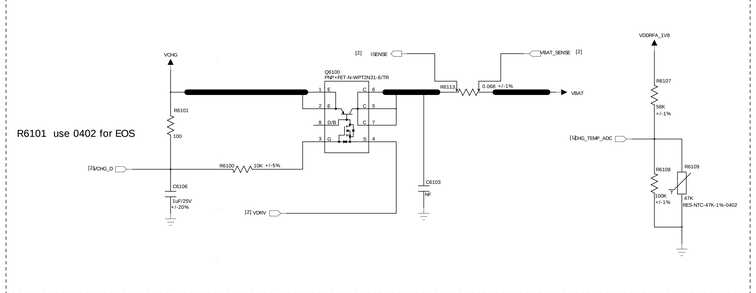


Battery temperature monitor



MARK POINT





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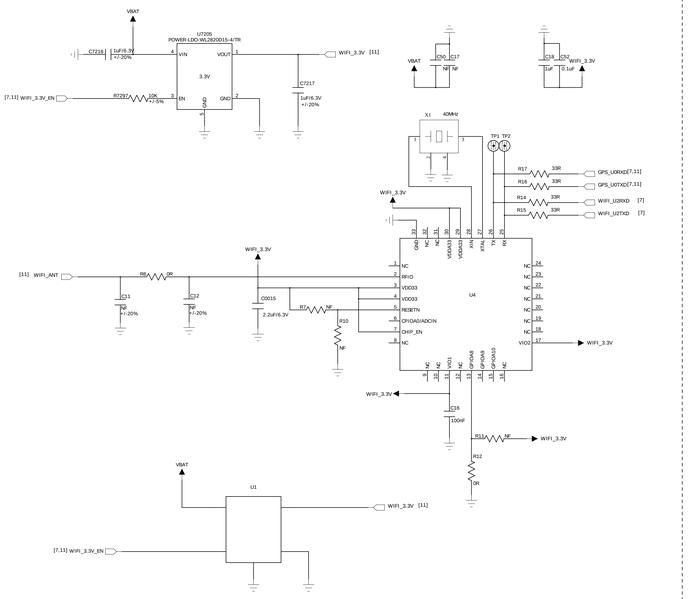
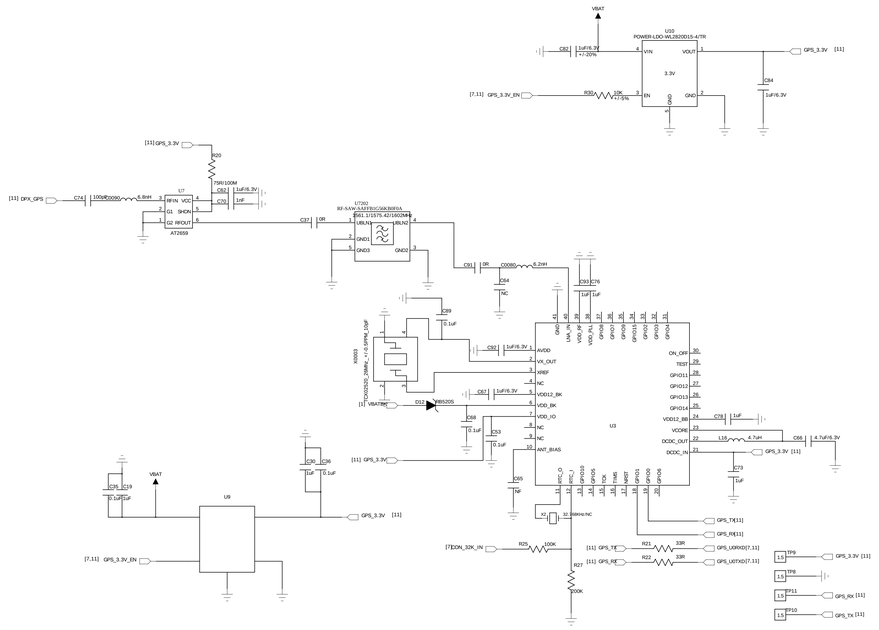
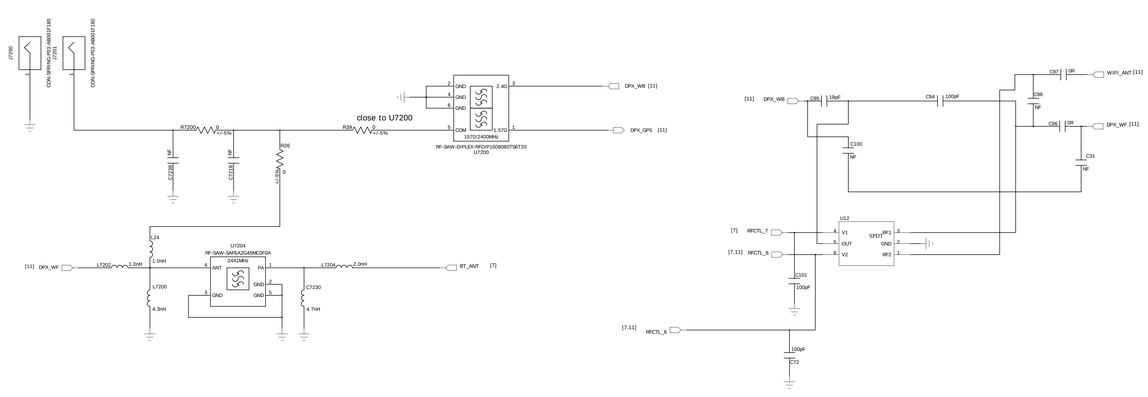
LTR:	ECO NO:	APPROVED:	DATE:

WIFI



GPS





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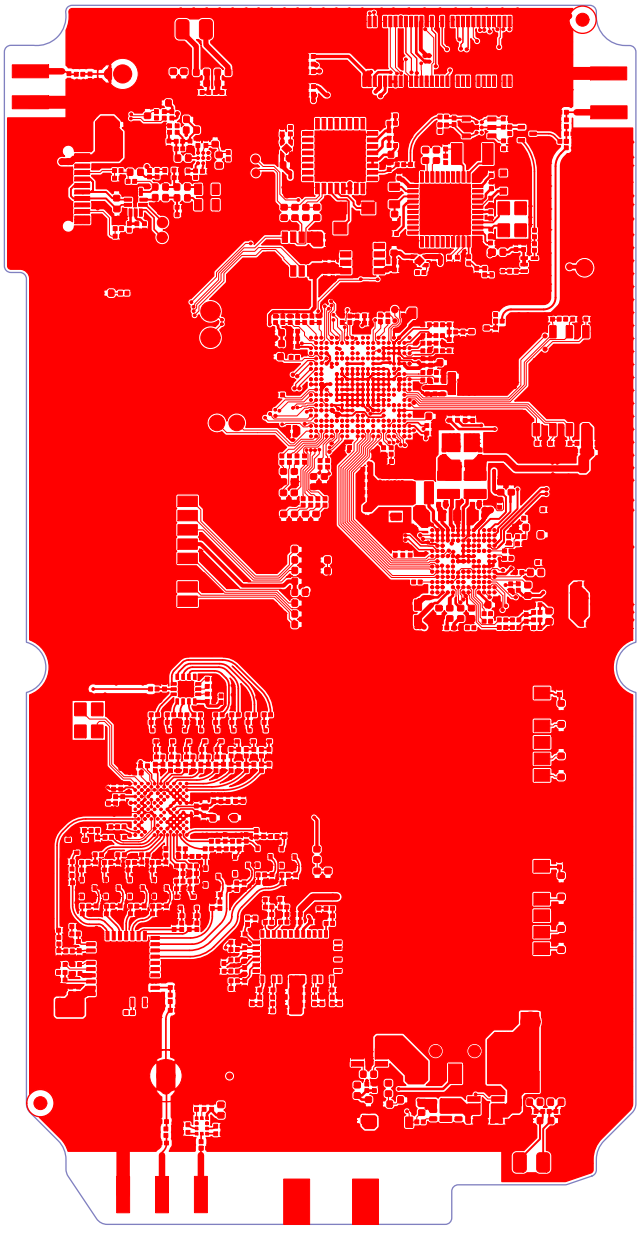

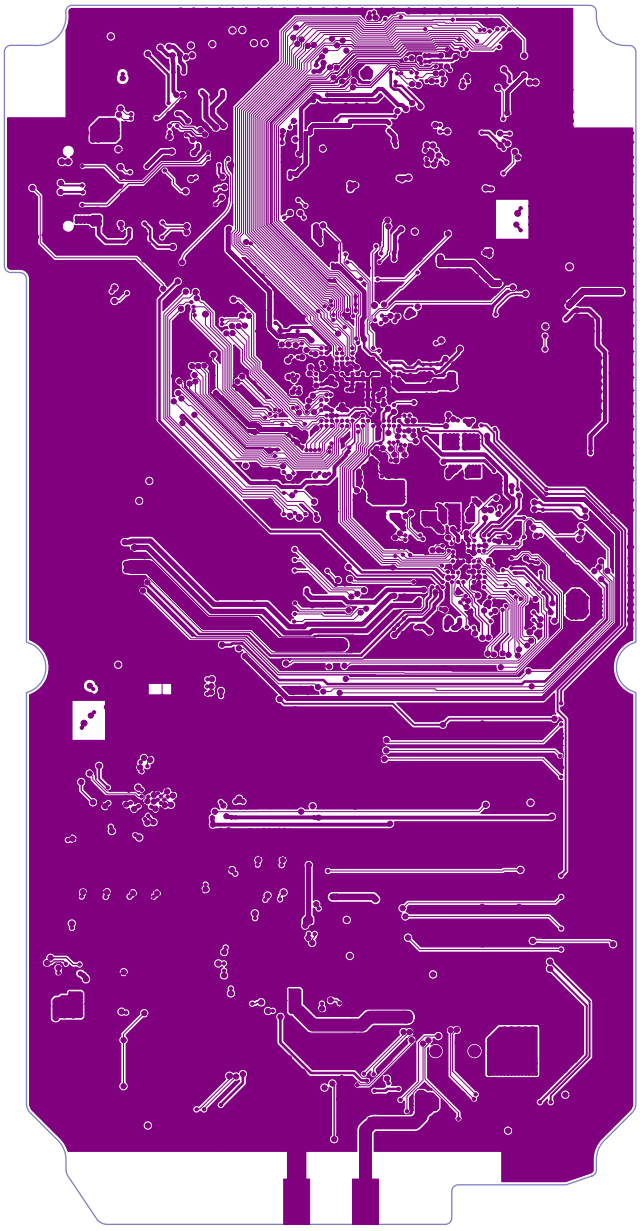

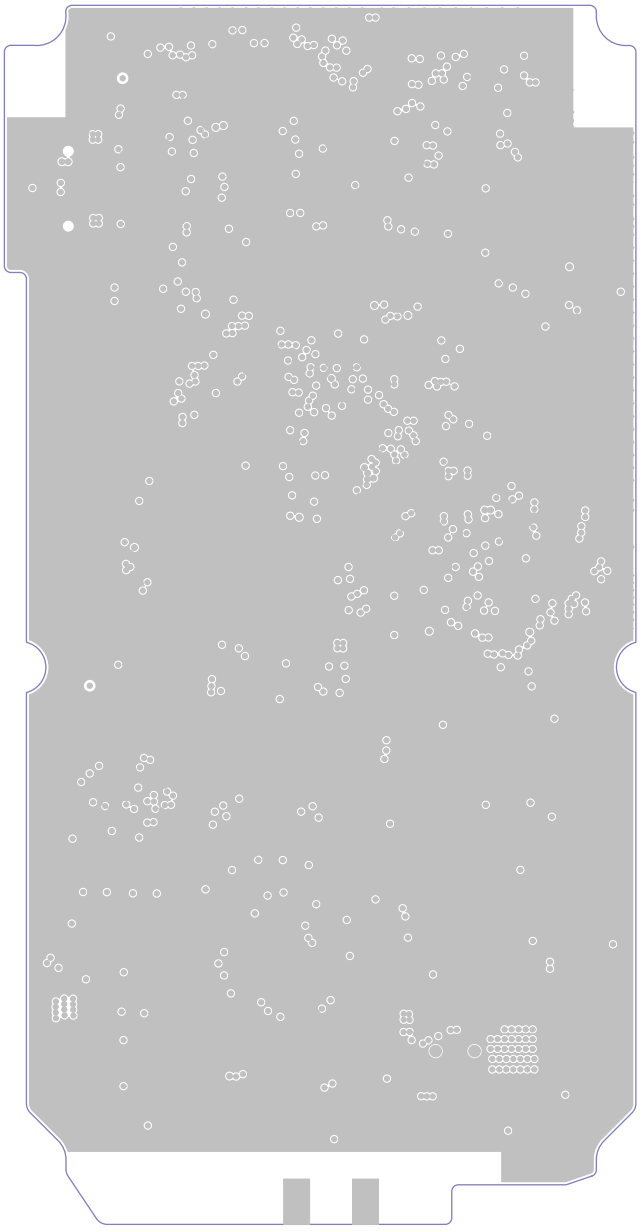

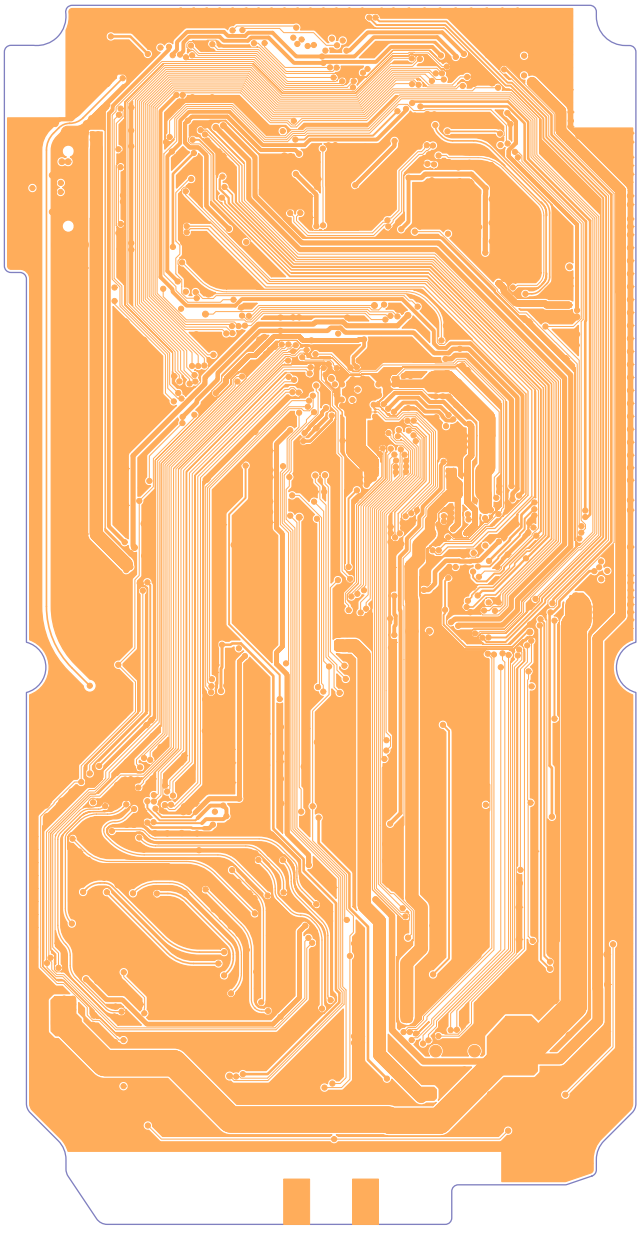

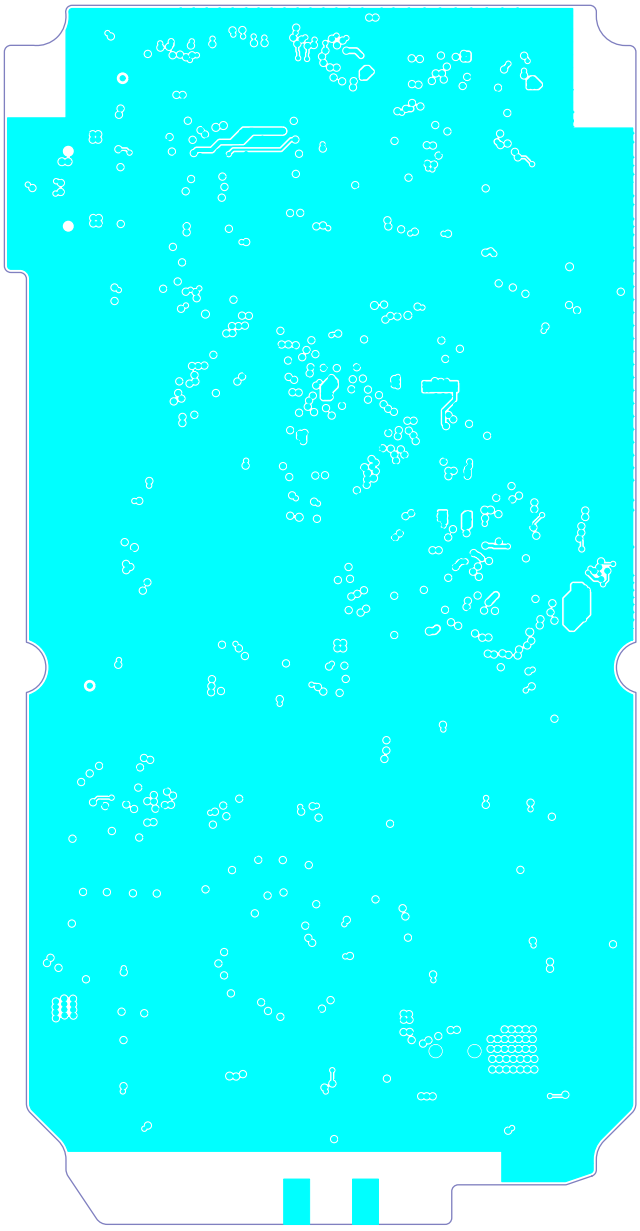

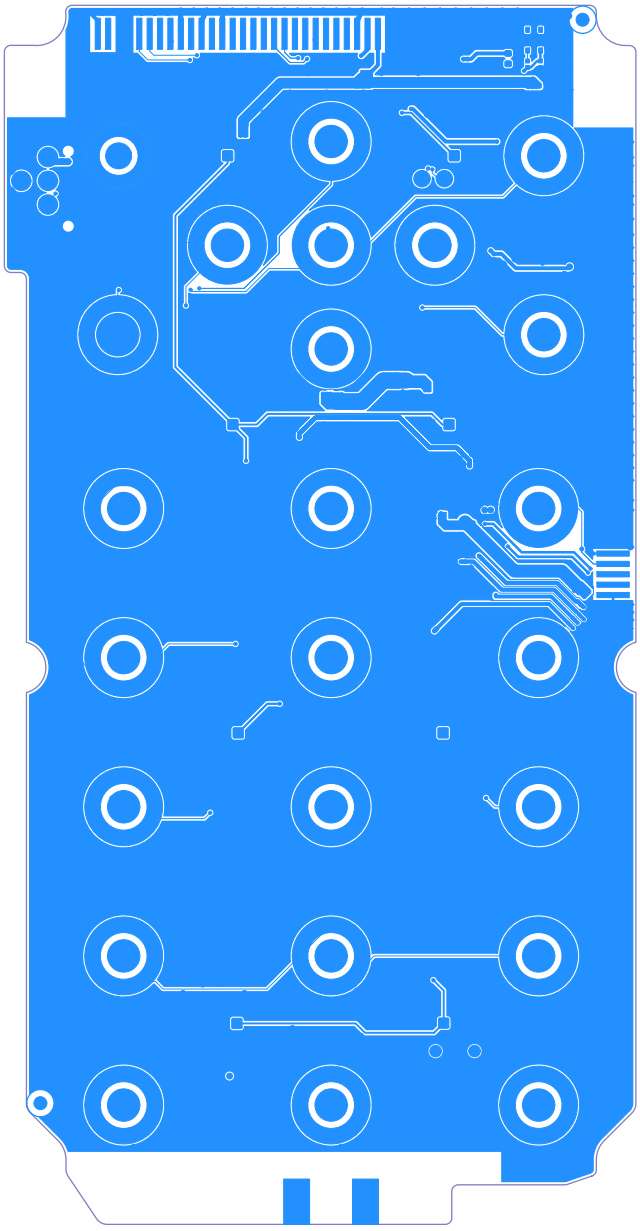

Troubleshooting

Fault analysis：

Can't turn on：

1, Upgrade the motherboard

2, Bad motherboard replacement

3, Bad battery replacement

Abnormal Display:

1, Bad display screen replacement

2, Replace the faulty FPC shaft

3, Bad motherboard replacement

No charging

1, Try with another power supply and cable.

2, Bad battery replacement

3, Bad motherboard replacement

No ringtone

1, bad speaker replacement

2, Bad motherboard replacement

No signal / Poor signal

1, Replace the Bad antenna

2, Bad motherboard replacement

Camera abnormal

1, Bad camera replacement

2, Bad motherboard replacement