REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

TABLE LIST

Sheet #	Content
01.	Table of Content
02.	Revision History
03.	Block Diagram
04.	GPIO MAP
05.	PMI8952_CHARGER
06.	PMI8952_CONTROL/INTERFACE
07.	PM8937_CONTROL_AND_MPP/CLOCK
08.	PM8937_BUCK_CONVERTER
09.	PM8937_LDO_CIRCUITS
10.	PM8937_CODEC
11.	MSM8937_CONTROL
12.	MSM8937:_EBI
13.	MSM8937:_GPIO
14.	MSM8937:_MIPI_AND_RF_CONTROL
15.	MSM8937:_POWER1
16.	MSM8937:_POWER2
17.	MSM8937:GND
18.	MEMORY:LPDDR3+EMMC
19.	BATTERY_CONNECTOR
20.	CHARGE
21.	MIC_RECEIVER&SPEAKER
22.	Headset
23.	LCD_INTERFACE_AND_BACKLIGHT
24.	MAIN/SLAVE_CAMERA_AND_FLASH
25.	Sensors
26.	SIM/TF_CARD
27.	KEYPAD/RGB_LED_DRIVER
28.	NC
29.	TEST_POINT/GND/SHIELDS
30.	WTR2965
31.	SKY77916+SKY77643
32.	LTE_DUPLEXER
33.	LTE_B7
34.	DRX
35.	QFE2101
36.	WCN3615

iREPAIR
LABORATORIO TÉCNICO MICROSOLDADURA

DRAWN: zhangzhiqiang	DATED: 20160926	COMPANY: Shanghai Longcheer Technology Co., Ltd	
CHECKED: yaogang	DATED: 20160926	TITLE: TABLE LIST	
		CODE: XX / SIZE: A0 / DRAWING NO: XXXX	REV: A
		SCALE: <Scale>	SHEET: 1 OF 36

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

REVISON

Revision History

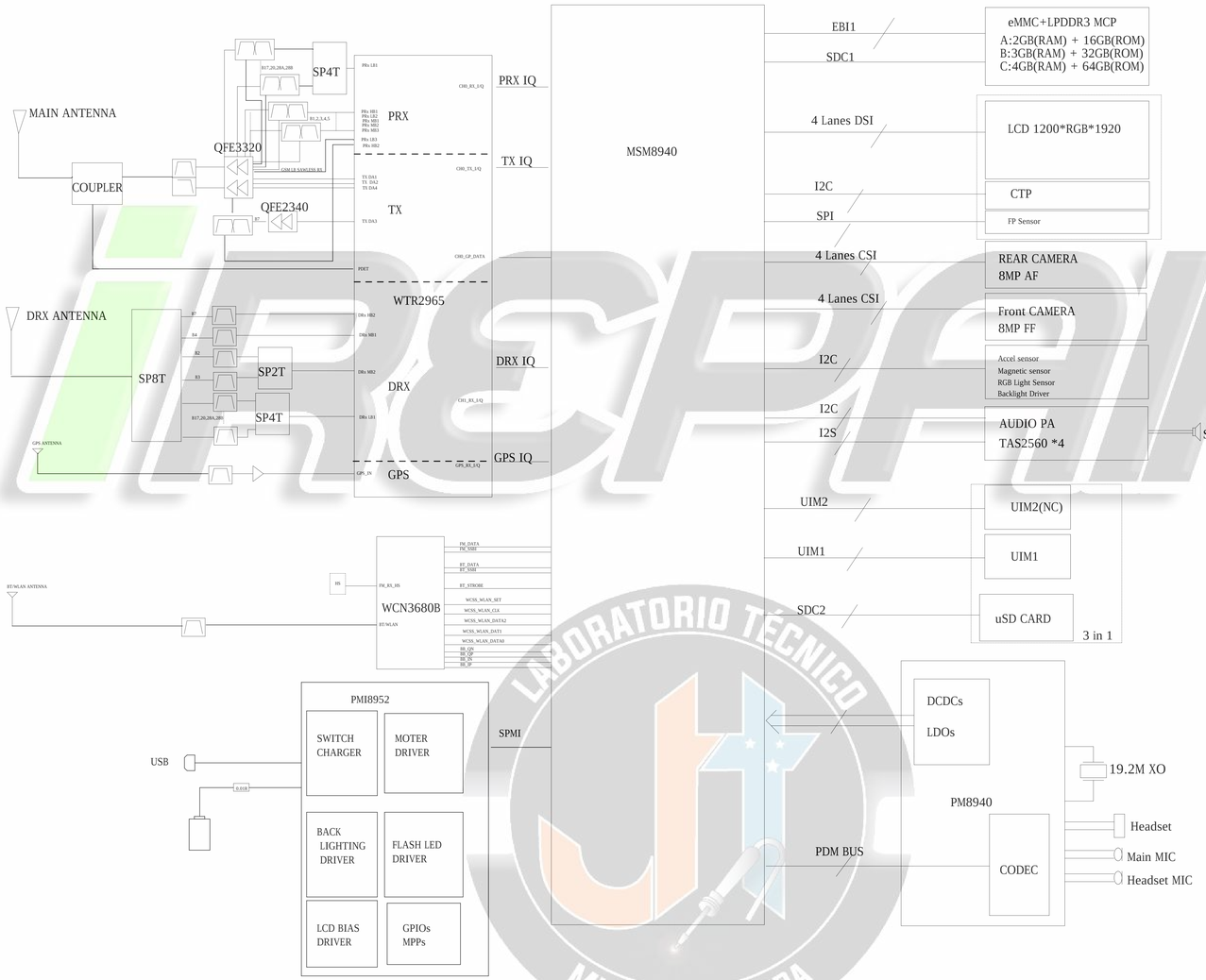
SCHEMATIC MCN	HW VERSION	VERSION	DESCRIPTION OF CHANGE
	PRE_EVT	A	PRE_EVT Initial release

iRCPAIR
LABORATORIO TÉCNICO MICROSOLDADURA

DRAWN: zhangzhiqiang	DATED: 20160926		
CHECKED: yaogang	DATED: 20160926		
COMPANY: Shanghai Longcheer Technology Co., Ltd			
TITLE: REVISON			
CODE: XX	SIZE: A0	DRAWING NO: XXXX	REV: A
SCALE: <Scale>		SHEET: 2 OF 36	

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

BLOCK



iREPAIR
LABORATORIO TECNICO MICROSOLDADURA

COMPANY: Shanghai Longcheer Technology Co., Ltd			
TITLE: BLOCK			
CODE: XX	SIZE: A0	DRAWING NO.: XXXX	REV: A
SCALE: <Scale>		SHEET: 3 OF 36	

DRAWN: zhangzhiqiang	DATED: 20160926
CHECKED: yaogang	DATED: 20160926

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

GPIO MAP

MSM8940 GPIO Configuration For QRD8909

GPIO_0	NC	GPIO_41	LIGHT_INT1	GPIO_82	NC	GPIO_123	NC
GPIO_1	NC	GPIO_42	ACCL_INT1_N	GPIO_83	WCSS_BT_CTRL	GPIO_124	AUDIO_INT4
GPIO_2	BL/LIGHT_SDA	GPIO_43	LIGHT_INT2	GPIO_84	WCSS_BT_DAT_STB	GPIO_125	GPIO_DOME_SWITCH
GPIO_3	BL/LIGHT_SCL	GPIO_44	MAG_RST_N	GPIO_85	MI2S_1_SCK	GPIO_126	NC
GPIO_4	UART_MSM_TX	GPIO_45	ACCL_INT2_N	GPIO_86	MI2S_1_D1	GPIO_127	HALL_EINT1
GPIO_5	UART_MSM_RX	GPIO_46	FP_INT_N	GPIO_87	MI2S_1_WS	GPIO_128	AUDIO_INT2
GPIO_6	SPK_SDA	GPIO_47	CAM_2V8_EN	GPIO_88	MI2S_1_D0	GPIO_129	GPIO_FP_ID
GPIO_7	SPK_SCL	GPIO_48	GPIO_BOX_ID	GPIO_89	BOARD_ID0	GPIO_130	AUDIO_INT2
GPIO_8	NC	GPIO_49	UIM_BATT_ALM	GPIO_90	BOARD_ID1	GPIO_131	GPIO_BOX_ID2
GPIO_9	NC	GPIO_50	FP_RST_N	GPIO_91	KEY_VOLP_UP_N	GPIO_132	GPIO_LCM_LED_EN
GPIO_10	TP_I2C_SDA	GPIO_51	UIM1_DATA	GPIO_92	NC	GPIO_133	NC
GPIO_11	TP_I2C_SCL	GPIO_52	UIM1_CLK	GPIO_93	AUDIO_INT3		
GPIO_12	MI2S_2_D0	GPIO_53	UIM1_RESET	GPIO_94	MI2S_2_SCK		
GPIO_13	MI2S_2_D1	GPIO_54	SIM/TF_DET_N	GPIO_95	MI2S_2_WS		
GPIO_14	BUCK_SMB_I2C_SDA	GPIO_55	NC	GPIO_96	BOARD_ID2		
GPIO_15	SENSOR_I2C_SCL	GPIO_56	AUDIO_RST	GPIO_97	BOARD_ID3		
GPIO_16	CAPSENSOR_RDY	GPIO_57	NC	GPIO_98	NC		
GPIO_17	CTP_1V8_EN	GPIO_58	NC	GPIO_99	NC		
GPIO_18	CAPSENSOR_SDA	GPIO_59	GPIO_LCM_LED_EN	GPIO_100	RFFE1_CLK		
GPIO_19	CAPSENSOR_SCL	GPIO_60	NC	GPIO_101	RFFE1_DATA		
GPIO_20	FP_SPI_MOSI	GPIO_61	NC	GPIO_102	RFFE2_CLK		
GPIO_21	FP_SPI_MISO	GPIO_62	AUDIO_INT1	GPIO_103	RFFE2_DATA		
GPIO_22	FP_SPI_CS	GPIO_63	NC	GPIO_104	TX_CPL		
GPIO_23	FP_SPI_CLK	GPIO_64	TP_RST_N	GPIO_105	PRX_B2B34B39_SEL2		
GPIO_24	NC	GPIO_65	TP_INT_N	GPIO_106	LNA_B3		
GPIO_25	GPIO_CHG_DISABLE	GPIO_66	GP_PDM_A0	GPIO_107	PRX_ANT_TUNER_SW2		
GPIO_26	CAM0_MCLK	GPIO_67	SIM/TF_DET_N	GPIO_108	PRX_ANT_TUNER_SW1		
GPIO_27	NC	GPIO_68	FP_RST_N	GPIO_109	LNA_B7		
GPIO_28	CAM_MCLK1	GPIO_69	CDC_PDM_CLK	GPIO_110	PRX_B17B28_SW1		
GPIO_29	CAM_I2C_SDA	GPIO_70	CDC_PDM_SYNC	GPIO_111	PRX_B17B28_SW2		
GPIO_30	CAM_I2C_SCL	GPIO_71	CDC_PDM_TX	GPIO_112	PRX_SW_B40B41		
GPIO_31	CAM_I2C_SDA1	GPIO_72	CDC_PDM_RX0	GPIO_113	DRX_BAND		
GPIO_32	CAM_I2C_SCL1	GPIO_73	CDC_PDM_RX1	GPIO_114	DRX_B34B39_SW		
GPIO_33	LCM_3V3_EN	GPIO_74	CDC_PDM_RX2	GPIO_115	ANT_TUNING_EN		
GPIO_34	TP_3V3_EN	GPIO_75	WCSS_BT_SSBI	GPIO_116	DRX_B5B8_SW		
GPIO_35	MCAM_PWDN	GPIO_76	WCSS_WLAN_DATA_2	GPIO_117	PRX_SW_B1B4		
GPIO_36	MCAM_RST_N	GPIO_77	WCSS_WLAN_DATA_1	GPIO_118	EXT_GPS_LNA_EN		
GPIO_37	FORCE_USB_BOOT	GPIO_78	WCSS_WLAN_DATA_0	GPIO_119	CH0_GSM_TX_PHASE_D0		
GPIO_38	GPIO_LCM_LOADSW	GPIO_79	WCSS_WLAN_SET	GPIO_120	RFFE5_CLK		
GPIO_39	SCAM_PWDN	GPIO_80	WCSS_WLAN_CLK	GPIO_121	RFFE5_DATA		
GPIO_40	SCAM_RST_N	GPIO_81	NC	GPIO_122	NC		

PM8940 GPIO/MPP Configuration For MSM8940

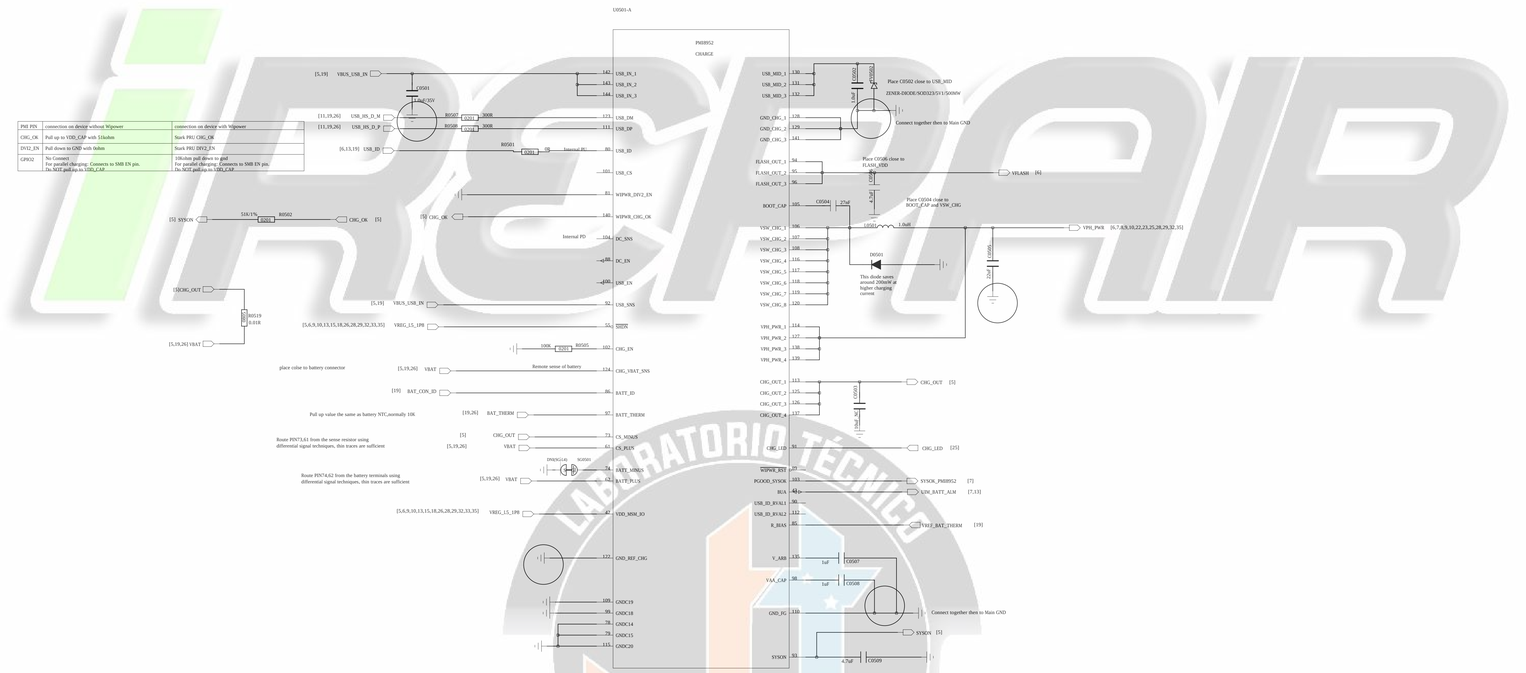
GPIO_1	NC	MPP_1	VDD_PX_BIAS_MPP_1
GPIO_2	SIM/TF_DET_N	MPP_2	USB_CONN_ADC
GPIO_3	UIM_BATT_ALM	MPP_3	VREF_DAC_MPP_3
GPIO_4	NC	MPP_4	QUIET_THERM

LABORATORIO TÉCNICO MICROSOLDADURA

DRAWN: zhangzhiqiang	DATED: 20160926	COMPANY: Shanghai Longcheer Technology Co., Ltd	
CHECKED: yaogang	DATED: 20160926	TITLE: GPIO MAP	
		CODE: XX / SIZE: A0 / DRAWING NO: XXXX	REV: A
		SCALE: <Scale>	SHEET: 4 OF 36

REVISION RECORD			
LTR:	ECO NO.:	APPROVED:	DATE:

PMI PIN	connection on device without Wipower	connection on device with Wipower
CHG_OK	Pull up to VDD_CAP with 510ohm	Stark PRU CHG_OK
DVI2_EN	Pull down to GND with 0ohm	Stark PRU DVI2_EN
GPIO2	No Connect For parallel charging: Connects to SMB EN pin. Do NOT pull up to VDD_CAP	100ohm pull down to gnd For parallel charging: Connects to SMB EN pin. Do NOT pull up to VDD_CAP



DRAWN:	DATED:
zhangzhiqiang	20160926
CHECKED:	DATED:
yaogang	20160926

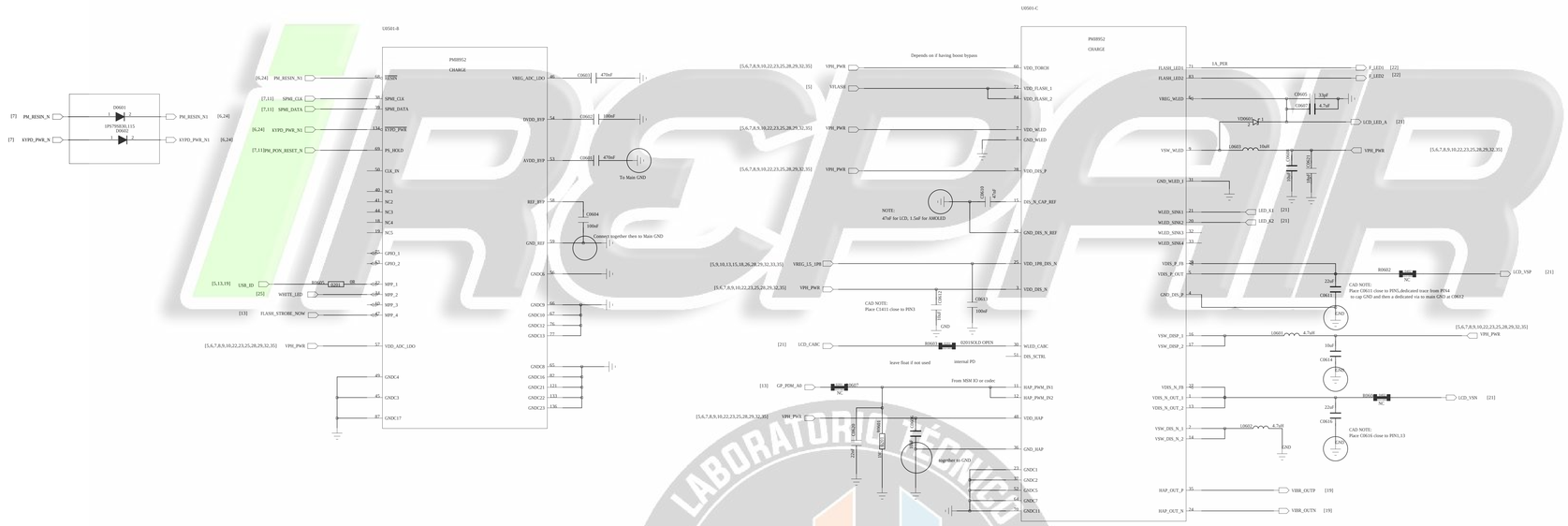
COMPANY: Shanghai Longcheer Technology Co., Ltd

TITLE: PMI8952

CODE:	SIZE:	DRAWING NO:	REV:
XX	A0	XXXX	A

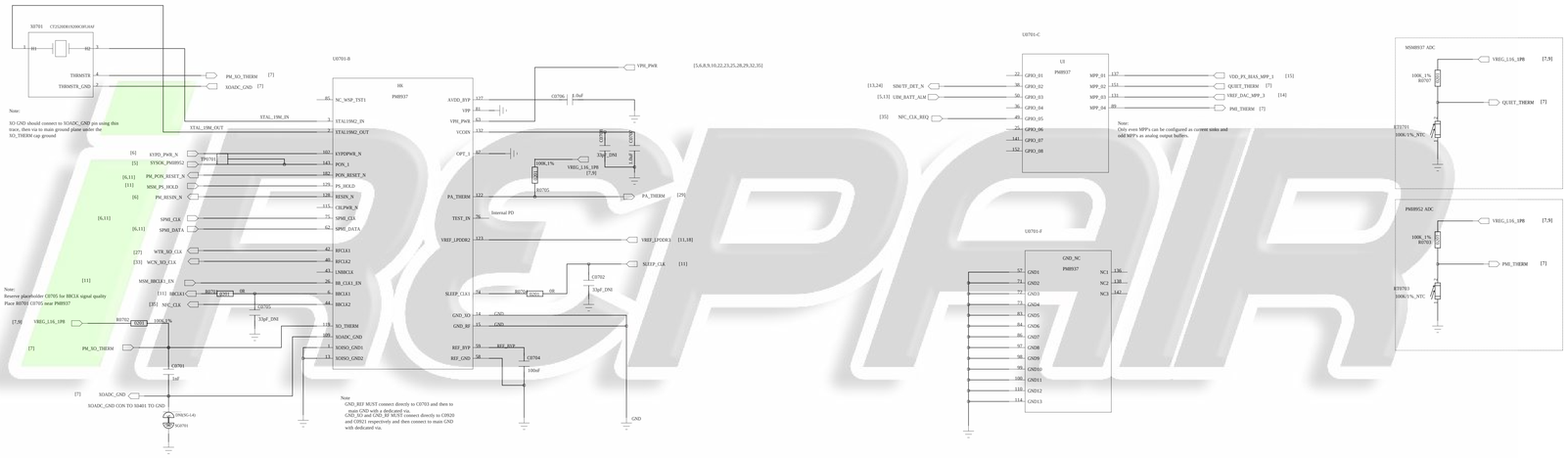
SCALE: <Scale> SHEET: 5 OF 36

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



COMPANY: Shanghai Longcheer Technology Co., Ltd			
TITLE: PMI8952			
CODE: XX	SIZE: A0	DRAWING NO: XXXX	REV: A
SCALE: <Scale>		SHEET: 6 OF 36	
DRAWN: zhangzhiqiang	DATED: 20160926		
CHECKED: yaogang	DATED: 20160926		

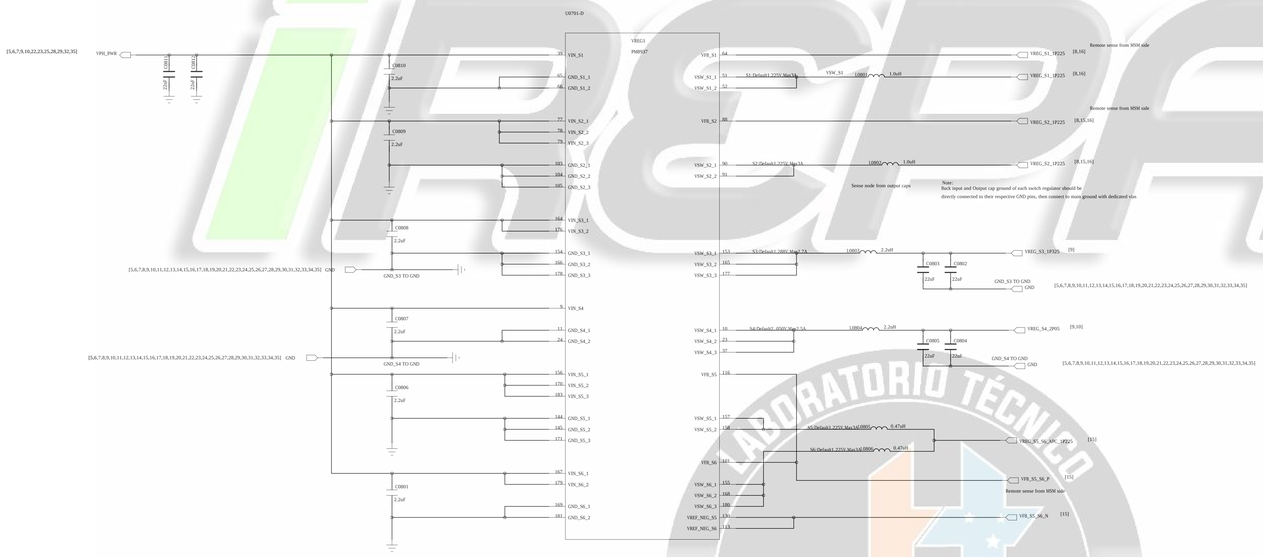
REVISION RECORD			
LTR	ECO NO.:	APPROVED:	DATE:



REPAIR
LABORATORIO TÉCNICO
MICROSOLDADURA

DRAWN: zhangzhiqiang	DATED: 20160926	COMPANY: Shanghai Longcheer Technology Co., Ltd	
CHECKED: yaogang	DATED: 20160926	TITLE: PM8940-CONTROL	
		CODE: XX / SIZE: A0 / DRAWING NO.: XXXX	REV: A
		SCALE: <Scale>	SHEET: 7 OF 36

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



LABORATORIO TÉCNICO MICROSOLDADURA

DRAWN: zhangzhiqiang	DATE: 20160926		
CHECKED: yaogang	DATE: 20160926		

COMPANY: Shanghai Longcheer Technology Co., Ltd			
TITLE: PM8940-BUCK			
CODE: XX	SIZE: A0	DRAWING NO: XXXX	REV: A
SCALE: <Scale>		SHEET: 8 OF 36	

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

PM8940-LDO

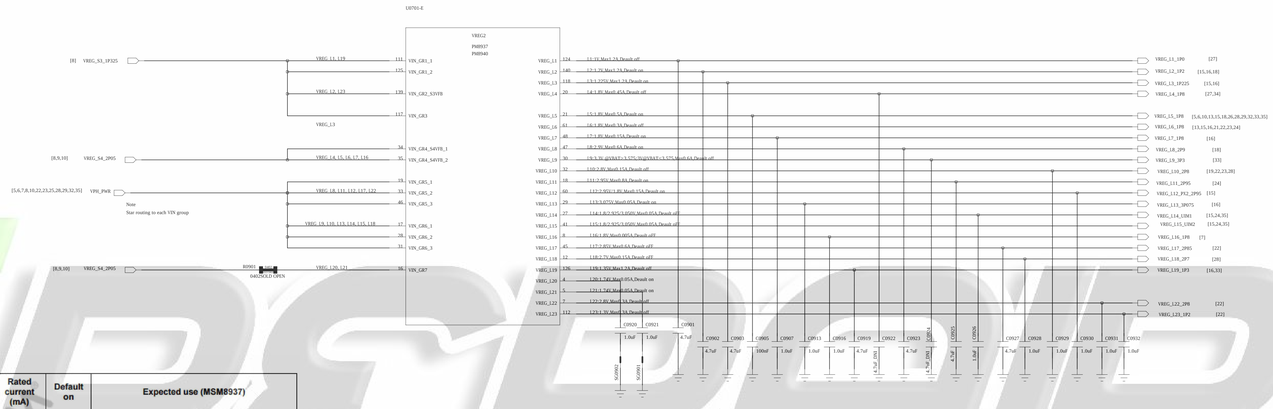


Table 3-6 PM8937/PM8940 regulators and their intended uses

Function	Circuit type	Default V (V) [1]	Specified range (V) [2] (MSM8937)	Programmable range (V)	Rated current (mA)	Default on	Expected use (MSM8937)
S1	ULT-SMPS	1.225	0.900–1.350	0.375–1.5625	2000[3]	N	MSM modem
S2	ULT-SMPS	1.225	0.550–1.350	0.375–1.5625	3000	Y	MSM core and graphics
S3	HF-SMPS	1.288	1.200–1.4125	0.375–1.5625	2700	Y	Low-voltage LDOs (1, 2, 3, 19, and 23)
S4	ULT-SMPS	2.050	1.800–2.050	1.550–3.125	2500	Y	High-voltage LDOs (4, 5, 6, 7, 16, RFCLK, and XO)
S5	FT-SMPS	1.225	1.050–1.350	0.350–1.355	3000	Y	MSM applications processor
S6	FT-SMPS	1.225	1.050–1.350	0.350–1.355	3000	N	MSM applications processor
L1	NMOS LDO	1.000	1.000	0.375–1.5375	1200	N	RFICs
L2	NMOS LDO	1.200	1.200	0.375–1.5375	1200	Y	LPDDR2/LPDDR3, MIPI CSI, and DSI
L3	NMOS LDO	1.225	0.750–1.350	0.375–1.5375	1200	Y	VDDMX
L4	PMOS LDO	1.800	1.800	1.750–3.3375	450	N	RFICs and GPS eLNA
L5 [4]	PMOS LDO	1.800	1.800	1.750–3.3375	500	Y	Most digital I/Os, MSM pad groups 3 and 7, LPDDR, and eMMC
L6	PMOS LDO	1.800	1.800	1.750–3.3375	300	N	MSM DSI PLL and OTP, camera, touchscreen, display, and sensors
L7	PMOS LDO	1.800	1.800	1.750–3.3375	150	Y	MSM analog and PLLs, WCN XO, and PM baseband clock driver
L8	PMOS LDO	2.900	2.900	1.750–3.3375	600	Y	eMMC
L9	PMOS LDO	V_{out} = 3.3 V for VBAT > 3.575 V; V_{out} = 3 V for VBAT < 3.575 V	3.000–3.300	1.750–3.3375	600	N	WCN
L10	PMOS LDO	2.8	2.800	1.750–3.3375	150	N	Sensors
L11 [5]	PMOS LDO	2.950	2.950	1.750–3.3375	800	Y	Micro SD
L12 [4]	PMOS LDO	2.950	1.800/2.950	1.750–3.3375	150	Y	MSM pad group 2 and SDC2
L13	PMOS LDO	3.075	3.075	1.750–3.3375	50	Y	MSM USB and audio

Function	Circuit type	Default V (V) [1]	Specified range (V) [2] (MSM8937)	Programmable range (V)	Rated current (mA)	Default on	Expected use (MSM8937)
L14 [5]	PMOS LDO	1.800	1.800/2.925/3.050	1.750–3.3375	50	N	MSM pad group 5, dual-voltage UIM1, and NFC
L15 [5]	PMOS LDO	1.800	1.800/2.925/3.050	1.750–3.3375	50	N	MSM pad group 6 and dual-voltage UIM2
L16	PMOS LDO	1.800	1.800	1.750–3.3375	5	N	PMIC HKADC
L17	PMOS LDO	2.850	2.850	1.750–3.3375	600	N	Camera, display, and touchscreen
L18	PMOS LDO	2.700	2.700	1.750–3.3375	150	N	QTI RF front-end
L19	NMOS LDO	1.350	1.350	0.375–1.5375	1200	N	MSM analog, WCN, and WGR
L20	Low-noise LDO	1.74	1.74	1.74–3.3375	5	Y	PMIC XO circuits
L21	Low-noise LDO	1.74	1.74	1.74–3.3375	5	Y	PMIC RF clock buffers
L22	PMOS LDO	2.800	2.800	1.750–3.3375	300	N	Camera – analog
L23	NMOS LDO	1.3	1.2	0.375–1.5375	300	N	Camera – digital

PSEUDO CAPLESS LDOs

L4*, L6, L8*, L9*, L10, L11*, L12, L14, L15, L17*, L18, L22, L23

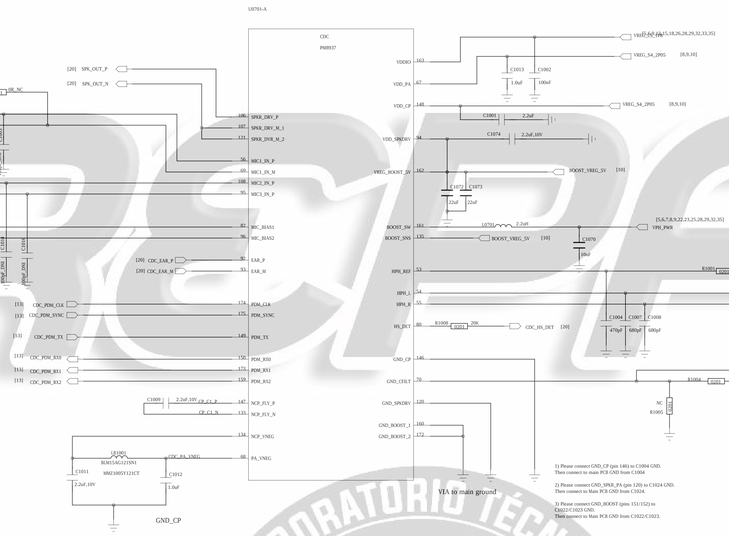
L4*, L8*, L9*, L11*, L17*, still need validation as Pseudo-capless

L5, L7, L13, L16 have internal PMIC Loads and require local CAPs.

LABORATORIO TÉCNICO MICROSOLDADURA

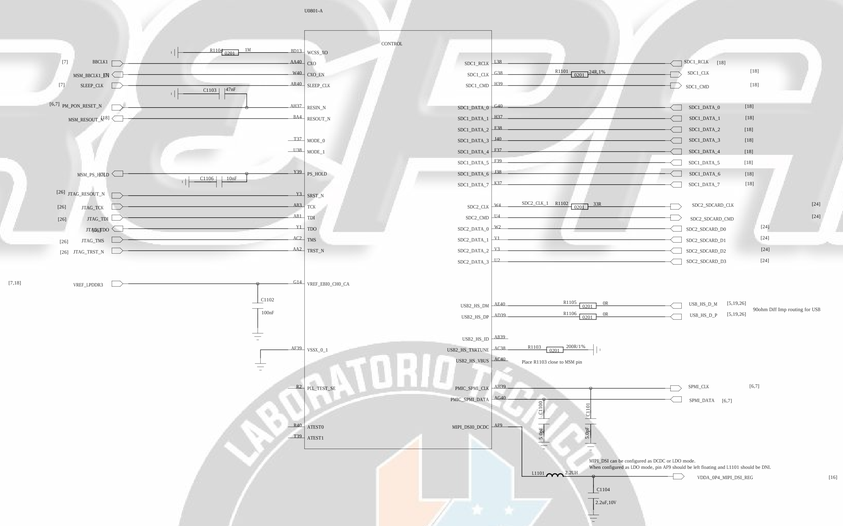
DRAWN: zhangzhiqiang	DATED: 20160926		
CHECKED: yaogang	DATED: 20160926		
COMPANY: Shanghai Longcheer Technology Co., Ltd			
TITLE: PM8940-LDO			
CODE: XX	SIZE: A0	DRAWING NO: XXXX	REV: A
SCALE: <Scale>		SHEET: 9 OF 36	

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



DRAWN: zhangzhiqiang	DATED: 20160926	COMPANY: Shanghai Longcheer Technology Co., Ltd	
CHECKED: yaogang	DATED: 20160926	TITLE: PM8940-CODEC	
		CODE: XX / SIZE: A0 / DRAWING NO: XXXX	REV: A
		SCALE: <Scale>	SHEET: 10 OF 36

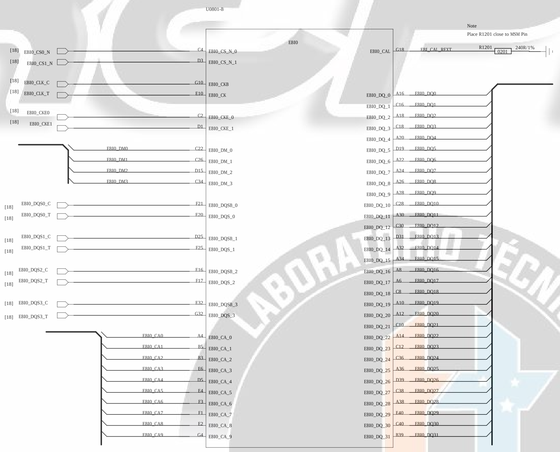
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



COMPANY: Shanghai Longcheer Technology Co., Ltd			
TITLE: MSM8940-CONTROL			
CODE: XX	SIZE: A0	DRAWING NO: XXXX	REV: A
SCALE: <Scale>		SHEET: 11 OF 36	

DRAWN: zhangzhiqiang	DATED: 20160926
CHECKED: yaogang	DATED: 20160926

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



iREPAIR
LABORATORIO TÉCNICO MICROSOLDADURA

DRAWN: zhangzhiqiang	DATED: 20160926		
CHECKED: yaogang	DATED: 20160926		

COMPANY: Shanghai Longcheer Technology Co., Ltd

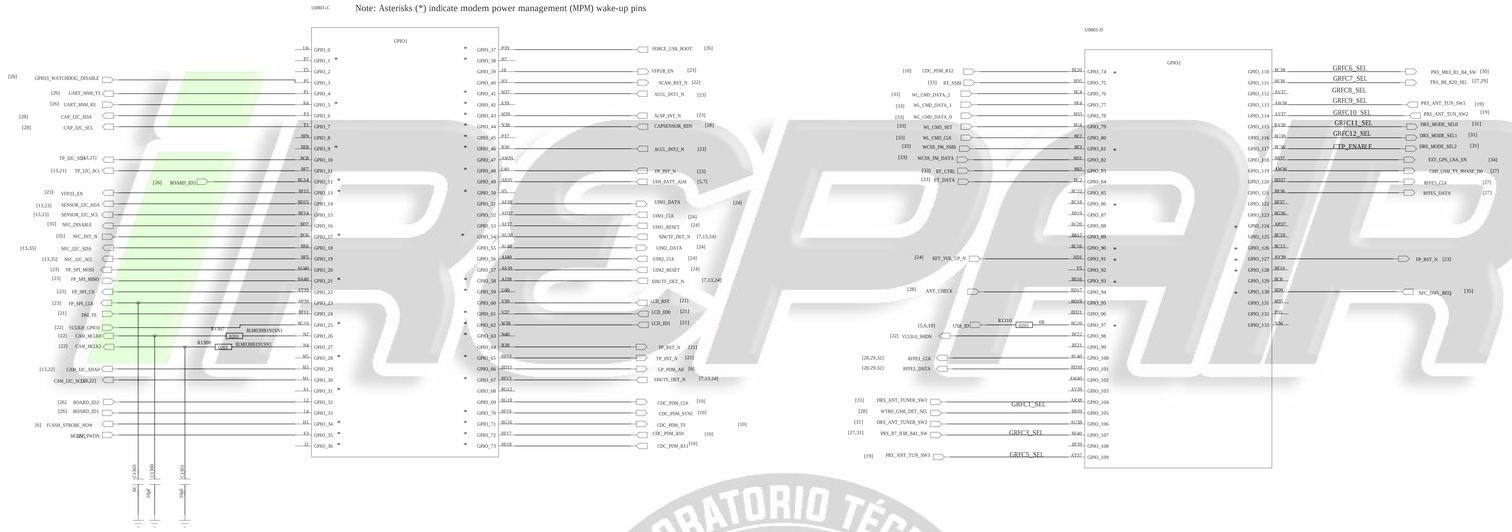
TITLE: MSM8940-EMI

CODE:	SIZE:	DRAWING NO:	REV:
XX	A0	XXXX	A

SCALE: <Scale> SHEET: 12 OF 36

REVISION RECORD			
LTR	ECO NO.	APPROVED:	DATE:

Note: Asterisks (*) indicate modem power management (MPM) wake-up pins



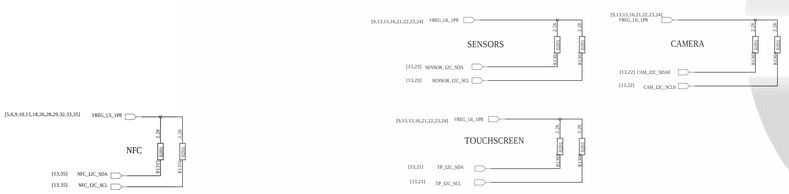
Note: Do not have pull-ups on the following GPIOs unless intend for boot or secure- boot related configurations:
GPIO_91, 107, 109

GPIO	BOOT_CONFIG
GPIO_3	BOOT_CONFIG[0]:WDOG_DISABLE
GPIO_111	BOOT_CONFIG[1]
GPIO_112	BOOT_CONFIG[2]
GPIO_88	BOOT_CONFIG[3]

BOOT_CONFIG[3:1]	BOOT_CONFIG
0b000	SDC1 -> SDC2 -> USB2.0
0b010	SDC1
0b100	SDC2-> SDC1

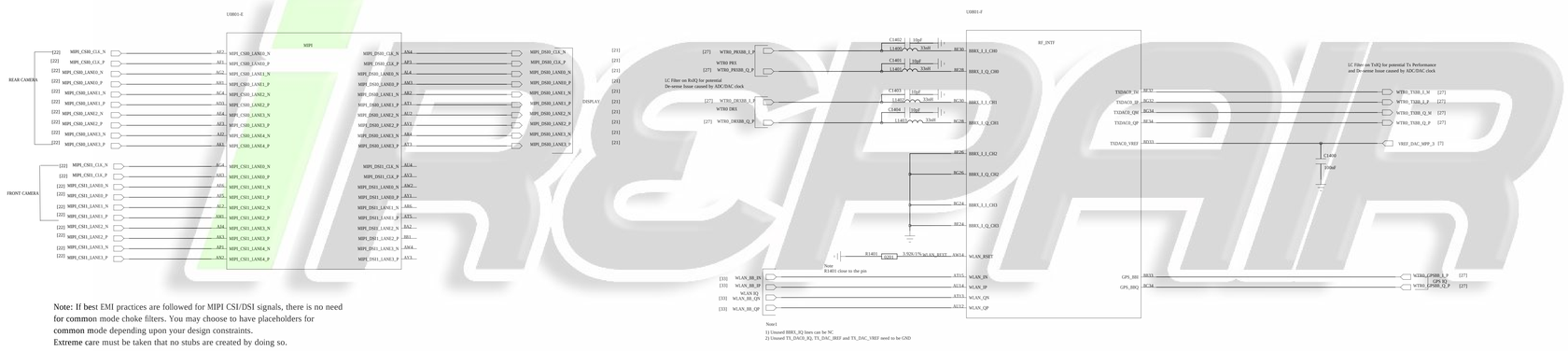
Default Boot Config (0b000) is SDC1(eMMC)

Note: Ensure SW sets these GPIOs (Sensor, CTP and Camera I2C bus) to inout pull down when the peripherals are powered off to eliminate leakage.



COMPANY: Shanghai Longcheer Technology Co., Ltd					
TITLE: MSM8940-GPIO					
	CODE: XX	SIZE: A0	DRAWING NO: XXXX		REV: A
DRAWN: zhangzhiqiang	DATED: 20160926				
CHECKED: yaogang	DATED: 20160926				
SCALE: <Scale>				SHEET: 13 OF 36	

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

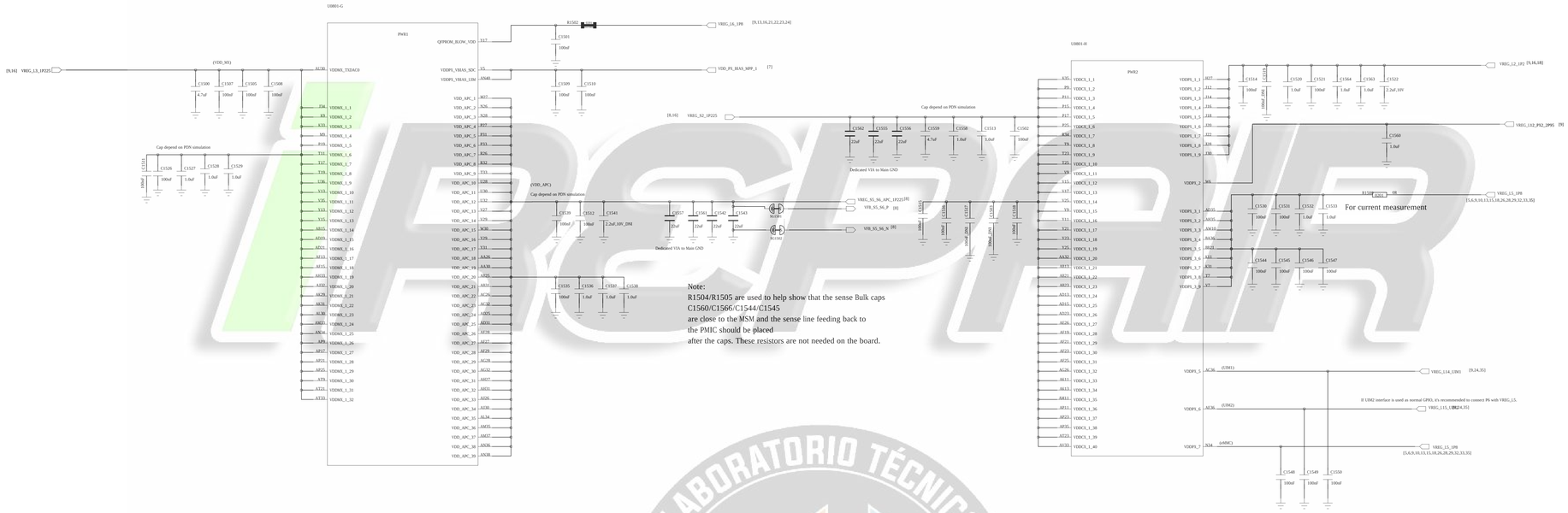


Note: If best EMI practices are followed for MIPI CSI/DSI signals, there is no need for common mode choke filters. You may choose to have placeholders for common mode depending upon your design constraints.
Extreme care must be taken that no stubs are created by doing so.

COMPANY: Shanghai Longcheer Technology Co., Ltd			
TITLE: MSM8940-MIPI			
CODE: XX	SIZE: A0	DRAWING NO: XXXX	REV: A
SCALE: <Scale>		SHEET: 14 OF 36	

DRAWN: zhangzhiqiang	DATED: 20160926
CHECKED: yaogang	DATED: 20160926

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

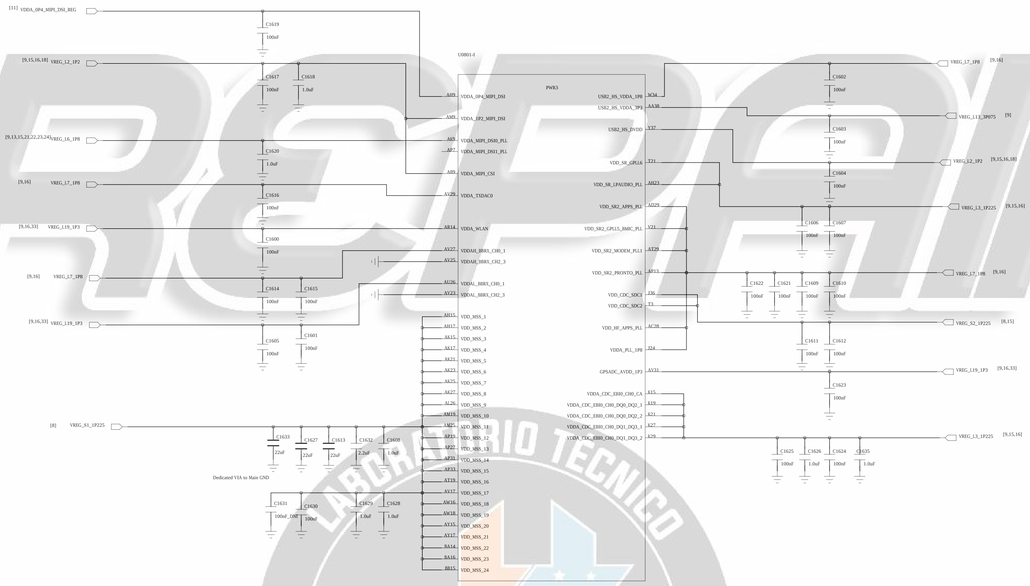


Note:
R1504/R1505 are used to help show that the sense Bulk caps
C1560/C1566/C1544/C1545
are close to the MSM and the sense line feeding back to
the PMIC should be placed
after the caps. These resistors are not needed on the board.

REPAIR
LABORATORIO TÉCNICO
MICROSOLDADURA

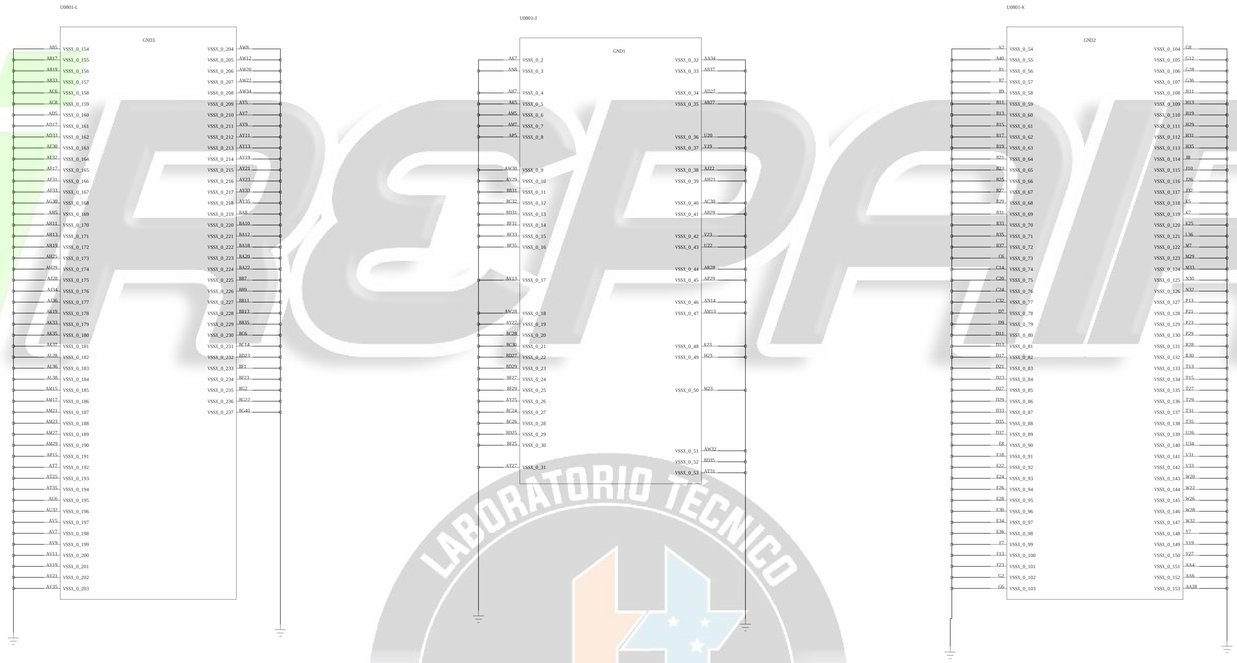
COMPANY: Shanghai Longcheer Technology Co., Ltd					
TITLE: MSM8940-POWER1					
CODE: XX	SIZE: A0	DRAWING NO: XXXX		REV: A	
DRAWN: zhangzhiqiang	DATE: 20160926	SCALE: <Scale>	SHEET: 15 OF 36		
CHECKED: yaogang	DATE: 20160926				

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



DRAWN: zhangzhiqiang	DATE: 20160926	COMPANY: Shanghai Longcheer Technology Co., Ltd	
CHECKED: yaogang	DATE: 20160926	TITLE: MSM8940-POWER2	
		CODE: XX / SIZE: A0 / DRAWING NO: XXXX	REV: A
		SCALE: <Scale>	SHEET: 16 OF 36

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



iREPAIR
LABORATORIO TÉCNICO
MICROSOLDADURA

DRAWN: zhangzhiqiang	DATED: 20160926		
CHECKED: yaogang	DATED: 20160926		

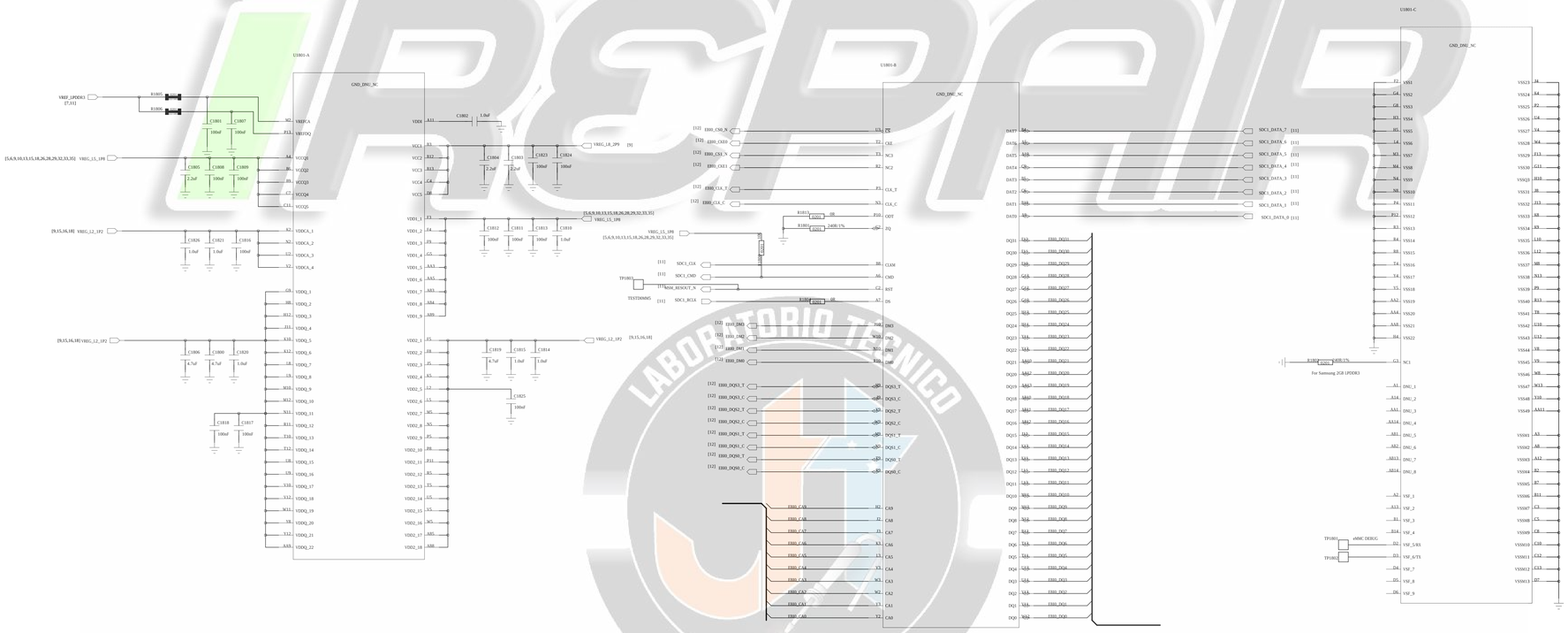
COMPANY: Shanghai Longcheer Technology Co., Ltd

TITLE: MSM8940-GND

CODE:	SIZE:	DRAWING NO:	REV:
XX	A0	XXXX	A

SCALE: <Scale> SHEET: 17 OF 36

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

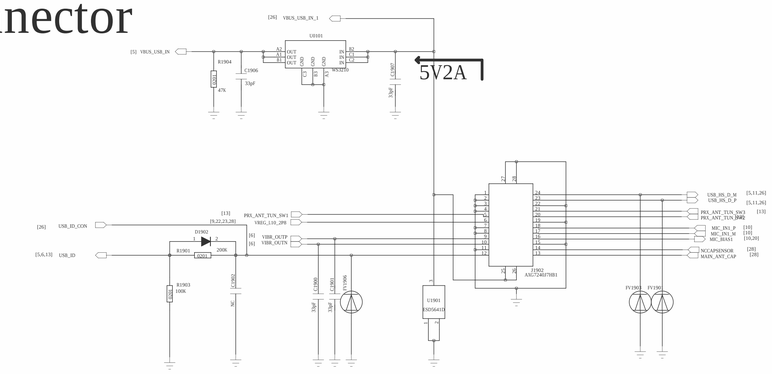


COMPANY: Shanghai Longcheer Technology Co., Ltd			
TITLE: EMCP			
CODE: XX	SIZE: A0	DRAWING NO: XXXX	REV: A
SCALE: <Scale>		SHEET: 18 OF 36	
DRAWN: zhangzhiqiang	DATED: 20160926		
CHECKED: yaogang	DATED: 20160926		

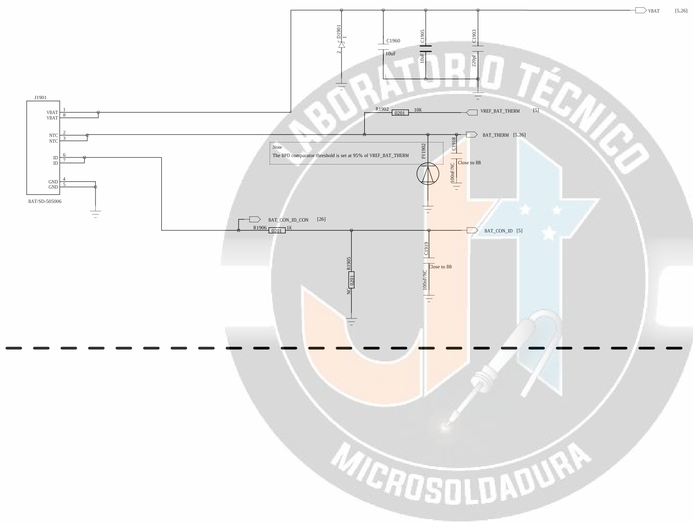
iREPAIR
LABORATORIO TÉCNICO MICROSOLDADURA

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

USB Connector



Battery Connector



iRSPAIR
LABORATORIO TÉCNICO
MICROSOLDADURA

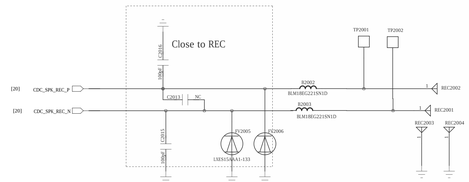
DRAWN: zhangzhiqiang	DATED: 20160926		
CHECKED: yaogang	DATED: 20160926		

COMPANY: Shanghai Longcheer Technology Co., Ltd			
TITLE: Charger Battery CON			
CODE: XX	SIZE: A0	DRAWING NO: XXXX	REV: A
SCALE: <Scale>		SHEET: 19 OF 36	

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

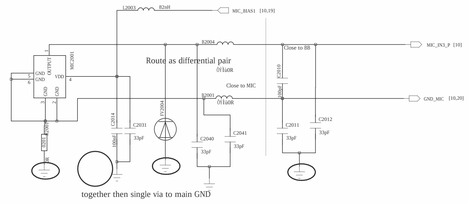
REC

Rintotal = Rex + Rin(6.6k)
F3db =1/2*π*R*Rintotal*Cin=502HZ
AVl =159.5K/Rintotal=16.6



Secondary microphone

CE ÊÎÖñÉ±È¿¹Ù©ÿñ½Ïõ ÊÈÀÎÉíõ0B4015R-423G-XD9RAC-BD-0MIC

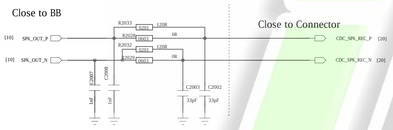


Primary MIC

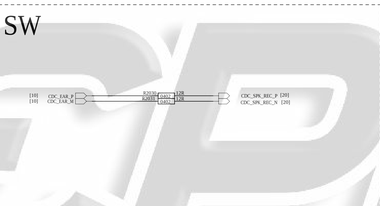
Close to BB

Close to Connector

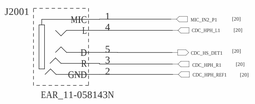
SPK

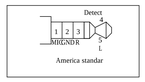


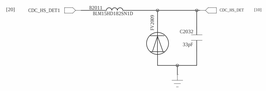
Audio SW

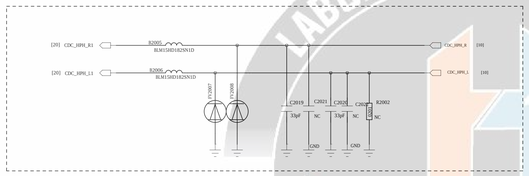


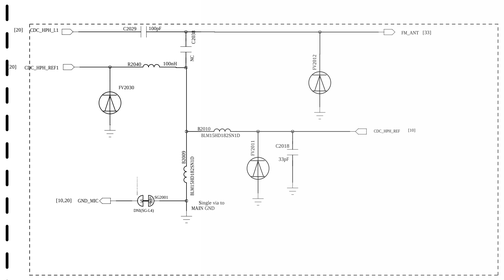
HEADSET

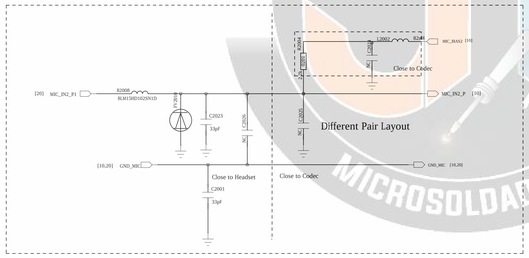










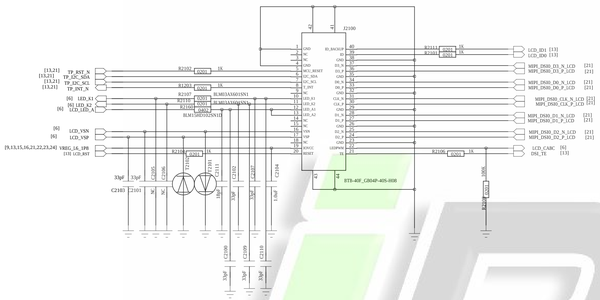


iREPAIR
LABORATORIO TÉCNICO MICROSOLDADURA

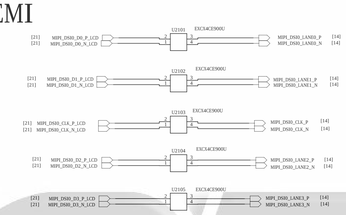
COMPANY: Shanghai Longcheer Technology Co., Ltd			
TITLE: AUDIO PA			
CODE: XX	SIZE: A0	DRAWING NO: XXXX	REV: A
DRAWN: zhangzhiqiang	DATED: 20160926		
CHECKED: yaogang	DATED: 20160926		
SCALE: <Scale>		SHEET: 20 OF 36	

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

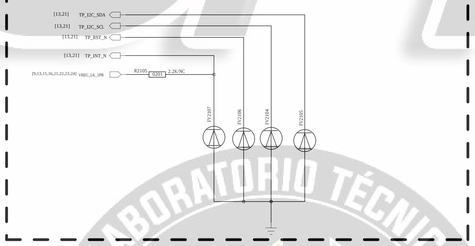
LCM & CTP



EMI



CTP-ESD



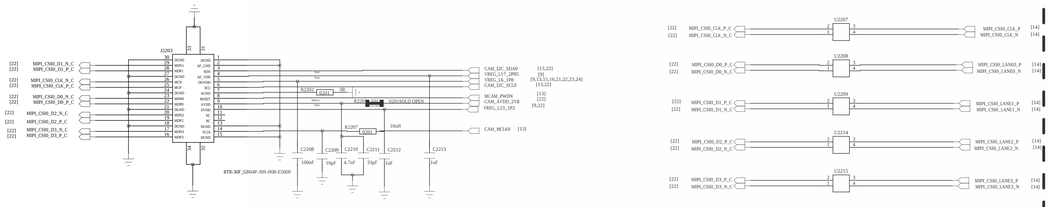
iREPAIR
LABORATORIO TÉCNICO
MICROSOLDADURA

DRAWN: zhangzhiqiang	DATED: 20160926	COMPANY: Shanghai Longcheer Technology Co., Ltd			
CHECKED: yaogang	DATED: 20160926	TITLE: LCD CT FP			
		CODE: XX	SIZE: A0	DRAWING NO: XXXX	REV: A
		SCALE: <Scale>		SHEET: 21 OF 36	

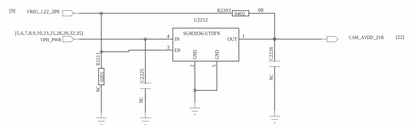
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

Main Camera

12M

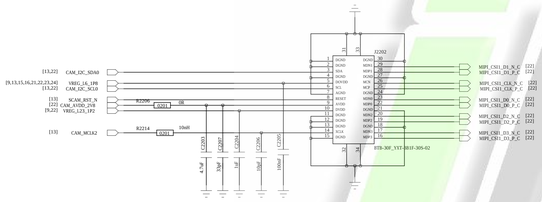


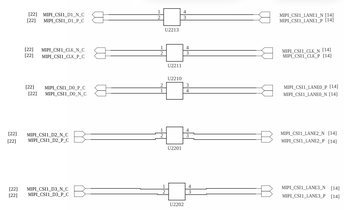
LDO



Front Camera

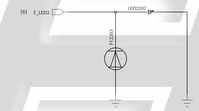
8M



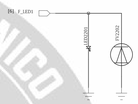


Front Flash

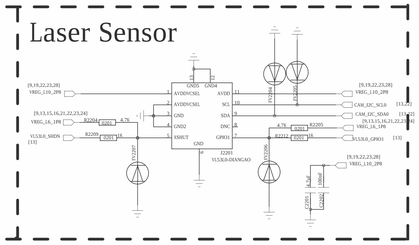
ILED=113mA



Rear Flash LED



Laser Sensor



iREPAIR
LABORATORIO TÉCNICO MICROSOLDADURA

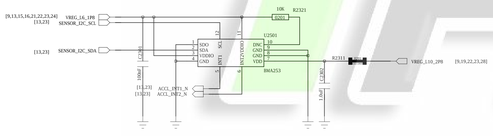
COMPANY: Shanghai Longcheer Technology Co., Ltd			
TITLE: CAM			
CODE: XX	SIZE: A0	DRAWING NO: XXXX	REV: A
SCALE: <Scale>		SHEET: 22 OF 36	
DRAWN: zhangzhiqiang	DATED: 20160926		
CHECKED: yaogang	DATED: 20160926		

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

Accelerometer Sensor

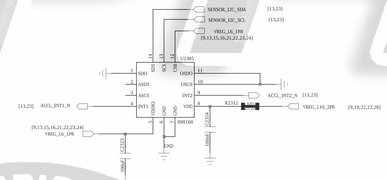
8bit(BMA223) compatible 12bit(BMA253)

ADDR 0011000b(0x18) SDO=0

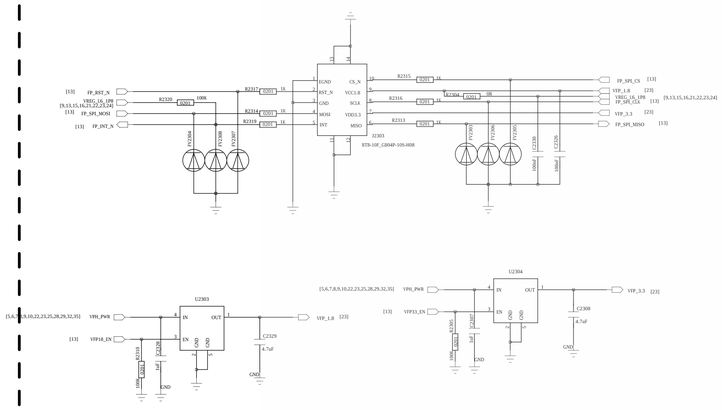


G+Gyro-Sensor

BMI120 I2C address
SDO=0: 0x68
SDO=1: 0x69



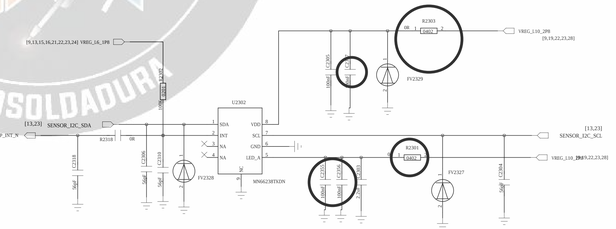
FingerPrint-Sensor



PS Sensor

EPL2590KTWJP

I2C address: 0xA6H Write 0xA7H Read

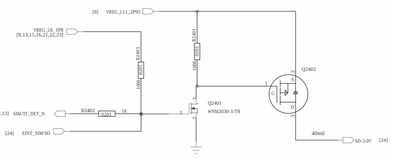


DRAWN: zhangzhiqiang	DATED: 20160926	COMPANY: Shanghai Longcheer Technology Co., Ltd		
CHECKED: yaogang	DATED: 20160926	TITLE: SENSOR		
		CODE: XX	SIZE: A0	DRAWING NO.: XXXX	REV: A
		SCALE: <Scale>		SHEET: 23 OF 36

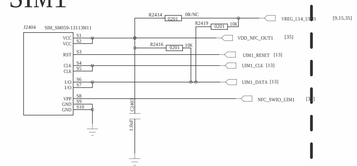
iREPAIR
LABORATORIO TÉCNICO MICROSOLDADURA

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

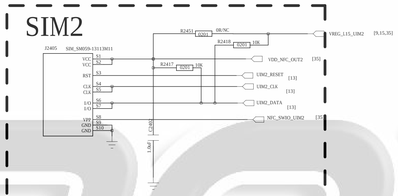
From P3585



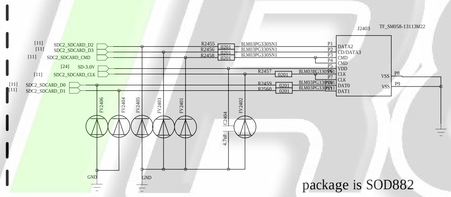
SIM1



SIM2



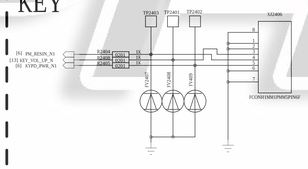
SD CARD



package is SOD882

3 Card shielding

KEY



Power Key / Key Pad

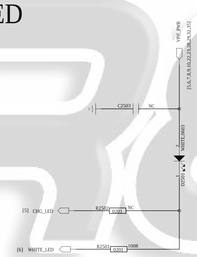
DO NOT put pull-up resistor on PWRKEY

LABORATORIO TECNICO MICROSOLDADURA

COMPANY: Shanghai Longcheer Technology Co., Ltd			
TITLE: SIM_TF CARD			
CODE: XX	SIZE: A0	DRAWING NO: XXXX	REV: A
SCALE: <Scale>		SHEET: 24 OF 36	
DRAWN: zhangzhiqiang	DATED: 20160926		
CHECKED: yaogang	DATED: 20160926		

REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:

RG LED

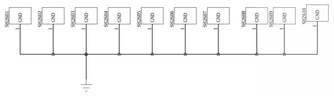


PMI8952 LED
MPP_2 GREEN_LED
chg_led RED_LED

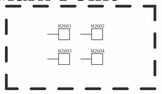
iREPAIR
LABORATORIO TÉCNICO MICROSOLDADURA

DRAWN: zhangzhiqiang	DATED: 20160926	COMPANY: Shanghai Longcheer Technology Co., Ltd	
CHECKED: yaogang	DATED: 20160926	TITLE: RG_LED/MOT	
		CODE: XX / SIZE: A0 / DRAWING NO: XXXX	REV: A
		SCALE: <Scale>	SHEET: 25 OF 36

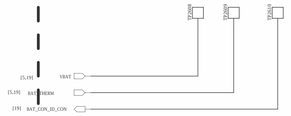
REVISION RECORD			
LTR	ECO NO:	APPROVED:	DATE:



Mark Point

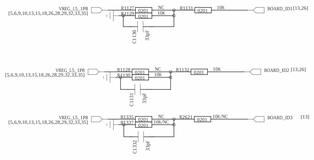


VBAT Test Point

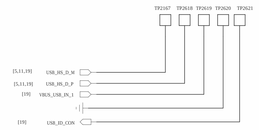


Add BAT_CON_ID of TP if battery has ID pin

board ID

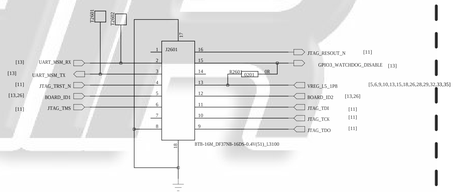


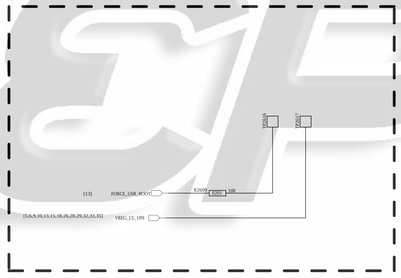
USB Test Point



Add a sperate GND close to USBUSB interface if space allowable

JTAG/UART/BOARD_ID





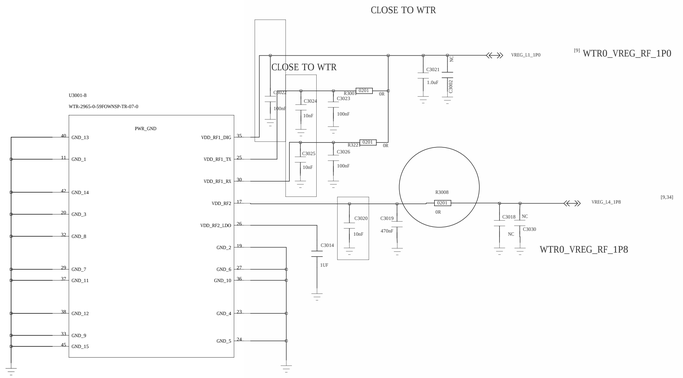
board ID

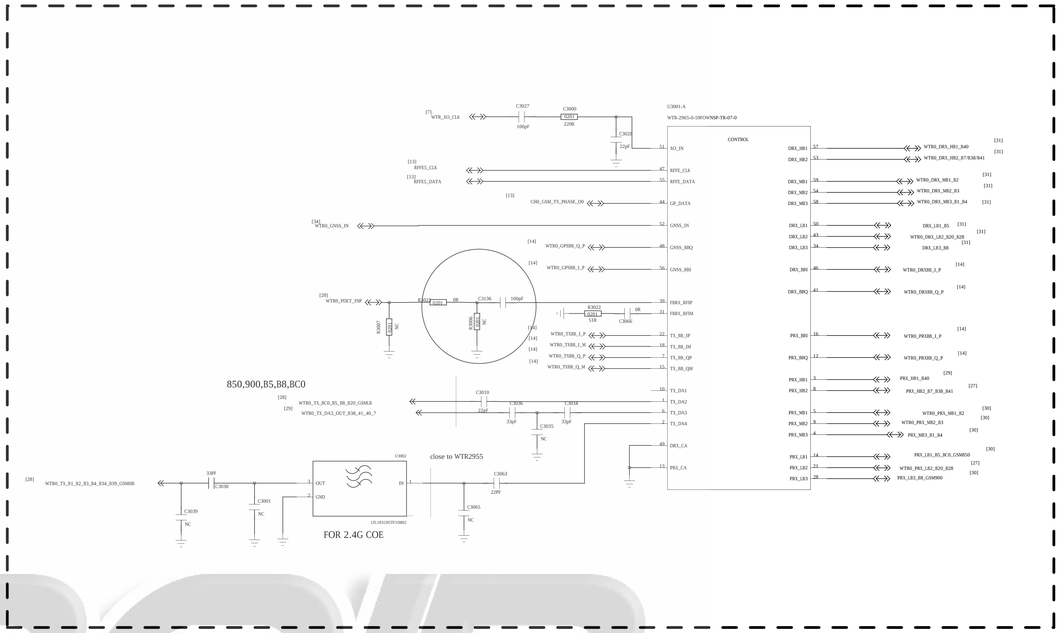
	ID0		ID1		ID2		ID3	
	R2901	R2902	R2903	R2904	R2905	R2906	R2907	R2908
Bach_AL00	NC	10K	10K	NC	NC	NC	NC	NC
Bach_W09	NC	10K	10K	NC	NC	NC	10K	NC
Bach_L01	NC	10K	10K	NC	10K	NC	NC	10K
Bach_L03	NC	10K	10K	NC	10K	NC	NC	NC
Bach_L09	NC	10K	10K	NC	10K	NC	10K	NC

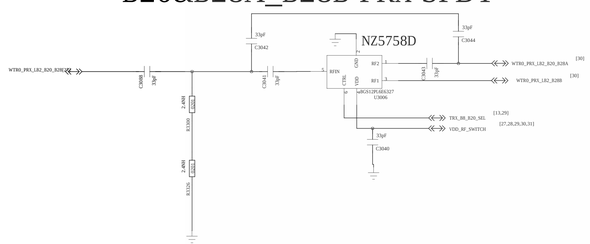
ID0-ID1 \ ID2-ID3	PD-PD	PD-NP	PD-PU	NP-PD	NP-NP	NP-PU	PU-PD	PU-NP	PU-PU
PD-PD									
PD-NP									
PD-PU					Bach-AL00	Bach-W09	Bach-L01	Bach-L03	Bach-L09
NP-PD					Chopin-AL00	Chopin-W09	Chopin-L01	Chopin-L03	Chopin-L09
NP-NP									
NP-PU									
PU-PD					TRT-AL00	TRT-TL10	TRT-L21	TRT-L22	TRT-L23
PU-NP									

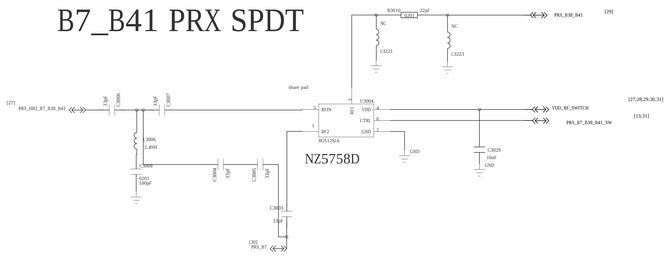
DRAWN: zhangzhiqiang	DATED: 20160926		
CHECKED: yaogang	DATED: 20160926		
COMPANY: Shanghai Longcheer Technology Co., Ltd			
TITLE: TEST_POINT			
CODE: XX	SIZE: A0	DRAWING NO: XXXX	REV: A
SCALE: <Scale>		SHEET: 26 OF 36	

LABORATORIO TÉCNICO MICROSOLDADURA

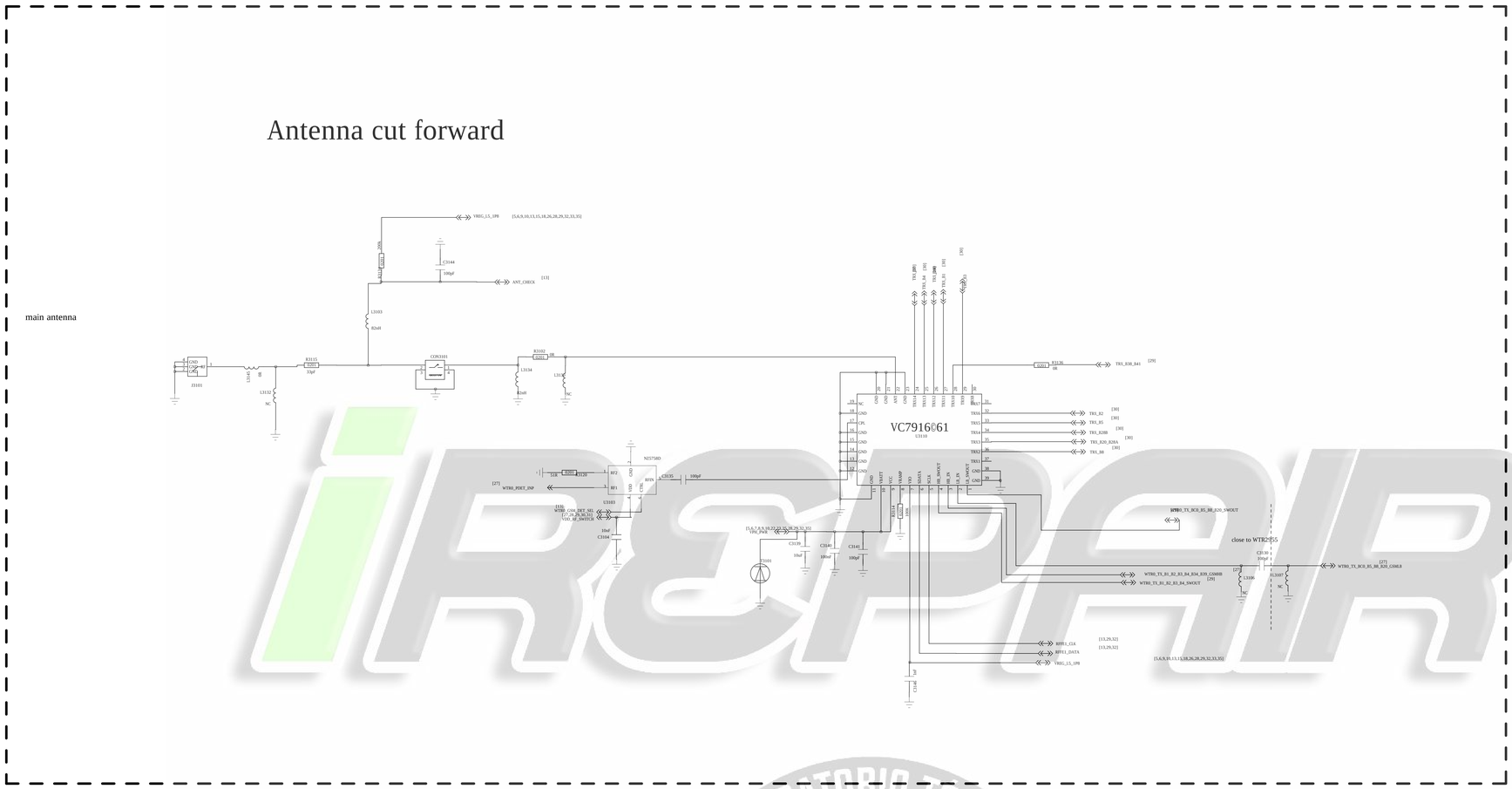


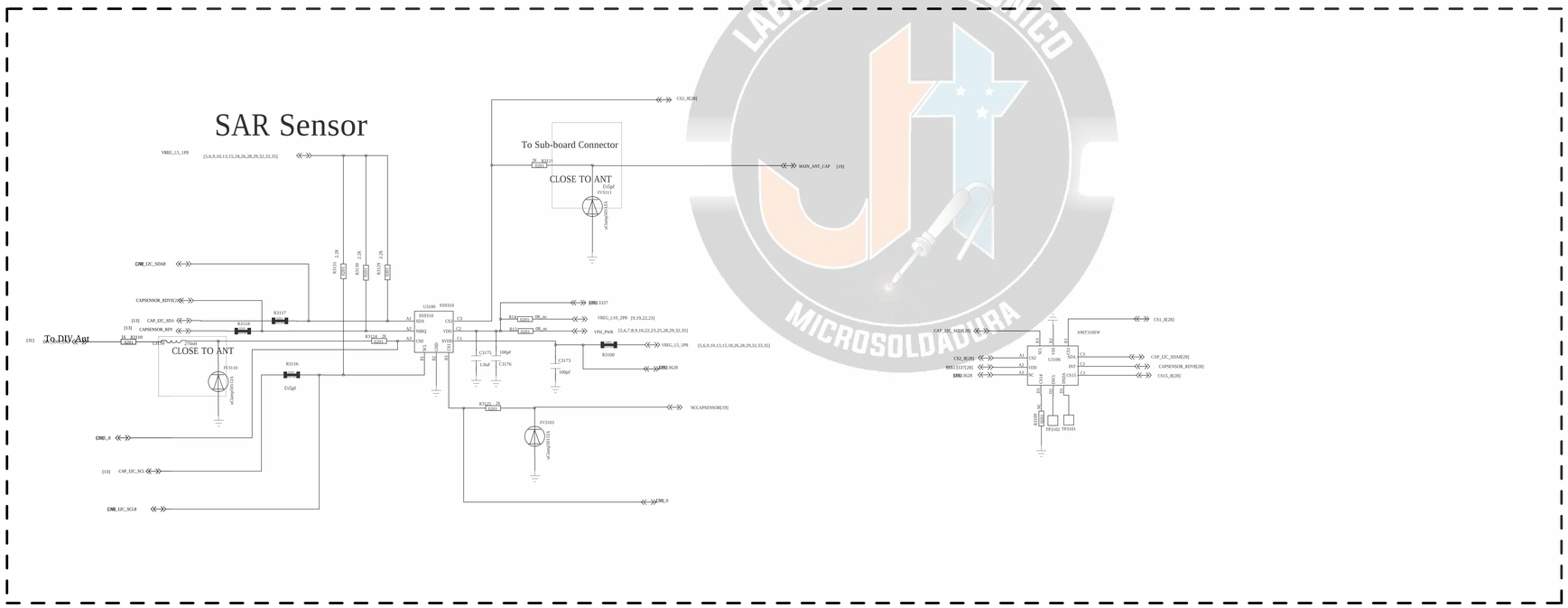




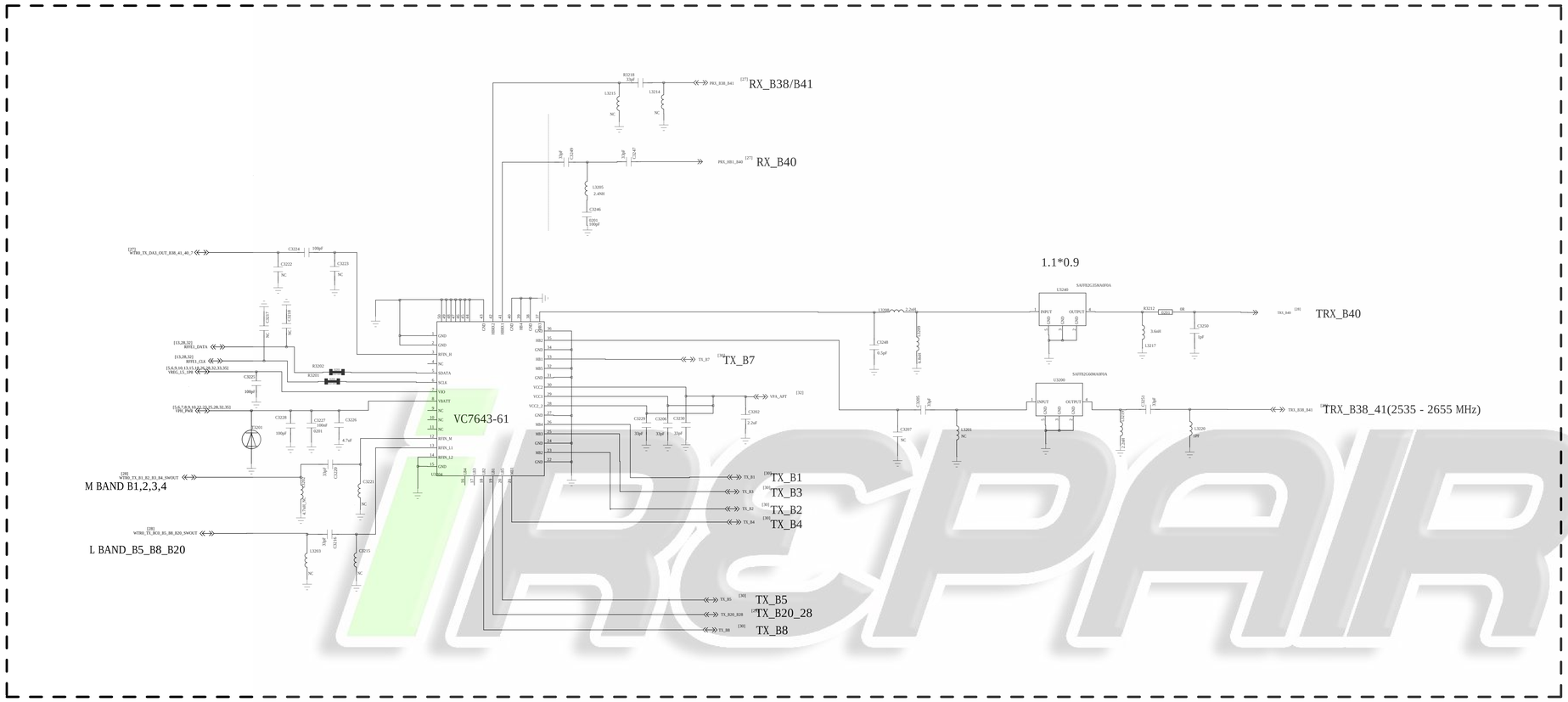


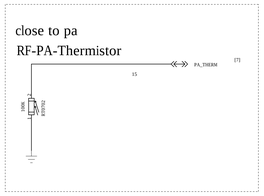
iREPAIR
LABORATORIO TÉCNICO
MICROSOLDADURA

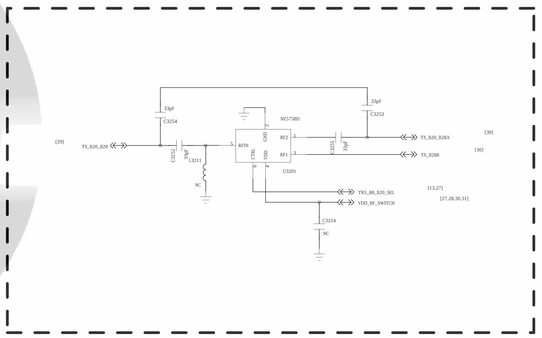




LABORATORIO TECNICO
MICROSOLDADURA

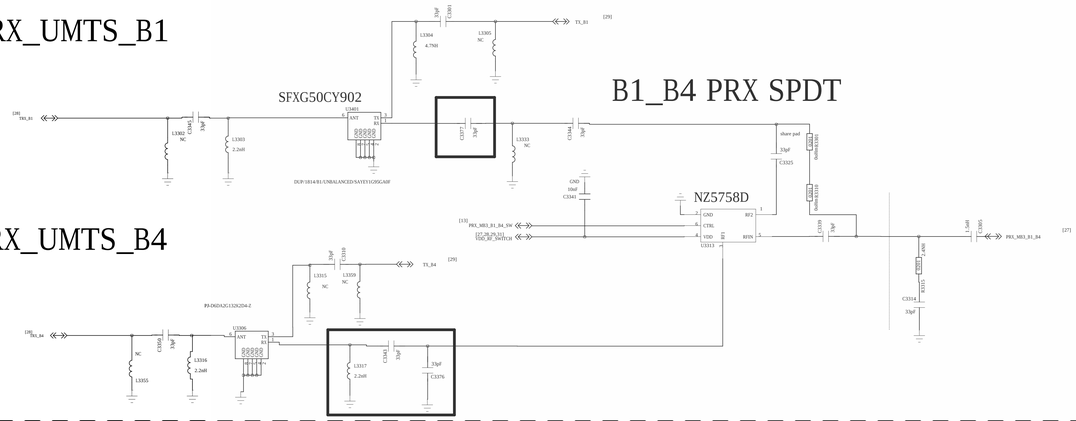




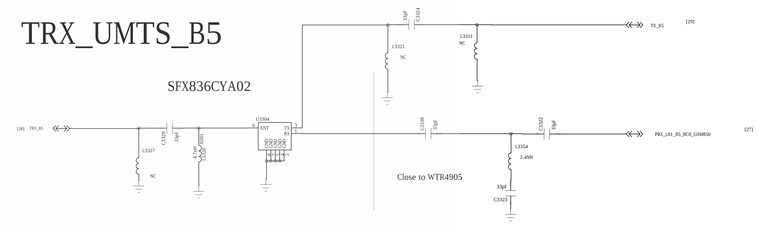


LABORATORIO TÉCNICO
MICROSOLDADURA

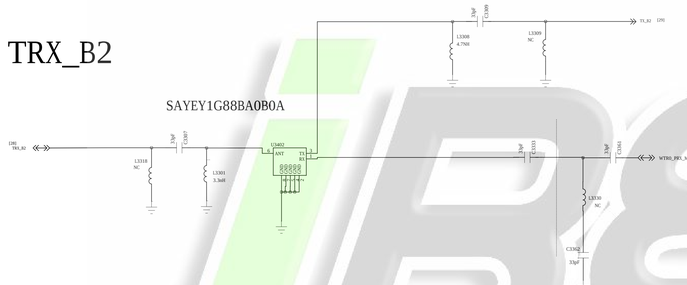
TRX_UMTS_B1



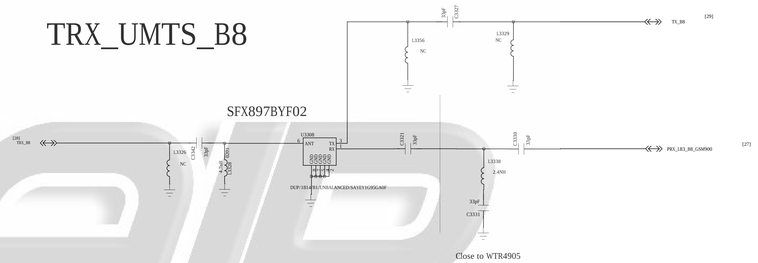
TRX_UMTS_B5



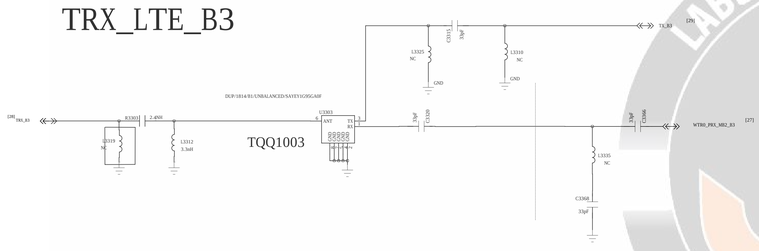
TRX_B2



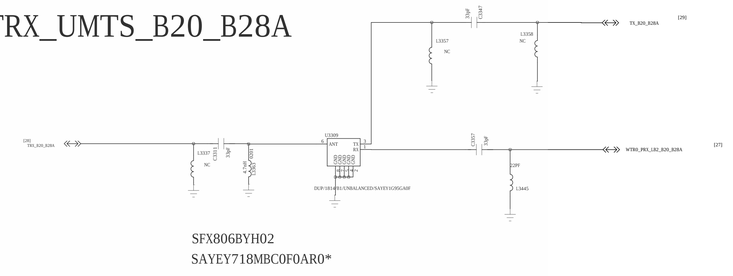
TRX_UMTS_B8



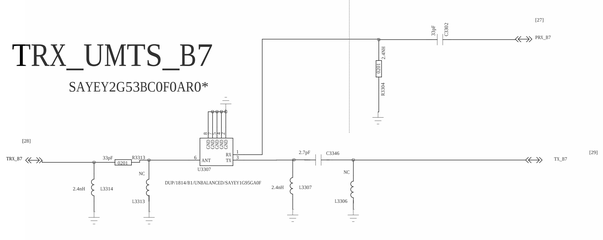
TRX_LTE_B3



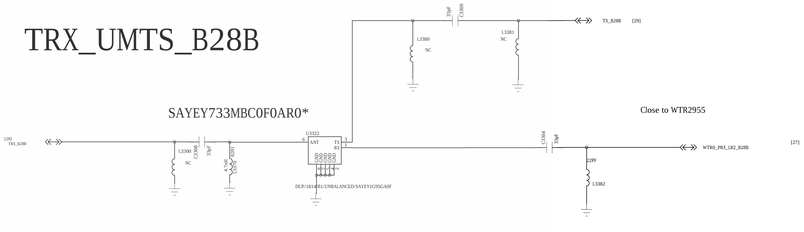
TRX_UMTS_B20_B28A



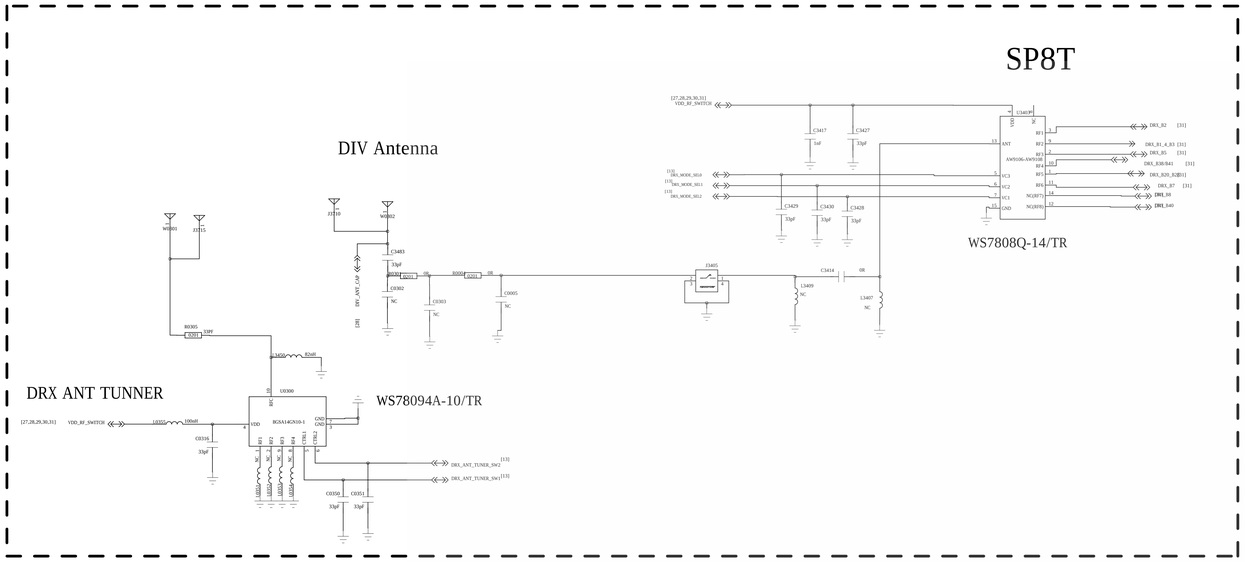
TRX_UMTS_B7

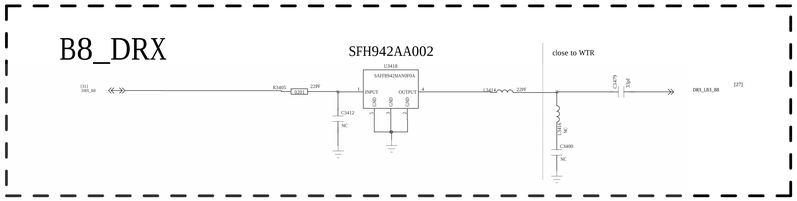


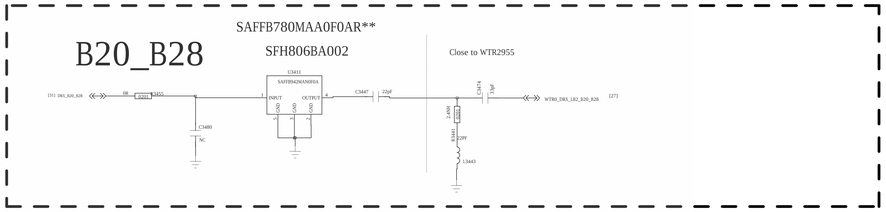
TRX_UMTS_B28B

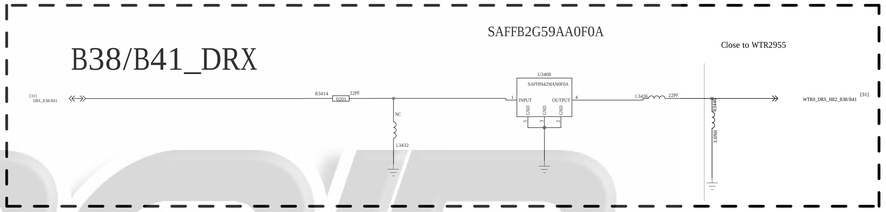


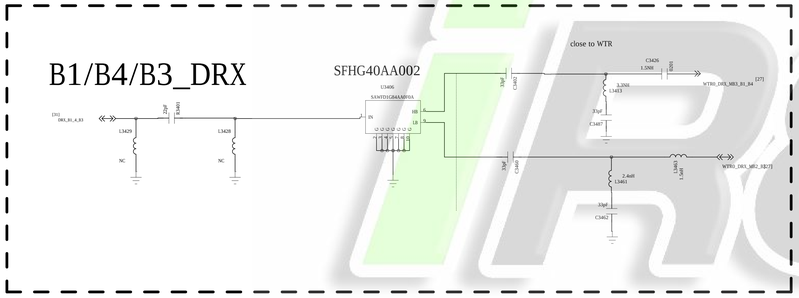
iREPAIR
LABORATORIO TÉCNICO MICROSOLDADURA

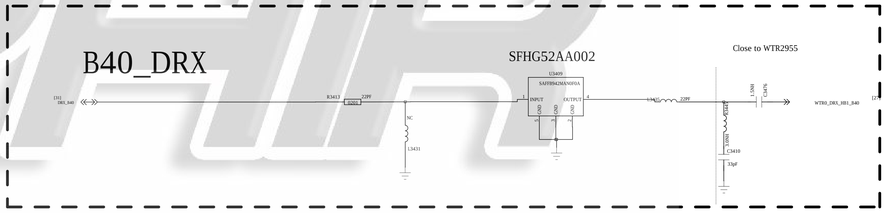


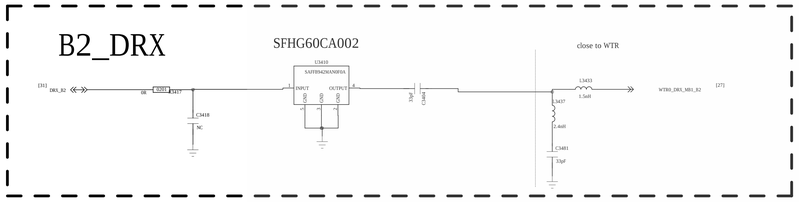


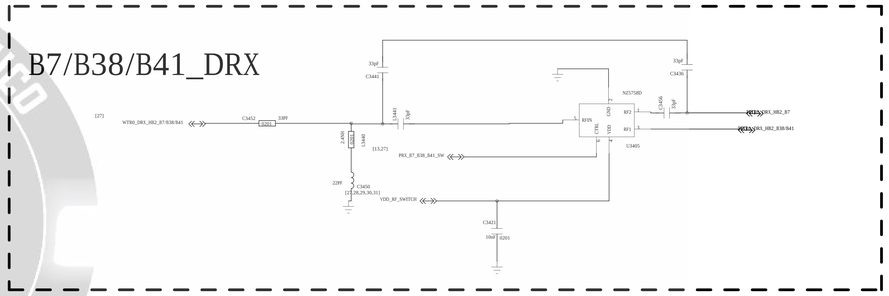


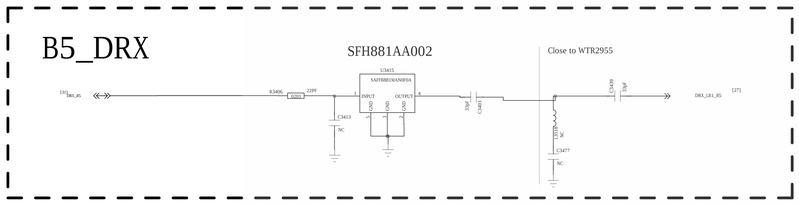


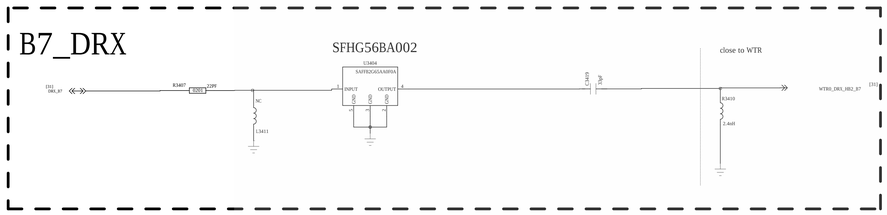






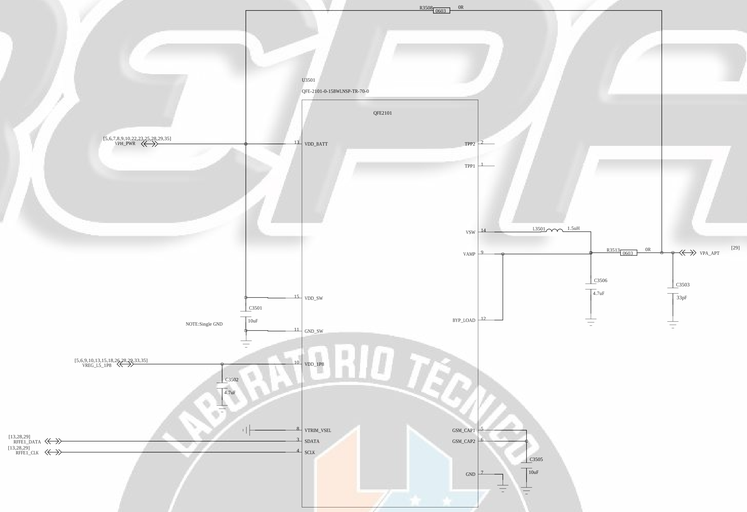


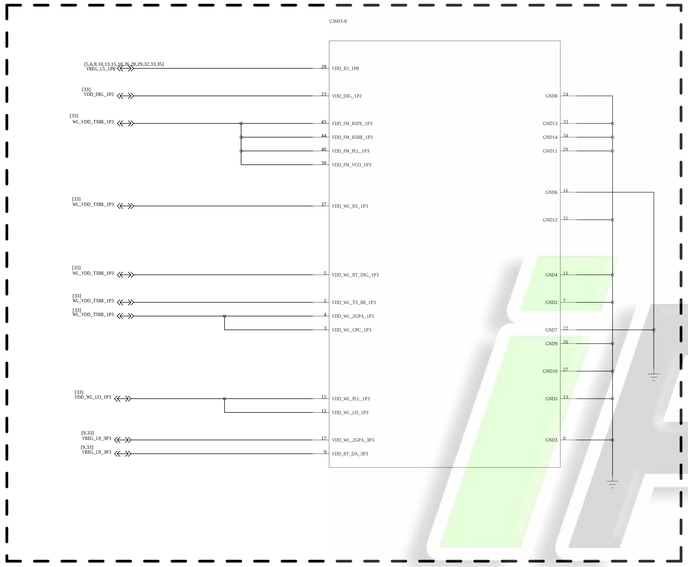


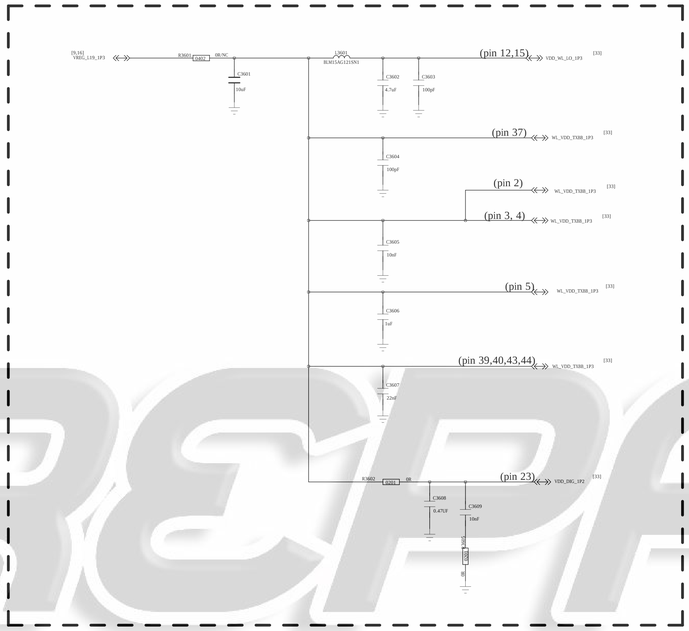


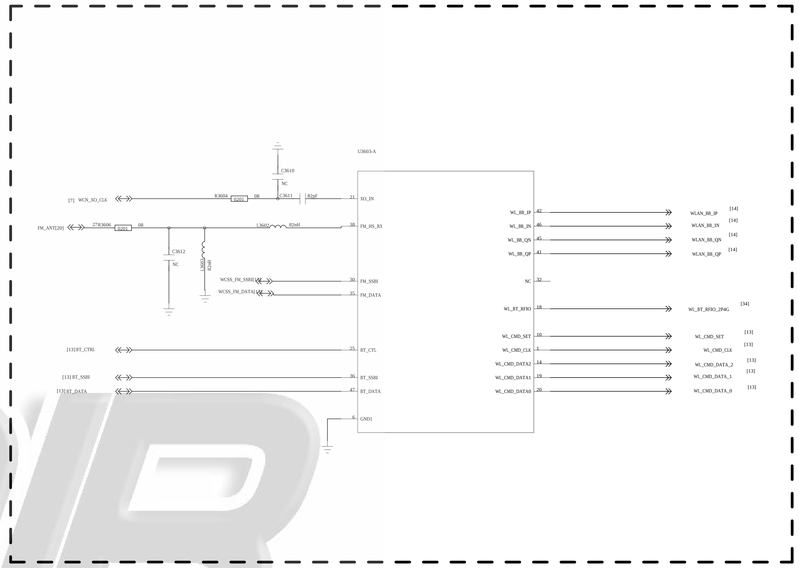
iREPAIR
LABORATORIO TÉCNICO
MICROSOLDADURA

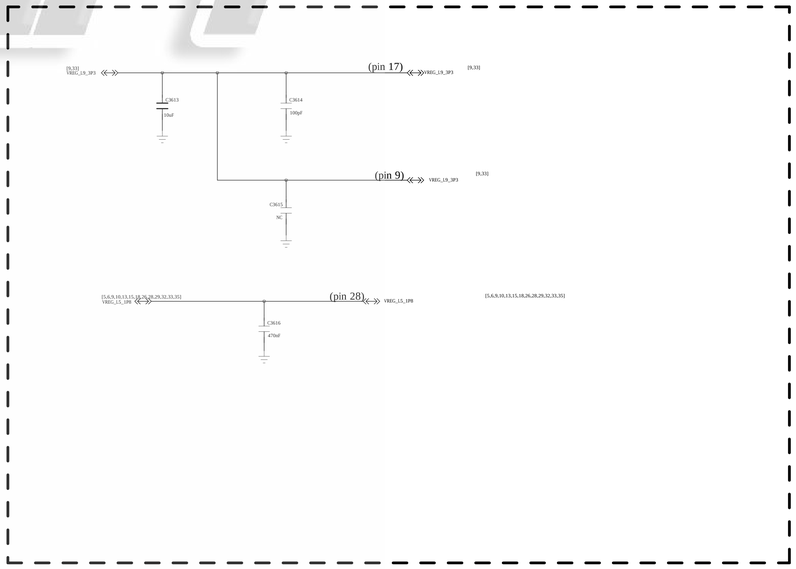
APT


R3508
0R0
08
U3501
QFE2101-0-15DM13XM-TR-7R-0
QFE2101
[5,6,7,8,9,10,22-32,35,28,29,35]
VPA_PWR
13
VDD_BATT
TPP2
2
TPP1
1
VSW
14
L3501
1.5uH
VAMP
6
R3513
0R0
08
VPA_APT
[29]
C3506
4.7uF
C3503
33pF
15
VDD_SW
C3501
10uF
NOTE:Single GND
11
GND_SW
RYP_LOAD
12
[5,6,9,10,13,15,18,26,28,30,33,35]
VREG_L5_APA
10
VDD_DPD
C3502
4.7uF
8
VTRIM_VSEL
[13,28,29]
RFFE1_DATA
3
SDATA
[13,28,29]
RFFE1_CLK
4
SCLK
GSM_CAP17
17
GSM_CAP2
16
C3505
10uF
GND
7



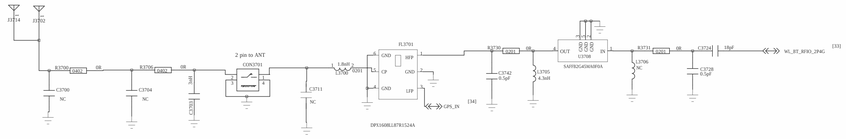


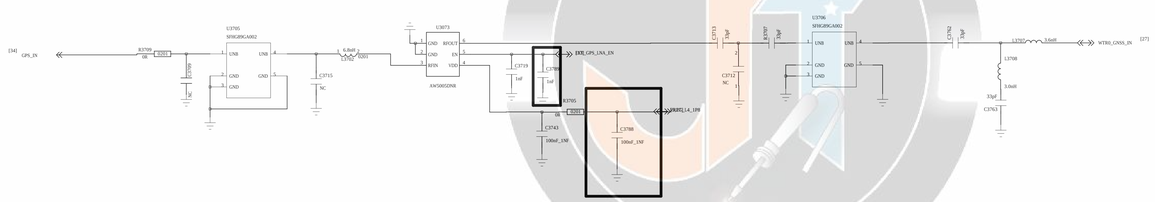




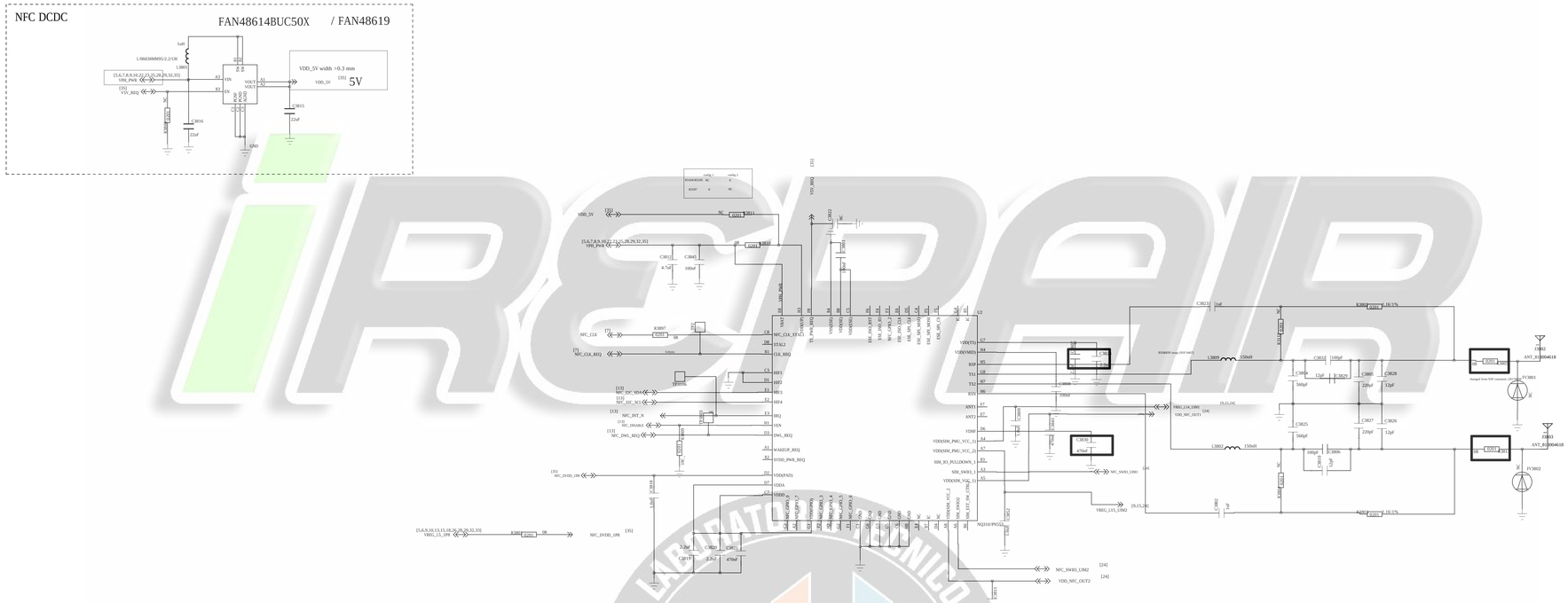
iREPAIR
LABORATORIO TÉCNICO
MICROSOLDADURA

GPS WIFI 2.4G Ant





iREPAIR
LABORATORIO TÉCNICO MICROSOLDADURA



LABORATORIO TÉCNICO
MICROSOLDADURA

REVISION RECORD			
LTR	ECO NO.	APPROVED:	DATE:

iREPAIR
LABORATORIO TÉCNICO MICROSOLDADURA

DRAWN: zhujinchun	DATED: 20160926	COMPANY: Shanghai Longcheer Technology Co., Ltd			
CHECKED: LiLi	DATED: 20160926	TITLE: 37_DIV_ANT			
QUALITY CONTROL: <QC By>	DATED: <QC Date>	CODE: XX	SIZE: A0	DRAWING NO.: XXXX	REV: A
RELEASED: <Released By>	DATED: <Release Date>	SCALE: <Scale>		SHEET: 36 36	