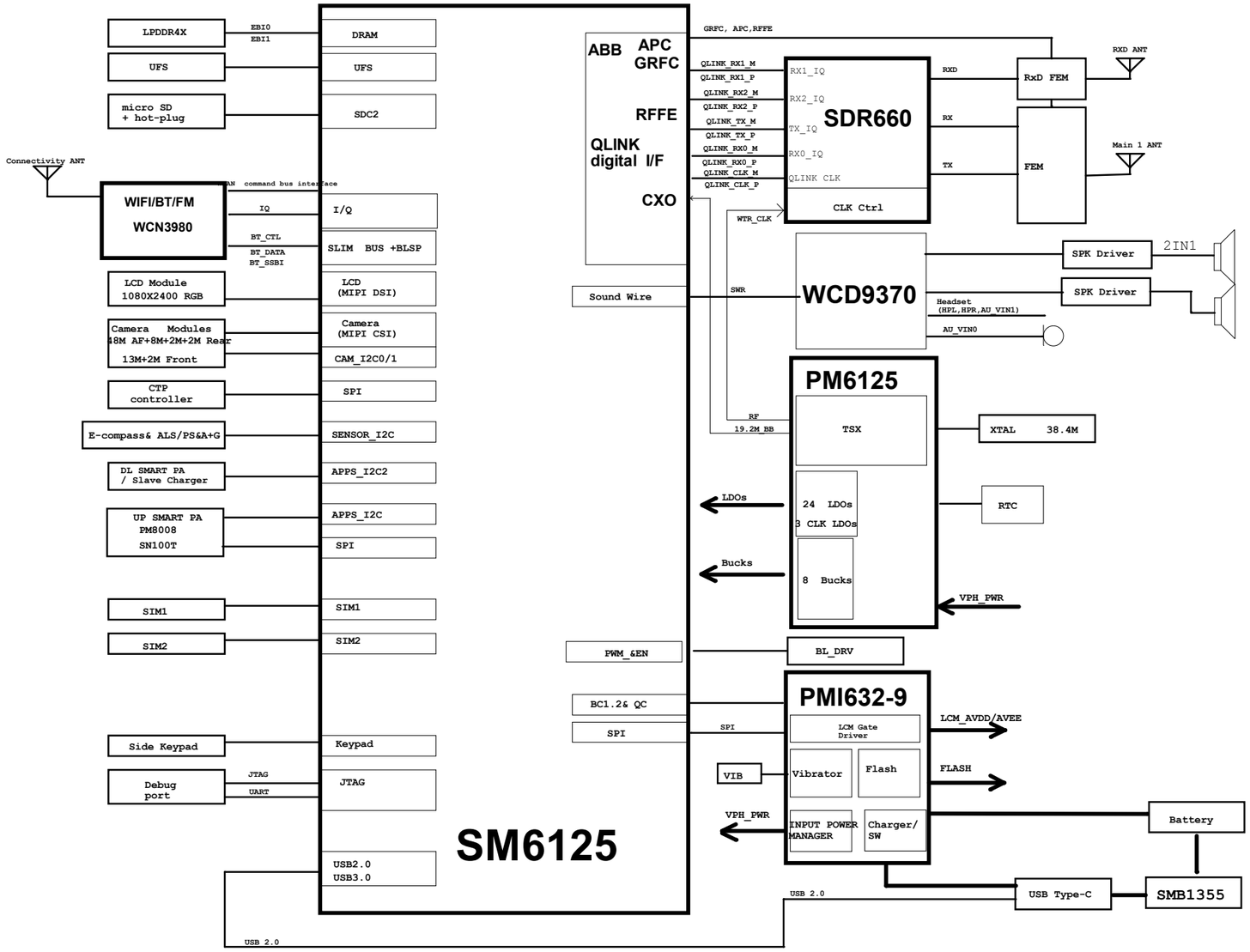
Block Diagram



华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title: 01.Block Diagram		
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I2C Configuration Table

CAM_I2C-0	AP	Rear Camera - 48M	400 Kbps	Yes.	Rear camera (S5KGM1SP) 48M I2C Address (R:0x5B;W:0x5A) AF driver (ATMJ1Z991A) I2C address: 0X0C (Write:0x18, Read:0x19) EEPROM (GT24P128C-2CSLI)I2C address: 0X50 (Write:0xA0, Read:0xA1)
		MONO Camera - 2M	400 Kbps	Yes.	MONO camera (GC02M0) 2M I2C Address (R:0x6F;W:0x6E) EEPROM I2C address: (Write:0XA5;0XA4)
		Front camera2	400 Kbps	Yes.	
CAM_I2C-1	AP	Front camera_8M	400 Kbps	Yes.	Front camera (S5K4H7) 16M I2C Address (R:0x21;W:0x20) EEPROM (STM24C64X) I2C address: (Write:0XA9;0XA8)
		Wide Camera - 8M	400 Kbps	Yes.	WIDE camera (OV8856) 8M I2C Address (R:0x45;W:0x44) EEPROM (P24C128B) I2C address: (Write:0XA3;0XA2)
		FF MONO Camera - 2M	400 Kbps	Yes.	FF MONO camera (OV02A10) 2M I2C Address (R:0x7B;W:0x7A) FF MONO EEPROM I2C address: (Write:0XA5;0XA4)
NFC_I2C	QUP0 SE3	NFC	400 Kbps	Yes.	NFC SN100 address: 0X08 (Write:0x51, Read:0x50)
			400 Kbps	Yes.	
SENSOR_I2C	QUP1 SE0	A+G	400 Kbps	Yes.	LSM6DS3TR-C I2C address: (Write:0xD5, Read:0xD4) BMI160 I2C address: (Write:0xD1, Read:0xD0)
		MSENOSR	400 Kbps	Yes.	MMC5603NJL I2C Address (R:0x61;W:0x60) AK09918C I2C Address (R:0x19;W:0x18)
		ALPS	400 Kbps	Yes.	STK33502 I2C Address (R:0x8D;W:0x8C)
APPS2_I2C	QUP1 SE2	DW SMART PA	400 Kbps	Yes.	AW87339CSR I2C address: (Write:0xB3, Read:0xB2) SIA8109 I2C address: (Write:0x55, Read:0x54)
		Second Charge	400 Kbps	Yes.	SMB1355 I2C Address (R:0x19;W:0x18)
APPS_I2C	QUP0_SE1	UP SMART PA	400 Kbps	Yes.	AW87339CSR I2C address: (Write:0xB1, Read:0xB0) SIA8109 I2C address: (Write:0x51, Read:0x50)
		MULTI LDO	400 Kbps	Yes.	PM8008 I2C address: (Write:0x04, Read:0x05)
			400 Kbps	Yes.	
			400 Kbps	Yes.	

SPI Configuration Table

LCD SPI	AP SE2	
NFC_ESE SPI	AP SE0	
FP_SPI	AP SE1	

华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title: 02.I2C Configuration Table		
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GPIO MAP

SDM6125 GPIO Configuration

GPIO_0	BLSP_SPI_MOSI_1	GPIO_42	NC	GPIO_84	UIM2_CLK
GPIO_1	BLSP_SPI_MISO_1	GPIO_43	NC	GPIO_85	UIM2_RESET
GPIO_2	BLSP_SPI_CS1_N_1	GPIO_44	NC	GPIO_86	**UIM2_PRESENT**
GPIO_3	BLSP_SPI_CLK_1	GPIO_45	NC	GPIO_87	**UIM1_DATA**
GPIO_4	BLSP_UART_TX_2	GPIO_46	CAM0_RST_N	GPIO_88	UIM1_CLK
GPIO_5	BLSP_UART_RX_2	GPIO_47	CAM1_RST_N	GPIO_89	UIM1_RESET
GPIO_6	BLSP_I2C_SDA_2	GPIO_48	CAM2_RST_N	GPIO_90	UIM1_PRESENT
GPIO_7	BLSP_I2C_SCL_2	GPIO_49	NC	GPIO_91	UIM_BATT_ALARM
GPIO_8	BLSP_SPI_MOSI_3	GPIO_50	CAM_AF_VDD_EN	GPIO_92	**NC**
GPIO_9	BLSP_SPI_MISO_3	GPIO_51	CAM_AVDD_EN	GPIO_93	**NC**
GPIO_10	BLSP_SPI_CS_N_3	GPIO_52	NC	GPIO_94	**NC**
GPIO_11	BLSP_SPI_CLK_3	GPIO_53	LCD0_RESET_N	GPIO_95	**NC**
GPIO_12	NC	GPIO_54	SD_CARD_DET_N	GPIO_96	**WDOG_DISABLE**
GPIO_13	KEYPAD_LED_PWM	GPIO_55	DP_EN_N	GPIO_97	**NC**
GPIO_14	BLSP_I2C_SDA_4	GPIO_56	USBC_ORIENTATION	GPIO_98	**NC**
GPIO_15	BLSP_I2C_SCL_4	GPIO_57	FORCED_USB_BOOT	GPIO_99	**QLINK_REQUEST**
GPIO_16	BLSP_UART_TX_5	GPIO_58	USB_PHY_PS	GPIO_100	**QLINK_ENABLE**
GPIO_17	BLSP_UART_RX_5	GPIO_59	MDP_VSYNC_P	GPIO_101	**RFFE1_DATA - SDR660 debug**
GPIO_18	BLSP_UART_CTS_N_5	GPIO_60	NC	GPIO_102	**RFFE1_CLK - SDR660 debug**
GPIO_19	BLSP_UART_RFR_N_5	GPIO_61	NC	GPIO_103	**RFFE2_DATA - (41)QAT3533**
GPIO_20	FP_SUB_RESET	GPIO_62	NC	GPIO_104	**RFFE2_CLK - (41)QAT3533**
GPIO_21	SMB_STAT	GPIO_63	NC	GPIO_105	**NC**
GPIO_22	BLSP_I2C_SDA_6	GPIO_64	NC	GPIO_106	**NC**
GPIO_23	BLSP_I2C_SCL_6	GPIO_65	NC	GPIO_107	**RFFE4_DATA-(45)QSW8574,(48)RF1656SR**
GPIO_24	CDC_SWR_CLK	GPIO_66	TS_RESET_N	GPIO_108	**RFFE4_CLK -(45)QSW8574,(48)RF1656SR**
GPIO_25	CDC_SWR_DATA	GPIO_67	TS_INT_N	GPIO_109	**RFFE5_DATA-(52)QAT3514, (52)QAT3550,(47) QAT3522**
GPIO_26	WSA_SPKR_SD_N_1	GPIO_68	ACC_GYRO_DATA_AVA_INT_N	GPIO_110	**RFFE5_CLK-(52)QAT3514, (52)QAT3550,(47)QAT3522**
GPIO_27	NC	GPIO_69	ACC_GYRO_MOT_INT_N	GPIO_111	**RFFE6_DATA - (46)QET4101 ch0, (41)QPA4361**
GPIO_28	NFC_IRQ	GPIO_70	MAG_INT_N	GPIO_112	**RFFE6_CLK - (46)QET4101 ch0, (41)QPA4361**
GPIO_29	NFC_EN	GPIO_71	ALSP_INT_N	GPIO_113	**NC**
GPIO_30	NFC_DWL_REQ	GPIO_72	FP_INT_N_1	LPI_GPIO_0	LPI_SPI_1_CS1_N
GPIO_31	NFC_ESE_PWR_REQ	GPIO_73	NC	LPI_GPIO_1	LPI_PWR_EN
GPIO_32	CAM_MCLK0	GPIO_74	NC	LPI_GPIO_2	LPI_I2C_3_SDA
GPIO_33	CAM_MCLK1	GPIO_75	NC	LPI_GPIO_3	LPI_I2C_3_SCL
GPIO_34	CAM_MCLK2	GPIO_76	NC	LPI_GPIO_4	LPI_SPI_2_CS_N
GPIO_35	NC	GPIO_77	AUDIO_USBC_EN2_N	LPI_GPIO_5	LPI_SPI_2_CLK
GPIO_36	CCI_I2C_SDA0	GPIO_78	WMSS_RESETN	LPI_GPIO_6	LPI_SPI_2_MOSI
GPIO_37	CCI_I2C_SCL0	GPIO_79	**PWM_CNTRL**	LPI_GPIO_7	LPI_SPI_2_MISO
GPIO_38	CCI_I2C_SDA1	GPIO_80	**AUDIO_USBC_EN1**	LPI_GPIO_8	LPI_SPI_1_CS_N
GPIO_39	CCI_I2C_SCL1	GPIO_81	MSS_LTE_COXM_TXD	LPI_GPIO_9	LPI_SPI_1_CLK
GPIO_40	NC	GPIO_82	MSS_LTE_COXM_RXD	LPI_GPIO_10	LPI_SPI_1_MOSI
GPIO_41	FL_STROBE_TRIG	GPIO_83	UIM2_DATA	LPI_GPIO_11	LPI_SPI_1_MISO

LPI_GPIO_12	LPI_UART_1_TX
LPI_GPIO_13	LPI_UART_1_RX
LPI_GPIO_14	NC
LPI_GPIO_15	NC
LPI_GPIO_16	NC
LPI_GPIO_17	NC
LPI_GPIO_18	CDC_PDM_CLK
LPI_GPIO_19	CDC_PDM_SYNC
LPI_GPIO_20	CDC_PDM_TX
LPI_GPIO_21	CDC_PDM_RX0
LPI_GPIO_22	CDC_PDM_RX0_COMP
LPI_GPIO_23	CDC_PDM_RX1
LPI_GPIO_24	CDC_PDM_RX1_COMP
LPI_GPIO_25	CDC_PDM_RX2
LPI_GPIO_26	CDC_DMIC_CLK1
LPI_GPIO_27	CDC_DMIC_DATA1
LPI_GPIO_28	CDC_DMIC_CLK2
LPI_GPIO_29	CDC_DMIC_DATA2
LPI_GPIO_30	LPI_QCA_SB_CLK
LPI_GPIO_31	LPI_QCA_SB_DATA0

PM6125 GPIO Configuration

GPIO_1	NC	GPIO_8	WLED_CABC_PM
GPIO_2	SD_CARD_DET_N1	GPIO_9	DISCHARGE_EN
GPIO_3	CPU_THERM		
GPIO_4	NC		
GPIO_5	KEY_VOL_DW		
GPIO_6	BOARD_ID		
GPIO_7	PM_USB_THERM		

PMI632 GPIO Configuration

GPIO_1	NC	GPIO_8	ISNS_SMB_N
GPIO_2	SMB_EN		
GPIO_3	PMI632_THERM		
GPIO_4	SNS_3P0_EN		
GPIO_5	NC		
GPIO_6	NC		
GPIO_7	ISNS_SMB_P		

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Title: 04.GPIO Map

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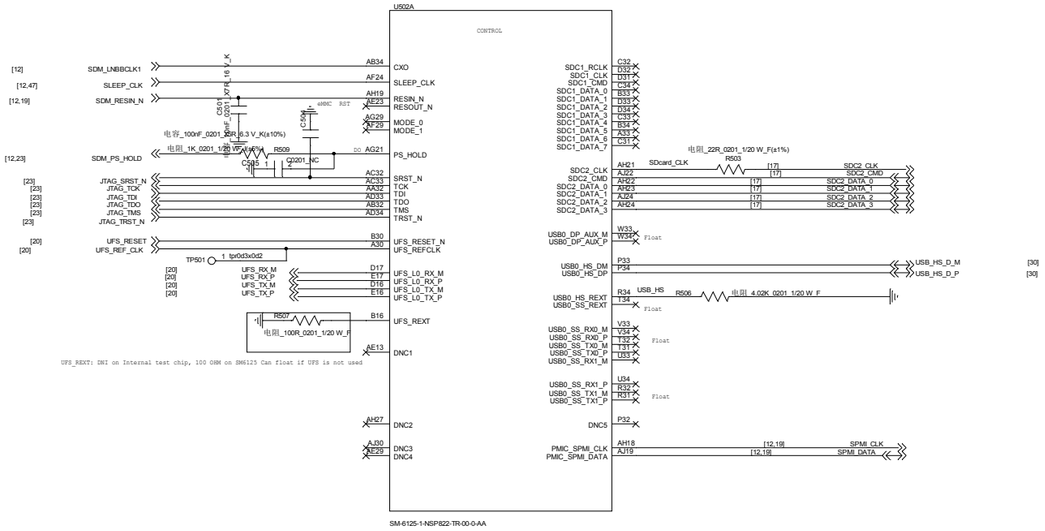
SM6125 Control/UFS/SDC1/SDC2

80-PJ285-41 Rev. A



华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title 05.SM6125 Control/UFS/SDC1/SDC2		
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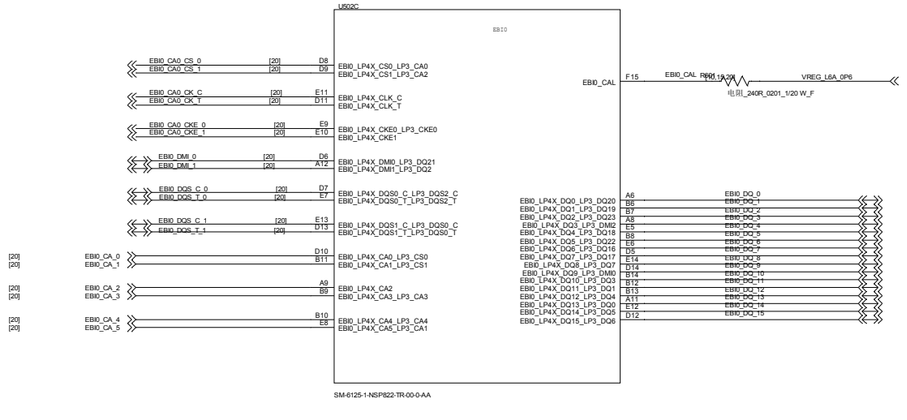
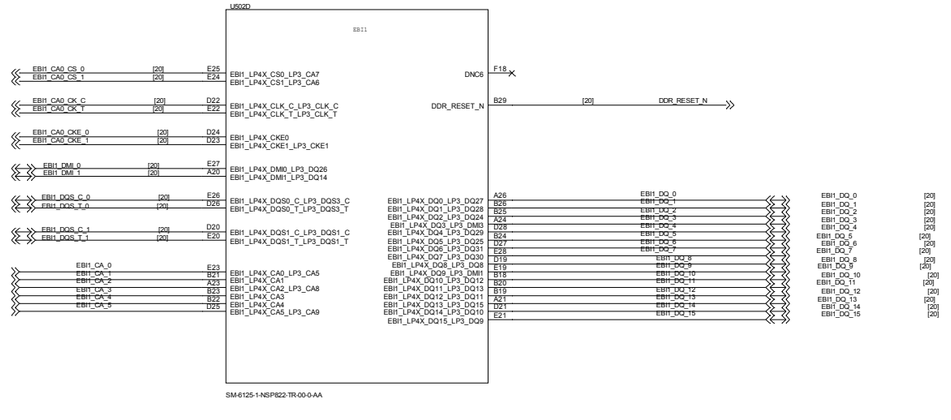
SM6125 LPDDR4

80-PJ285-41 Rev. A





华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title 06.SM6125 LPDDR4		
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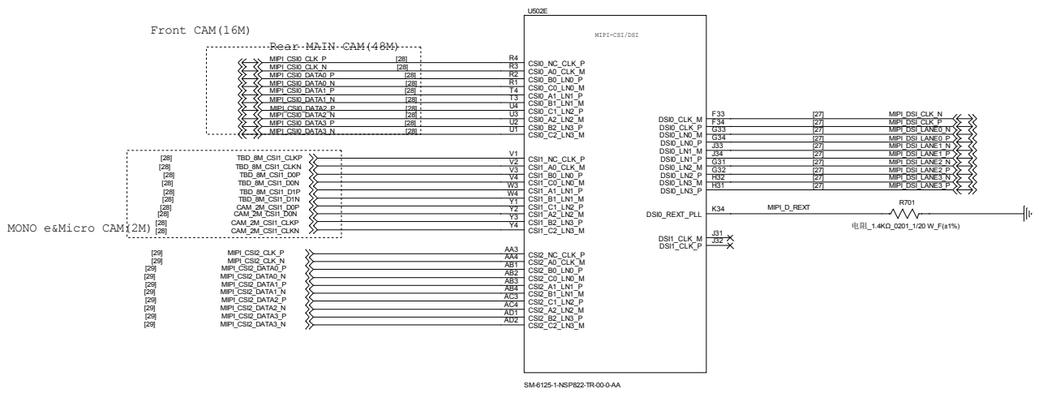
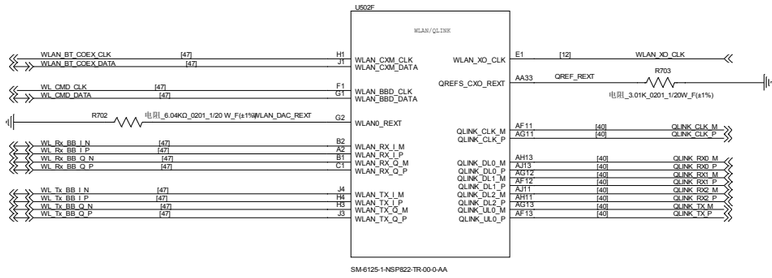
SM6125 CSI/DSI

REF 701-799





华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title 07.SM6125 CSI/DSI		
Size D	Project QL1863	Rev V1
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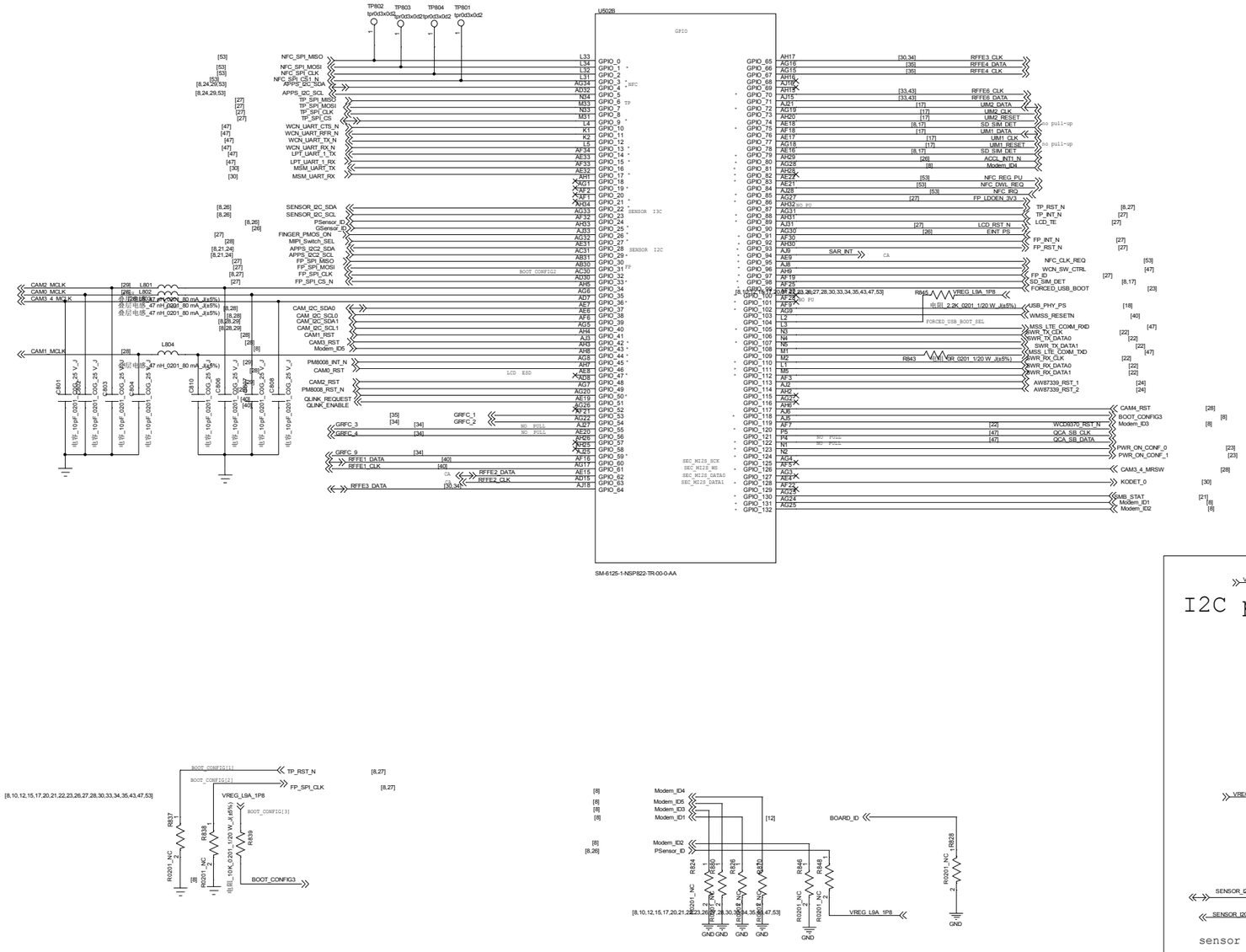
Note: Asterisks (*) indicate modem power management (MPM) wake-up pins

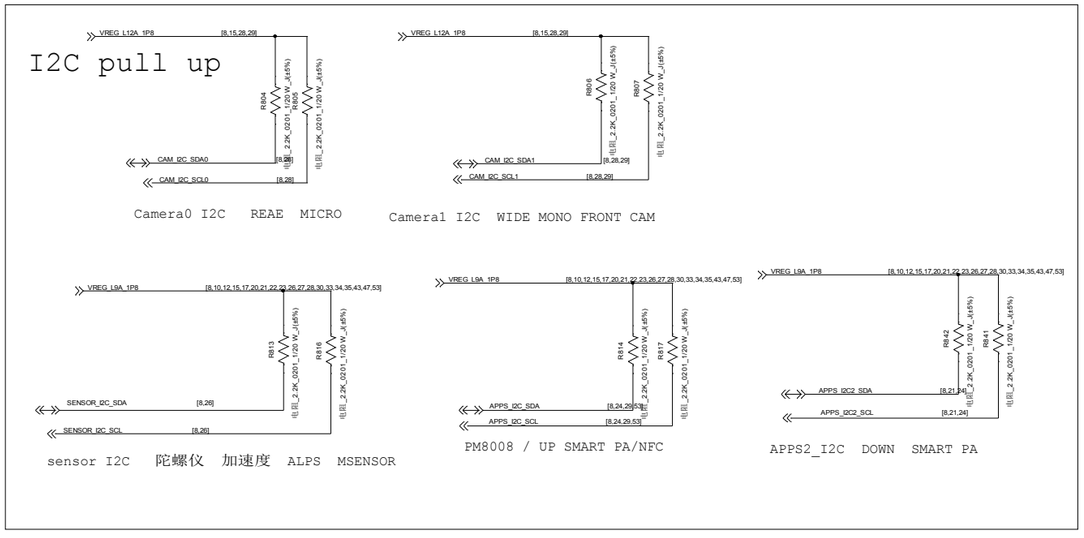


FORCED_USB_BOOT	FORCED_USB_BOOT_SEL	FORCE_USB_BOOT FUNCTION
GND	GND	NORMAL BOOT Mode
PULL UP	GND	EDL MODE
PULL UP	PULL UP	NORMAL BOOT Mode
GND	PULL UP	EDL MODE

GPIO_56	BOOT_CONFIG(0)	WDOG_DISABLE
GPIO_87	BOOT_CONFIG(1)	FASTBOOT_SEL(0)
GPIO_32	BOOT_CONFIG(2)	FASTBOOT_SEL(1)
GPIO_118	BOOT_CONFIG(3)	FASTBOOT_SEL(2)
GPIO_99	FORCED_USB_BOOT	
GPIO_104	FORCED_USB_BOOT_POL_SEL	

BOOT OPTIONS	BOOT CONFIG BITS 3 2 1
0: Default(eMMC->SD->USB(EDL))	0 0 0
1: SD->eMMC->USB(EDL)	0 0 1
2: SD->USB(EDL)	0 1 0
3: USB(EDL)	0 1 1
4: UFS->SD->USB(EDL)	1 0 0
5: SD->UFS->USB(EDL)	1 0 1
6: UFS->USB(EDL)	1 1 0
7: UFS_PWM_MODE->USB(EDL)	1 1 1

FASTBOOT_SEL[3:1]	BOOT OPTIONS
0b100	4: Default (UFS > uSD -> USB-> eDL)



版本

版本		Modem_ID3	Modem_ID2	Modem_ID1	Modem_ID4
内销	全网通	0	0	0	
	移动版	0	0	1	
外销	亚太简版	0	1	0	
	亚太版	0	1	1	
	全频段版	1	0	0	
	运营商版	1	0	1	

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Title	08.SM6125 GPIO (Internal Codec)	
Size D	Project QL1863	Rev V1
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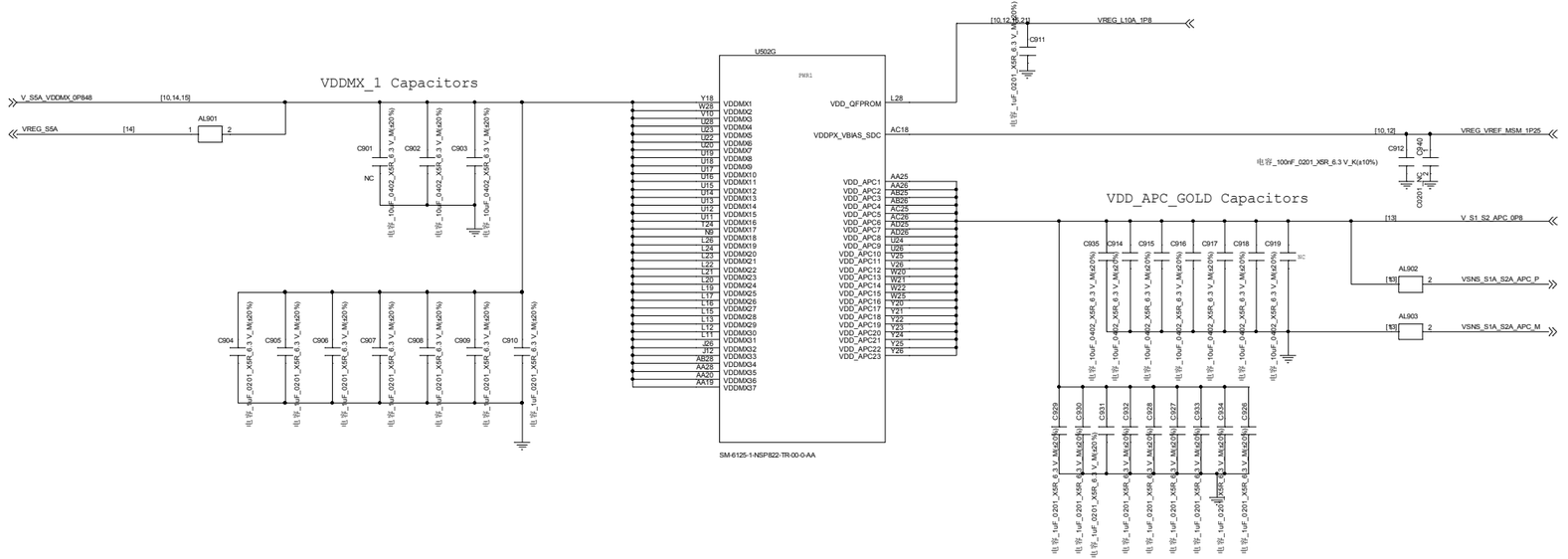
SM6125 Power (Core)

REF 901-999



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Title: 09.SM6125 Power (Core)		
Size: D	Project: QL1863	Rev: V1
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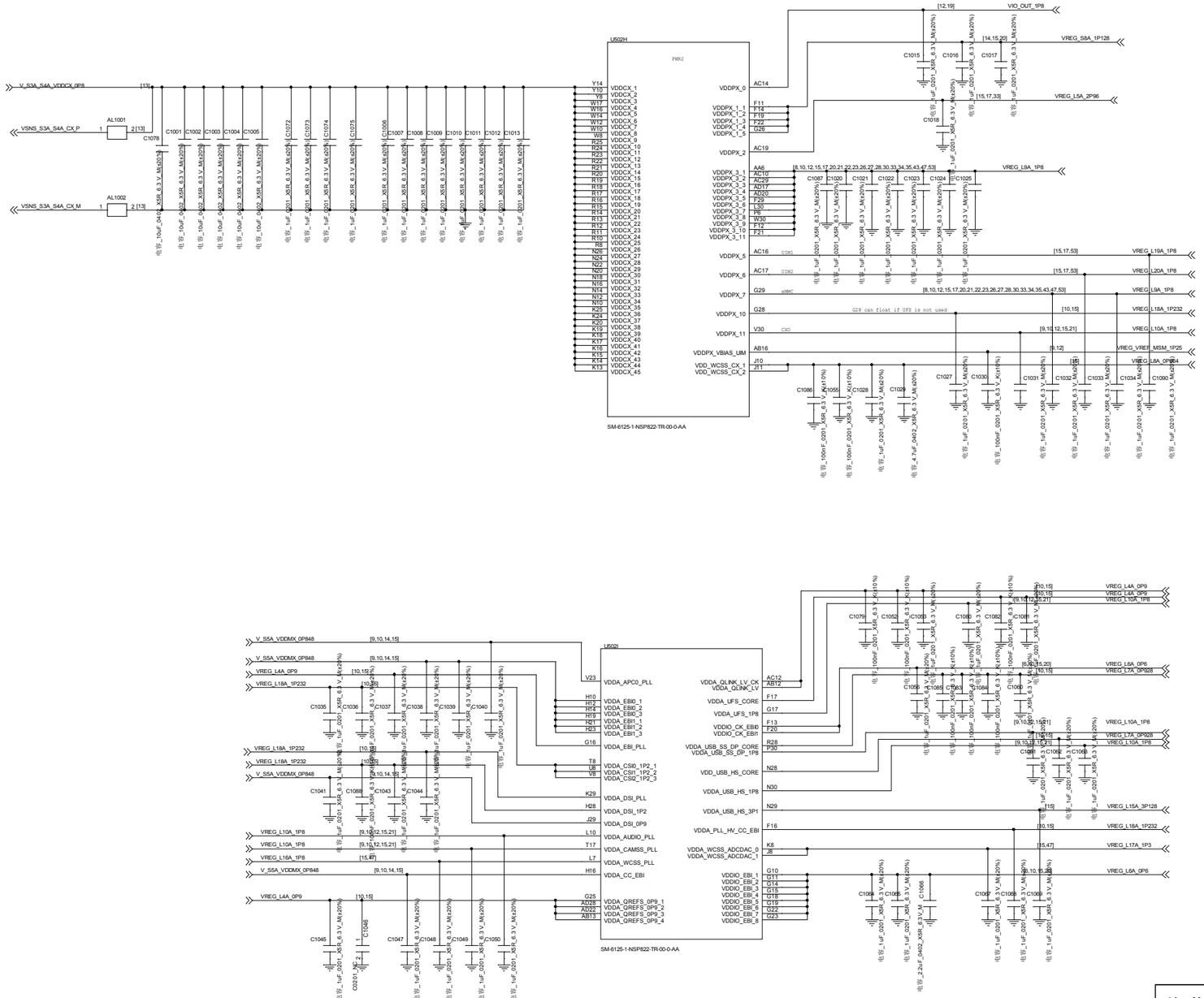
SM6125 Power (Other, LP4X)

REF 1001-1099



华勤通讯 Huaqin Telecom Technology Com.,Ltd	
Title	10.SM6125 Power (Other, LP4X)
Size: D	Project: QL1863
Rev: V1	
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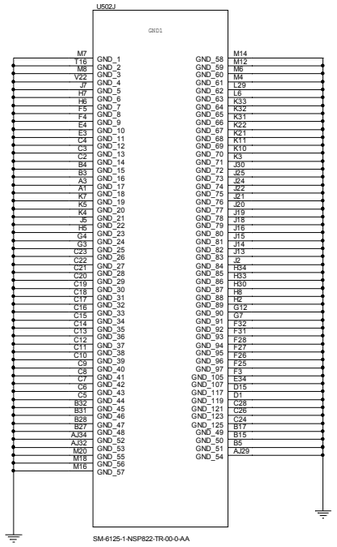
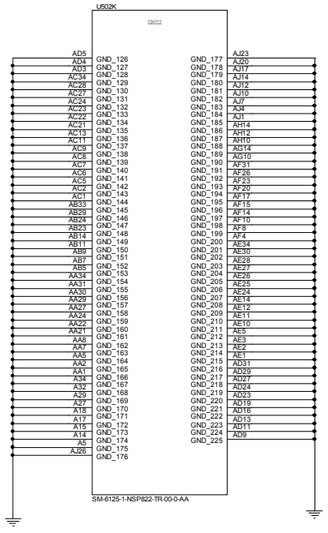
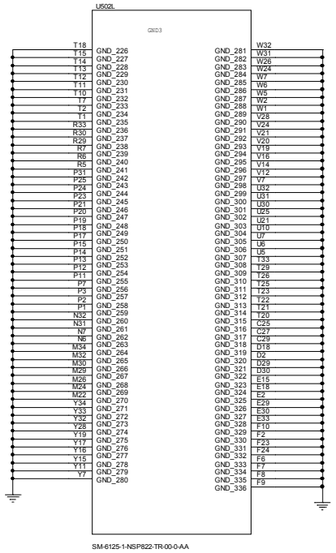
SM6125 Ground

REF 1101-1199







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Title: 11.SM6125 Ground		
Size: D	Project: QL1863	Rev: V1
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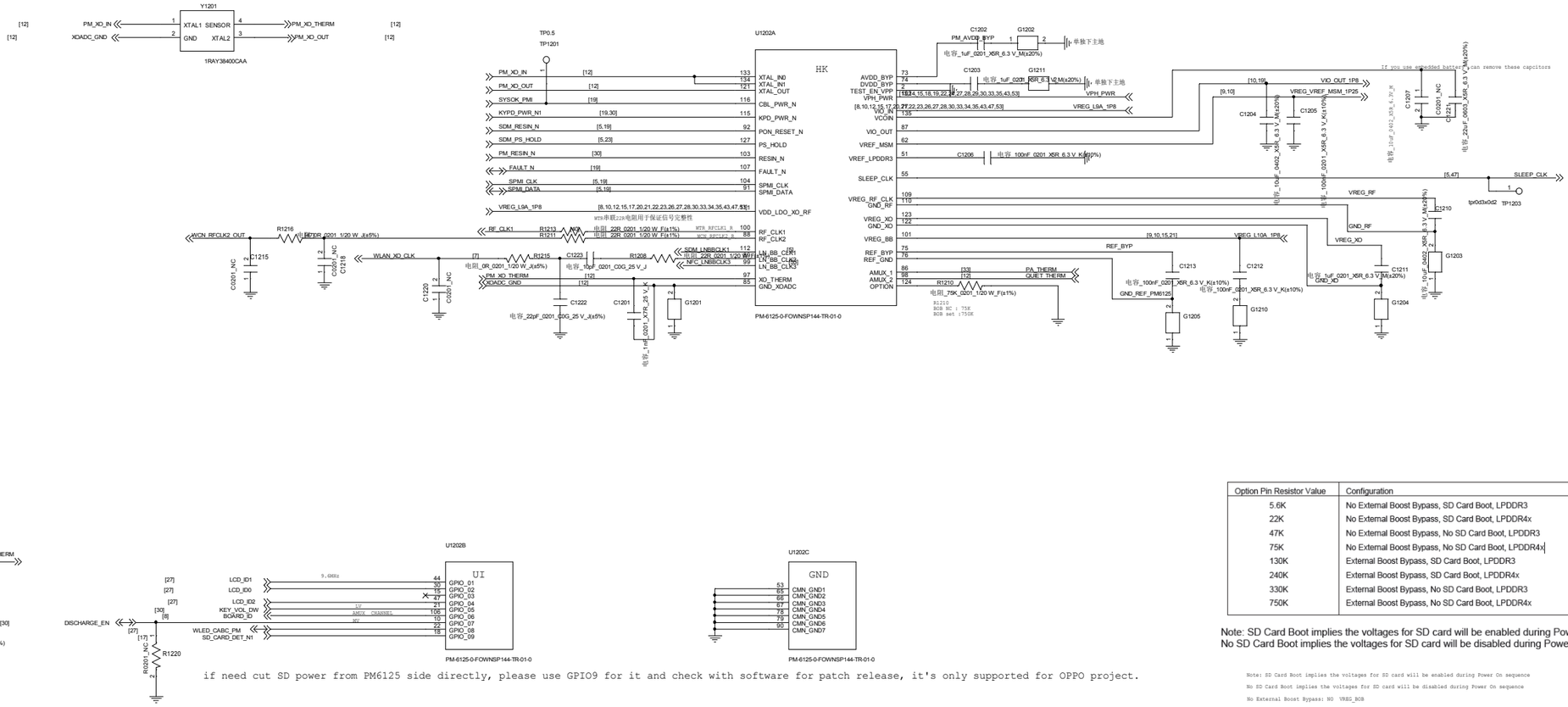
PM6125 CLKs/Control_GND

REF 1201-1299



Option Pin Resistor Value	Configuration
5.6K	No External Boost Bypass, SD Card Boot, LPDDR3
22K	No External Boost Bypass, SD Card Boot, LPDDR4x
47K	No External Boost Bypass, No SD Card Boot, LPDDR3
75K	No External Boost Bypass, No SD Card Boot, LPDDR4x
130K	External Boost Bypass, SD Card Boot, LPDDR3
240K	External Boost Bypass, SD Card Boot, LPDDR4x
330K	External Boost Bypass, No SD Card Boot, LPDDR3
750K	External Boost Bypass, No SD Card Boot, LPDDR4x

Note: SD Card Boot implies the voltages for SD card will be enabled during Power On sequence
No SD Card Boot implies the voltages for SD card will be disabled during Power On sequence

if need cut SD power from PM6125 side directly, please use GPIO9 for it and check with software for patch release, it's only supported for OPPO project.

PM6125	PMI632	
QUIET_THERM	PMI_USB1_THERM	
PA_THERM	PMI_USB2_THERM	

华勤通讯 Huaqin Telecom Technology Com.,Ltd

Title	12.PM6125 CLKs/Control_GND	
Size D	Project QL1863	Rev V1
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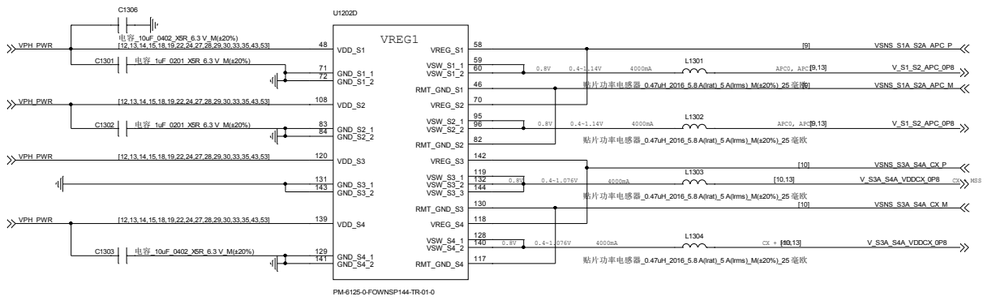
PM6125 Buck Converter

REF 1301-1399



Nicobar Power Grid v1.31 10/31/2018

S1A-2A:	FTS510	0.8V default 8000mA Ipeak 8110.00mA	APC
S3A-4A:	FTS510	0.8V default 8000mA Ipeak 8480mA	CX, MODEM
S5A:	HFS510	0.912V default 4000mA Ipeak 3620.00mA	EBI, MX, nLDO
S6A:	HFS510	1.352V default 4000mA Ipeak 1560mA	LDO
S7A:	HFS510	2.04V default 2500mA Ipeak 2350mA	LDO
S8A:	FTS510	1.128V default 4000mA Ipeak 1790mA	LDO, LPDDR4x

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Title	13.PM6125 Buck Converter1	
Size D	Project QL1863	Rev V1
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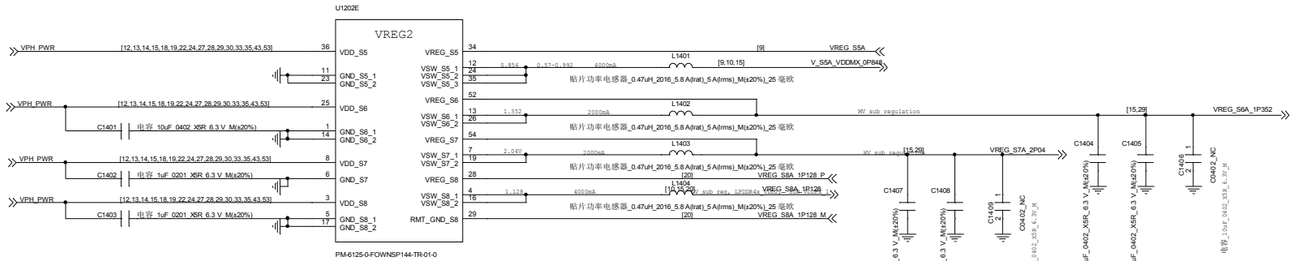
PM6125 LDO Circuits

REF 1401-1499



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Title: 14.PM6125 Buck Converter2		
Size: D	Project: QL1863	Rev: V1
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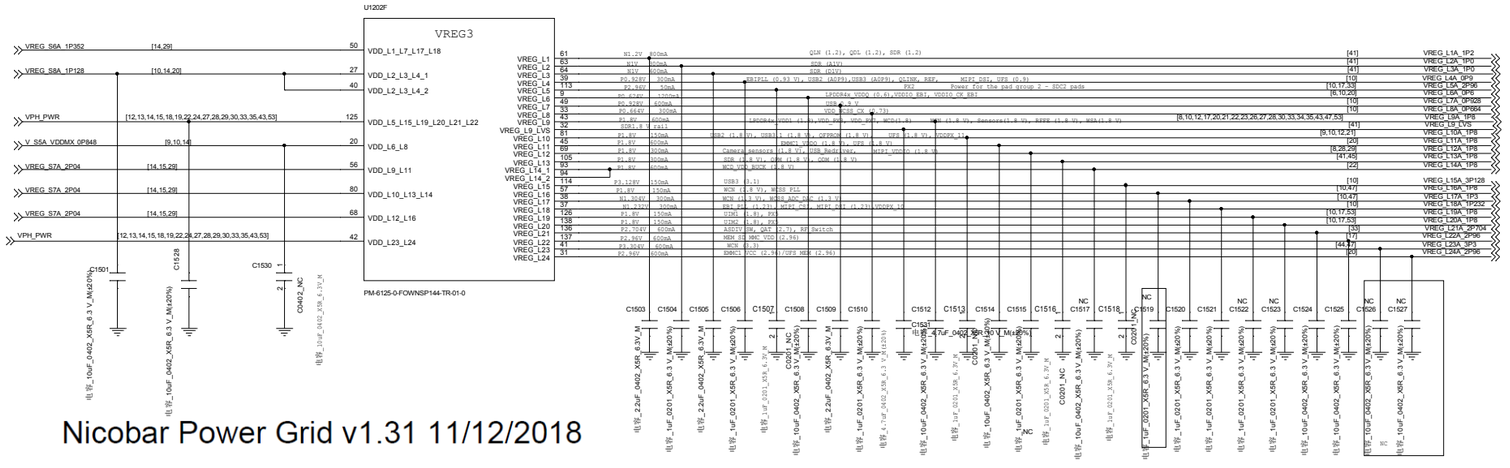
PM660 Charger_FG

REF 1501-1599

LDO Input Rail	Parent Buck	Max Current
VDD_L1_L7_L17_L18	VREG_S6	1.13
VDD_L2_L3_L4	VREG_ S8	0.816
VDD_L5_L15_L19_L20_L21_L22	BOB	1.38
VDD_L6_L8	VREG_S5	0.906
VDD_L9_L11	VREG_S7	1.01
VDD_L10_L13_L14	VREG_S7	1.08
VDD_L12_L16	VREG_S7	0.270
VDD_L23_L24	BOB	1.161



Nicobar Power Grid v1.31 11/12/2018

LDO	Type	Source V_default (est)	Target Pin#
L1	N600	S6A 1.2V (625)	QLN,SDR 1,2 61
L2	N300	S8A 1V (320)	SDR VDD 1.0V 63
L3	N600	S8A 1V (370)	SDR VDD 1.0V 64
L4	N300	S8A 0.928V (126)	QLINK| EBI, MIPI 39
L5	MVP50	VPH 2.96V (22)	PX 113
L6	N1200	S5A 0.624V (1040)	VDDQ, EBI 9
L7	N600	S6A 0.928V (54.2)	USB 49
L8	N300	S5A 0.664V (81)	CX 33
L9	LVP600	S7A 1.8V (754)	Sensors, WCD, TMD, PMI_MSM, QET 43
L10	LVP150	S7A 1.8V (100)	QFPROM, USB,UFS, PX 81
L11	LVP600	S7A 1.8V (925)	EMMC/VCCQ 45
L12	LVP300	S7A 1.8V (121)	OV. USB_REDRIVER 69
L13	LVP300	S7A 1.8V (204)	QPM 1.8V, BBRX, GPS 105
L14	LVP600	S7A 1.8V (650)	WCD Buck 94,93
L15	MVP150	VPH 3.128V (5.28)	USB 3.1V, DP PHY 114
L16	LVP150	S7A 1.8V (92.5)	WCSS, WCN_XO 93
L17	N300	S6A 1.304V (246)	WCN, WCSS ADX DAC 38
L18	N300	S6A 1.232V (133)	MIPI, VDDPX 37
L19	MVP150	VPH/BB 1.8V (60.2)	Memory, SN100, PX 126
L20	MVP150	VPH/BB 1.8V (60.2)	Memory, SN100, PX 138
L21	MVP600	VPH/BB 2.704V (0.68)	QAT, DFE, RTC,QSW 136
L22	MVP600	VPH/BB 2.96V (800)	MMC 137
L23	MVP600	VPH/BB 3.304V (591)	WCN 3.3V 41
L24	MVP600	VPH/BB 2.96V (1170)	EMMC 31

LDO L5/L9/L10/L11/L12/L13/L14/L15/L16/L19/L20/L21/L22/L23/L24 is the Pseudo-capless LDO, so can dni CAP in BOM

PSEUDO CAPLESS LDOs
P-type are psuedo-capless, cap can be at load
For CAPLESS LDOs: If decaps on the load side do not
add up to LDO spec, then install the cap close to the PMIC

华勤通讯 Huaqin Telecom Technology Com.,Ltd

Title: 15.PM6125 LDO		
Size: D	Project: QL1863	Rev: V1
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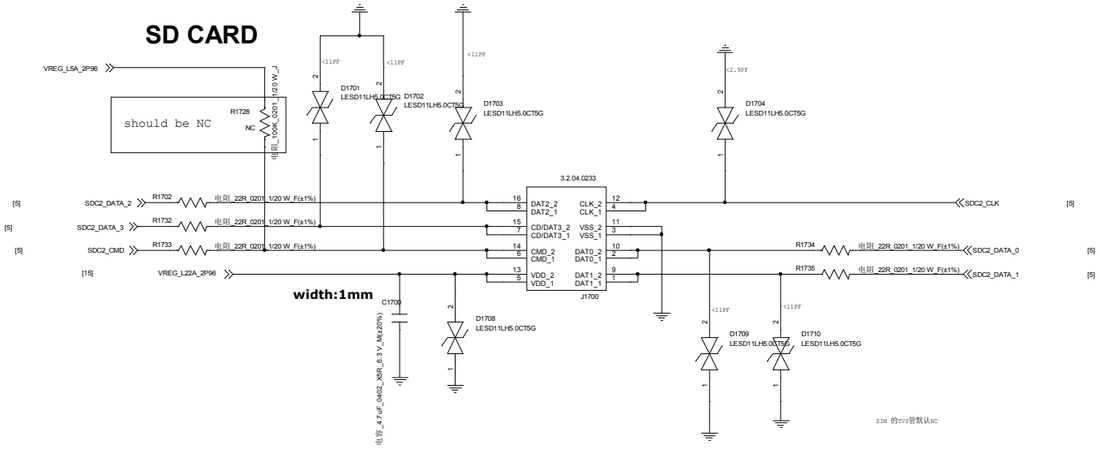
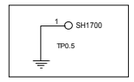
华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title 16. BOB		
Size D	Project QL1863	Rev V1
Date: Monday, January 20, 2020	Sheet 16 of 55	

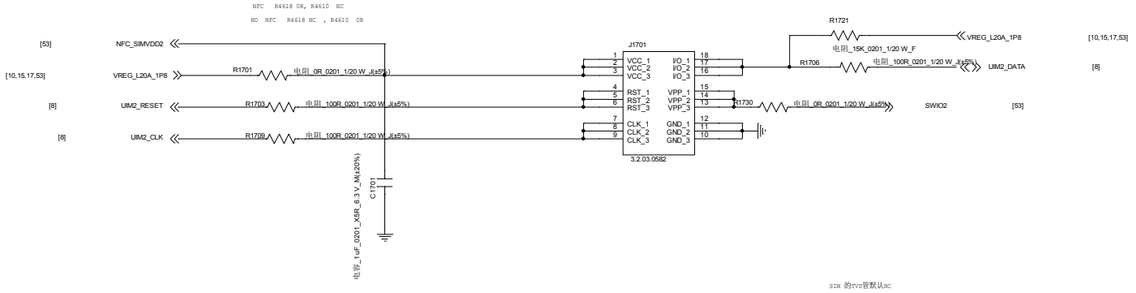
卡座更换



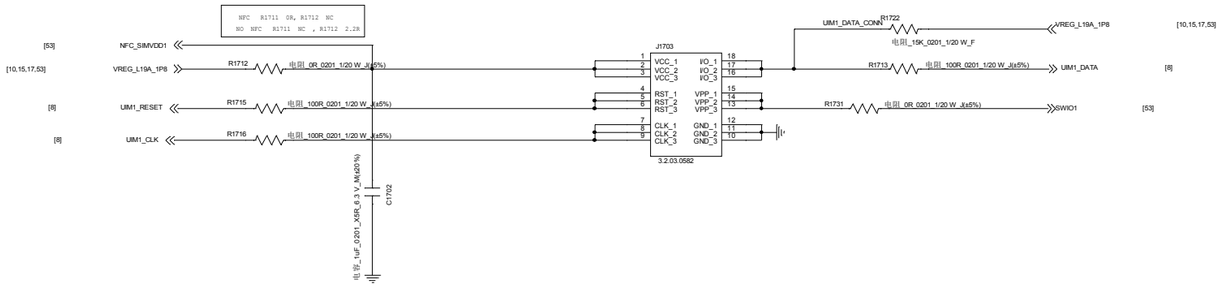
SIM1/SIM2 Card 挡块

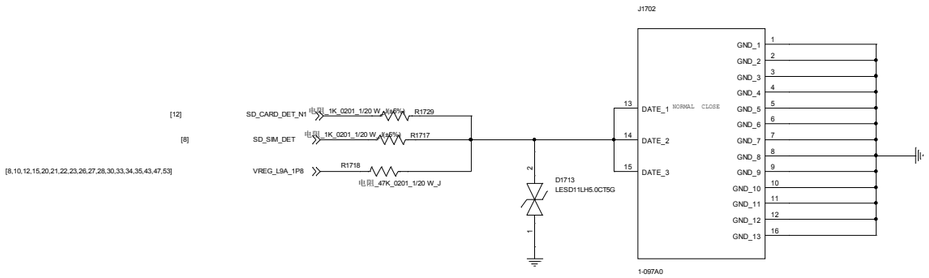


SIM1/SIM2



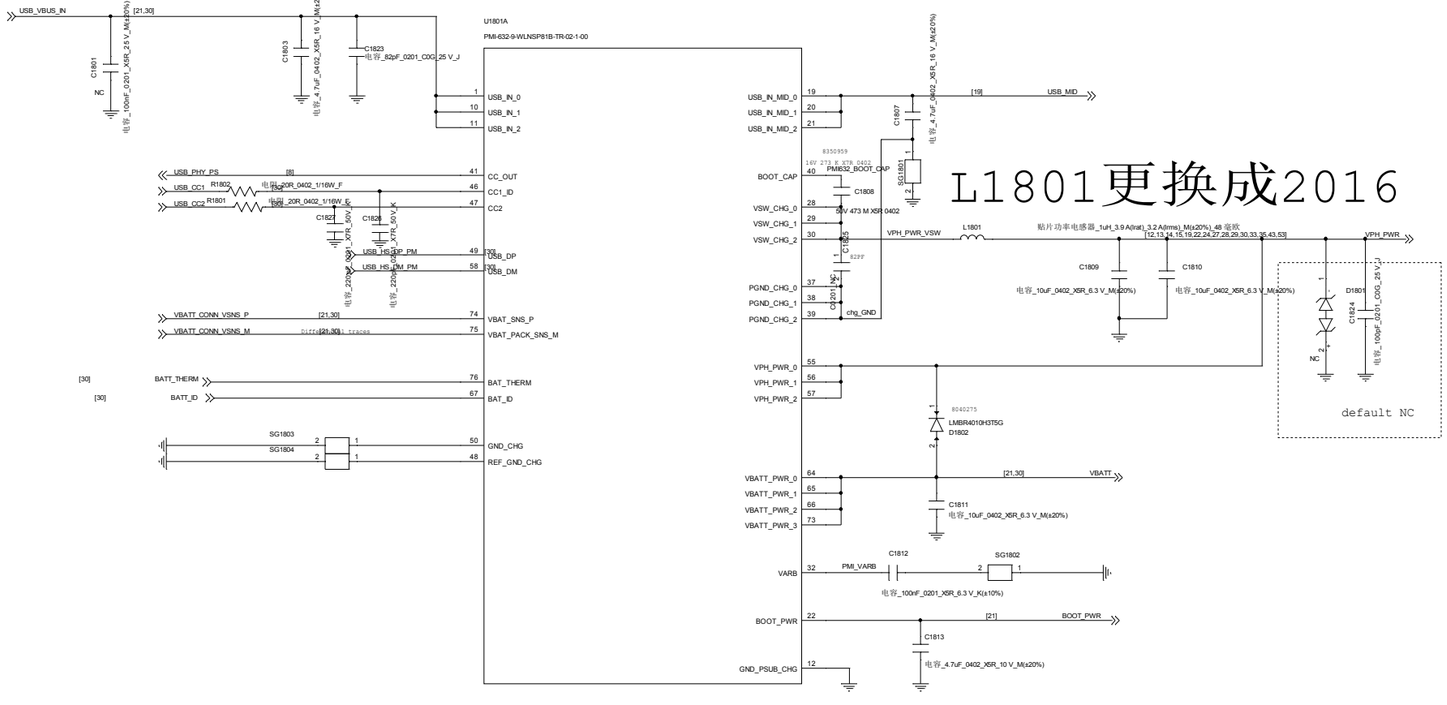
SIM1/SIM2



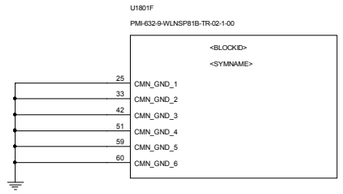


华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title: 17.SIM_SD		
Size: D	Project: QL1863	Rev: V1
Date: Monday, January 20, 2020		Sheet 17 of 55

PMI PIN	connection on device without Wipower	connection on device with Wipower
CHG_OK	Pull up to VDD_CAP with 51kohm	Stark PMU CHG_OK
DVI2_EN	Pull down to GND with 0ohm	Stark PMU DIV2_EN
GPIO2	No Connect For parallel charging: Connects to SMB EN pin. Do NOT pull up to VDD_CAP	10Kohm pull down to gnd For parallel charging: Connects to SMB EN pin. Do NOT pull up to VDD_CAP



L1801更换成2016 4.1A (DFE2016

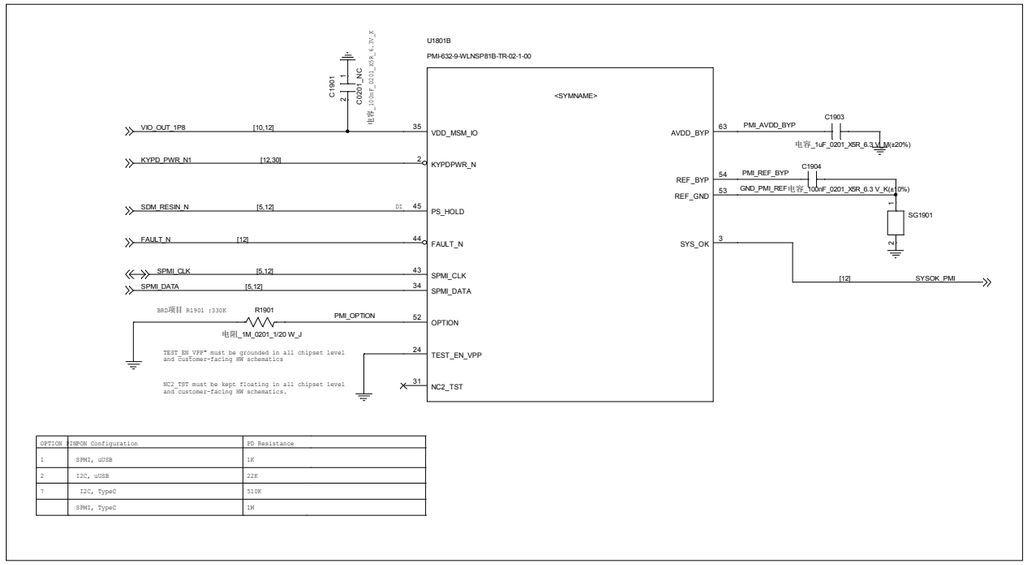


PMI632 Charger

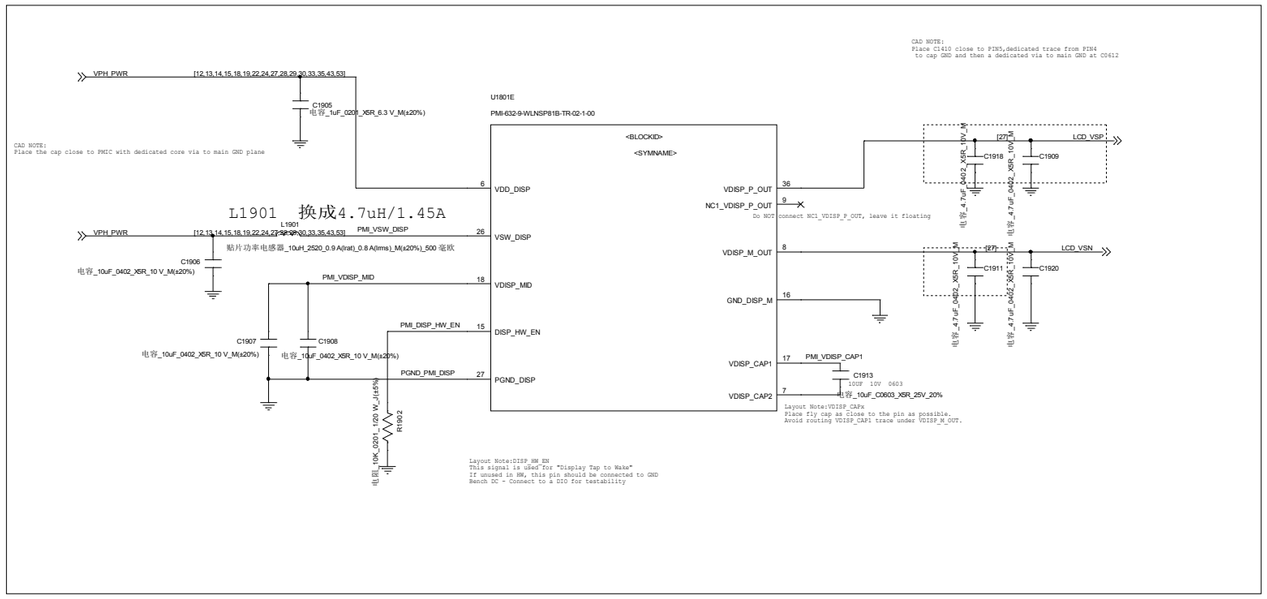
华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title: 18.PMI632 CHARGING		
Size: D	Project: QL1863	Rev: V1
Date: Monday, January 20, 2020	Sheet 18 of 55	

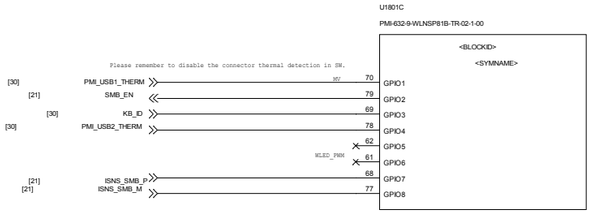
PMI632 Display

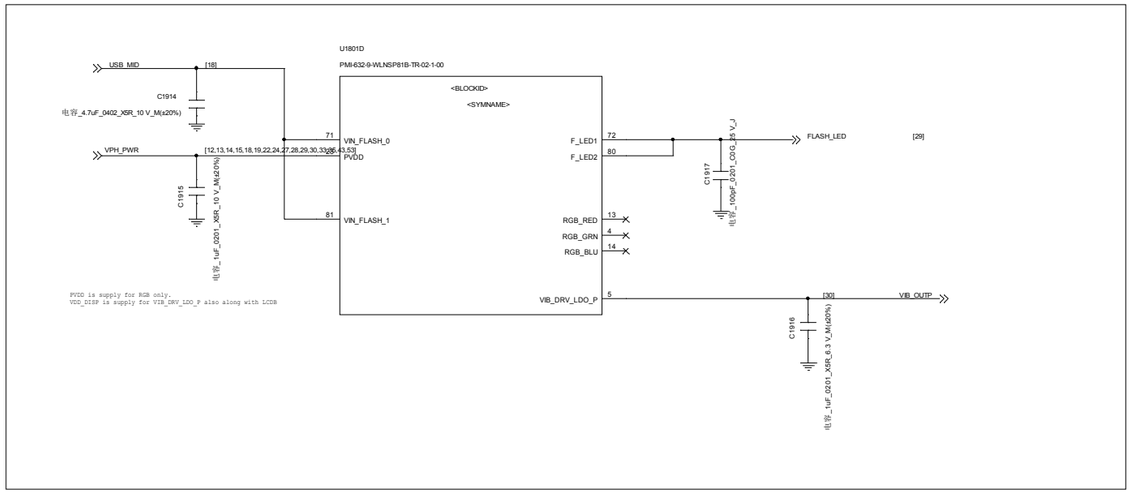
REF 80-PG427-41 Rev. B



OPTION	PMICON Configuration	PD Resistance
1	SPMI, USB	1K
2	I2C, USB	22K
?	I2C, TypeC	510K
	SPMI, TypeC	1M



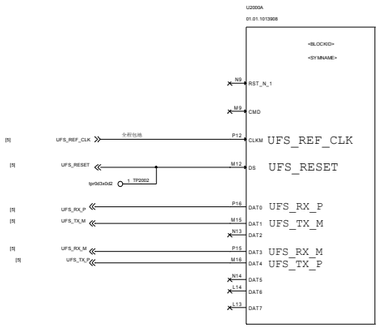




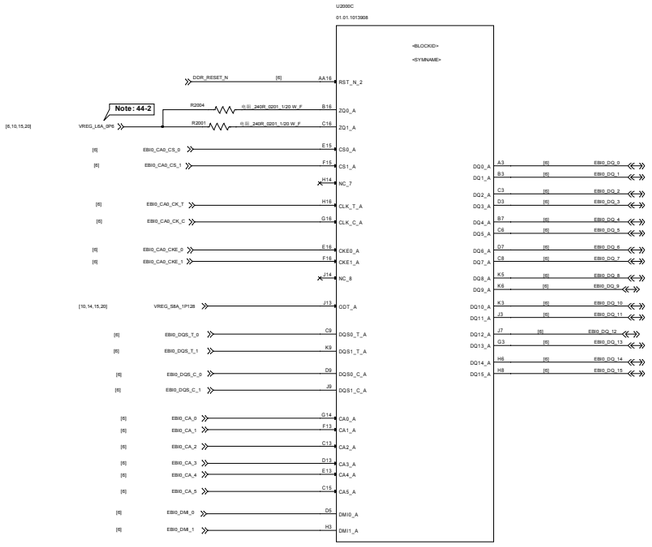
华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title	19.PMI632 Control/Display/GPIO	
Size D	Project QL1863	Rev V1
Date: Monday, January 20, 2020	Sheet 19 of 55	

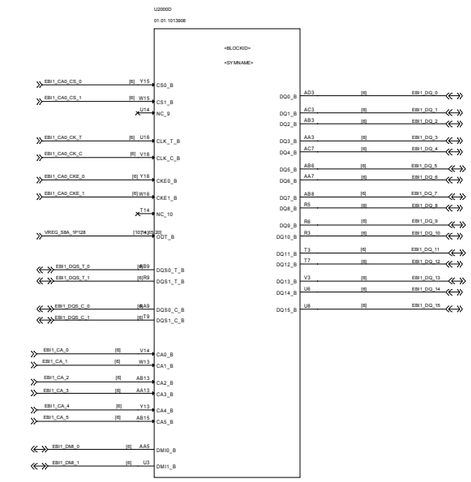
eMCP
REF 2001-2099

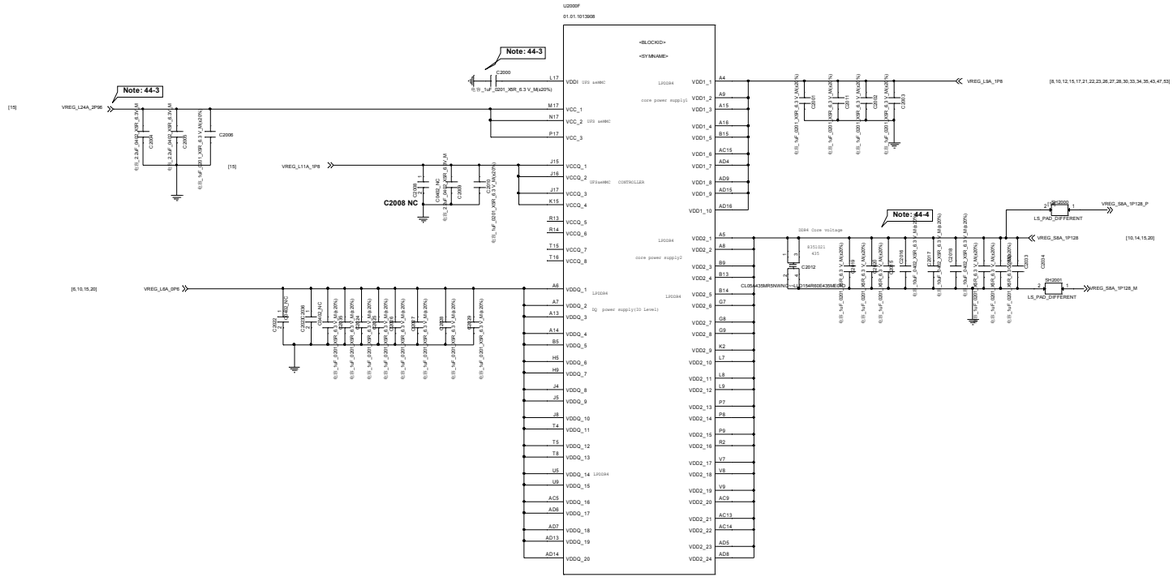
UFS MEMORY

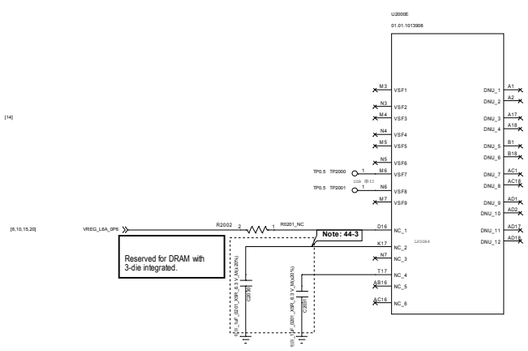


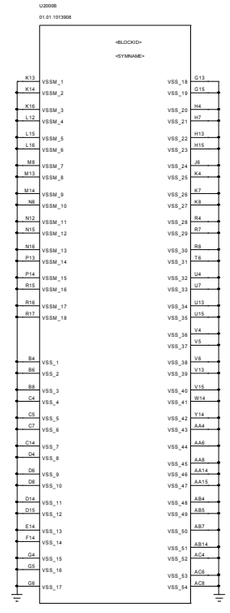
uMCP:LPDDR4x











hynix是0.22uF，最大不超过1uF，
micron是1uF，
三星的不需要贴。
但是为了避免项目使用几家的uMCP时bom出错，统一贴1uF

PDN Guidelines for samsung uMCP

	Channel	pins	DC R	AC Z@20MHz
VDDQ(0.6V)	Ch. I	A6\A7\A13\A14\B5\H5\H9\J4\J5\J8	<15m	<38m
	Ch. II	T4\T5\T8\U5\U9\AC5\AD6\AD7\AD13\AD14	<15m	<38m
VDD2(1.1V)	Ch. A	A5\A8\B9\B13\B14\G7\G8\G9\K2\L7\L8\L9	<9m	<38m
	Ch. B	P7\P8\P9\R2\V7\V8\V9\AC9\AC13\AC14\AD5\AD8	<9m	<38m
VDD1(1.8V)	Ch. A	A4\A9\A15\A16\B15	<40m	<126m
	Ch. B	AC15\AD4\AD9\AD15\AD16	<40m	<126m
VCCQ2(1.8V)		J15\J16\J17\K15	<15m	<63m
VCC(3.3V)		M17\N17\P17	<30m	<126m

Schematic design notice of "44_Memory_UFS_LPDDR4X" page.

Note 44-1:	Please refer to power supply related page select LDO7_VOUT / BUCK2_LX output voltage properly for LPDDR4X
Note 44-2:	DRAM ZQx resistor = 240ohm (1%) that must be connected to VDDQ,
Note 44-3:	Please refer to uMCP vendor's datasheet or MTK common design notice to get the recommendation bypass cap. value for VCC/VCCQ/VDDI power domains of UFS.
Note 44-4:	VDD2 VDDQ decoupling cap: closed to DRAM ball. For other cap for PMIC [>10uF, at PMIC page]: please also refer to MMD and layout guide for placement.

华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title: 20.uMCP		
Size: E	Project: QL1863	Rev: V1
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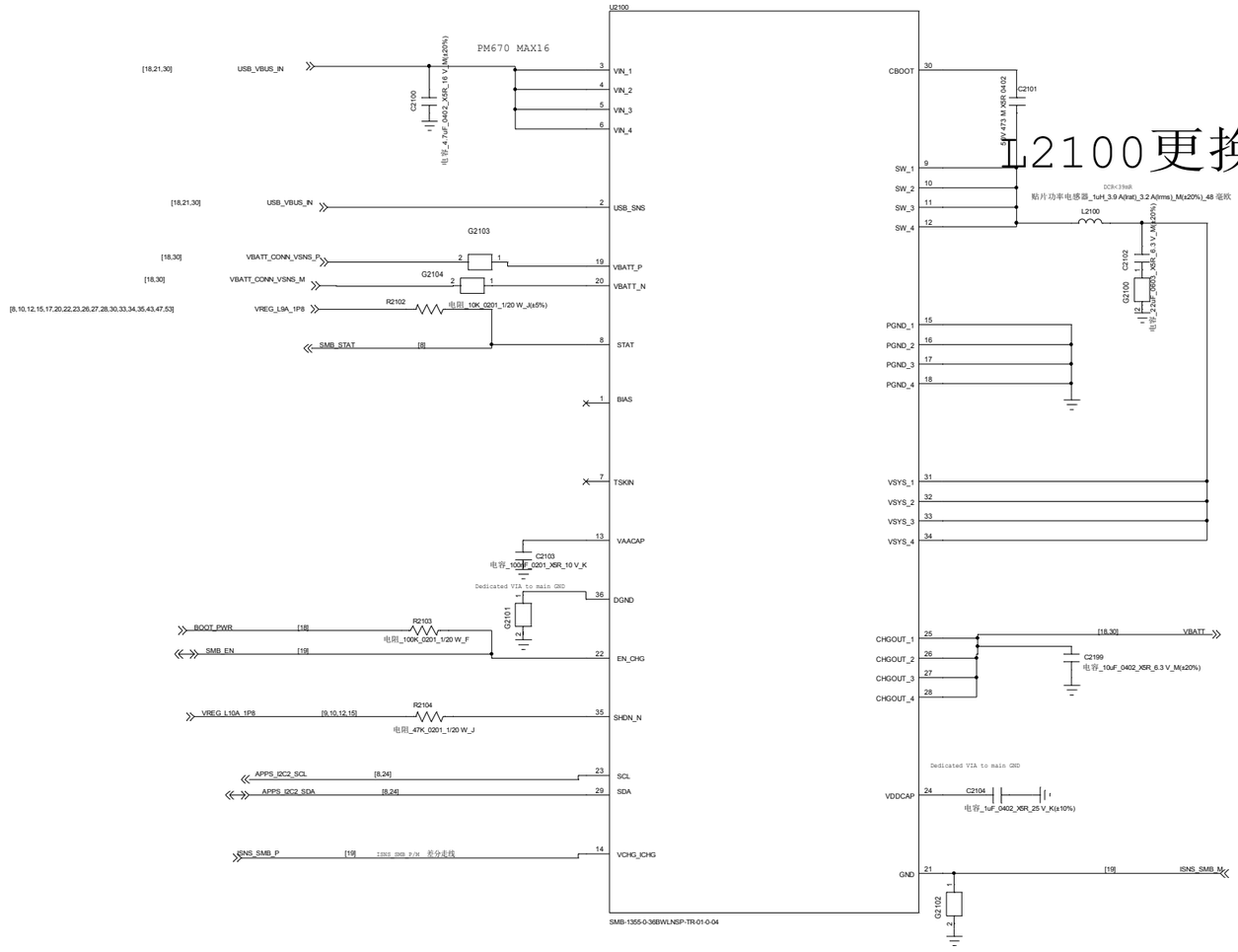
18W CHARGE

REF 2101-2199



L2100更换成2016 4.1A (DFE201610K)

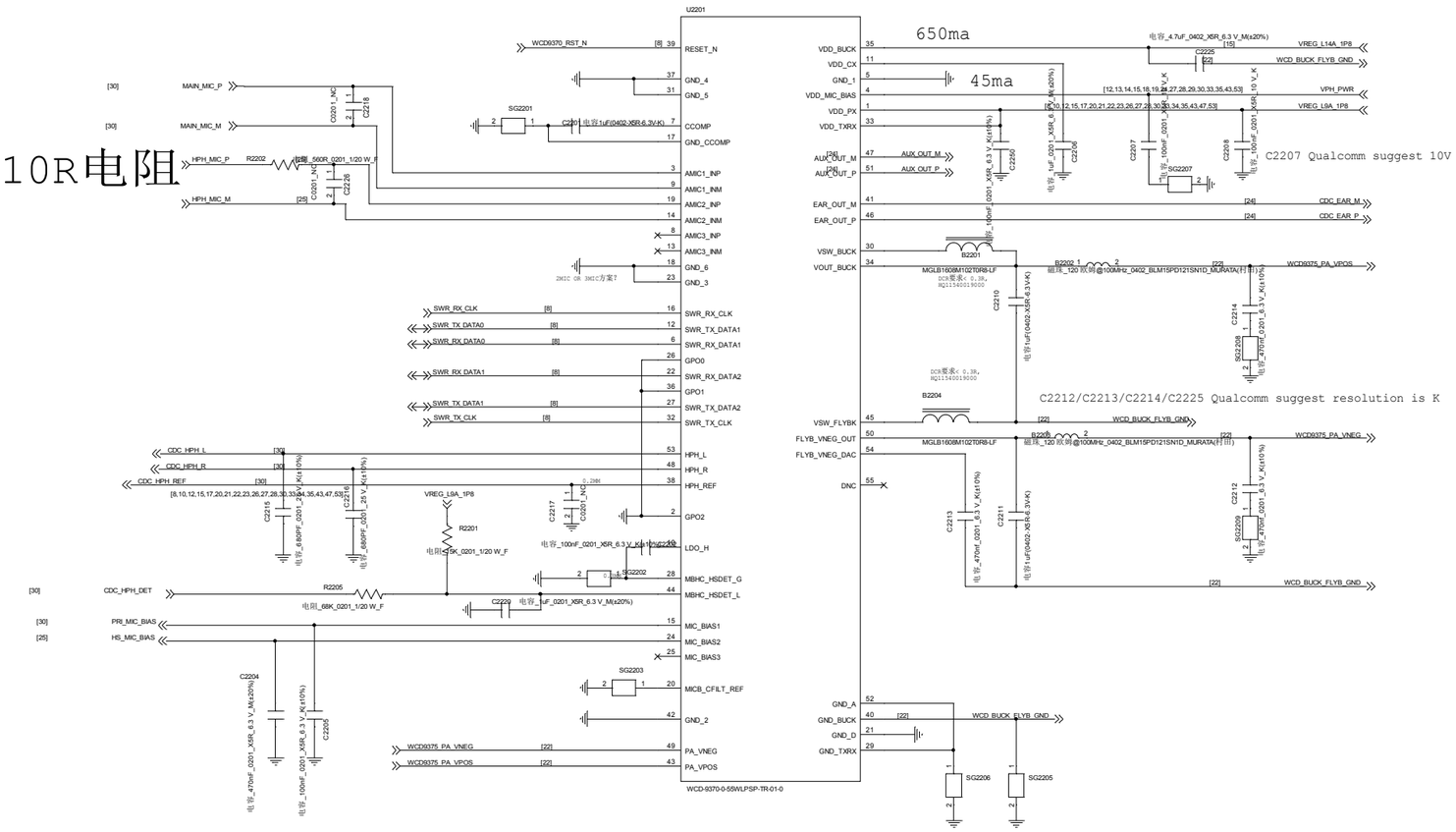
SMB1355 I2C Address (R:0x19;W:0x18)

华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title: 21.Charger _SMB1355		
Size: D	Project: QL1863	Rev: V1
Date: Monday, January 20, 2020	Sheet 21 of 55	

CODEC

REF 2201-2299

R2202：510R电阻

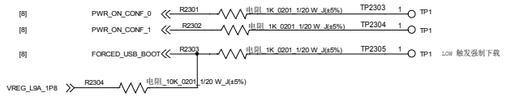


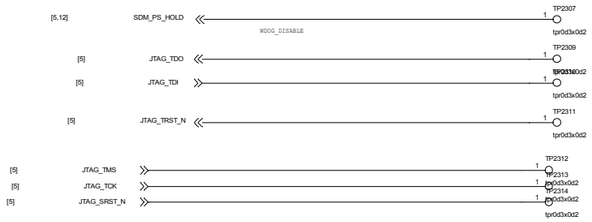
华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title: 22.WCD9370_CODEC		
Size: D	Project: QL1863	Rev: V1
Date: Monday, January 20, 2020	Sheet 22 of 55	

CONFIG_0	CONFIG_1	SYSTEM MODE
0	0	Factory Mode
0	1	WIFI Mode
1	0	RF Mode
1	1	Ordinary Power Mode

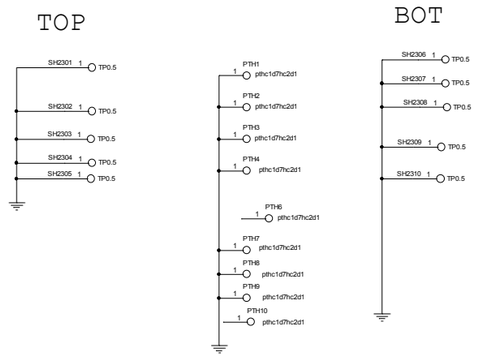
UART

[8,10,12,15,17,20,21,22,26,27,28,30,33,34,35,43,47,53]





Sheilding



MARK

TP/GND/Shielding

华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title: 23.Test Points		
Size: D	Project: QL1863	Rev: V1
Date: Monday, January 20, 2020	Sheet 23 of 55	

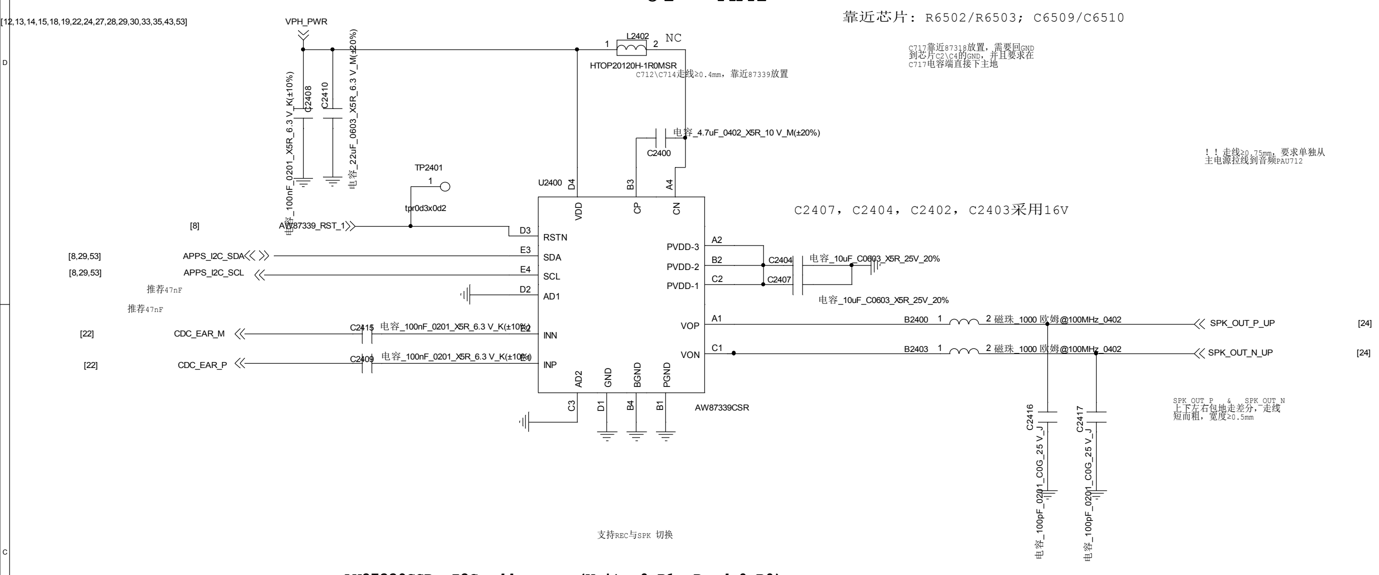
Speaker PA

1,REC 与AUX 信号 做为立体声输入源

B2400,B2401,B2402,B2404 :MPZ1005S121-TDK

靠近芯片: R6502/R6503; C6509/C6510

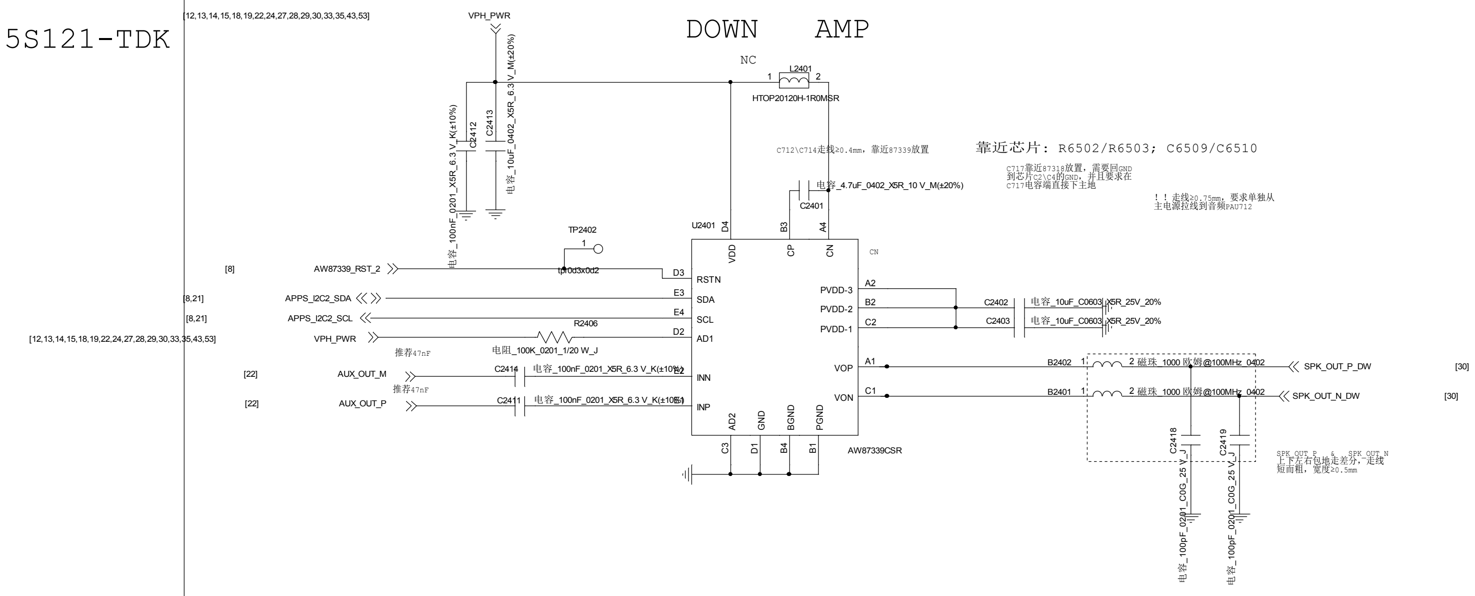
UP AMP



AW87339CSR I2C address: (Write:0xB1, Read:0xB0)
SIA8109 I2C address: (Write:0x51, Read:0x50)

BIT7	BIT6	BIT5	BIT4	BIT3	BIT2	BIT1	BIT0
1	0	1	1	0	A2	A1	R/W

DOWN AMP

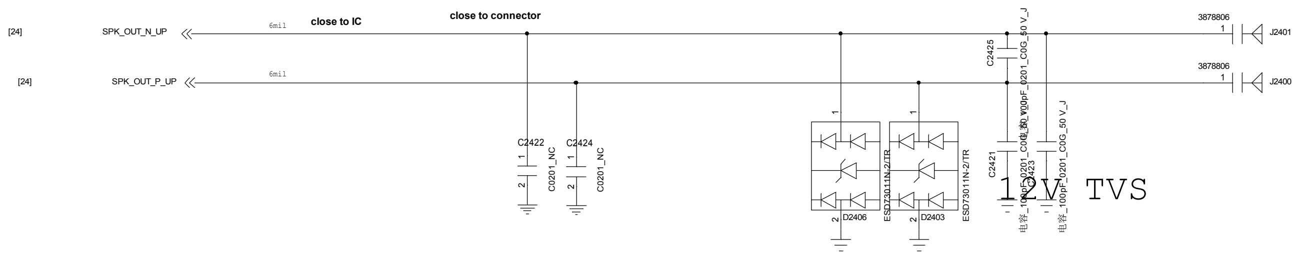


AW87339CSR I2C address: (Write:0xB3, Read:0xB2)
SIA8109 I2C address: (Write:0x55, Read:0x54)

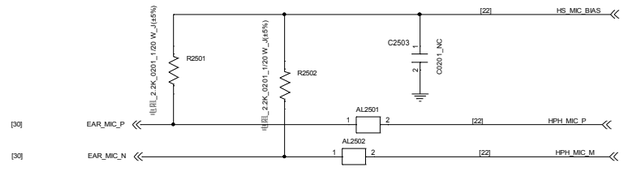
BIT7	BIT6	BIT5	BIT4	BIT3	BIT2	BIT1	BIT0
1	0	1	1	0	A2	A1	R/W

Receiver & HAC

UP 2IN1 Receiver OR SPK



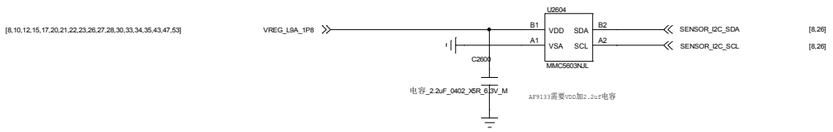
华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title	24.AUDIO_RCV_SPK	
Size D	Project QL1863	Rev V1
Date: Monday, January 20, 2020	Sheet 24 of 55	



华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title 25.HEADSET		
Size D	Project QL1863	Rev V1
Date: Monday, January 20, 2020	Sheet 25 of 55	

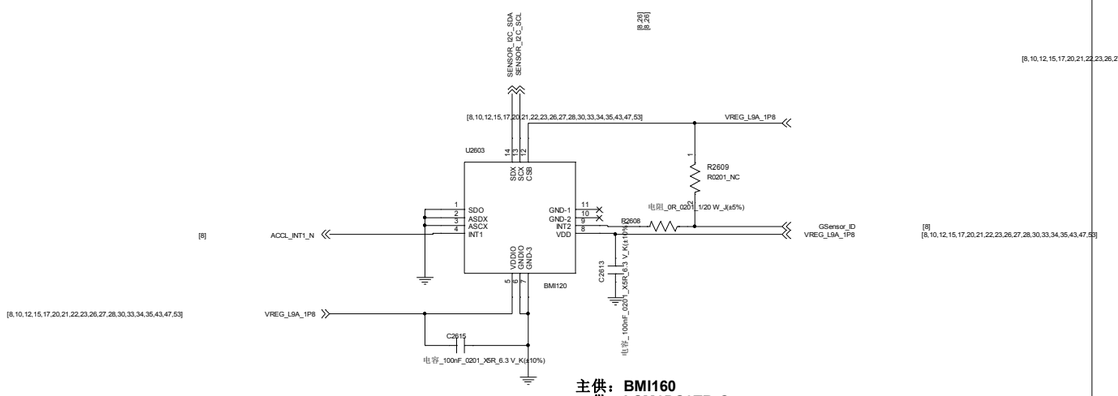
M-Sensor

AK09918 / M-Sensor I2C Address : 0x0C (Write:0x18, Read:0x19)



MMC5603NJL I2C Address (R:0x61;W:0x60)
AK09918C I2C Address (R:0x19;W:0x18)

Gyro+A sensor Prime配置



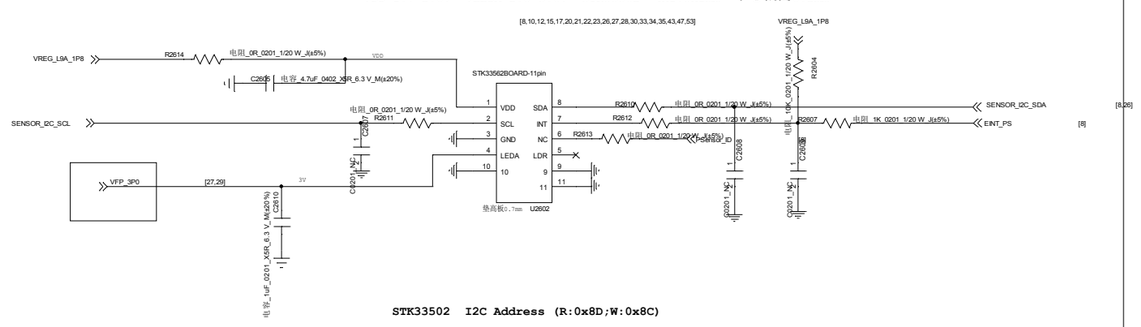
主供：BMI160
二供：LSM6DS3TR-C

LSM6DS3TR-C I2C address: (Write:0xD5, Read:0xD4)
BMI160 I2C address: (Write:0xD1, Read:0xD0)

ALPS SENSOR

PS: IR VDD 1.7~3.0V VLEDA 2.8~4.6V STK3332 4X1.5X1mm
VDD 1.7~3.0V VLEDA 2.8~4.6V STK3331 5X1.5X1mm

ALPS: IR VDD 1.7~2.0V VLEDA 2.8~3.6V STK33502 4X1.5X1mm 中心偏离0.2mm
VDD 1.7~2.0V VLEDA 2.8~3.6V STK33562 4X1.5X1mm 中心偏离0.2mm



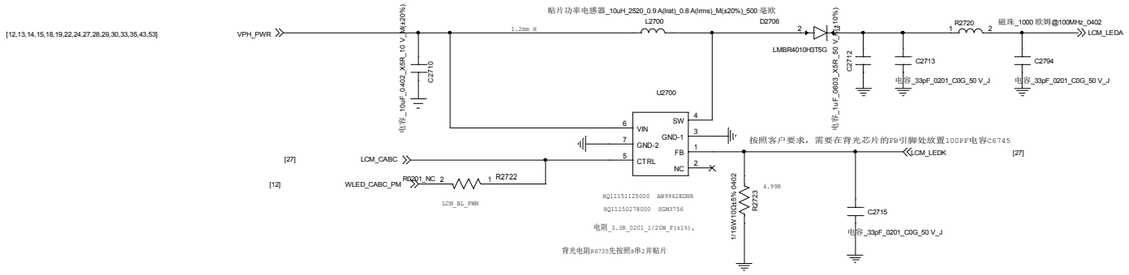
STK33502 I2C Address (R:0x8D;W:0x8C)

华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title: 26.Sensor		
Size: D	Project: QL1863	Rev: V1
Date: Monday, January 20, 2020	Sheet 26 of 55	

LCD MIPI Common Mode Filter

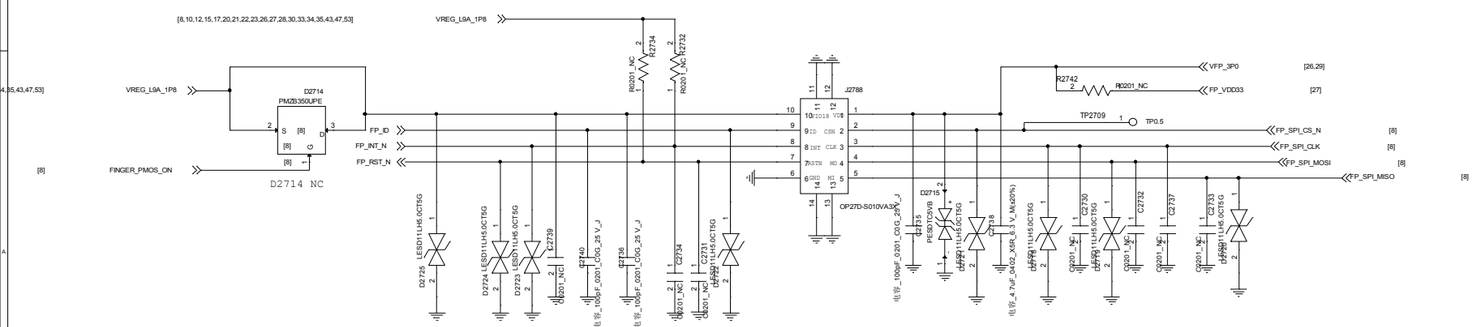
First using 0R ,Second using EMI Filter.

LCD-BACKLIGHT

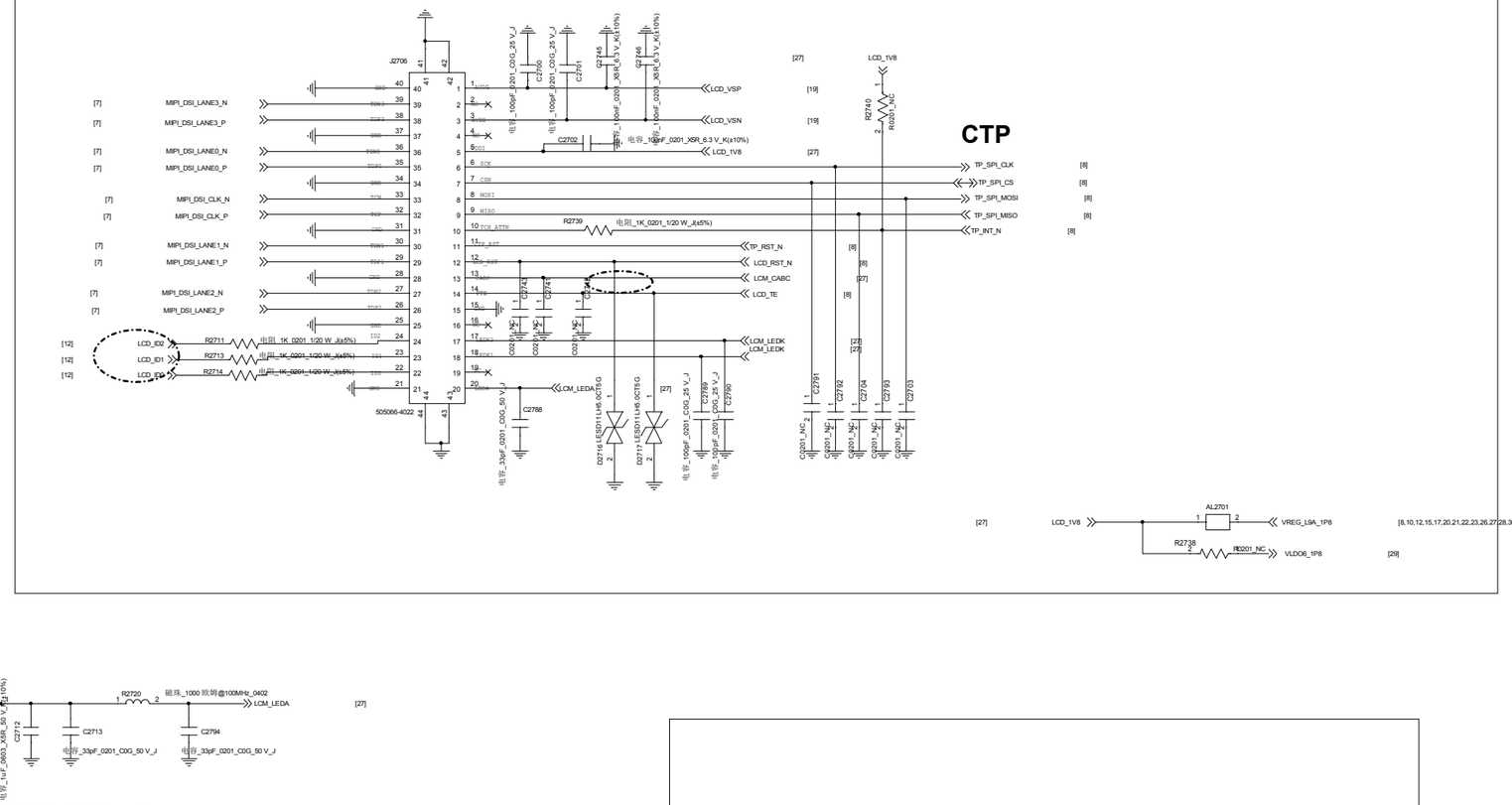


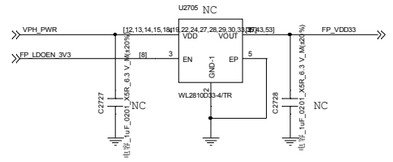
Finger连接器待更新

有TVS管的位置，在信号之前一定要先经过去耦的电容100PF，再到TVS，这样才能解决RSE的问题，故需要提前C6728。



Main LCM+CTP INCELL





华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title 27.LCD_FP_TP		
Size D	Project QL1863	Rev V1
Date: Monday, January 20, 2020	Sheet 27 of 55	

Rear Camera

48M

48M I2C Address (R:0x5B;W:0x5A)

48M DRIVE I2C Address (R:0x19;W:0x18)

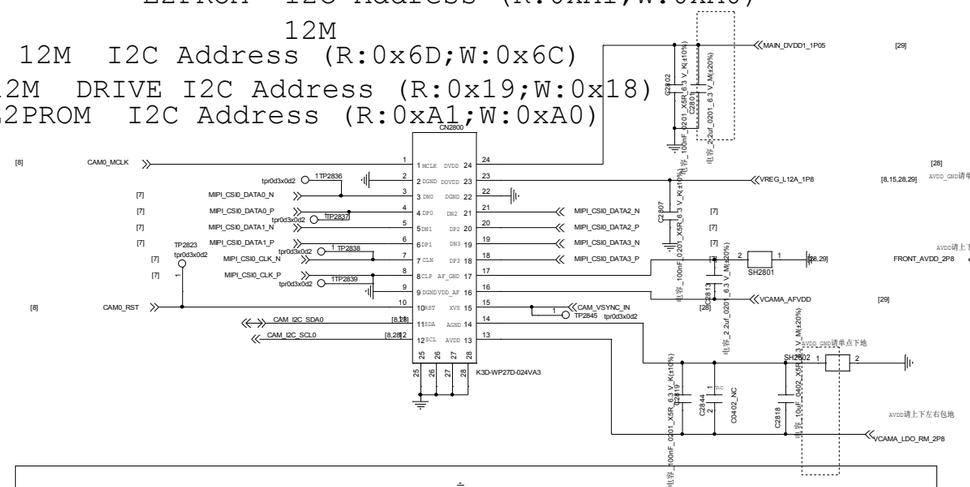
E2PROM I2C Address (R:0xA1;W:0xA0)

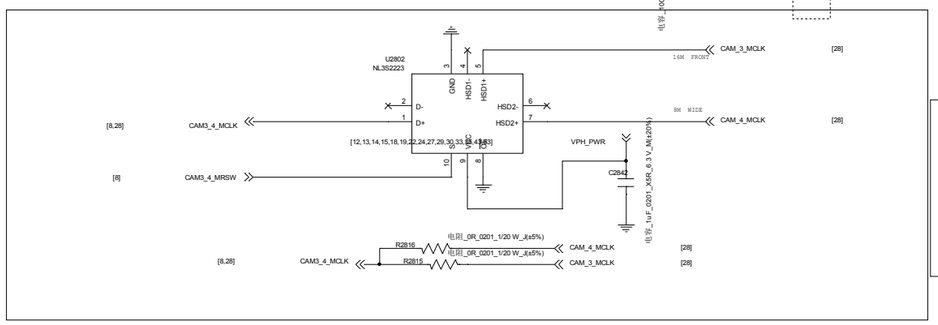
12M

12M I2C Address (R:0x6D;W:0x6C)

12M DRIVE I2C Address (R:0x19;W:0x18)

E2PROM I2C Address (R:0xA1;W:0xA0)

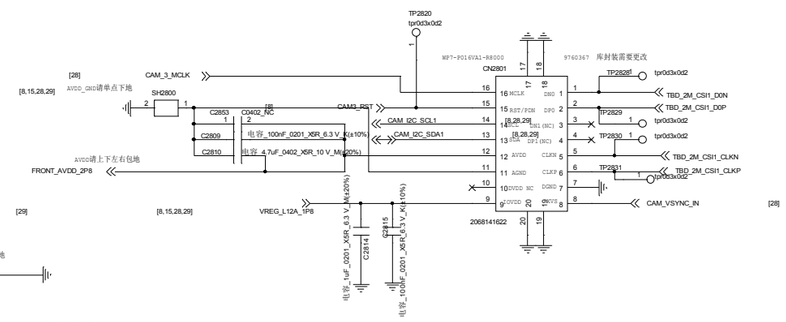




2M I2C Address (R:0x7B;W:0x7A)

E2PROM I2C Address (R:0xA5;W:0xA4)

FF mono 2M



2M I2C Address (R:0x7B;W:0x7A)

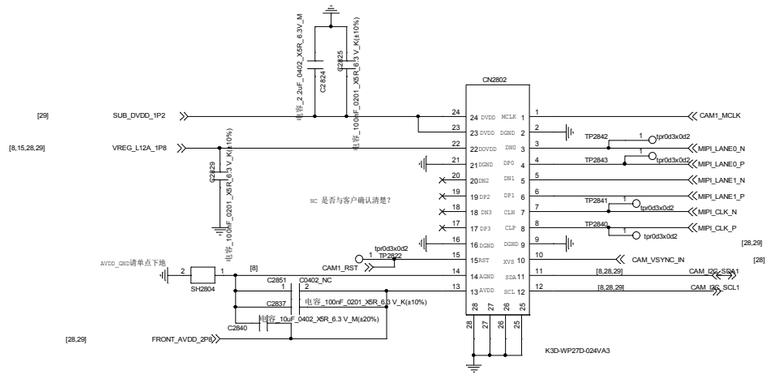
E2PROM I2C Address (R:0xA5;W:0xA4)

CLK_SEL1	CLK_SEL2	
0	0	
0	1	
1	0	
1	1	

WIDE 8M

8M I2C Address (R:0x6D;W:0x6C)

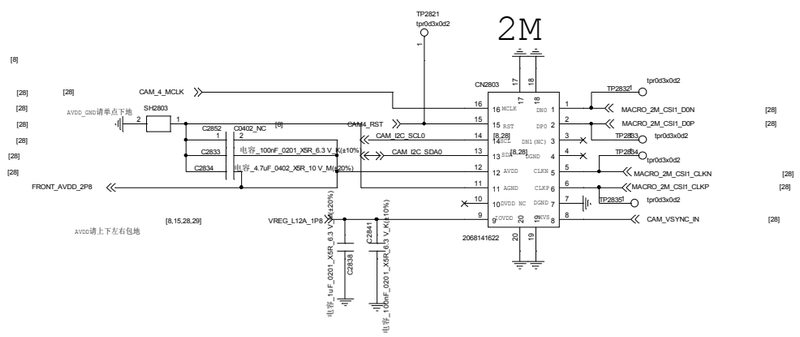
E2PROM I2C Address (R:0xA3;W:0xA2)



2M I2C Address (R:0x6F;W:0x6E)

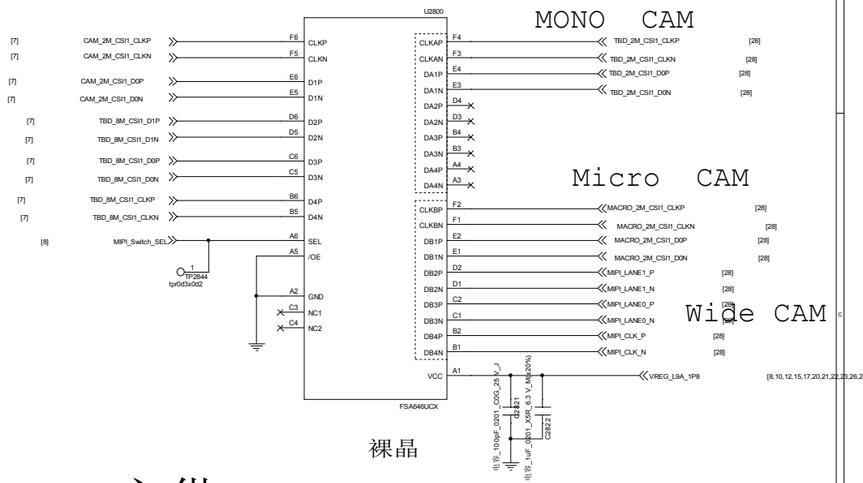
E2PROM I2C Address (R:0xA5;W:0xA4)

MICRO 2M



MIPI SWITCH

裸晶



裸晶

主供FSA646

二供DIO1646

华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title	67_PERI_LCD_CTP_FP	
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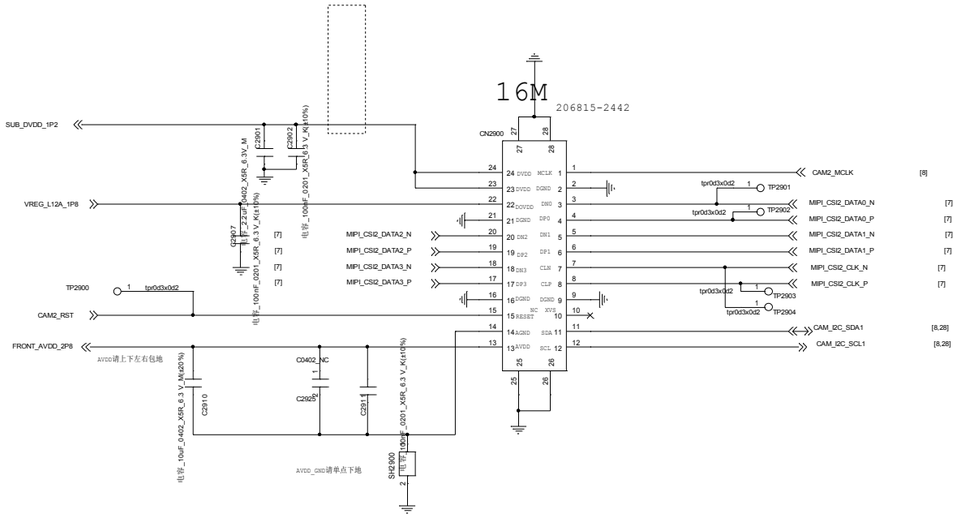
NT CAMERA

Front Cameral

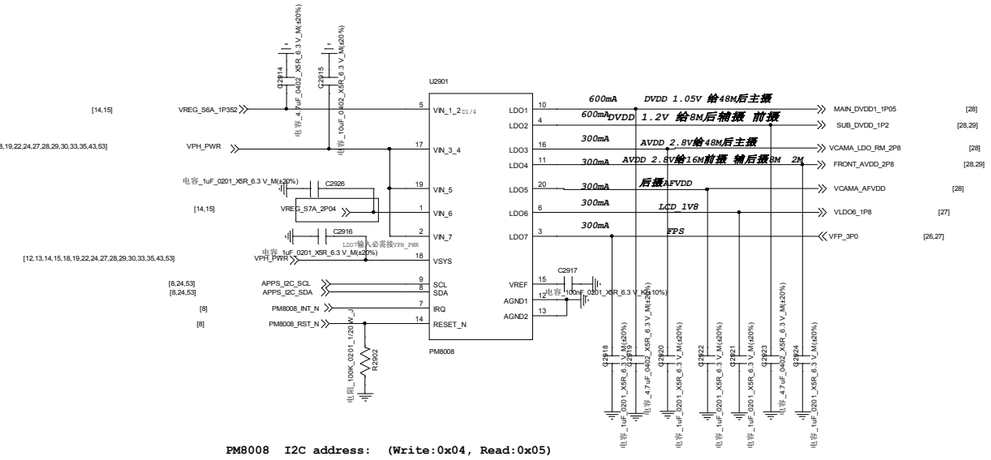
16M I2C Address (R:0x21;W:0x20)

16M E2PROM I2C Address (R:0xA9;W:0xA8)

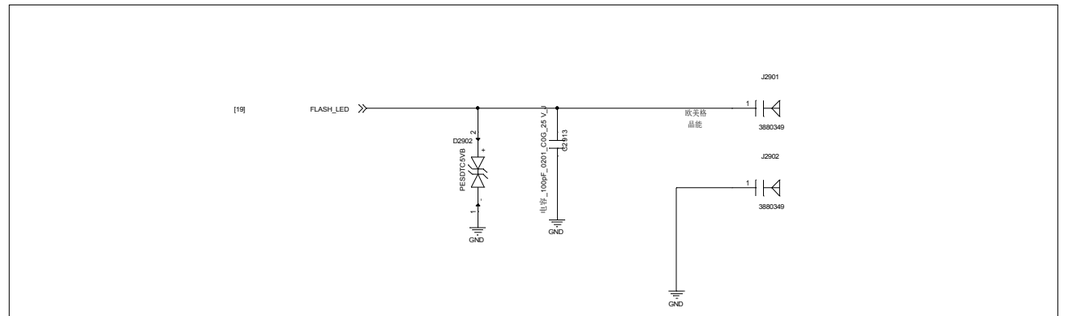


7Channel LDO

如使用7路LDO 不再使用GPIO扩展和多路LDO



PM8008 I2C address: (Write:0x04, Read:0x05)



华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title 67_PERI_LCD_CTP_FP		
Size D	Project QL1863	Rev V1
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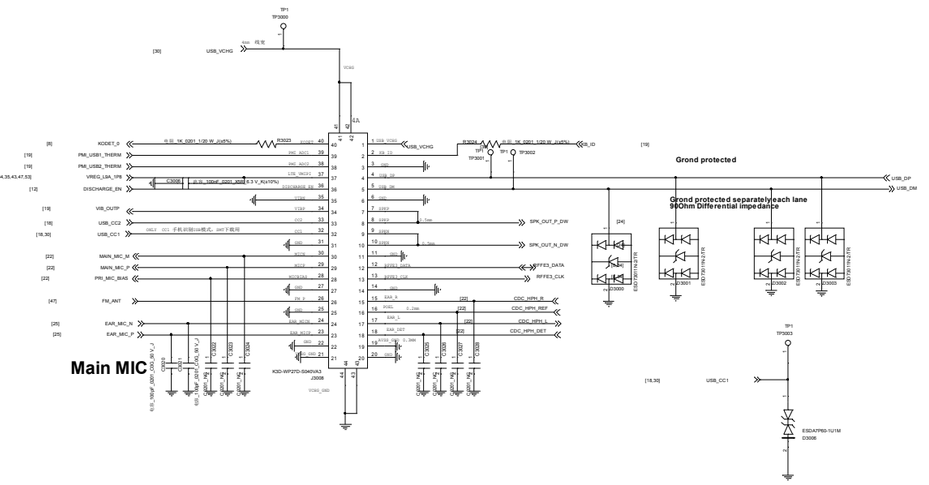

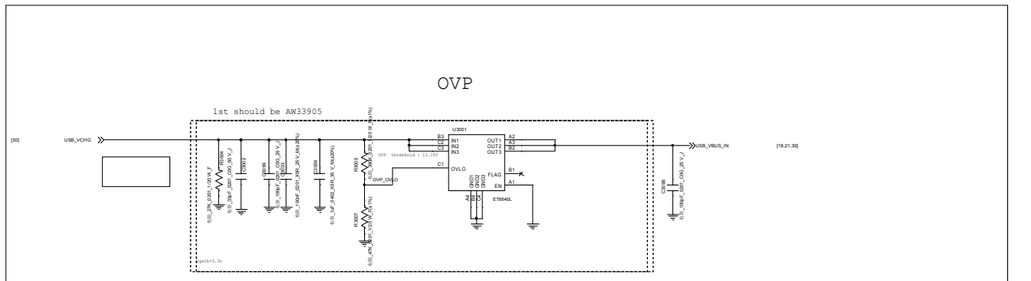

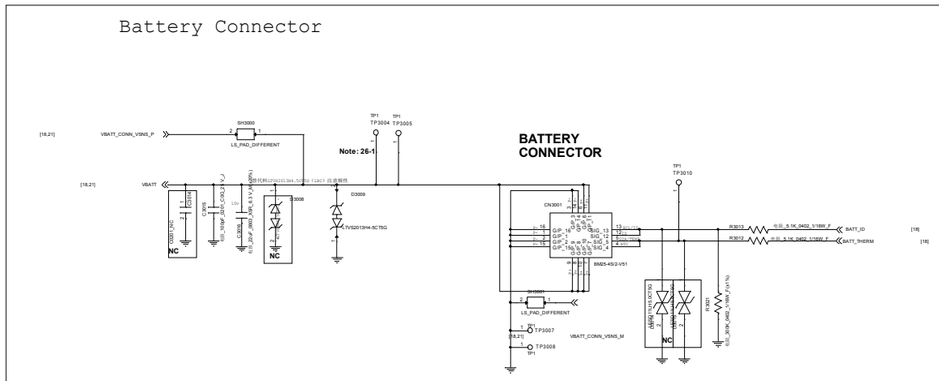

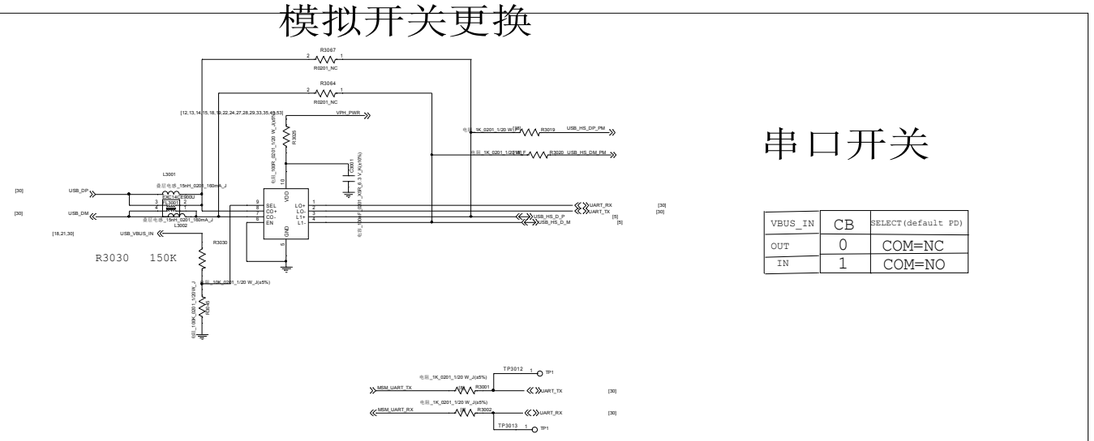

串口开关

VBUS_IN	CB	SELECT(default PD)
OUT	0	COM=NC
IN	1	COM=NO

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DTV

REF 3101-3199

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Title 31.Reserve		
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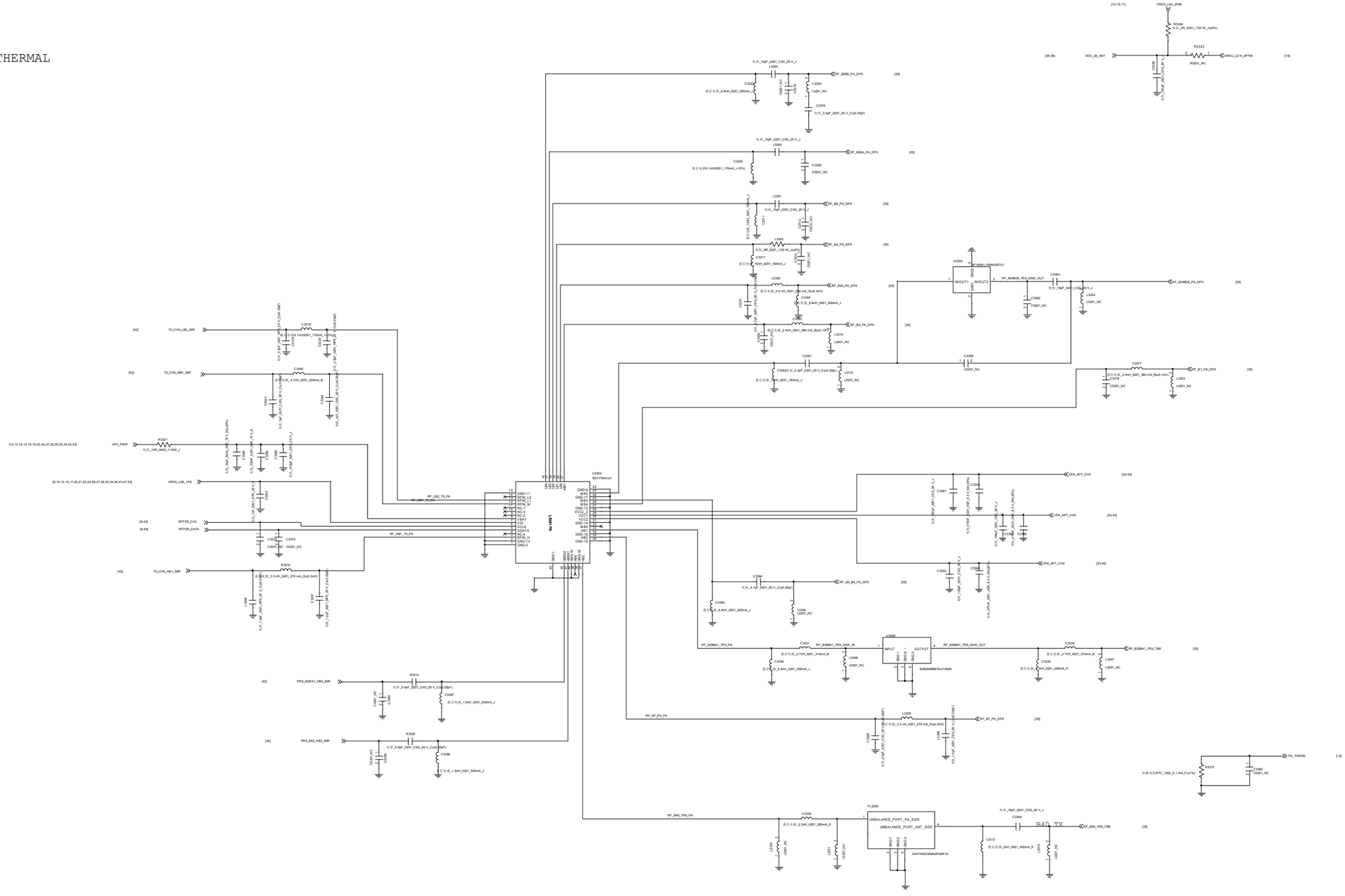
PA & PA THERMAL

REF 3401-3499



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Title	33_RF_TX		
Size E	Project QL1863		Rev V1
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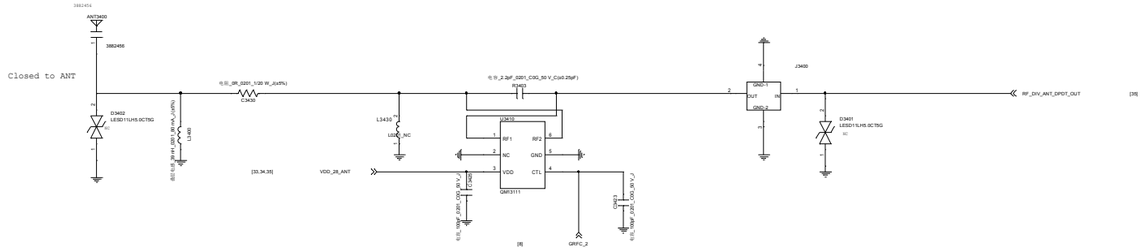
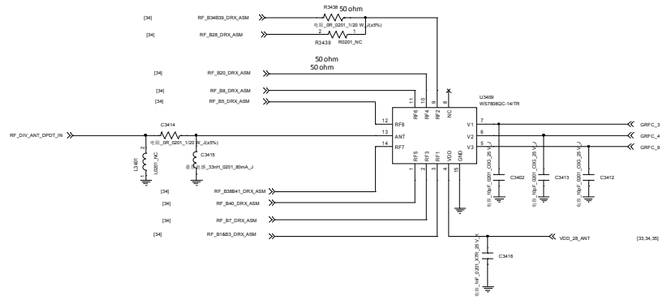
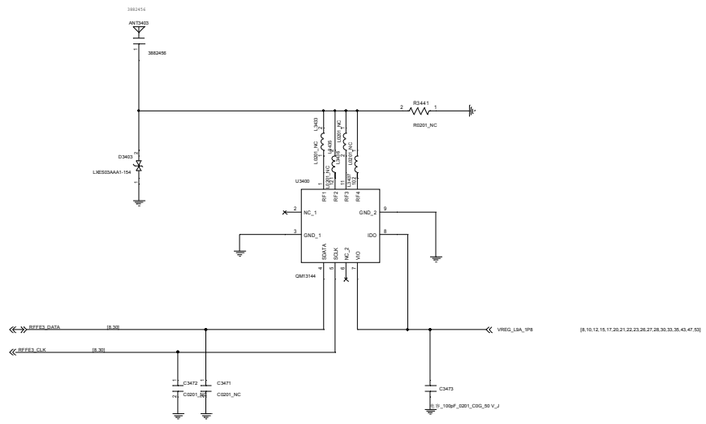
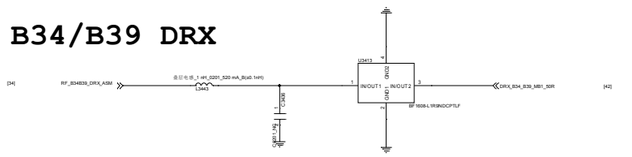
DIV_ANT



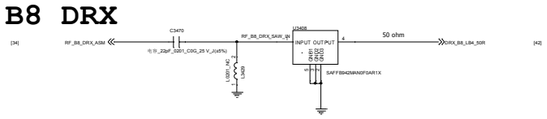




B34/B39 DRX

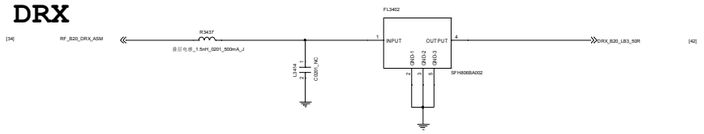


B8 DRX

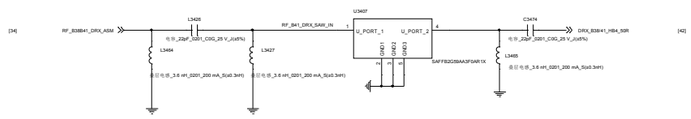


B40 DRX

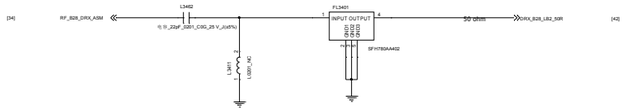
B20 DRX



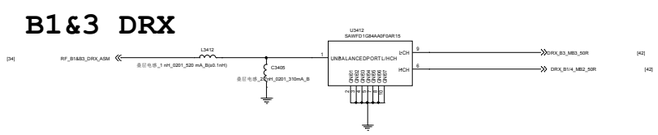
B38/B41 DRX



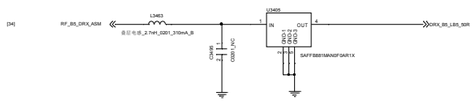
B28 DRX



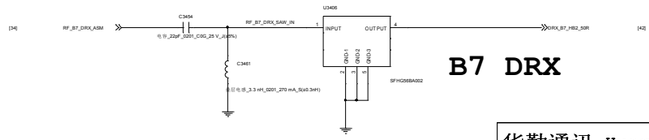
B1&3 DRX



B5 DRX



B7 DRX



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TXM_GSM

DPDT SWITCH

优先保证射频走线，兼容通路，不要有断头线

电池连接器到PA VBAT 脚，不小于2mm线宽，峰值电流2A

B1

B1&B4_Rx

B3

B3_Rx

B7

B2

B34/B39 DPX

B20A

B28A

B28B

B5

B5 DPX

B8

B8 DPX

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Title	35_RF_PRX		
Size E	Project	QL1863	Rev V1
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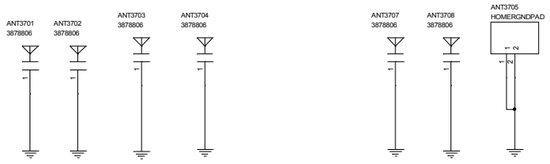

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Title: 37.ANT_GND		
Size: D	Project: QL1863	Rev: V1
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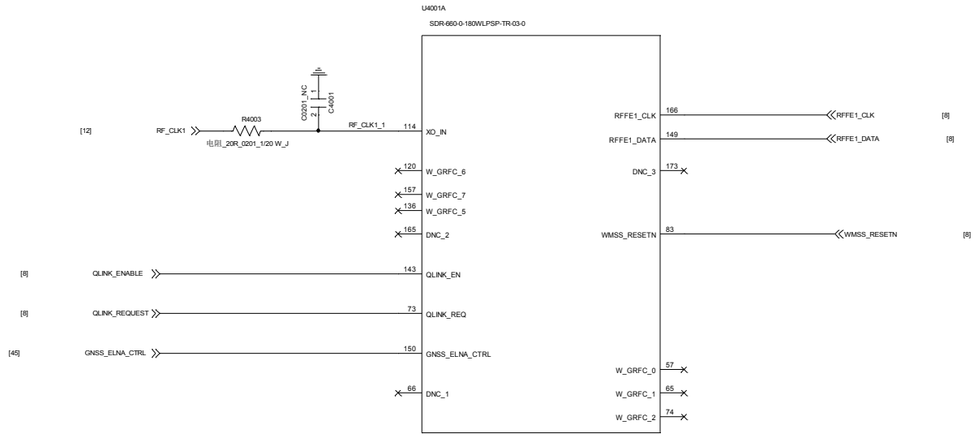
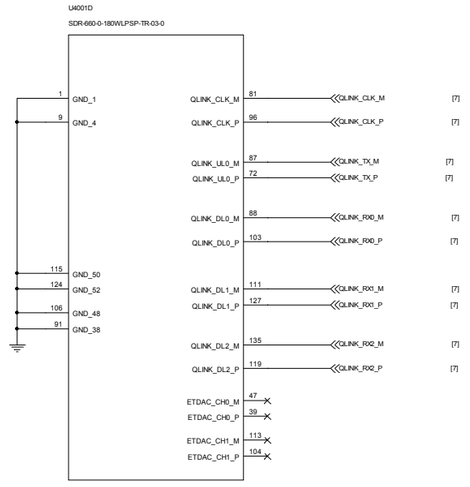
SDR660_MSS





华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title: 40: SDR660_MSS		
Size: D	Project: QL1863	Rev: V1
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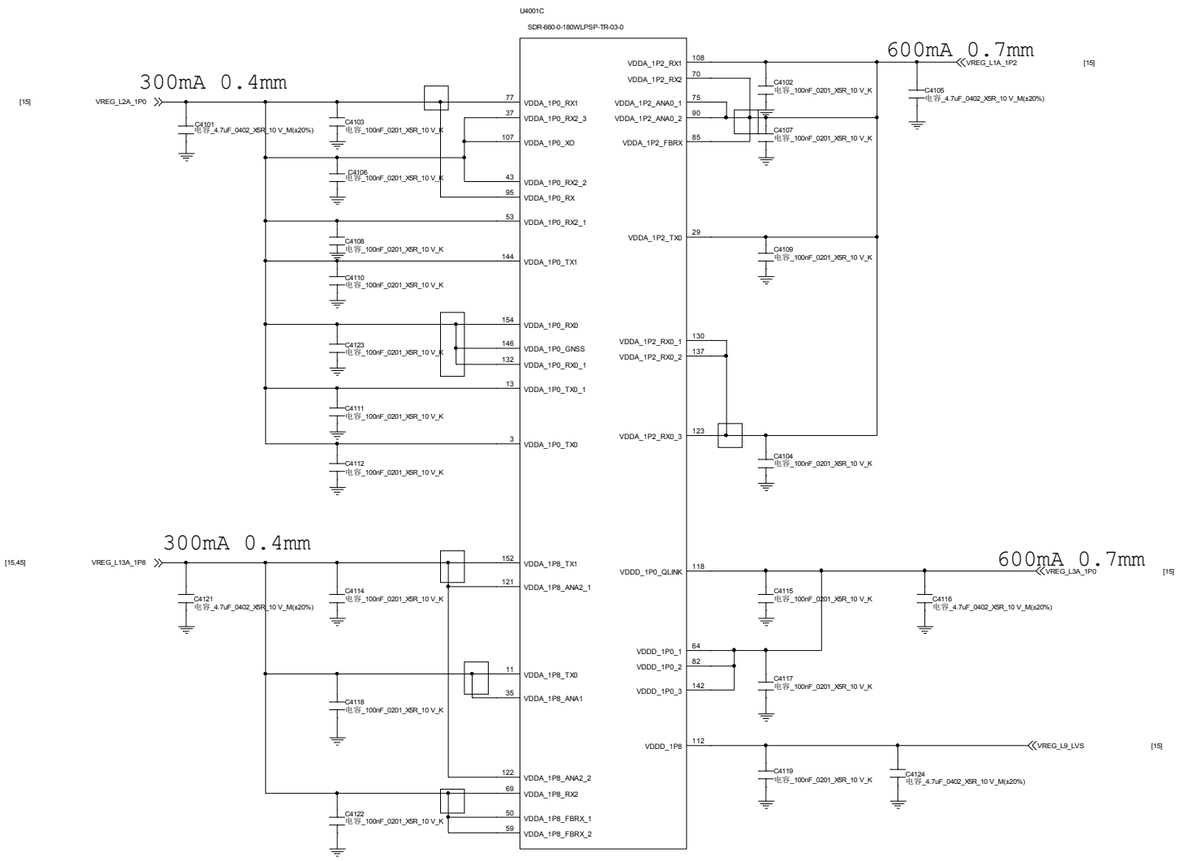
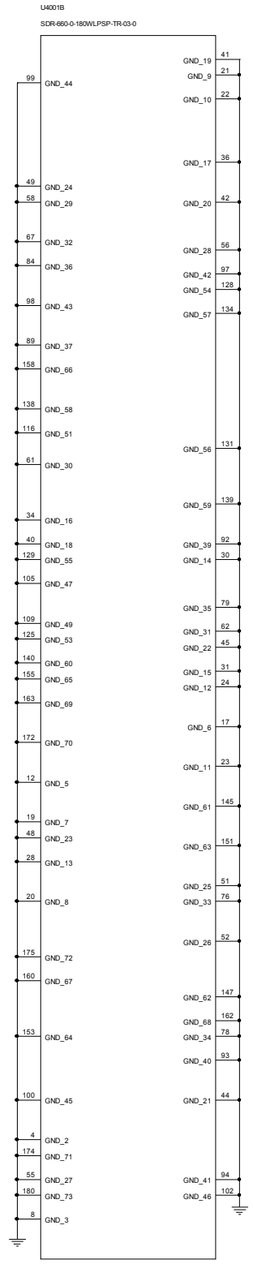
SDR660_PWR





华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title: 41: SDR660_PWR		
Size: D	Project: QL1863	Rev: V1
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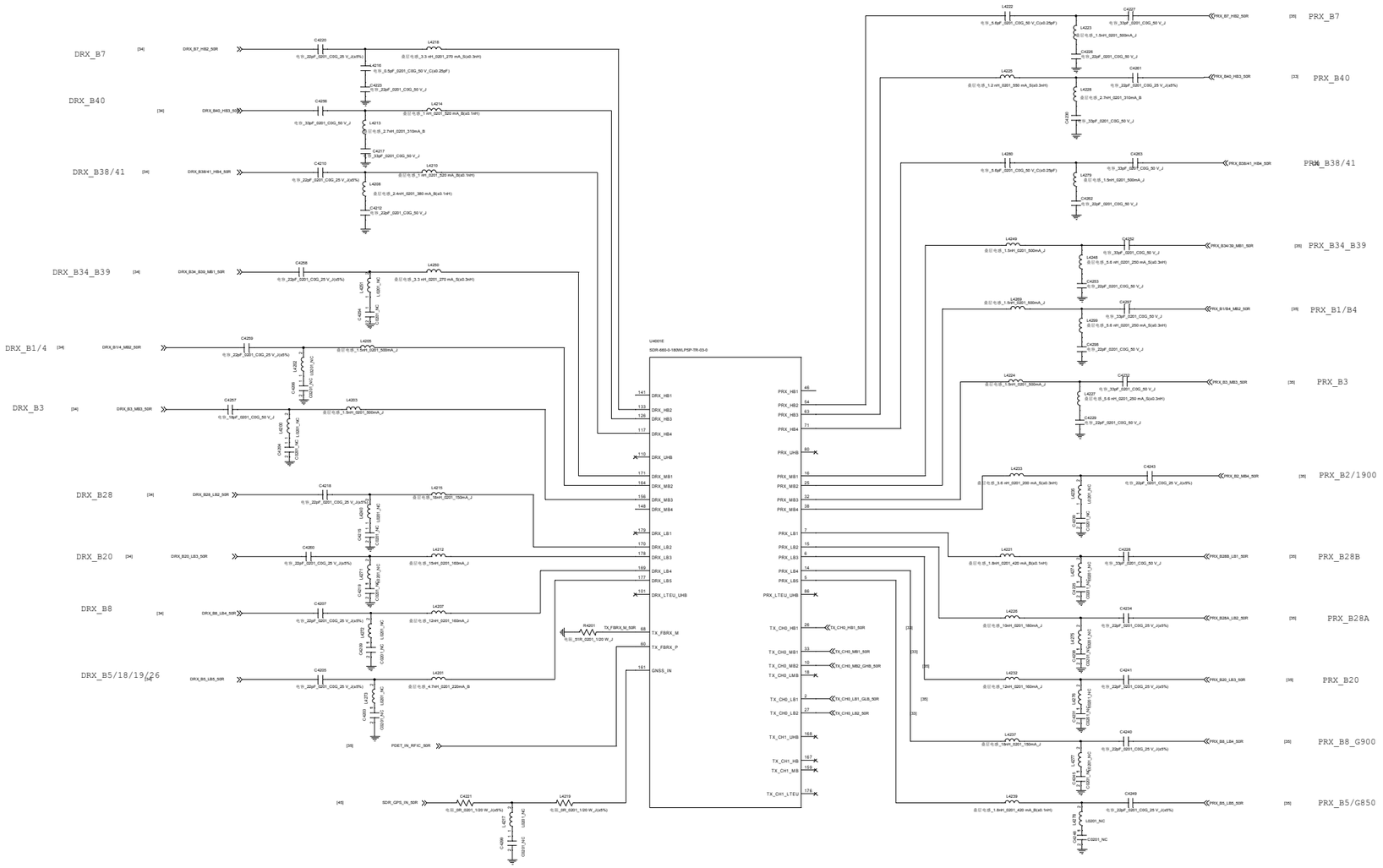
SDR660_DA/PRX/DRX/FBRX



华勤通讯 Huaqin Telecom Technology Com.,Ltd			
Title	42: SDR660_DA/PRX/DRX/FBRX		
Size E	Project QL1863		Rev V1
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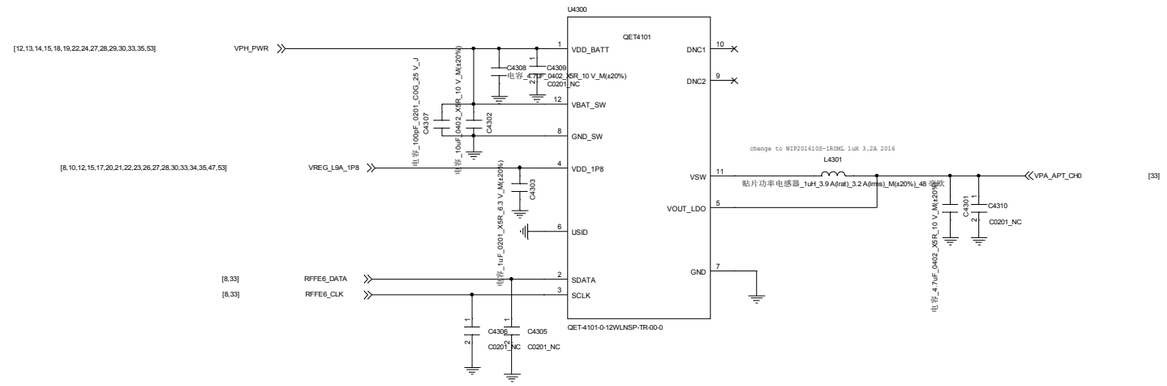
QET4101



华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title 43: QFE4101		
Size D	Project QL1863	Rev V1
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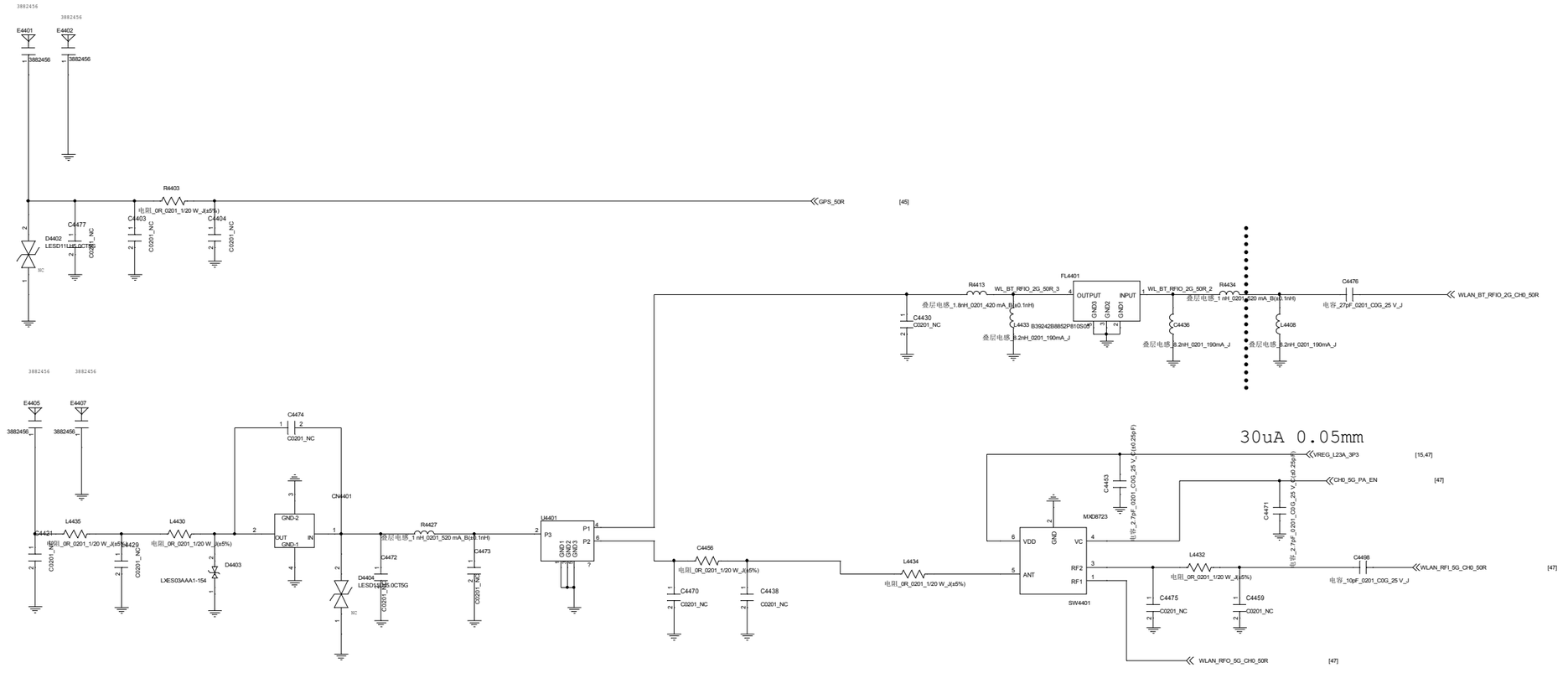
WIFI 2.4G/BT



华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title 44: WIFI_2.4G & BT		
Size D	Project QL1863	Rev V1
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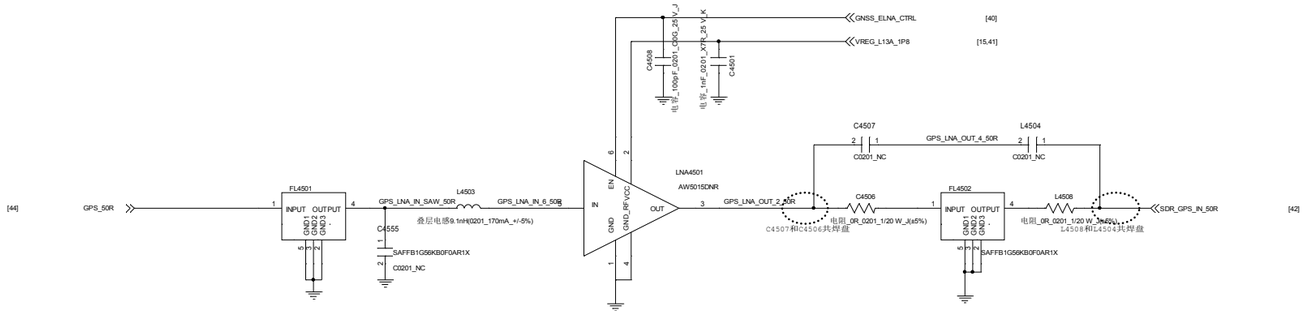
GPS



WS7918DC Will

华勤通讯 Huaqin Telecom Technology Com.,Ltd

Title: 45: GPS		
Size: D	Project: QL1863	Rev: V1
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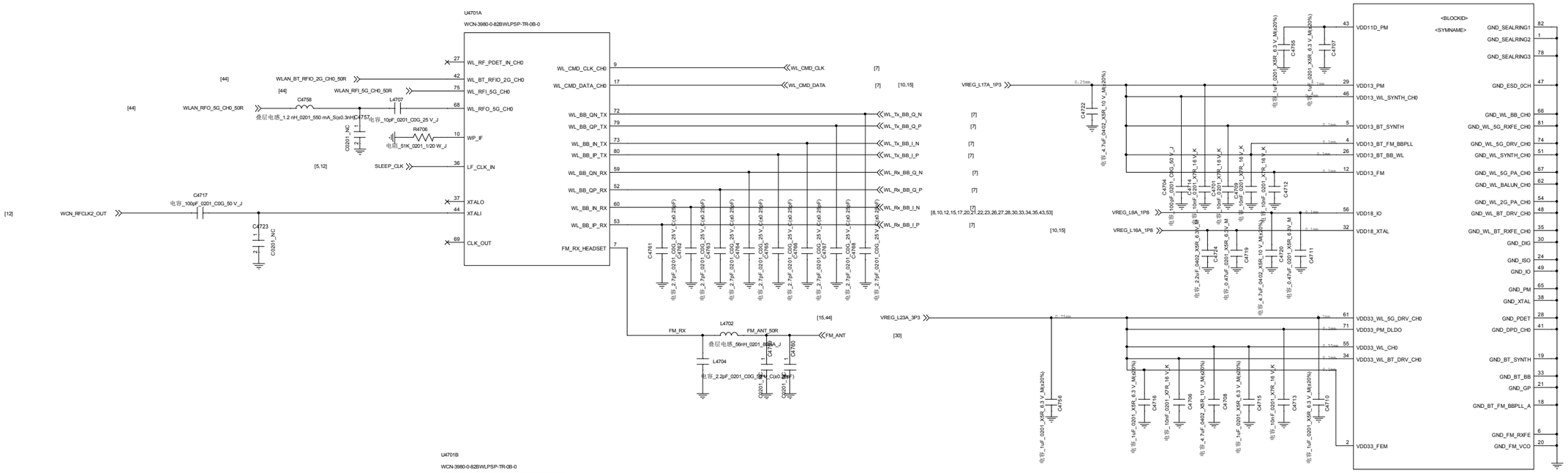
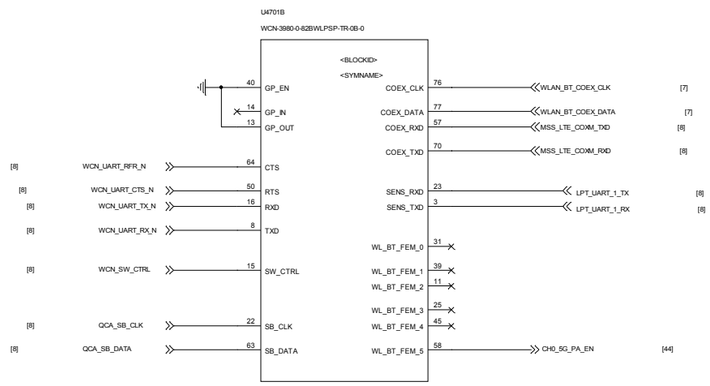
WCN_3980

VDD33_FEM	2	1mA
VDD18_IO	56	15mA
VDD18_XTAL	32	60mA

PIN脚名称	PIN脚	电流大小
VDD13_BT_BB_WL	26	120mA
VDD13_WL_SYNTH_CH0	46	40mA
VDD13_BT_SYNTH	5	15mA
VDD11D_PM	43	20mA
VDD13_FM	12	15mA
VDD13_BT_FM_BBPLL	4	10mA
VDD13_BT_PM	29	20mA
VDD33_WL_CH0	55	450mA
VDD33_WL_5GPA_DRV_CH0	61	70mA
VDD33_WL_BT_DRV_CH0	34	65mA
VDD33_PM_DLDO	71	5mA





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华勤通讯 Huaqin Telecom Technology Com.,Ltd

Title: 47: WCN		
Size: D	Project: QL1863	Rev: V1
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0928 ： 增加双前摄电路，双前摄电路同步信号待确认中----hero

0929: 删除U1602 BOB相关电路----hero

0929: 删除B1801磁珠----hero

0929: 删除NFC时钟----hero

0929: 删除NFC电源----hero

1001: 更换主副板50PIN修改成40PIN的连接器（Sheet 30）----hero

1001: D1706,D1705 ,D1712 0402更改成0201封装 （Sheet 17）----hero

1001: 增加闪光灯 Thermal NTC电路预留（Sheet 12）---hero

1001: 删除u2600 I2C测试点（Sheet 26）---hero

1001: 增加u3008 USB模拟开关（Sheet 30）---hero

1002: 删除D2713 TVS管（Sheet 27）---hero

1002: 删除TR1203（Sheet 12）---hero

1003: 增加C3098（Sheet 30）---hero

1003: 增加C3099（Sheet 30）---hero

1003: 增加C2788，C2789，C2790（Sheet 27）---hero

1003: 增加C2791，C2792，C2793（Sheet 27）---hero

1003: 增加C1216，C1217，C1218,，C1219，C1220，C1221（Sheet 12）---hero

1003: 增加C1216，C1217，C1218,，C1219，C1220，C1221（Sheet 12）---hero

1003: 增加C1824（Sheet 18）---hero

1003: R1214调整为并联位（Sheet 12）---hero

1003: 删除R4501,L4502（Sheet 45）---hero

1003: 删除C4428,C4429（Sheet 44）---hero

1003: 删除U3002主板防烧电路，防烧电路放KB （Sheet 30）---hero

1003: CAM上的RST测试点（Sheet 27/28）---hero

1004: 删除R846，R847，R848，R849（Sheet 27/28）---hero

1004: 删除R846，R847，R848，R849（Sheet 8）---hero

1004: 删除C1823 10PF电容（Sheet18）---hero

1004: 删除R2606 ，R2605，C2606（Sheet26）---hero

1004: 删除R2791，R2792，R2793，D2701，D2702，D2703，D2704，D2705，C2703,C2704（Sheet27）---hero

1004: 删除C2790（Sheet27）---hero

1004: 删除R2800，C2803，C2808，R2805（Sheet28）---hero

1004: 删除R2906，C2906，C2903，（Sheet29）---hero

1004: 删除C3011，C3012，C3013，（Sheet30）---hero

1004: 删除R5308，R5309（Sheet53）---hero

1005: 更新CN2801库（Sheet53）---hero

1005: 修改辅充充电方案（Sheet21）---hero

1022: CAM MIPI CS0与CS1整组交换,便于走线（Sheet28）---LZH

1022: R2102更换为10k，R2104更换为47K（Sheet28）---LZH

1031: 删除L3543,C3593,R3547,L3546,L3545,C3505（Sheet35）---ZLK

1031: 更改R3554为NC（Sheet35）---ZLK

1031: 增加C3379（Sheet33）---ZLK

1102:更改分集B1 及HB口位顺序（Sheet42）---ZLK

1105: 新增C1826 C1827 220pF电容（从小板换到MB）---LZH

1105:R501删除；C501换成103---LZH

1105:R881删除 ---LZH

1105:R845改为上拉，删去R2304 TP2306 ---LZH

1105: C1066改为2.2UF---LZH

1105: C2012,C2013,C2014 1uf 换成1颗C2012 0402 435电容---LZH

1105: R3031 R3032 上拉电阻NC---LZH

V3.0

1115: C1913改成0603 10uF 10V ,c1909 c1911改成2个0402 4.7uF 10V---LZH

1116 PSENSOR_ID增加R2613 ---LZH

1116 删去C1305 ---LZH

1118 C3001靠近ovp 10PIN 放置 ---LZH

1118 删去多余的PTH05 ---LZH

1119 优化B1/B3分集口位设计 ---ZLK

1120 删去R508 ---LZH

1122增加TP501 ---LZH

1122 修改 B1/B3 DRX net命名 ---ZLK

1123 增加R2304 ---LZH

1123 C2012变更为软端子电容 ---LZH

1123 C2611删去 加R2611 ---LZH

1123 更新ANT3705库 ---LZH

1124 优化B1/B3/B39分集口位设计 ---ZLK

华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title 54_CHANGELIST		
Size D	Project HOMER	Rev V1
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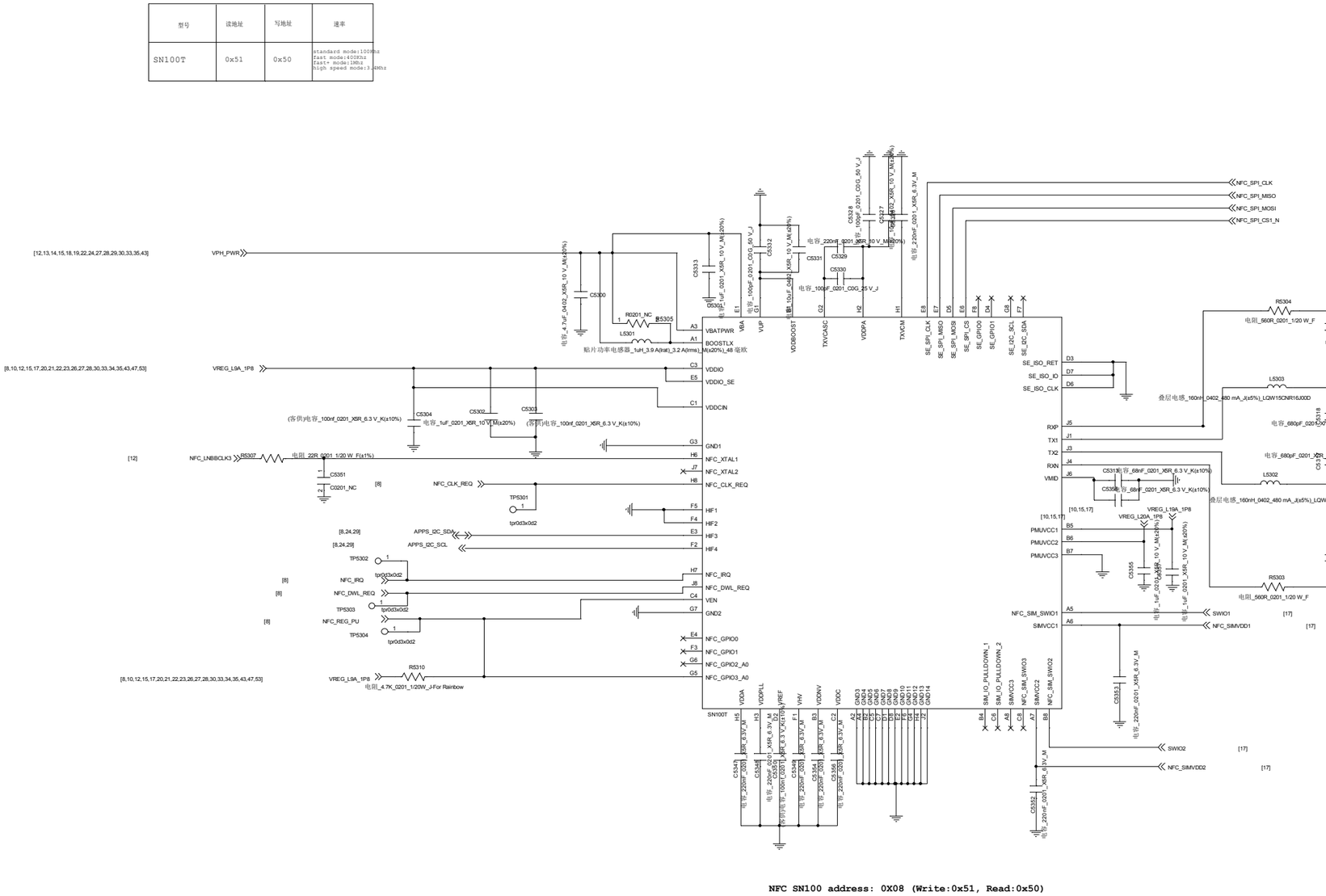
型号	读地址	写地址	速率
SN100T	0x51	0x50	standard mode:100Khz fast mode:400Khz fast+ mode:1Mhz high speed mode:3.4Mhz



NFC SN100 address: 0X08 (Write:0x51, Read:0x50)

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0929:更新射频控制信号分配,包括RFFE,GRFC. -Kerwin
0929:更换WCN芯片为WCN3980,更改外围电路. -Kerwin
0929:更换NFC芯片为SN100T,更改外围电路. -Kerwin
0929:DRX QLNA Input B8更换到SW21.B5更换到SW23. -Kerwin
0930:增加WIFI测试座,U4401封装更换为镜像封装 -Kerwin
1003:2.4GWIFI增加外置PA兼容,增加SAR Sensor -Kerwin
1004:海枢更新精简后如下部分需要恢复 -Kerwin
1004:增加10pF电容C1823（Sheet18） -Kerwin
1004:增加100pF电容C2790,C2791,C2792,C2793,C2704,C2703（Sheet27） -Kerwin
1004:增加电阻预留R2800,R2805,R2811,R2812（Sheet28） -Kerwin
1004:增加电阻预留R2906,R2908（Sheet29） -Kerwin
1004:删掉上天线的空口检测,去除L3440，D3404，C3491，L3460，C3492，L3431（Sheet34） -Kerwin
1004:L3438更换0201封装,增加C3496,L3466（Sheet34） -Kerwin
1006:删除L4218,L4216,L4210,L4208,L4203,L4200,L4211,L4209,L4212,L4236
L4238,L4237,L4222,L4223,L4231,L4234,L4224,L4227,L4233,L4235,L4226,L4239
L424,L4240（Sheet42） -Kerwin
1007:在最新的CA版本的原理上合入NCA的射频部分（Sheet34） -Kerwin
1009:删除上天线的空口检测,删除ANT3401,R3440（Sheet34） -Kerwin
1011:更改SDR660端口分配,精简开关 -Kerwin
1017:调整TXM端口分配,兼容912设计 -Kerwin
1101:MIPI并联电容默认NC，取消天线开关电源上串联电阻 -Kerwin
1107:Tuner开关更换为QM13144 -Kerwin
1108:QM13111 PIN2 NC改为接地 -Kerwin

1125:.更换光距感U2602库---LZH
1125:.增加C2226---LZH
1125:.Y1201库更新---LZH

V4.0

1209:删去R4438---LZH
1209:指纹处L9A_1P8上增加D2725---LZH
1210:指纹信号串接R2741~R2747,7颗电阻---刘冶
1212:增加C505电容---李珍华
1213:增加电容C3474,电感L3465，L3464---久永

V5.0

1223: 指纹连接J2788 库更新为nemo一致---LZH
1223: PM8008_RST_N增加R2902 100K下拉电阻---LZH
1227: 增加C2425--LZH

0115: 预留下拉电阻R1220，去掉R2107/R2108，网络连接----LYH
0116: 去掉R2745 R2746 R2747 R2741 R2733 R2743 R2744----李跃华
0116: 去掉T2700 T2701 T2702 T2703 T2704
R2700 R2701 R2703 R2704 R2709
R2712 R2715 R2716 R2717 R2718----李跃华
0117: 去掉R2736 R2735 R2726 R2729 R2803 R2811 R2808 R2817 R2907 ，
R2742 换成NC属性电阻 ---李跃华
0117:去掉 R2203 ----LYH

V6.0

0120:PIN脚VDDPX_5 网络VREG_L9A_1P8换成VREG_L19A_1P8----LYH
0120:删除C502 C503----LYH
0120:增加C1090 ----LYH

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