

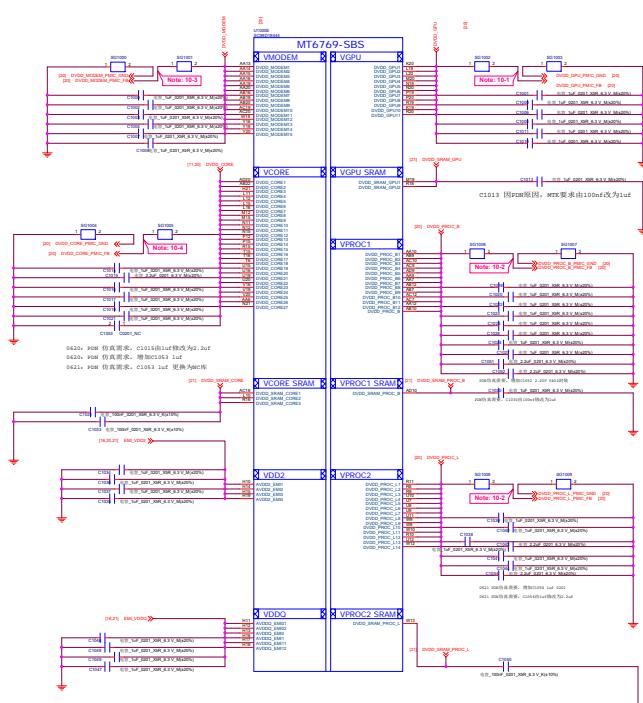
华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title 01_Block_Diagram		
Size D	Project AL6361A	Rev v1
Date: Monday, August 29, 2022	Sheet 1 of 99	

I2C	Sub SYS	Function	Part Number	I2C Spec.	Budget Timing	I2C Slave Address / Write / Read (7-bit mode)	
I2C-0	AP	Cap Touch controller	GT1151	400 Kbps	Yes.	0x5D	Write:0xB8 / Read:0xB8
		LCM Gate Drive	RT4801HWSC	400 Kbps	Yes.		
I2C-1 (I3C) Sensor Hub	AP	Magnetic Sensor	AK09918C	400 Kbps	Yes.	0x0C	Write:0x18 / Read:0x19
		Ambient Light Sensor	CM36558	400 Kbps	Yes.	0x51	Write:0xA2 / Read:0xA3
		Proximity Sensor	BMP280	400 Kbps	Yes.	0x77	Write:0xE6 / Read:0xEF
		IMX319	IMX319	400 Kbps		0x1A	Write:0x34 / Read:0x25
I2C-2 (I3C)	AP	Rear Camera	EEPROM	400 Kbps		0x40	Write:0x01 / Read:0xA1
		AF driver	400 Kbps			0x41	Write:0x01 / Read:0xA1
		Dual cam (B+b) - Main2	EEPROM	400 Kbps		0x20	Write:0xA1 / Read:0x0B
		AF driver	400 Kbps			0x50	Write:0xA1 / Read:0xA1
						0x0C	Write:0x1E / Read:0x19
I2C-3	AP	NFC					
		Audio PA					
I2C-4 (I3C)	AP	Front Camera	S6017	400 Kbps	0x20	Write:0x04 / Read:0x0B	
			EEPROM	400 Kbps	0x52	Write:0xA4 / Read:0xA5	
I2C-5	AP	Reserved					
I2C-6	AP SSPM	Reserved					
I2C-7	AP	Audio Smart PA	MT6660	400 Kbps	Yes.	0x34	Write:0x68 / Read:0x69
		SW Charger	SW Charger	400 Kbps	Yes.		
		CC Detect	RT1715WSC	400 Kbps	Yes.		
		Flash LED 5V Boost	RT4505	400 Kbps	Yes.		

Note : I2C Spec. : Standard mode (100 kbps) and Fast mode (400 kbps), Fast mode Plus (1 Mbps) and High-speed mode (3.4 Mbps)

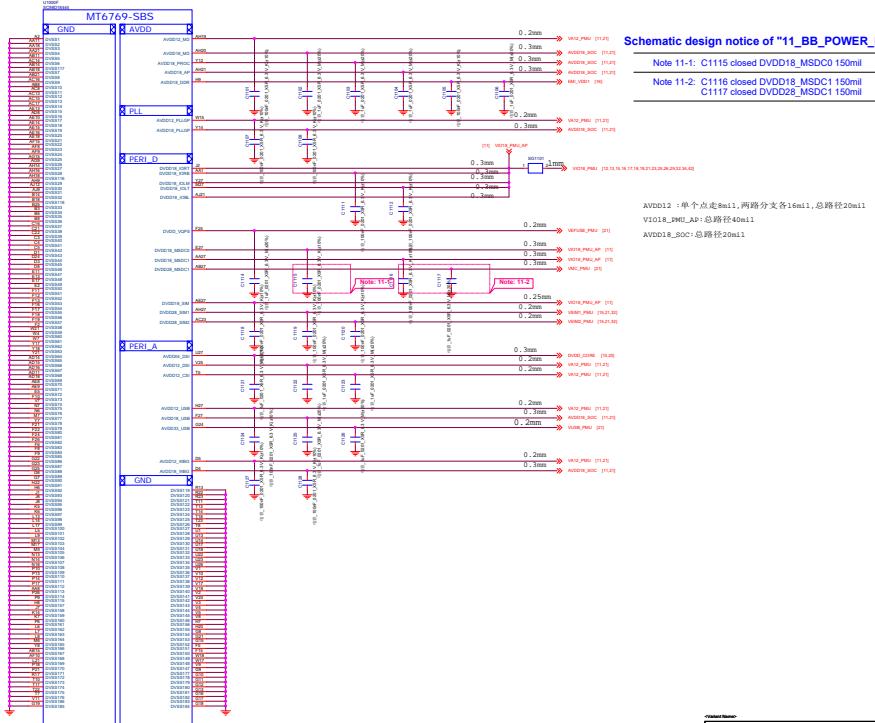
华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title 02_I2C_ID_Overview		
Size D	Project AL6361A	Rev V1
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<Variant Name>		
华勤通讯 Huaqin Telecom Technology Com., Ltd		
Title	04_Change_Note	
Size C	Project AL6361A	Rev v1
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- Note 10-1: Differential pair of DVDO_GPU remote sense must be close to BB's ball. Remote sense trace with GND shielding to PMIC (Differential)
- Note 10-2: Differential pair of DVDO_PROC remote sense must be close to BB's ball. Remote sense trace with GND shielding to PMIC (Differential)
- Note 10-3: Differential pair of DVDO_MODEM remote sense must be close to BB's ball. Remote sense trace with GND shielding to PMIC (Differential)
- Note 10-4: Differential pair of DVDO_CORE remote sense must be close to BB's ball. Remote sense trace with GND shielding to PMIC (Differential)

华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title 10_BB_POWER_PDN		
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Schematic design notice of "11_BB_POWER_IO" page:

Note 11-1: C1115 closed DVDD18_MSDC0 150mi

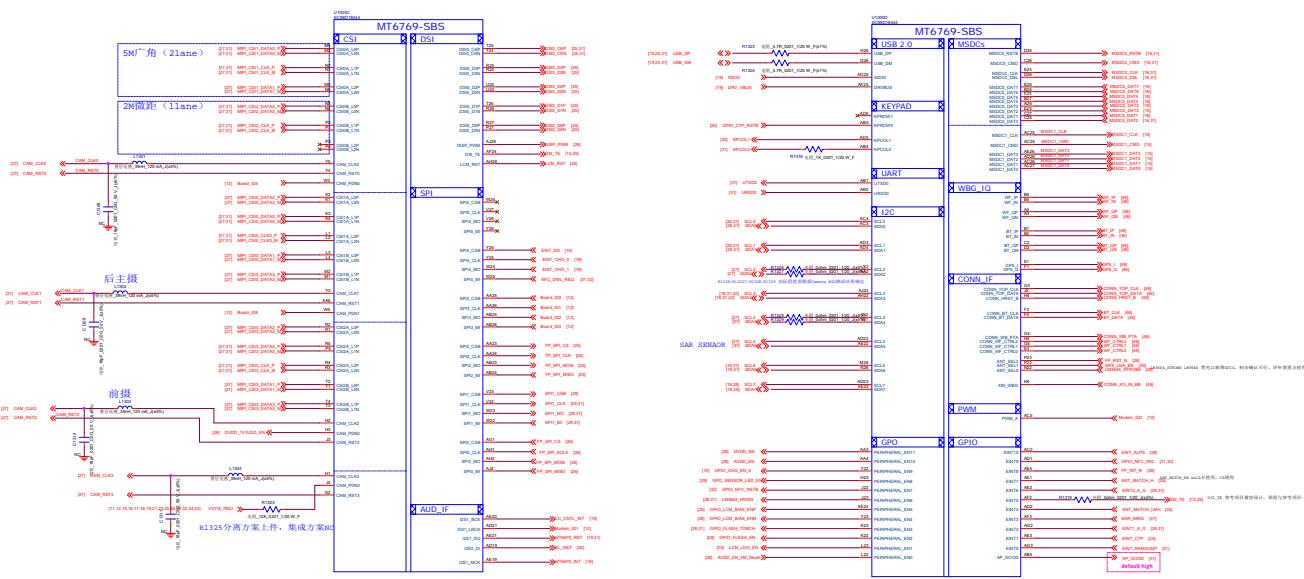
Note 11-2: C1116 closed DVDD18_MSDC1 150m
C1117 closed DVDD28_MSDC1 150m

AVDD12 :单个点走8mil,两路分支各16mil,总路径20mil

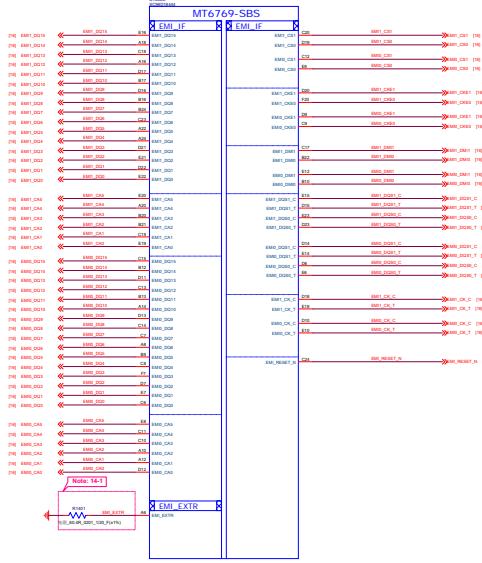
VIO18_DMU_AP:总路径40mil

AVDD18_SOC:总路径20mil

华勤通讯 Huaqin Telecom Technology Com.,Ltd	
Title 11_BB_POWER_IO	
Size D	Project AL6361A
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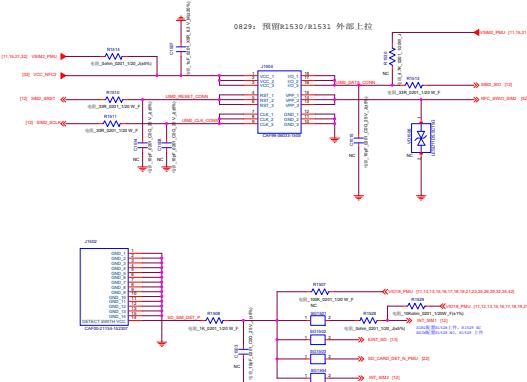
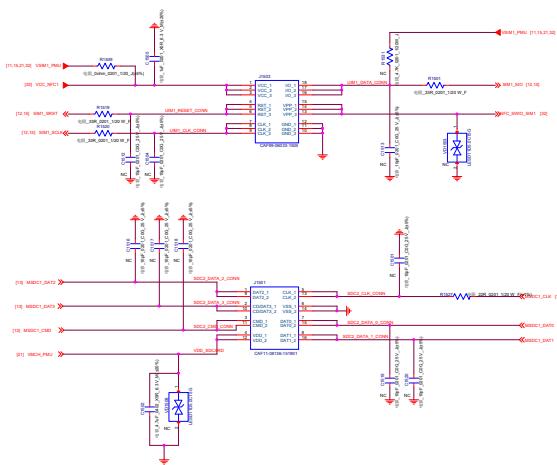
华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title 13_BB_2		
Size D	Project AL6361A	Rev v1
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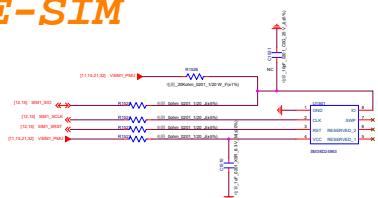
Schematic design notice of "14_BB_3" page.

Note 14-1: R1401 please select 60.4 ohm (1%) resistor

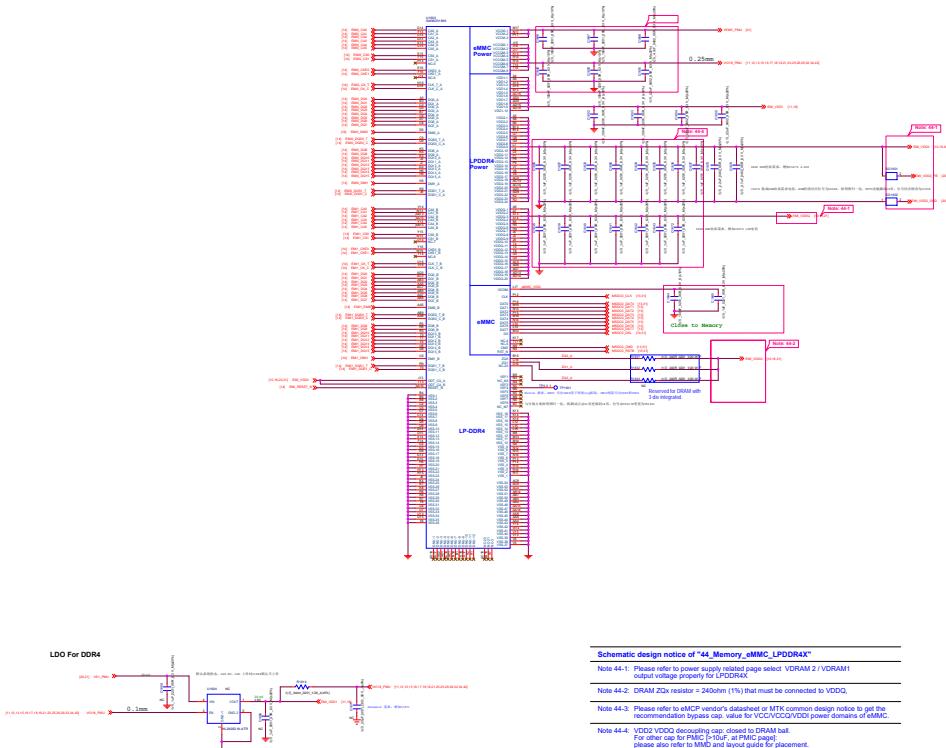
华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title 14_BB_3		
Size D	Project AL6361A	Rev v1
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E-SIM

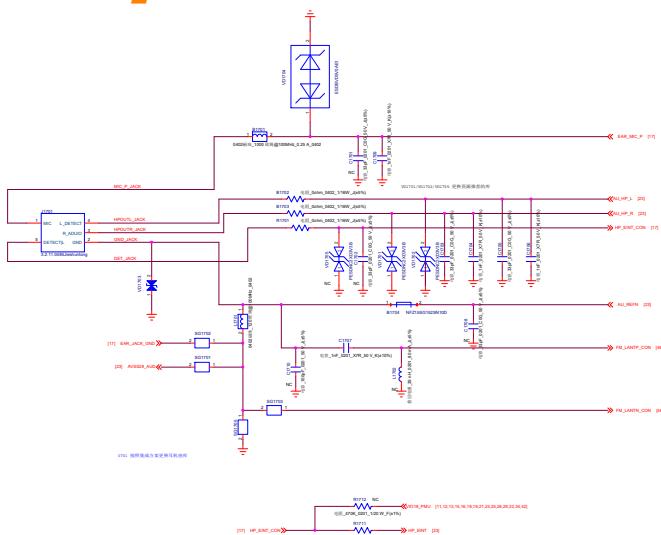


华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title 15_Memory_SD SIM_Card		
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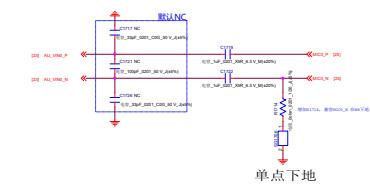


华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title 16_Memory_EMMC_LPDDR4X		
Size E	Project AL6361A	Rev VI
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Earphone Audio

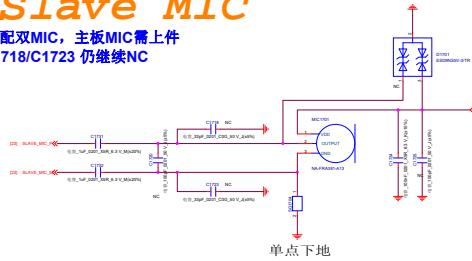


Main MIC

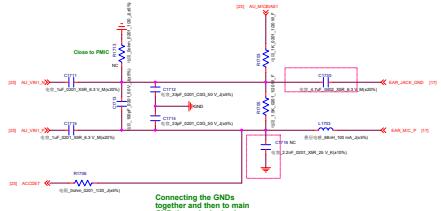


Slave MIC

低配单MIC，高配双MIC，主板MIC需上件
需要上件时C1718/C1723 仍继续NC

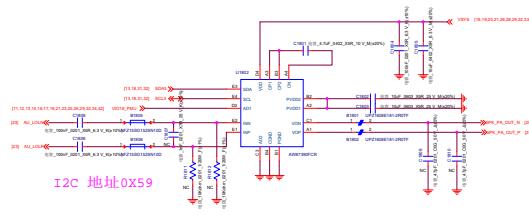


Earphone Microphone

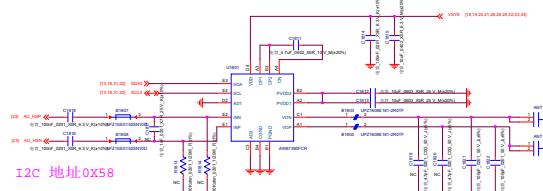


华勤通讯 Huaqin Telecom Technology Com.,Ltd			
Title 17_AUDIO_Earphone_MIC			
Size D	Project AL6361A	Rev v1	
Date: Monday, August 29, 2022	Sheet 17 of 99		

SPEAKER



Receiver



华勤通讯 Huaqin Telecom Technology Co., Ltd

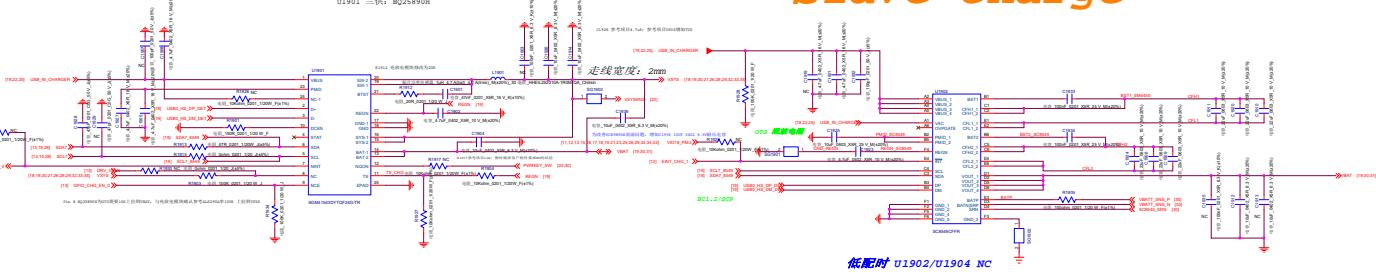
Title 18_AUDIO_Speaker_Receiver

Size D	Project AL6361A	Rev v1
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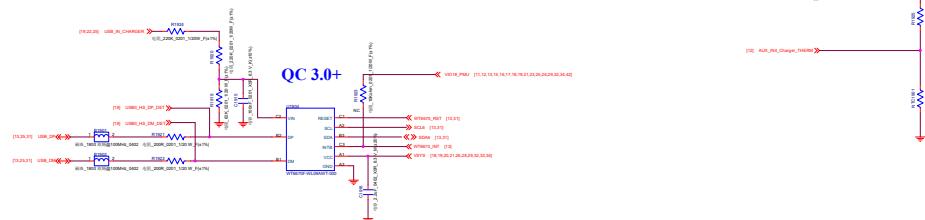
Date: Monday, August 29, 2022 Sheet 18 of 99

Master charge

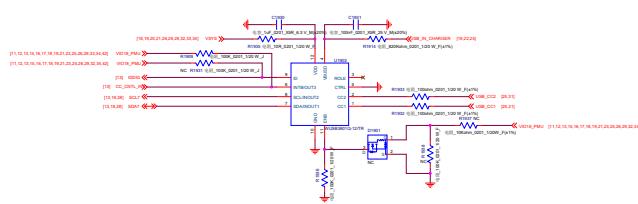
Slave charge



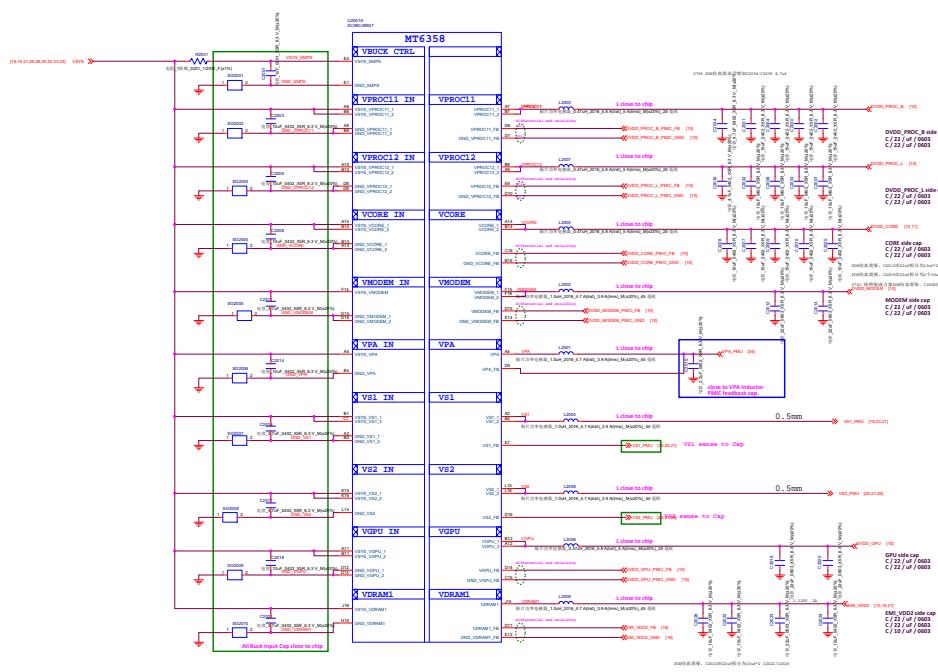
QC 3.0+



CC logic



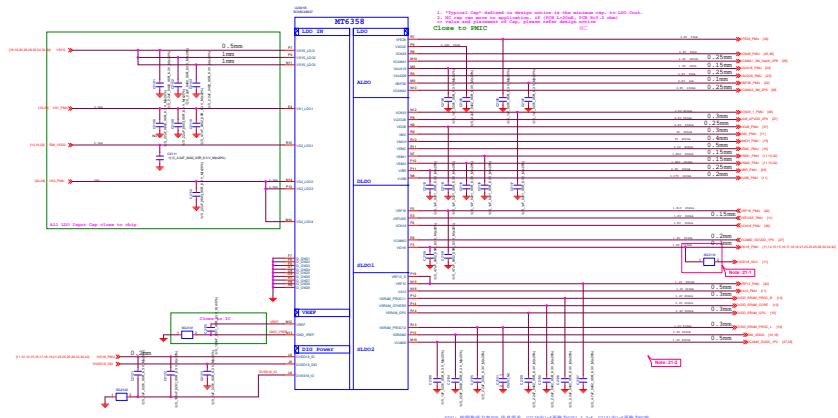
Information		
华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title 19_Charger		
Size	Project AL6361A	Rev v1
D		
Date: Monday, August 29, 2022	Sheet 19 of 99	



Input Power	Power Name	Output Voltage (V)	Output Current	Default Voltage	Usage
BUCK from VSYS	VPA	0.5~3.4V	1A	0.5V	
	V9R9C011	0.85~1.1V	5A	0.8V	
	V9R9C012	0.85~1.1V	5A	0.8V	
	V2GU	0.55~1.1V	5A	0.8V	
	VCOKE	0.85~1.1V	5A	0.8V	
	VNQDM	0.45~1.1V	3.25A	0.8V	
	VSI	1.86~2.2V	2A	2V	
	VS2	1.25~1.5V	2A	1.35V	
	VDRAM	1.225/1.125	2A	1.125	

IP	Inductance	IDC(A)
VSI	1	2.6
VS2	1	2.5
VDRAM	1	2.5
VPA	1	4
VMDMEM	1	4
VFPROC11	0.47	5.3
VFPROC12	0.47	3.85
VCORE	0.47	5.3
VGPU	0.47	3.9

华勤通讯 Huaqin Telecom Technology Com.,Ltd			
Title	20_POWER_MT6358_Buck		
Size D	Project AL6361A		Rev v1
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Input Power	Power Name	Output Voltage (V)	Output Current (A)	Default Voltage
LDO from VDD	VDD24	1.8VA	2.0VA	1.8V
	VDD12	2.8VA	1.0VA	2.8V
	VDD10	2.8VA	1.0VA	2.8V
	VDD8A	1.8/2.8/3.2/4.2VA	2.0VA	2.8V
	VDD14	1.8VA	1.0VA	1.8V
	VDD16	1.8VA	1.0VA	1.8V
	VDD18	1.8VA	1.0VA	1.8V
	VDD20	1.8VA	1.0VA	1.8V
	VDD24S	1.8/2.8/3.2/4.2VA	2.0VA	1.8V
	VDD28	1.8/2.8/3.2/4.2VA	2.0VA	1.8V
LDO from VFB	VFB24	1.8VA	1.0VA	1.8V
	VFB12	2.8VA	1.0VA	2.8V
	VFB10	2.8VA	1.0VA	2.8V
	VFB8A	1.8/2.8/3.2/4.2VA	2.0VA	2.8V
	VFB14	2.8VA	1.0VA	2.8V
	VFB16	2.8VA	1.0VA	2.8V
	VFB18	2.8VA	1.0VA	2.8V
	VFB20	2.8VA	1.0VA	2.8V
	VFB24S	1.8/2.8/3.2/4.2VA	2.0VA	1.8V
	VFB28	1.8/2.8/3.2/4.2VA	2.0VA	1.8V
LDO from VBI	VBI24	1.8VA	1.0VA	1.8V
	VBI12	2.8VA	1.0VA	2.8V
	VBI10	2.8VA	1.0VA	2.8V
	VBI8A	1.8/2.8/3.2/4.2VA	2.0VA	2.8V
	VBI14	2.8VA	1.0VA	2.8V
	VBI16	2.8VA	1.0VA	2.8V
	VBI18	2.8VA	1.0VA	2.8V
	VBI20	2.8VA	1.0VA	2.8V
	VBI24S	1.8/2.8/3.2/4.2VA	2.0VA	1.8V
	VBI28	1.8/2.8/3.2/4.2VA	2.0VA	1.8V
LDO from VEE	VEE24	1.8VA	1.0VA	1.8V
	VEE12	2.8VA	1.0VA	2.8V
	VEE10	2.8VA	1.0VA	2.8V
	VEE8A	1.8/2.8/3.2/4.2VA	2.0VA	2.8V
	VEE14	2.8VA	1.0VA	2.8V
	VEE16	2.8VA	1.0VA	2.8V
	VEE18	2.8VA	1.0VA	2.8V
	VEE20	2.8VA	1.0VA	2.8V
	VEE24S	1.8/2.8/3.2/4.2VA	2.0VA	1.8V
	VEE28	1.8/2.8/3.2/4.2VA	2.0VA	1.8V
LDO from VSS	VSS24	1.8VA	1.0VA	1.8V
	VSS12	2.8VA	1.0VA	2.8V
	VSS10	2.8VA	1.0VA	2.8V
	VSS8A	1.8/2.8/3.2/4.2VA	2.0VA	2.8V
	VSS14	2.8VA	1.0VA	2.8V
	VSS16	2.8VA	1.0VA	2.8V
	VSS18	2.8VA	1.0VA	2.8V
	VSS20	2.8VA	1.0VA	2.8V
	VSS24S	1.8/2.8/3.2/4.2VA	2.0VA	1.8V
	VSS28	1.8/2.8/3.2/4.2VA	2.0VA	1.8V
LDO from VDDA	VDDA24	1.8VA	1.0VA	1.8V
	VDDA12	2.8VA	1.0VA	2.8V
	VDDA10	2.8VA	1.0VA	2.8V
	VDDA8A	1.8/2.8/3.2/4.2VA	2.0VA	2.8V
	VDDA14	2.8VA	1.0VA	2.8V
	VDDA16	2.8VA	1.0VA	2.8V
	VDDA18	2.8VA	1.0VA	2.8V
	VDDA20	2.8VA	1.0VA	2.8V
	VDDA24S	1.8/2.8/3.2/4.2VA	2.0VA	1.8V
	VDDA28	1.8/2.8/3.2/4.2VA	2.0VA	1.8V
LDO from VEEA	VEEA24	1.8VA	1.0VA	1.8V
	VEEA12	2.8VA	1.0VA	2.8V
	VEEA10	2.8VA	1.0VA	2.8V
	VEEA8A	1.8/2.8/3.2/4.2VA	2.0VA	2.8V
	VEEA14	2.8VA	1.0VA	2.8V
	VEEA16	2.8VA	1.0VA	2.8V
	VEEA18	2.8VA	1.0VA	2.8V
	VEEA20	2.8VA	1.0VA	2.8V
	VEEA24S	1.8/2.8/3.2/4.2VA	2.0VA	1.8V
	VEEA28	1.8/2.8/3.2/4.2VA	2.0VA	1.8V
LDO from VSSA	VSSA24	1.8VA	1.0VA	1.8V
	VSSA12	2.8VA	1.0VA	2.8V
	VSSA10	2.8VA	1.0VA	2.8V
	VSSA8A	1.8/2.8/3.2/4.2VA	2.0VA	2.8V
	VSSA14	2.8VA	1.0VA	2.8V
	VSSA16	2.8VA	1.0VA	2.8V
	VSSA18	2.8VA	1.0VA	2.8V
	VSSA20	2.8VA	1.0VA	2.8V
	VSSA24S	1.8/2.8/3.2/4.2VA	2.0VA	1.8V
	VSSA28	1.8/2.8/3.2/4.2VA	2.0VA	1.8V

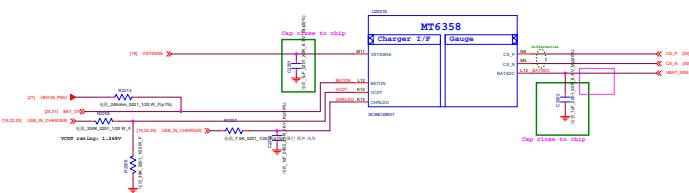
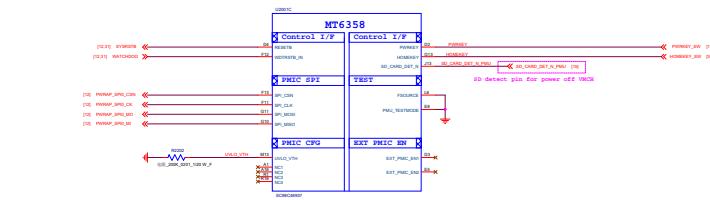
Note 21-1: Please set SG2110 close to C211P, making star connection.

Note 21-1: Please set SG2110 close to C2118, making star connection between VIO18_PMU and AVDD18_SOC near to LDO cap. C2118
Please also refer to MT6358 design notice for further detail design information

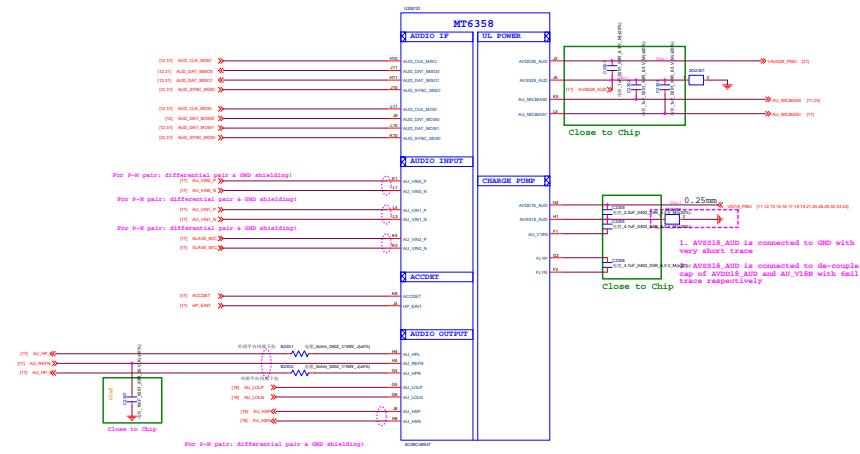
Note 21-2: If these power trace can meet LDO layout constraint, these CAP can be NC or removed.
Please refer to MPP20A datasheet for further detail design information.

Note 21-2: In these power trace can't meet ESD layout constraint, these CAP can be NC or removed. Please refer to MT8358 design notice.

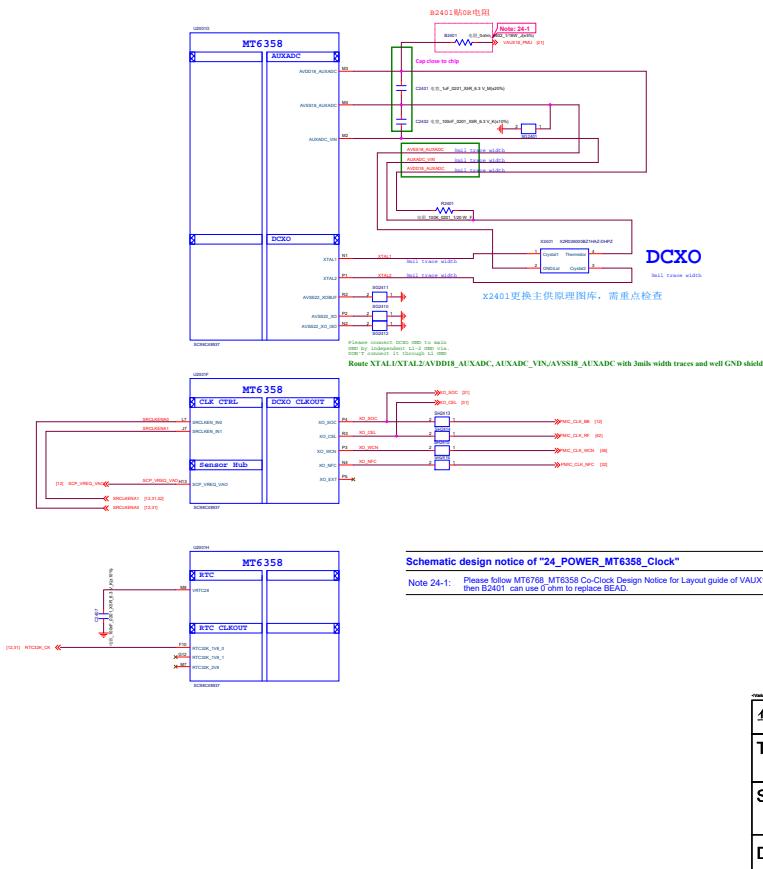
华勤通讯 Huagin Telecom Technology Com.,Ltd			
Title 21_POWER_MT6358_LDO			
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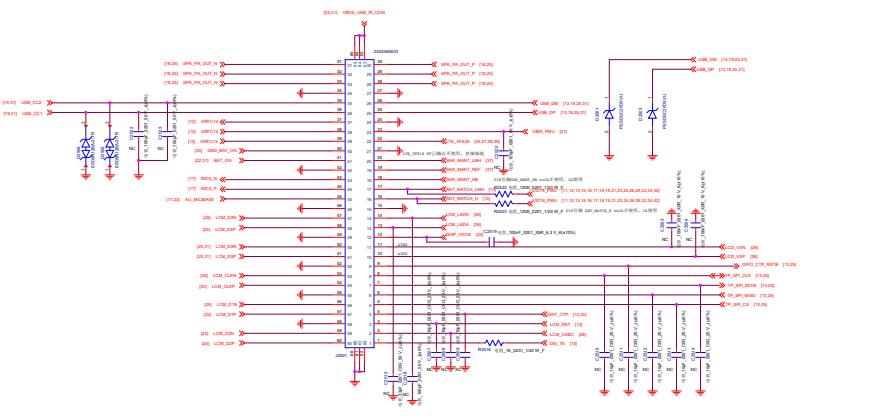
华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title 22_POWER_MT6358_IF		
Size D	Project AL6361A	Rev v1
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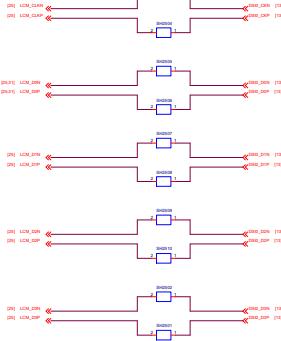
华勤通讯 Huaqin Telecom Technology Com.,Ltd
 Title 23_POWER_MT6358_Audio
 Size D Project AL6361A Rev V1
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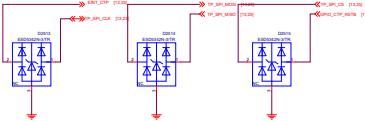
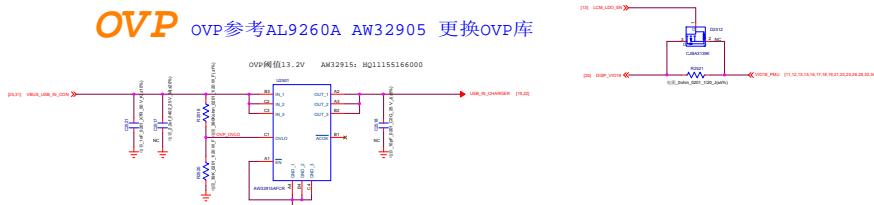
华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title 24_POWER_MT6358_Clock		
Size D	Project AL6361A	Rev V1
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LCD MIPI Common Mode Filter



OVP 参考AL9260A AW32905 更换OVP库

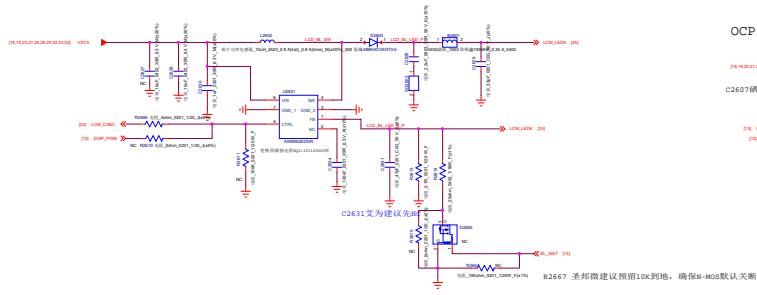


华勤通讯 Huaqin Telecom Technology Com.,Ltd			
Title	25_LINK_OVP		
Size	Project	AL6361A	Rev
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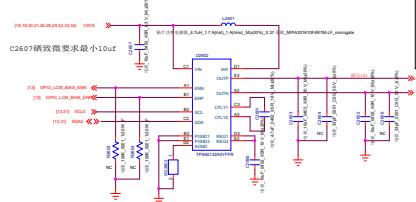
LCM Backlight

LCM Bias

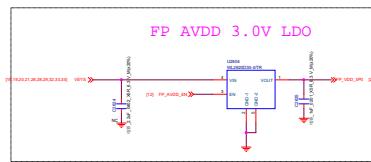
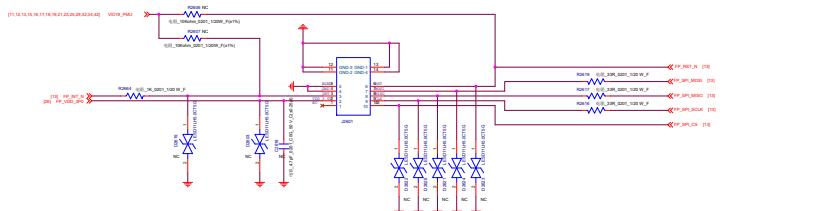
偏压电路参考milan2



OCP2131 HQ11152662000 /TPS65132 HQ11140016000



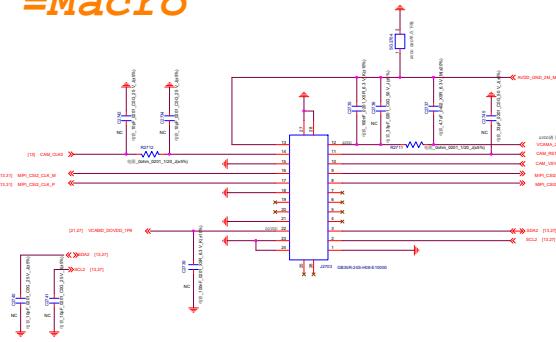
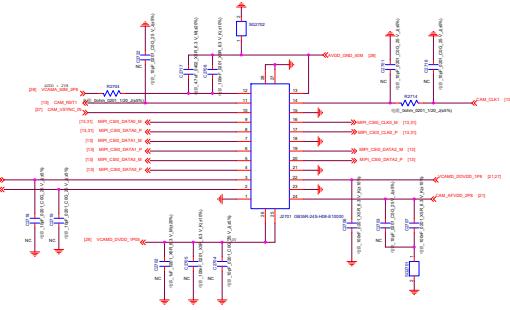
Finger Print



华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title 26_LCD_BL_BIAS_Finger		
Size D	Project AL6361A	Rev v1
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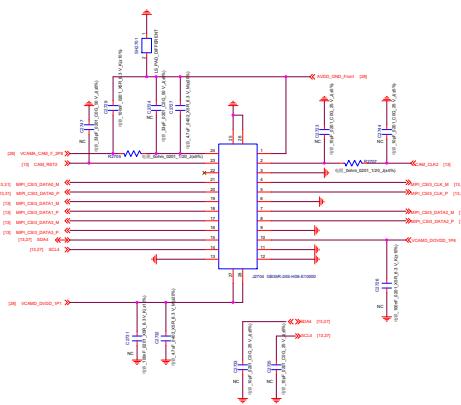
Main Camera 50M_OIS

2M =Macro

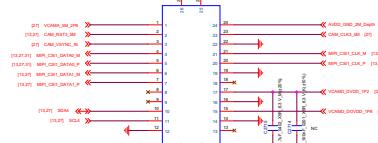


2M Depth *NOTE:低配2M J2702上件

Front CAM 16M/8M

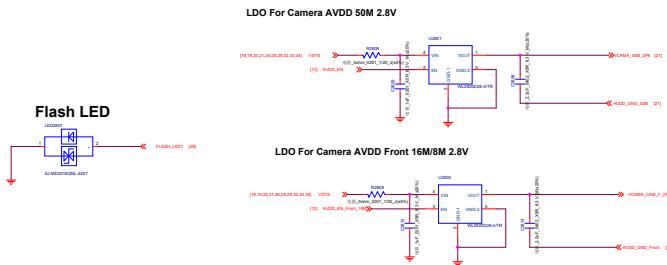
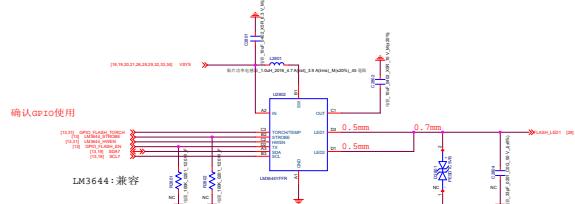


5M Wide *NOTE:低配2M J2702上件

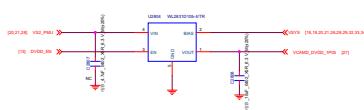


华勤通讯 Huaqin Telecom Technology Com.,Ltd	
Title 27_Camera	
Size D	Project AL6361A Rev v1
Date: Monday, August 29, 2022	Sheet 27 of 99

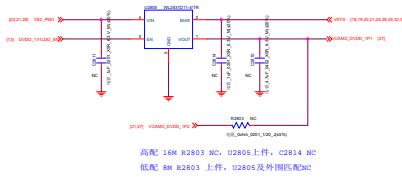
Rear CAM FLASH



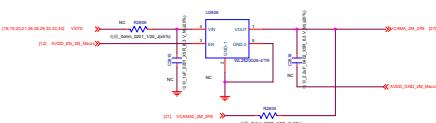
LDO For Camera DVDD 50M 1.05V



LDO For CAM DVDD Front 16M 1.1V HQ11154597000, LDO_1.1_500_mA



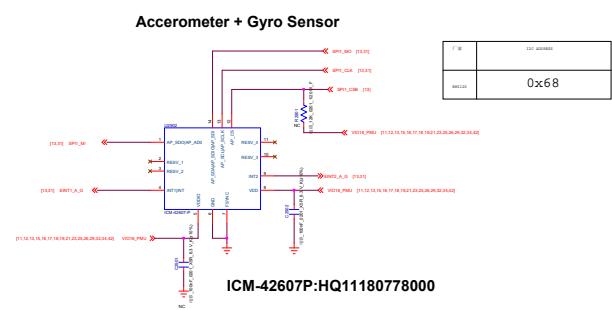
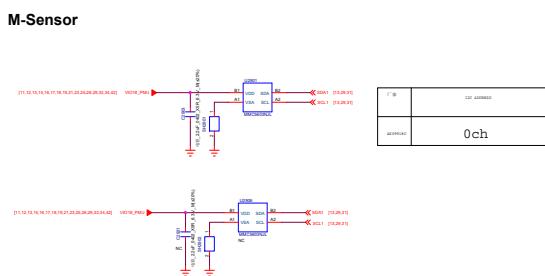
LDO For Camera AVDD 2M Macro 2.8V 預留外部LDO



LDO For Camera AVRD 2M Depth 2.8V 项目外部LDO

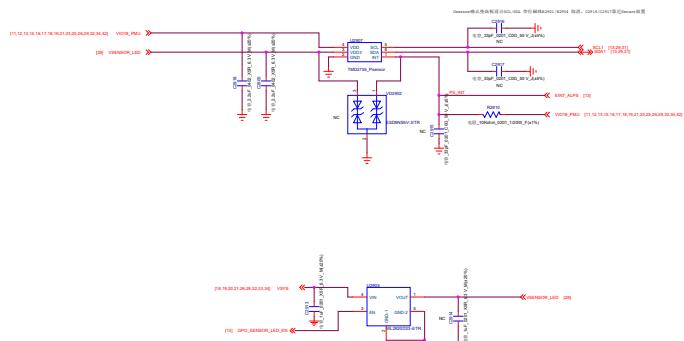


华勤通讯 Huaqin Telecom Technology Com.,Ltd			
Title	28_Camera_Flash_Powers_LDO		
Size D	Project AL6361A		Rev V1
Date:	Monday, August 29, 2022	Sheet 28 of 99	



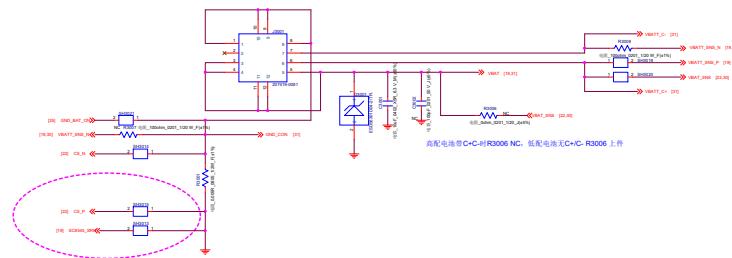
ALPS SENSOR

G Sensor OD0.7更新不再需要再兼容，删除单 G sensor

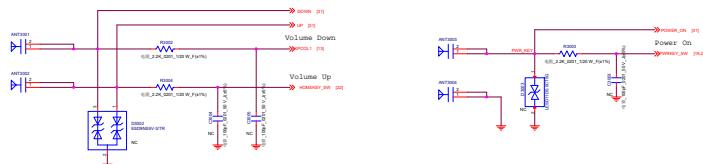


华勤通讯 Huaqin Telecom Technology Com.,Ltd			
Title 29_Sensors			
Size	Project	AL6361A	Rev
D			V1
Date:		Monday, August 29, 2022	Sheet 29 of 99

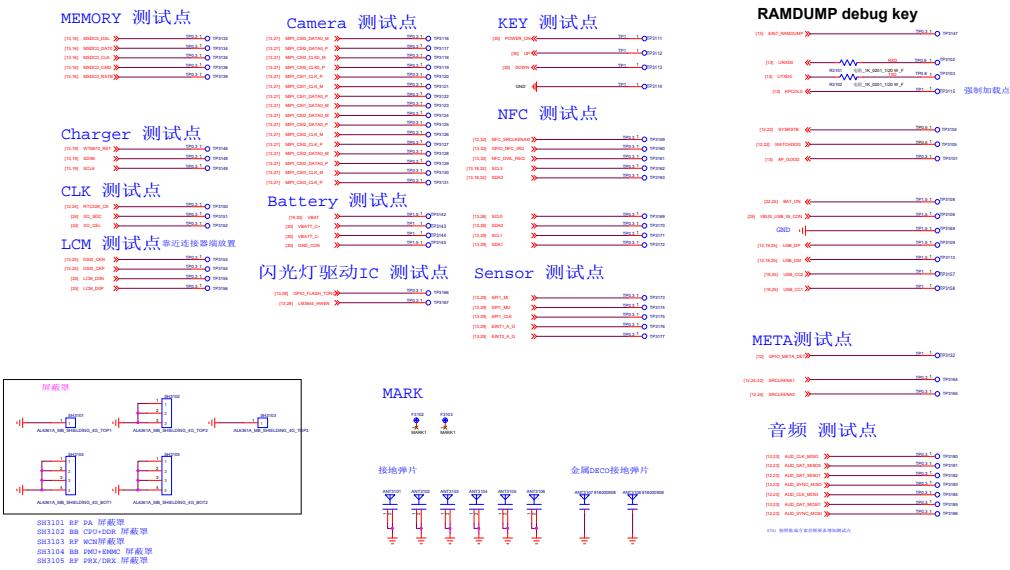
BATT CON



KEY



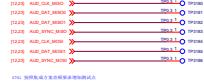
华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title 30_BAT_Key		
Size D	Project AL6361A	Rev V1
Date: Monday, August 29, 2022		Sheet 30 of 99



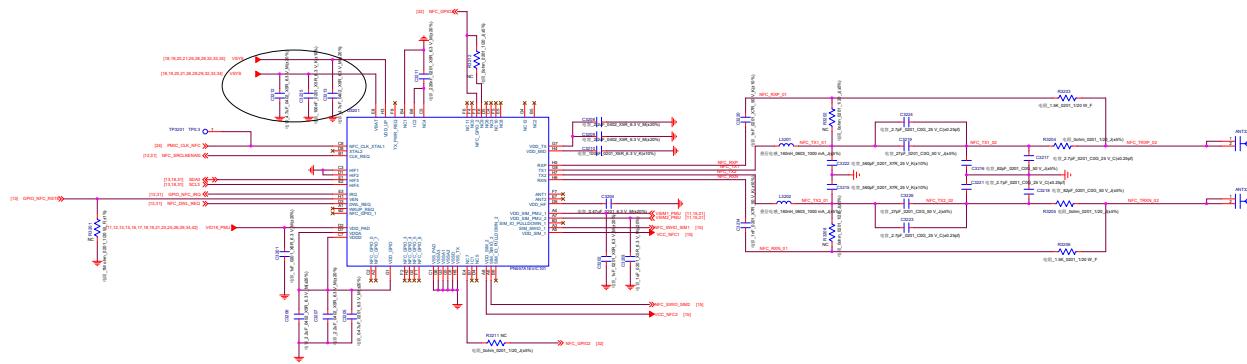
META测试点



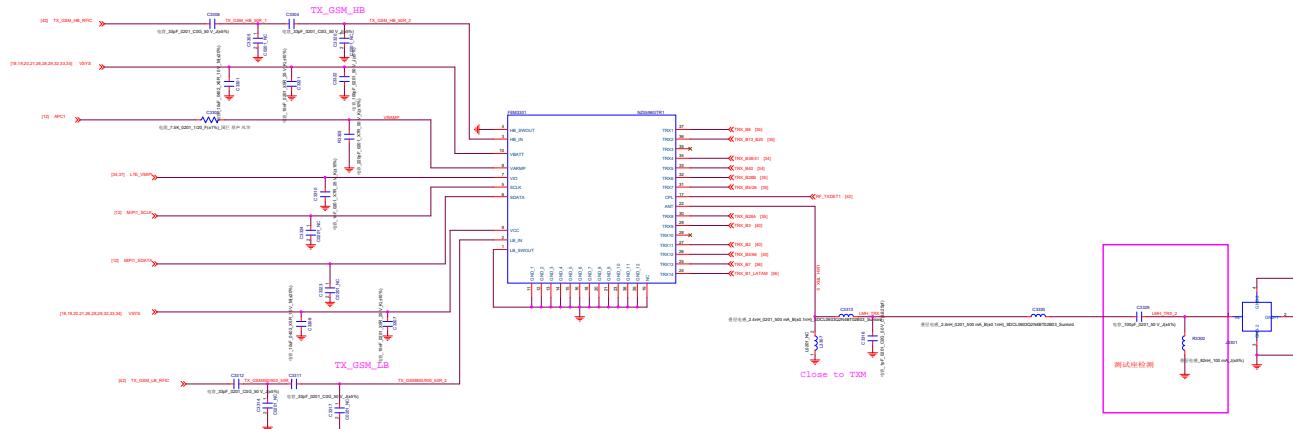
音频 测试点

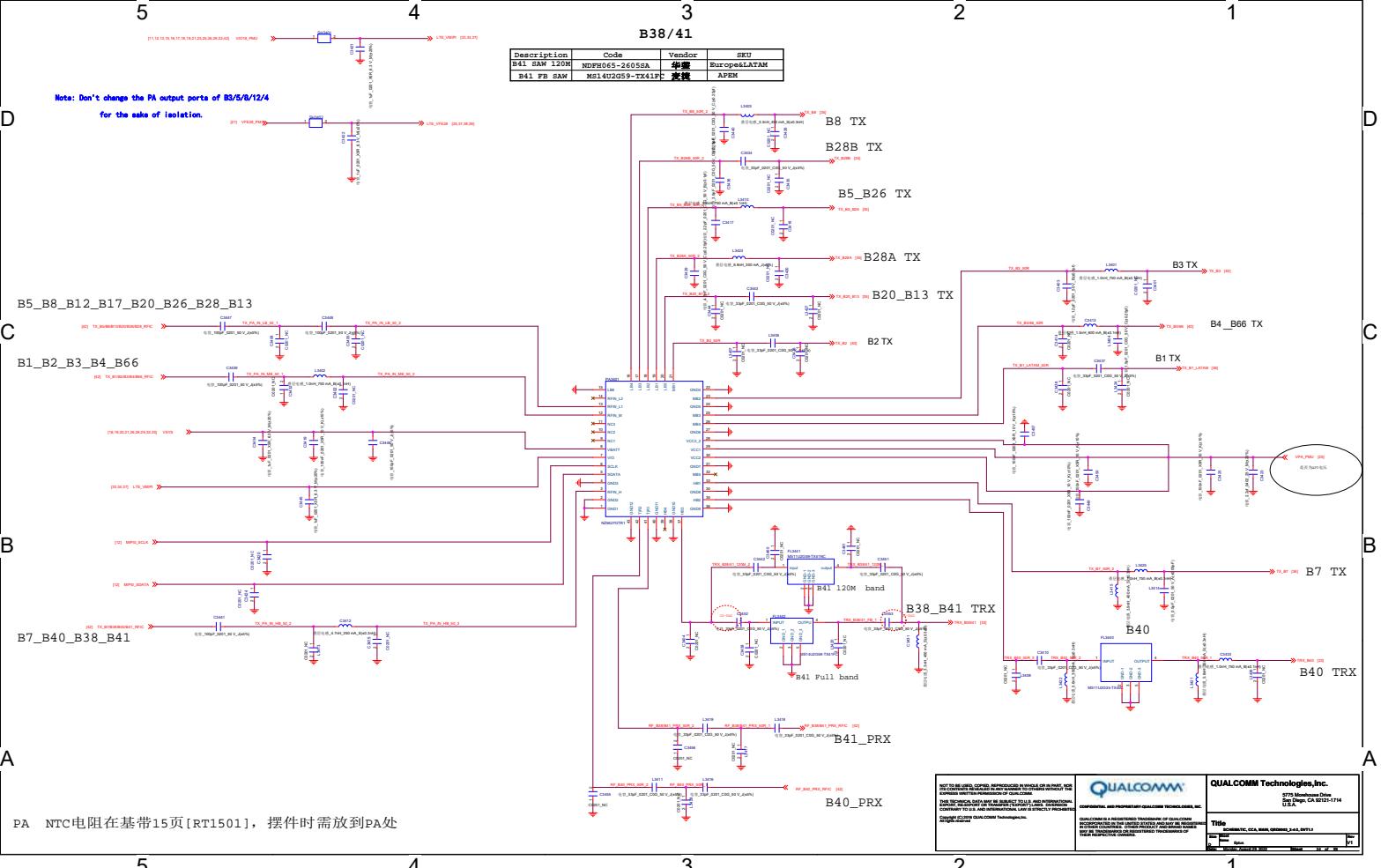


华勤通讯 Huaqin Telecom Technology Com.,Ltd	
Title 31_Testpoint_Debug	
Size D	Project AL6361A
Date: Monday, August 29, 2022	Sheet 31 of 99

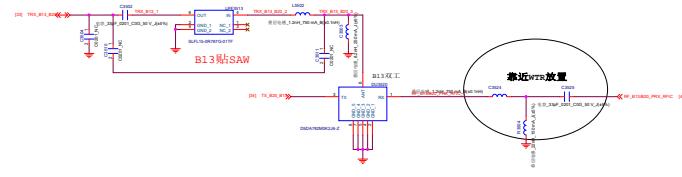


华勤通讯 Huaqin Telecom Technology Com.,Ltd	
Title	32_NFC
Size D	Project AL6361A
Date: Monday, August 29, 2022	Sheet 32 of 99

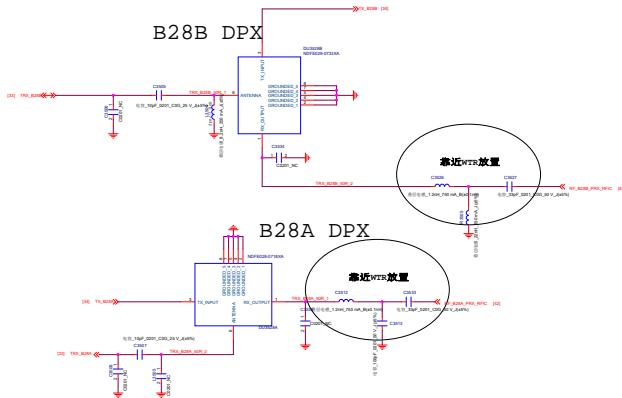
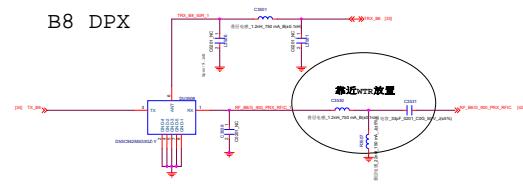




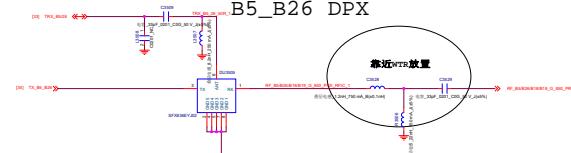
Description	Code	Vendor	SKU
B20 DPX	SPX806CYH02	Wisol	Europe&APEM
B13 DPX	D5DA782M0K2J6-2	Taiyo	LATAM

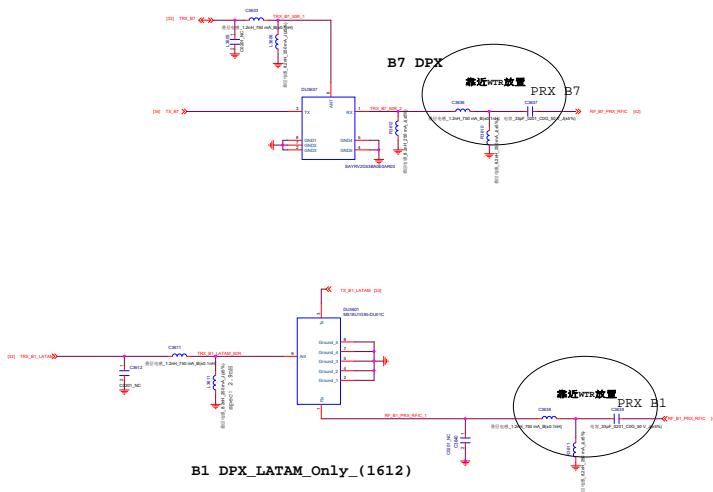


B8 DPX

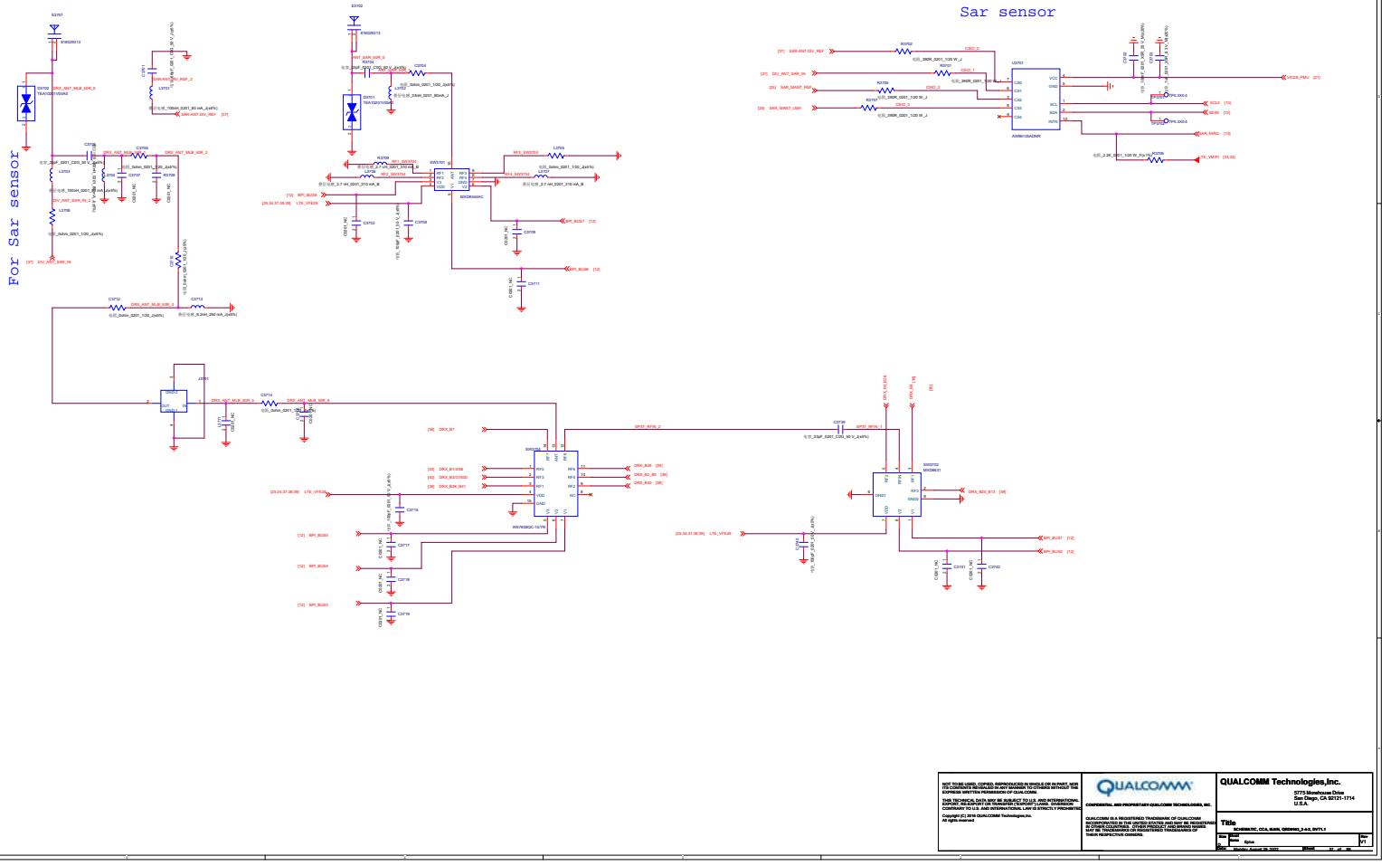


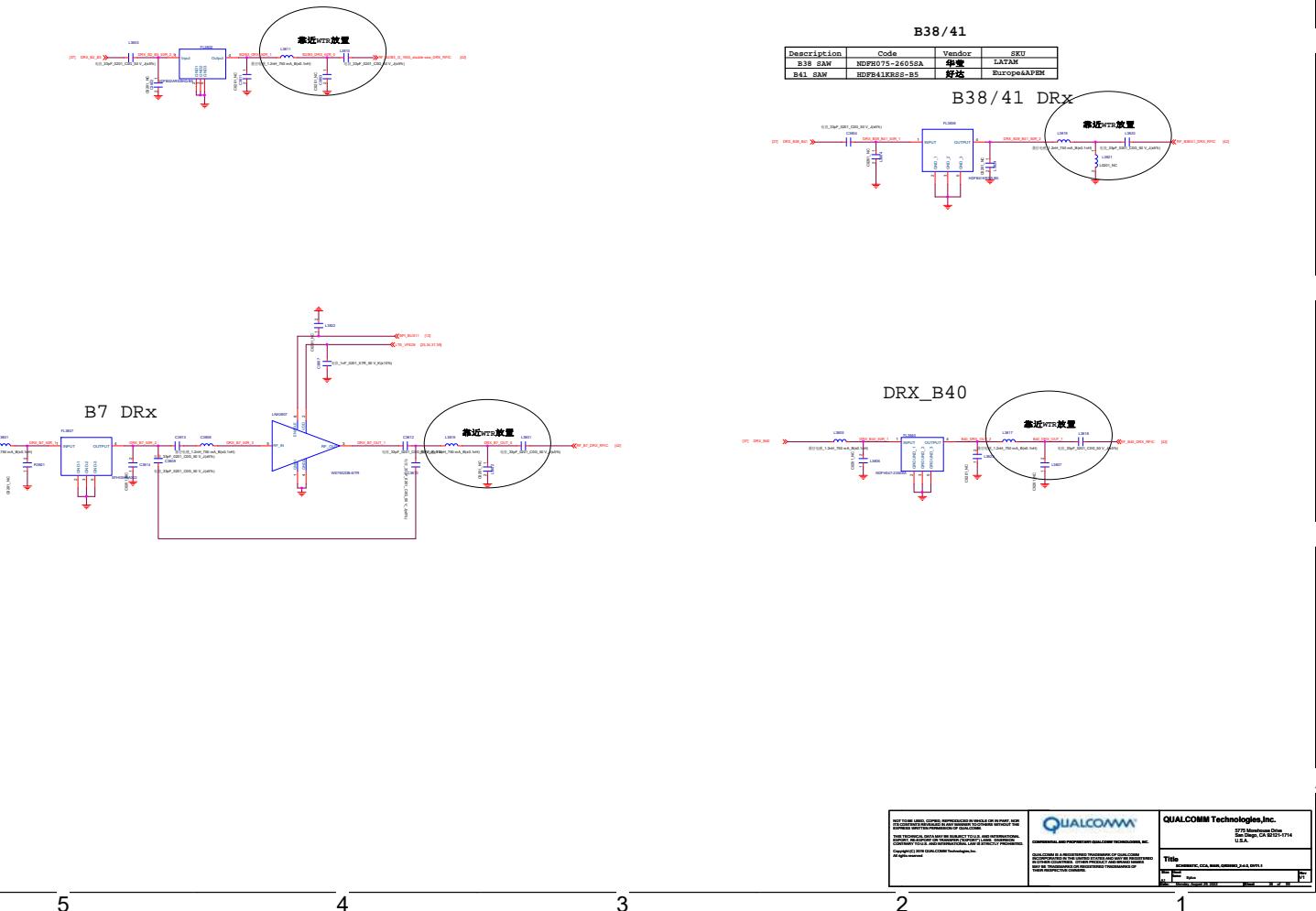
Description	Code	Vendor	SKU
B26 DPX	SAYTB831MBABOAR0G	MURATA	LATAM&APEM
B5 DPX	HDDB05CNSS-B11	好达	Europe





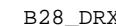
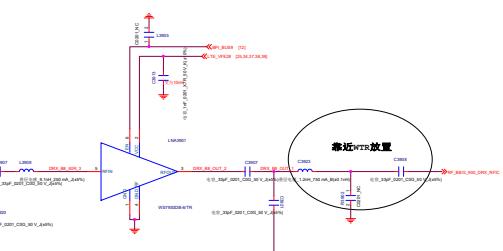
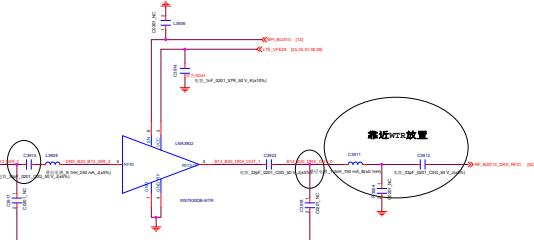
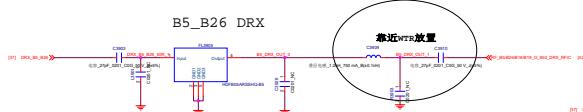
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Description	Code	Vendor	SKU
B20 DRX	NDFH016-0806SA	华勤	Europe&APEM
B13 DRX	SAFFB742MAA0F0AR1X	村田	LATAM + CA

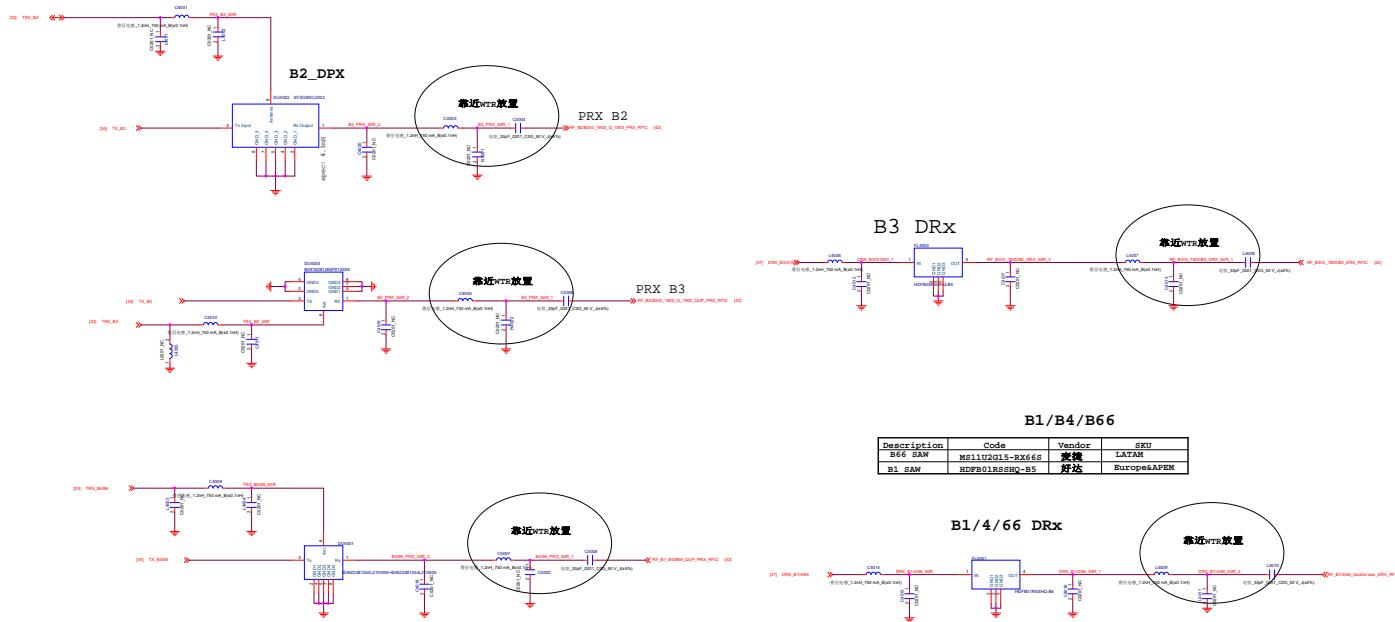
Description	Code	Vendor	SKU
B26 DRX	NDFH052-0876SA	华显	LATAM & APEM
B5 DRX	HDFB05ARSSHQ-B5	好达	Europe



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QUALCOMM

QUALCOMM Technologies, Inc.		
5775 Morehouse Drive San Diego, CA 92121-1714 U.S.A.		
Title	SCHMATIC_CCA_HARF_CDRSHEET_3-4-2, DVT1.1	
Date	Spudz	Rev
<input checked="" type="checkbox"/>	Monday, August 26, 2002	V1
<input type="checkbox"/>		



B1/B4/B66

Description	Code	Vendor	SKU
B66 SAM	MS11U2G15-RX66B	凌珑	LATAM
B1 SAM	HDFB01RESHQ-B5	好达	Europe&APEM



5

4

3

2

1

D

C

B

A

D

C

B

A

5

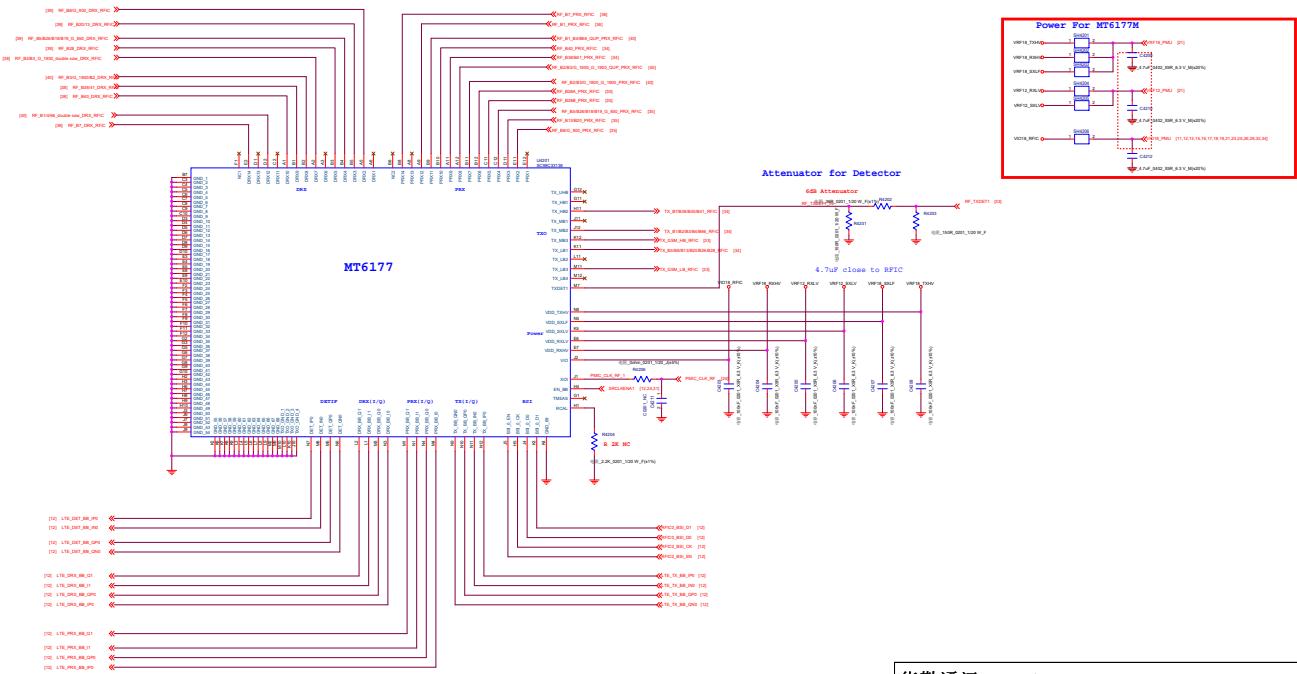
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3

2

1





华勤通讯 Huaqin Telecom Technology Com.,Ltd

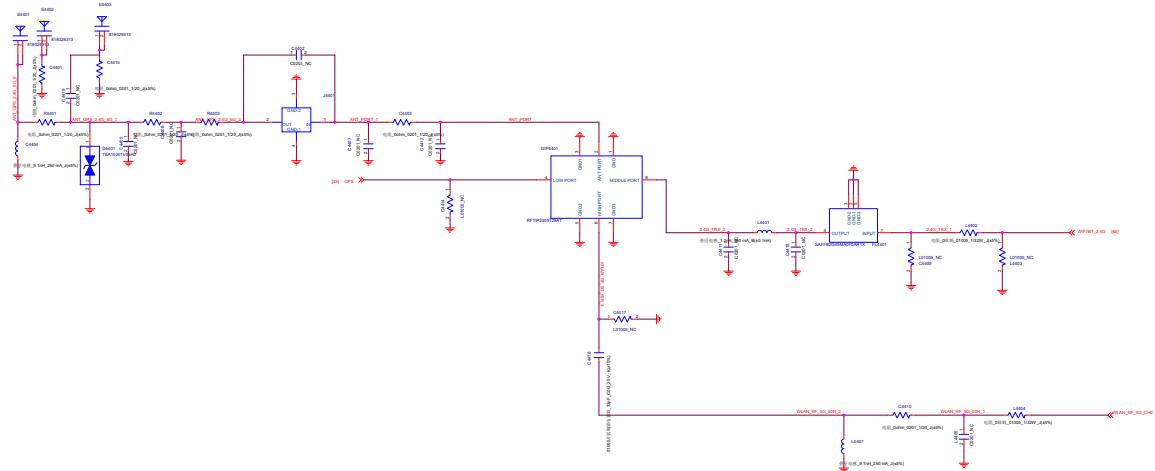
Title 31_RF_MT6177_Pin_Out

Size Project AI 1611 MB V4 Rev

Date: Monday, August 29, 2022 Sheet 42 of 99



WIFI 2.4G_BT_5G_GPS



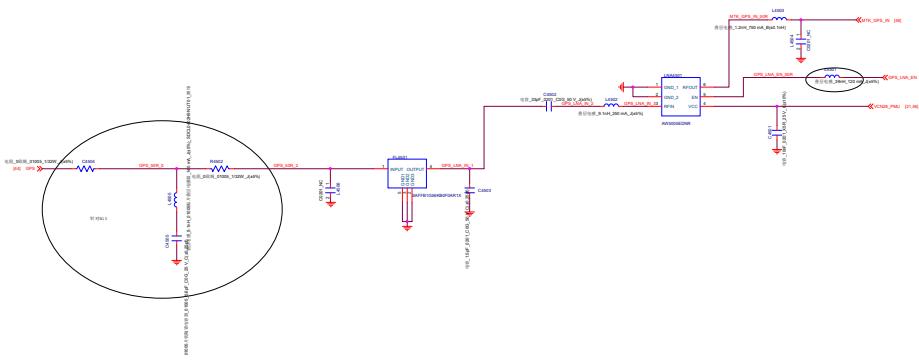
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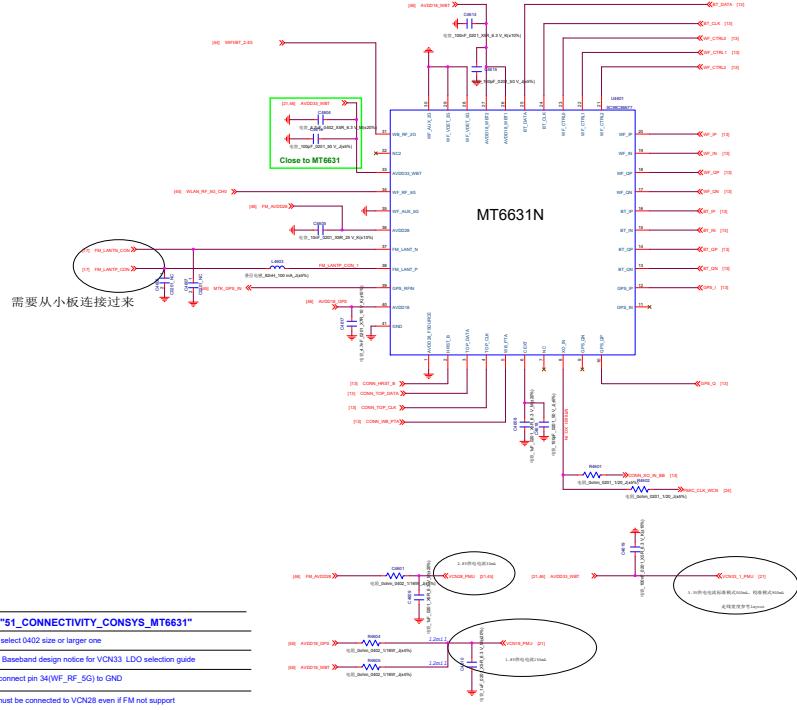
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QUALCOMM Technologies, Inc.	
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Title	Schematic, CCA, ISM, QRD9003_2x4.2, DRAFT.1
D.	Spies
	Ver V1





Schematic design notice of "51_CONNECTIVITY_CONSYS_MT6631"

Note 51-1: For R5015 size, please select 0402 size or larger one

Note 51-2: Please refer to MT8765 Baseline design notice for VCN33 LDO selection guide

Note 51-3: If WiFi 5G not support, connect pin 34(WF_RF_S0) to GND

Note 51-4: Pin 36 (AVDD28_FM) must be connected to VCN28 even if FM not support

华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title 36_RF_WCN_MT6631		
Size D	Project AL1611_MB_V4	Rev v4
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