



华勤通讯 Huaqin Telecom Technology Com.,Ltd			
Title 01_Block_Diagram			
Size D	Project J19_MB_V1		Rev V1
Date: Saturday, February 15, 2020			
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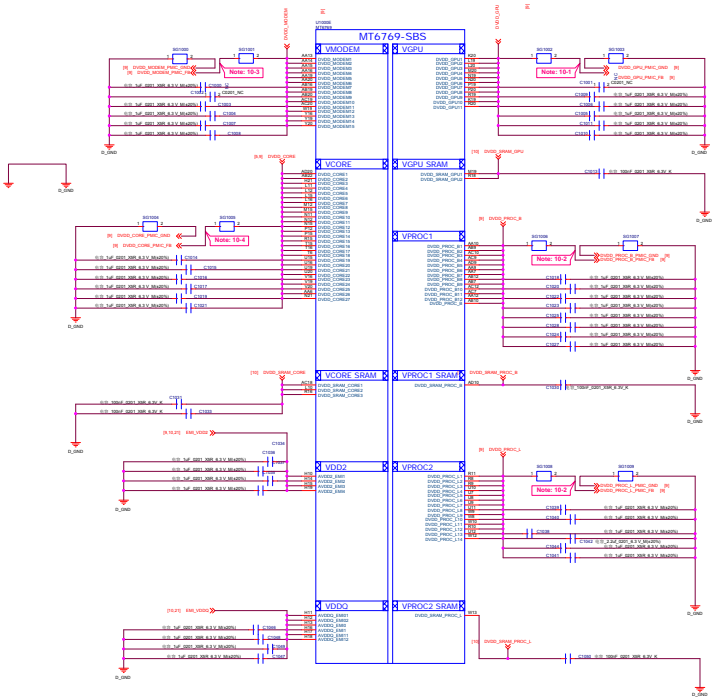
I2C	Sub SYS	Function	Part Number	I2C Spec.	Budget Timing	I2C Slave Address / Write / Read (7-bit mode)	
I2C-0	AP	Cap Touch controller	GT1151	400 Kbps	Yes.	0x5D	Write 0xBA / Read 0xBB
		LCM Gate Drive	RT4801HWSC	400 Kbps	Yes.		
		Magnetic Sensor	AK09918C	400 Kbps	Yes.	0x0C	Write 0x18 / Read 0x19
I2C-1 (3C)	AP Sensor Hub	Ambient Light Sensor	CM03558	400 Kbps	Yes.	0x51	Write 0xA2 / Read 0xA3
		Proximity Sensor					
		Pressure Sensor	BMP280	400 Kbps	Yes.	0x77	Write 0xEE / Read 0xEF
						0x1A	Write 0xA4 / Read 0xA5
I2C-2 (3C)	AP	Rear Camera	EEPROM	400 Kbps		0x59	Write 0xA7 / Read 0xA1
			AF driver	400 Kbps		0x5C	Write 0x19 / Read 0x19
						0x20	Write 0xA4 / Read 0xA8
		Dual cam (B+b) - Main1	EEPROM	400 Kbps		0x59	Write 0xA7 / Read 0xA1
			AF driver	400 Kbps		0x5C	Write 0x19 / Read 0x19
I2C-3	AP	NFC	ST21NFCD	400 Kbps	Yes.	0x08	Write 0x10 / Read 0x11
		Dual cam (B+b) - Main2	EEPROM	400 Kbps		0x18	Write 0x20 / Read 0x21
			EEPROM				
			AF driver				
I2C-4 (3C)	AP	Front Camera	EEPROM	400 Kbps		0x20	Write 0xA4 / Read 0xA8
			AF driver	400 Kbps		0x5C	Write 0xA4 / Read 0xA5
I2C-5	AP	Reserved					
I2C-6	AP SSPM	Reserved					
I2C-7	AP	Audio Smart PA	MT5980	400 Kbps	Yes.	0x34	Write 0xA9 / Read 0xA9
		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)

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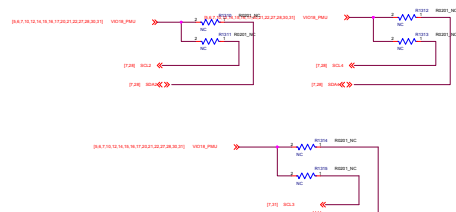
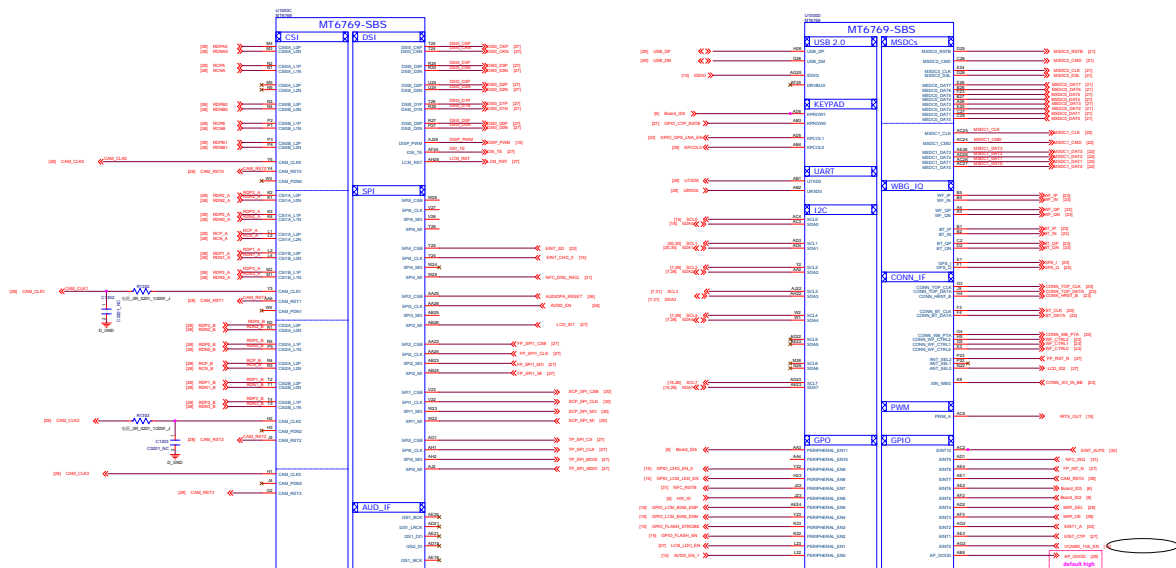
Date	Category	Item
2018.12.14 (V0.1)	Page 04	V0.1 Release
2019.01.11 (V0.2)	Page 12	Add CAM_PDN3(GPIO110) HW pin for Note 12-4: HW pin for DDR type feature in bootstrap Delete R1007 and R1012 ext. pull for LP4X eMCP
	Page 13	Add CAM_PDN3(GPIO110)'s Note : No ext. pull for DDR type feature in bootstrap
	Page 69	Add CAM_PDN3(GPIO110)'s Note : No ext. pull for DDR type feature in bootstrap
	Page 21	Add C2106 for VBIF28 cap
	Page 22	Delete R2202

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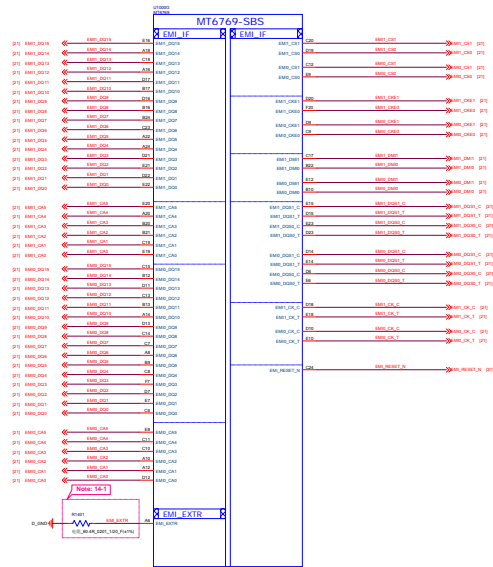


- Note 10-1: Differential pair of DVDD_GPU remote sense must be close to BB's ball.
Remote sense trace with GND shielding to PMC (Differential)
- Note 10-2: Differential pair of DVDD_PROC remote sense must be close to BB's ball.
Remote sense trace with GND shielding to PMC (Differential)
- Note 10-3: Differential pair of DVDD_MODEM remote sense must be close to BB's ball.
Remote sense trace with GND shielding to PMC (Differential)
- Note 10-4: Differential pair of DVDD_CORE remote sense must be close to BB's ball.
Remote sense trace with GND shielding to PMC (Differential)

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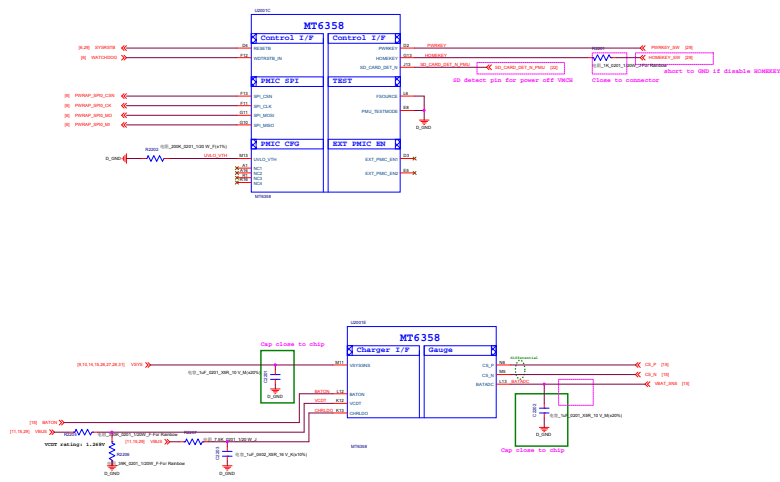
华勤通讯 Huaqin Telecom Technology Com.,Ltd			
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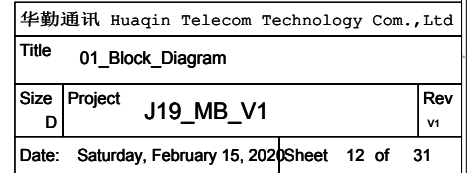
Schematic design notice of "14_BB_3" page.

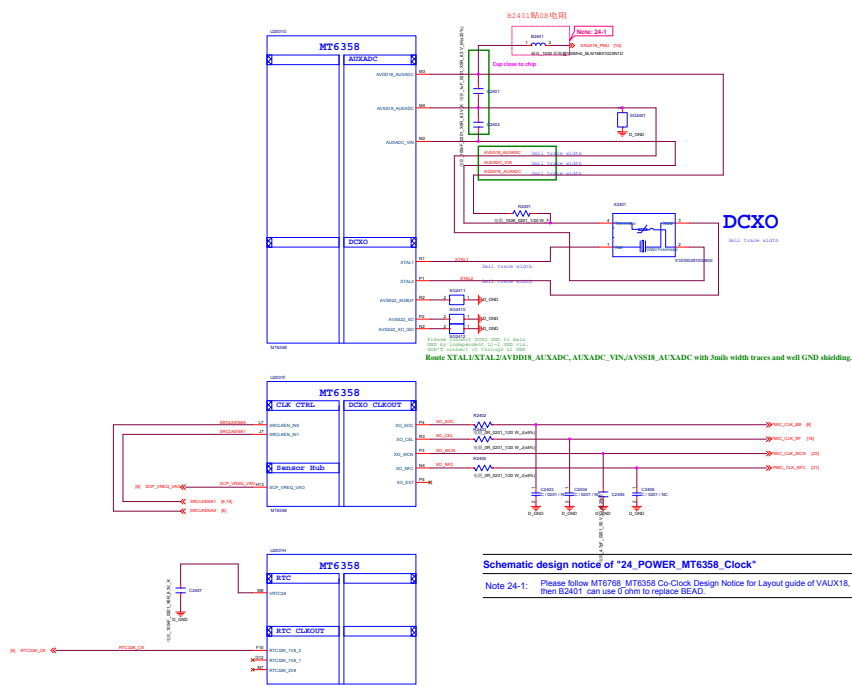
Note 14-1: R1401 please select 60.4 ohm (1%) resistor

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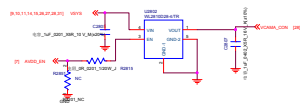
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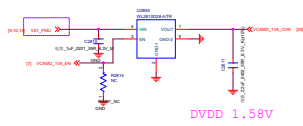


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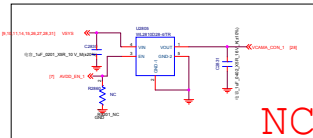
LDO for Dual Camera (VCAMA_EXT) 2.8V



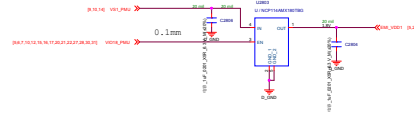
LDO for Depth Camera (VCAMD_EXT1) 1.58V



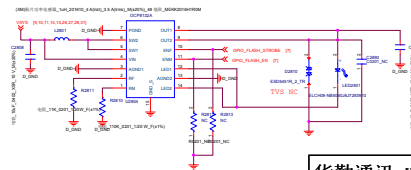
LDO for Dual Camera (VCAMA_EXT2) 2.8V



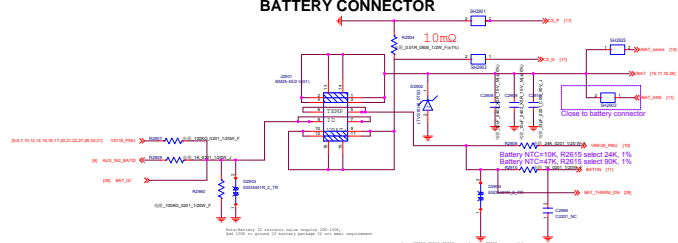
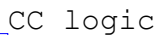
Ext. EMI_VDD1 for LPDDR4X VDD1



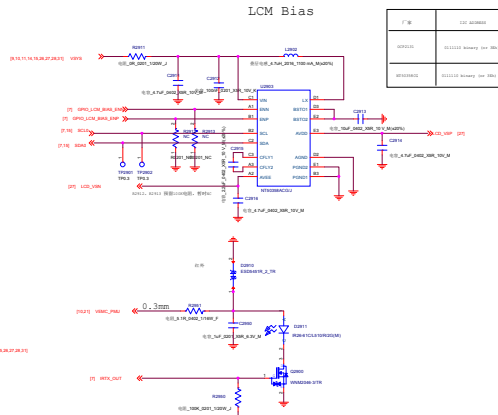
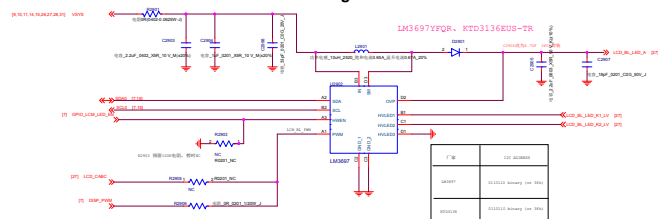
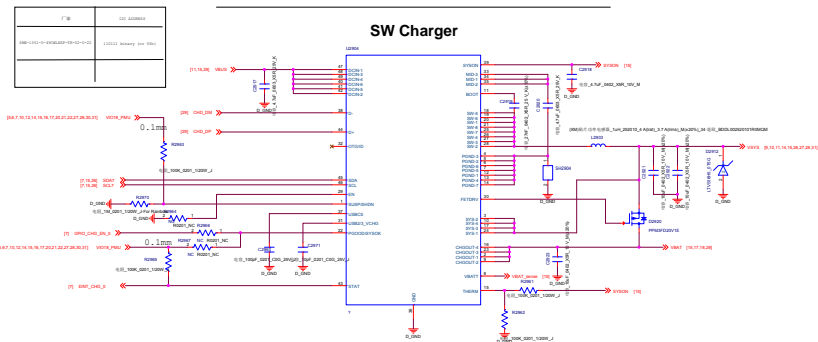
Flash LED 5V Boost



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Note 29-1: For better ESD or surge performance we need choose suitable device for system protection. Please refer to [Surge device selection guide V2.0] provide by MTK.



Title	01 Block Diagram
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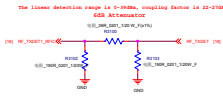
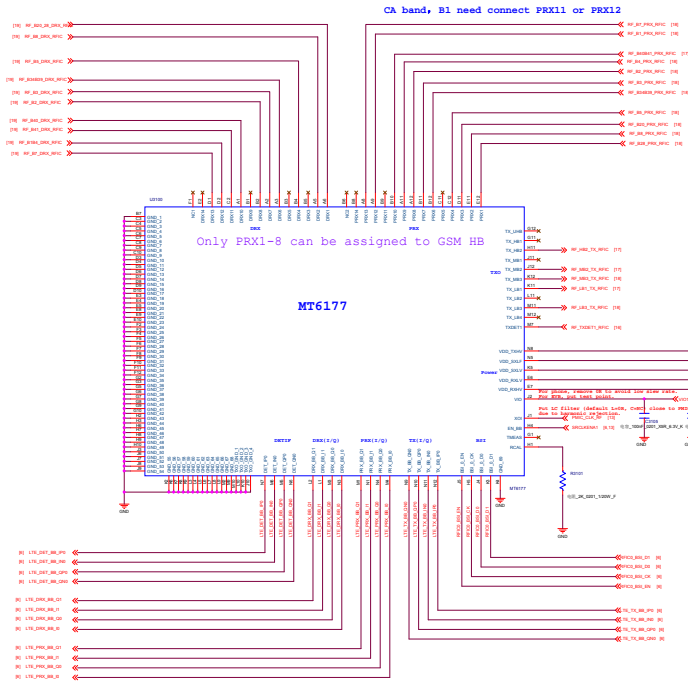
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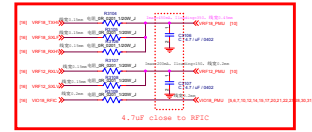
Rev
v1

Attenuator for Detector

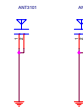
Transceiver



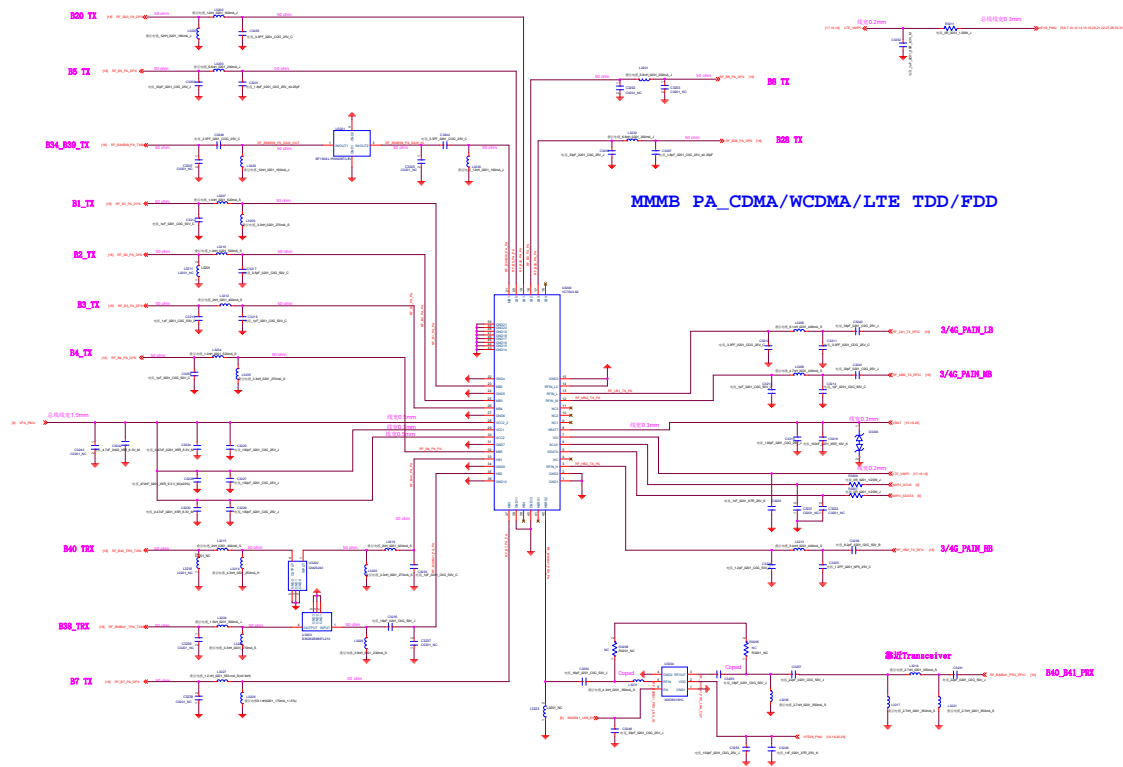
Power For MT6177



GND

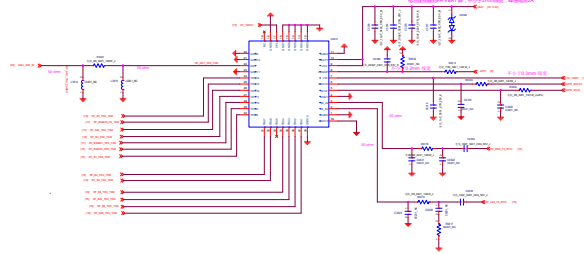


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Title 31_RF_MT6177_Pin_Out		
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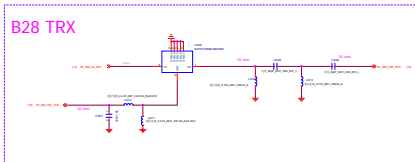
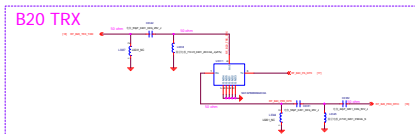
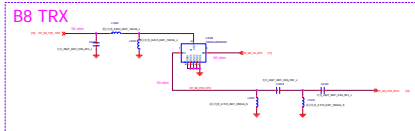
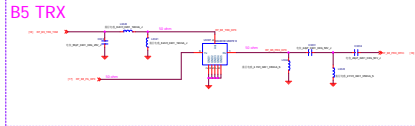
华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title 32_RF_MT6177_RF_TX		
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MAIN_ANT

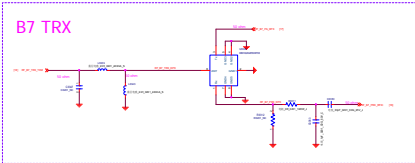


TXM_GSM

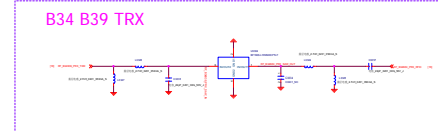
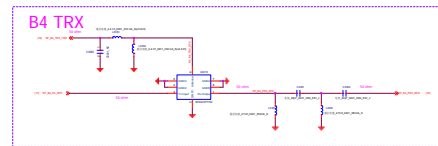
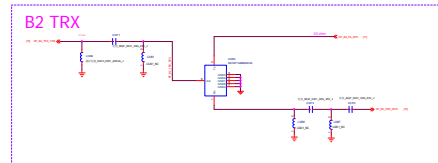
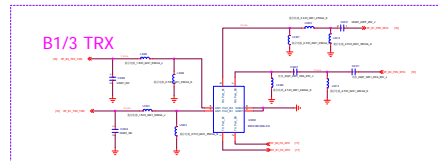
TRX_LB



TRX_HB

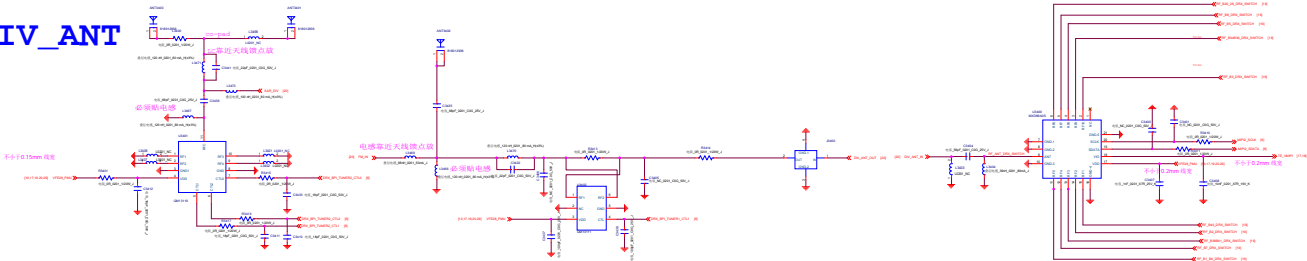


TRX_MB

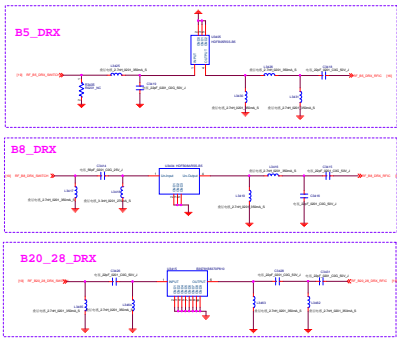


华勤通讯 Huaqin Telecom Technology Com.,Ltd		
Title 33_RF_MT6177_RF_PRX		
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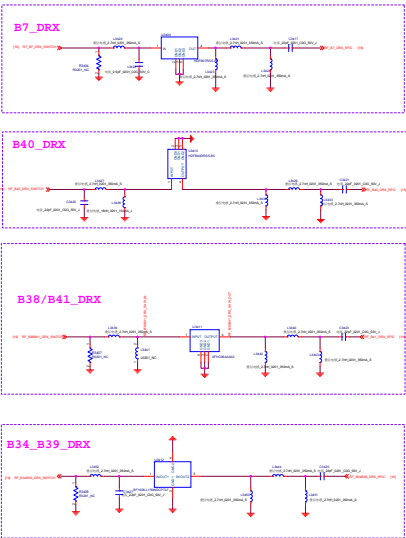
DIV_ANT



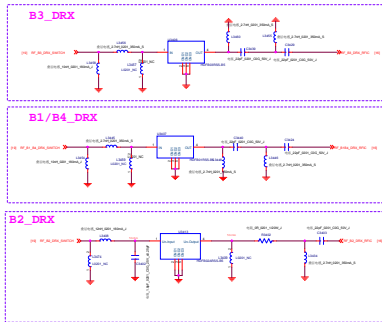
DIV_LB



DIV_HB



DIV_MB



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Title 34_RF_MT6177_RF_DRX			
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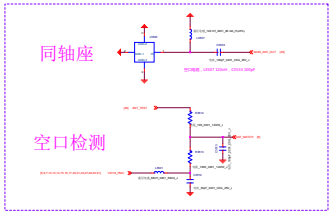
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3

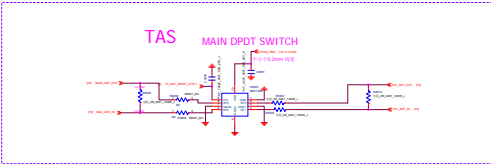
2

1

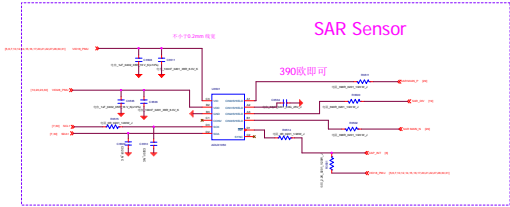
空口检测



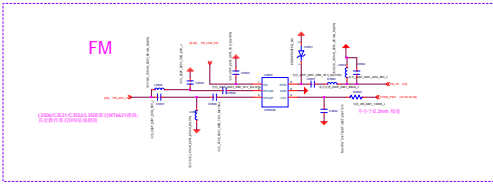
DPDT



SAR Sensor



FM



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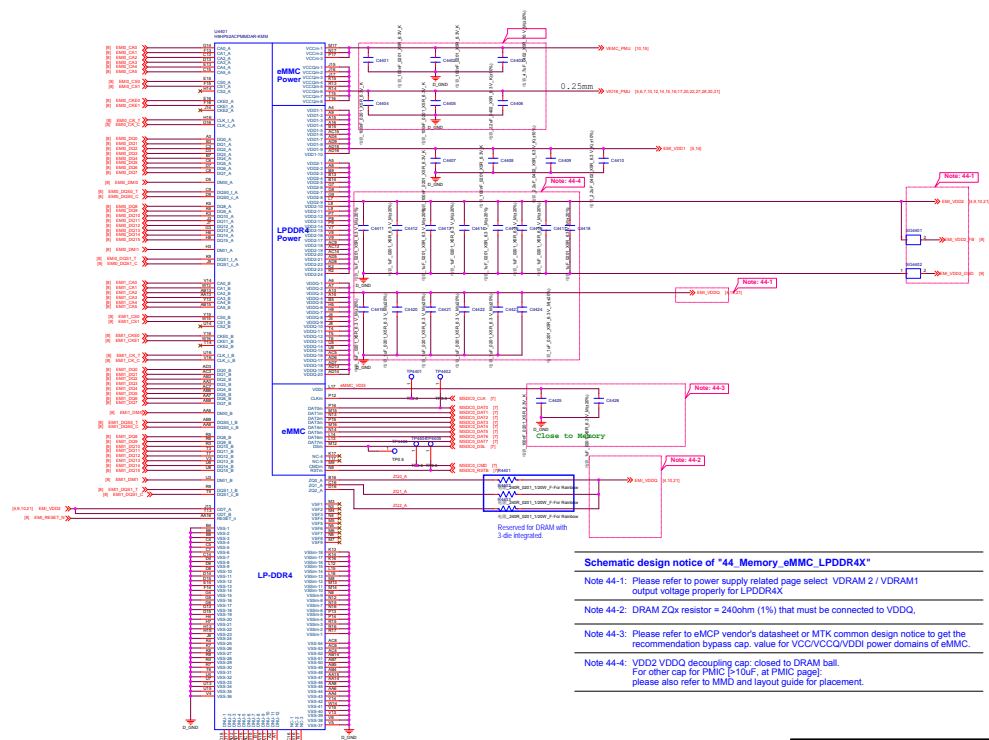
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4

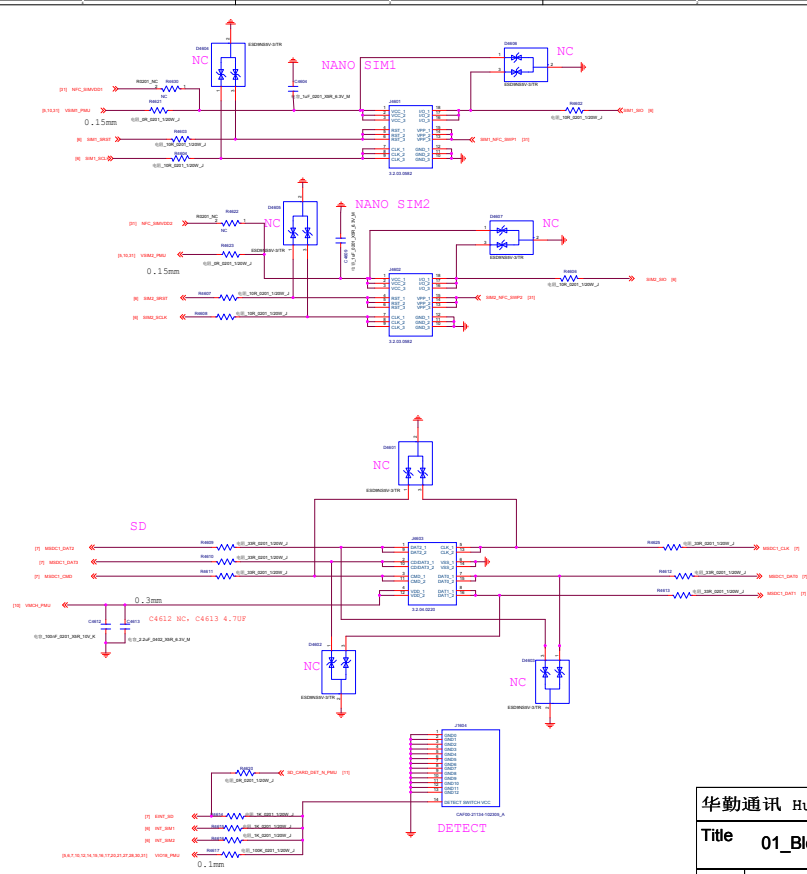
3

2

1



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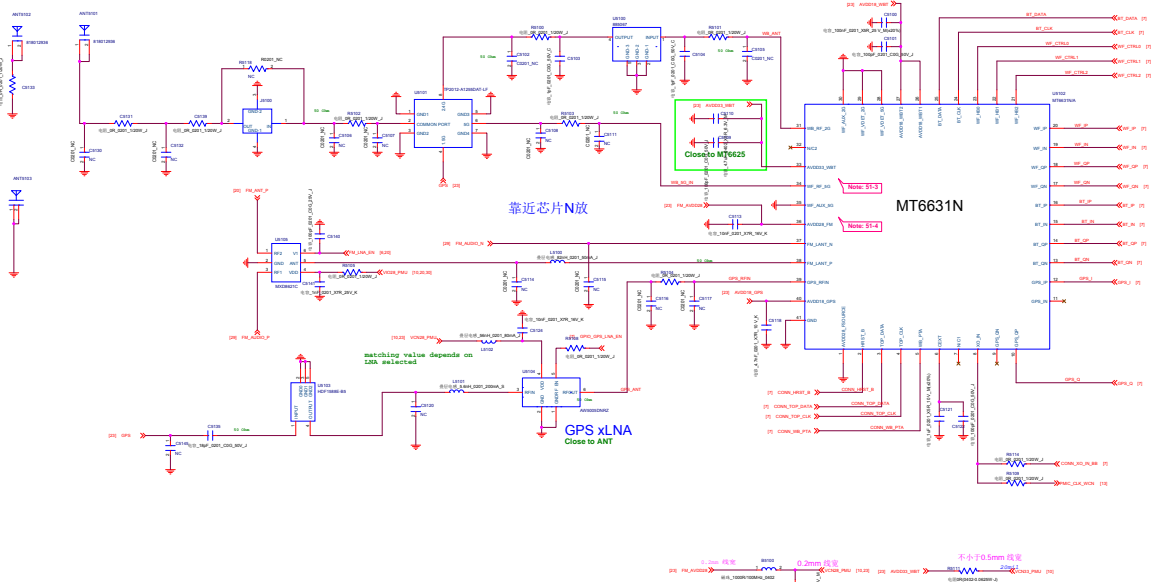


Note 46-1:

[Schematic design notice of "46_MEMORY_SD Card" page.](#)

For better ESD performance, please select suitable components for system protection.

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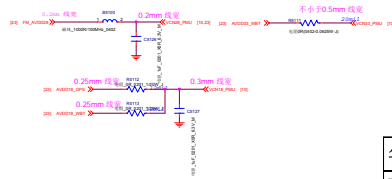
Schematic design notice of "51_CONNECTIVITY_CONSYS_MT6631"

Note 51-1: For RS015 size, please select 0402 size or larger one

Note 51-2: Please refer to MT6785 Baseband design notice for VCN33 LDO selection guide

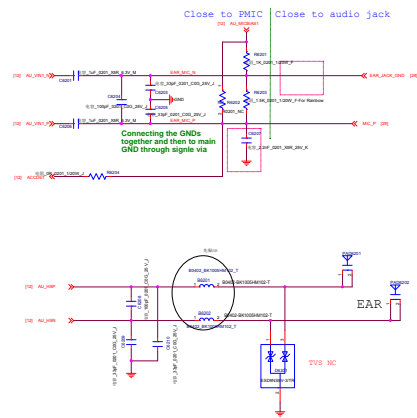
Note 51-3: If WFI 5G not support, connect pin 34(WF_RF_SG) to GND

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



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Earphone Microphone



Schematic design notice of "62_PERI_AUDIO_IO" page.

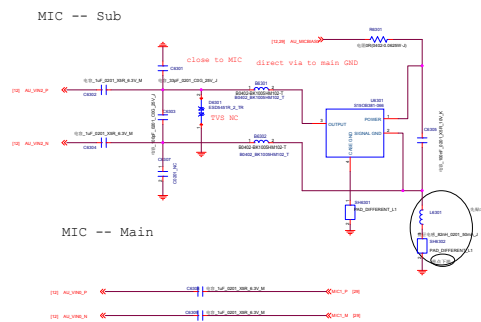
Note 62-1: Part # of BEAD6202, BEAD6203, BEAD6204 and BEAD6205 needs changed to "BLM18BD102SN1" for high THD performance (-90dB) but this BOM change will results in FM RSSI 10dB degraded .

Note 62-2: Reserved Cap for CS/RS test, please double check multi-key function when used

Note 62-3:

	Karylene JACK	Karylene JACK
	9 Main board	9 Sub board
	2 cam	100cr

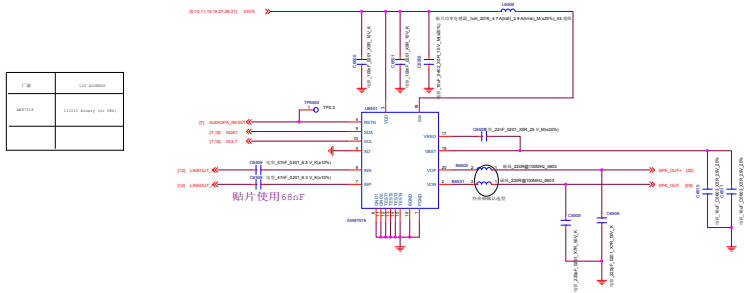
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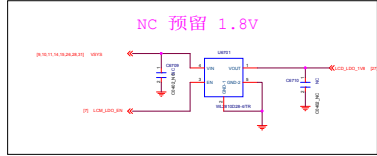
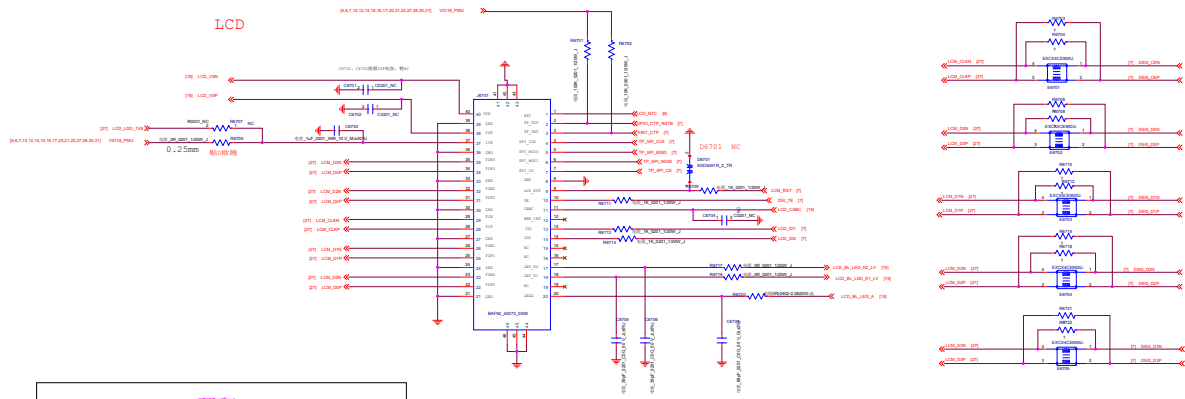
Schematic design notice of "63_PERI_AUDIO_IO" page.
Note 63-1: 1 uF for ACC mode

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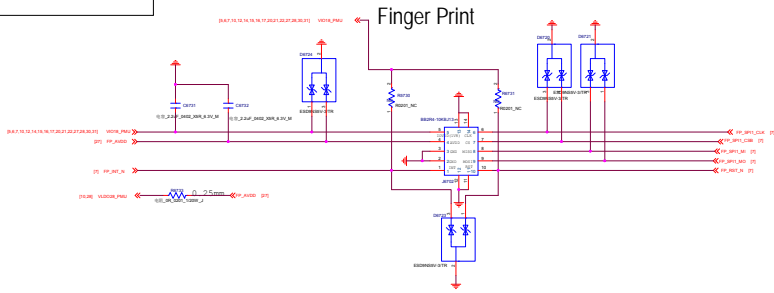
厂家	ISO ADDRESS
硬件地址	0030-101000



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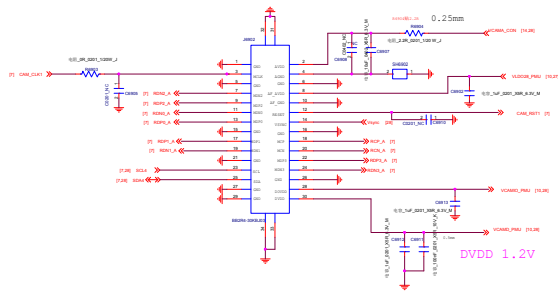
CAP tolerance above 50V!!!



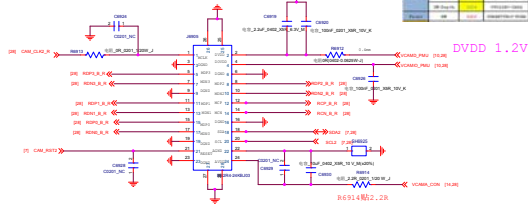
LCD-BACKLIGHT

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Main MONO Camera 13M



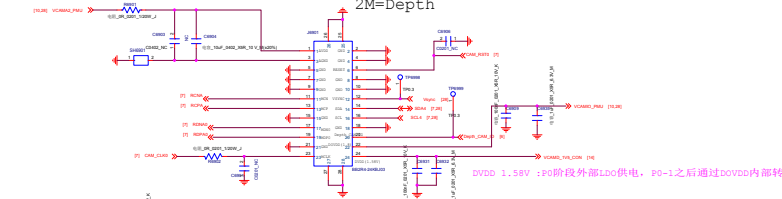
Front Camera - 8M



貼R6967、R6968，其他器件NC

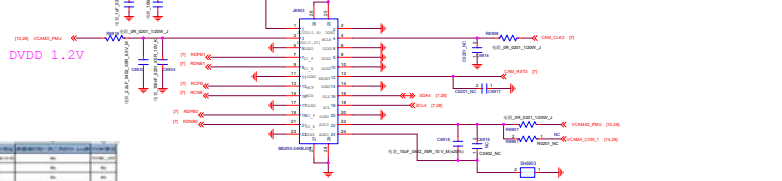
Pin	Function	Value
1	VDD	1.2V
2	VDDA	1.2V
3	DVDD	1.2V

2M=Depth

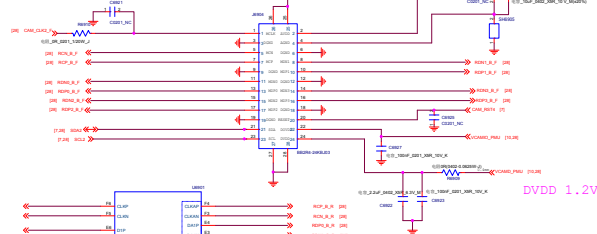


DVDD 1.5V : P0阶段外部LDO供电，P0-1之后通过DVDD内部转

5M=Macro



Rear Camera 8M



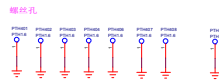
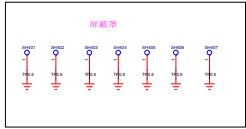
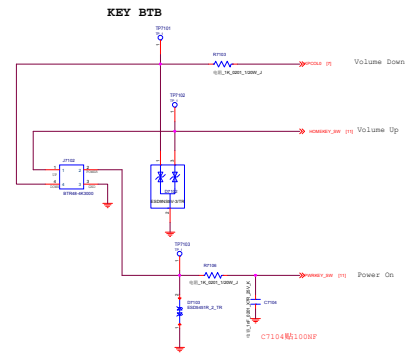
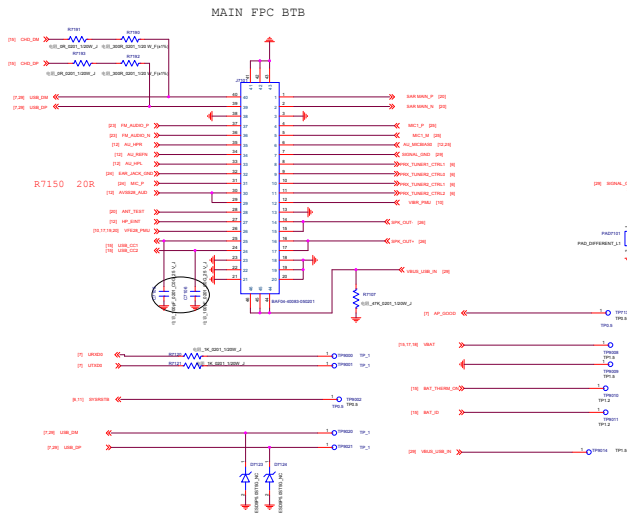
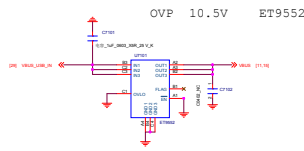
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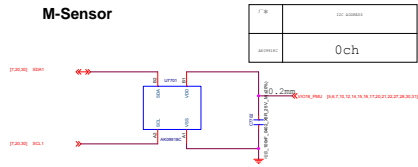
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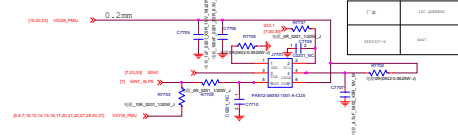
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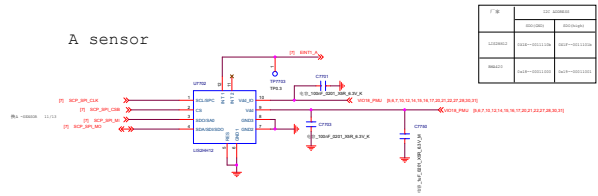
M-Sensor



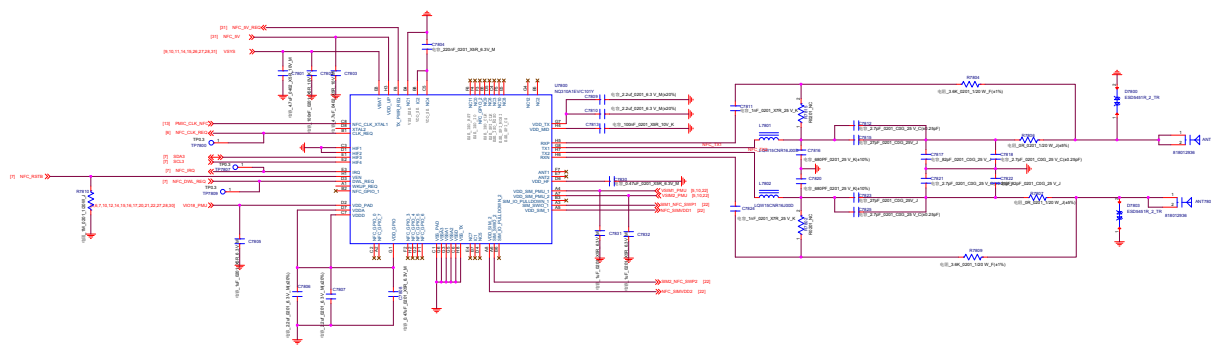
ALS PS STK3337-X



A sensor

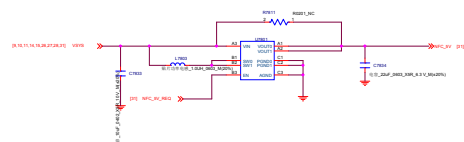


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NFC DCDC

DCDC no part number



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