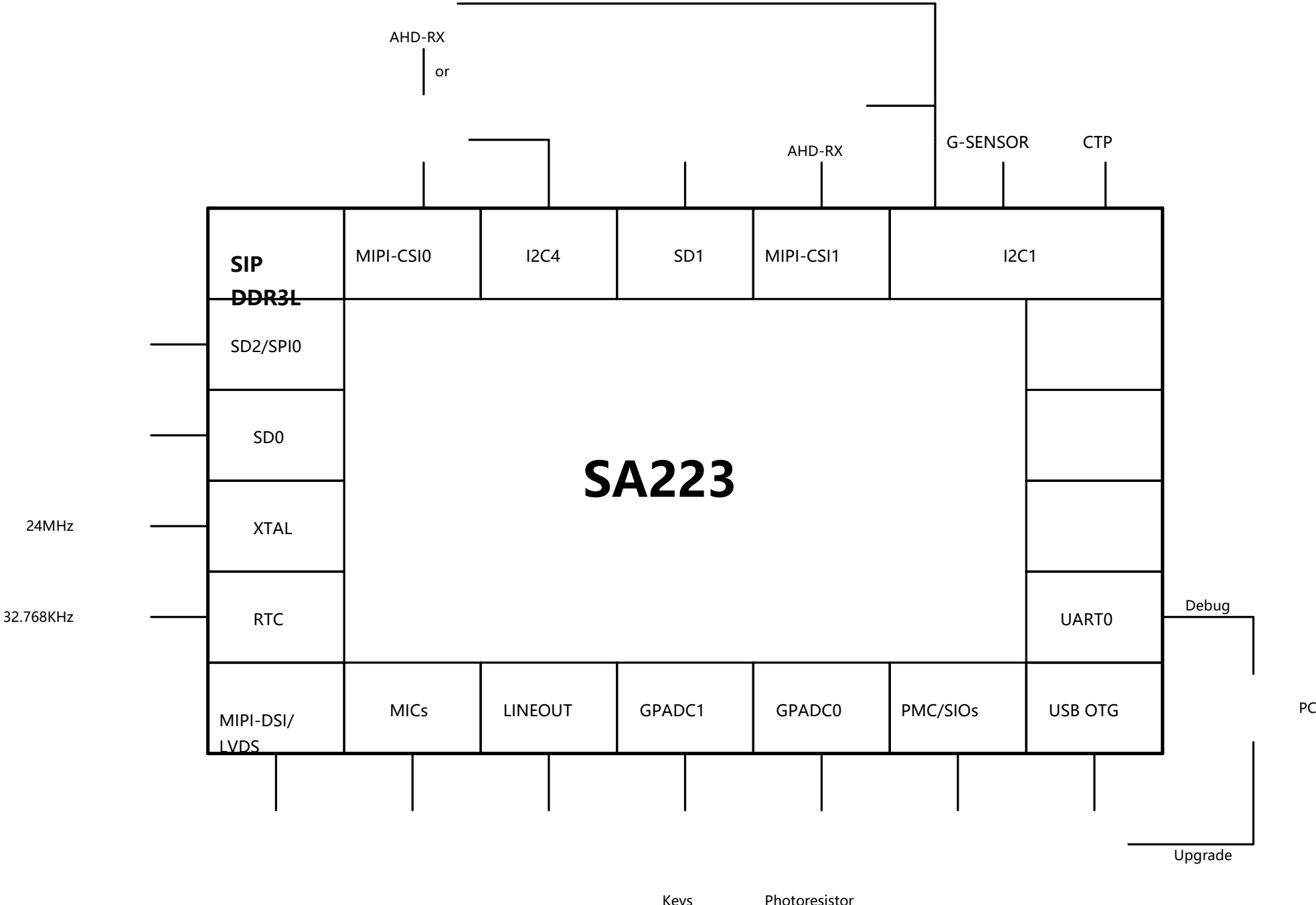


BLOCK DIAGRAM

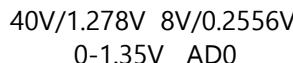
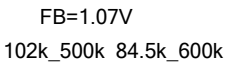
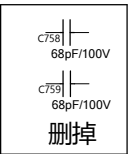


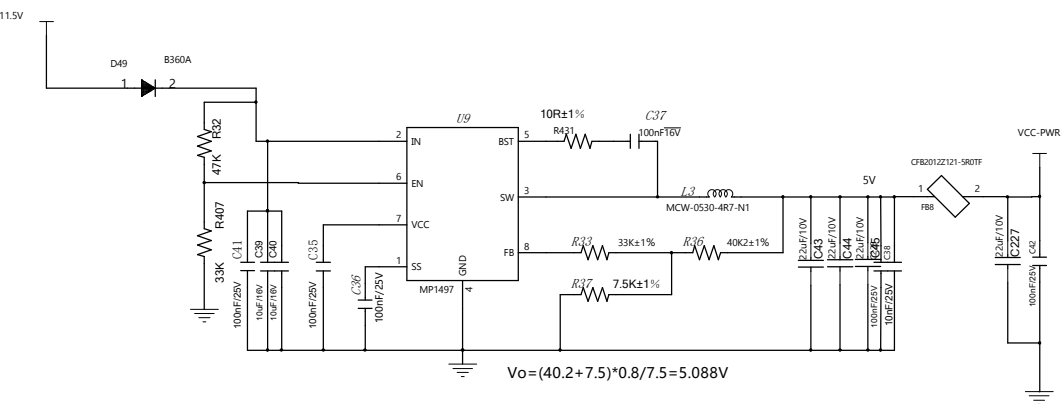
Change List

Version	Data	Description
V0.1	2021/6/8	Initial Release
V0.2	2021/7/21	Add Button Battery circiut
V0.3	2021/8/9	Upgrade description of Boot_sel and CTP Connector
V0.4	2021/9/7	Add PWM-SYS pin
V0.5	2021/11/19	

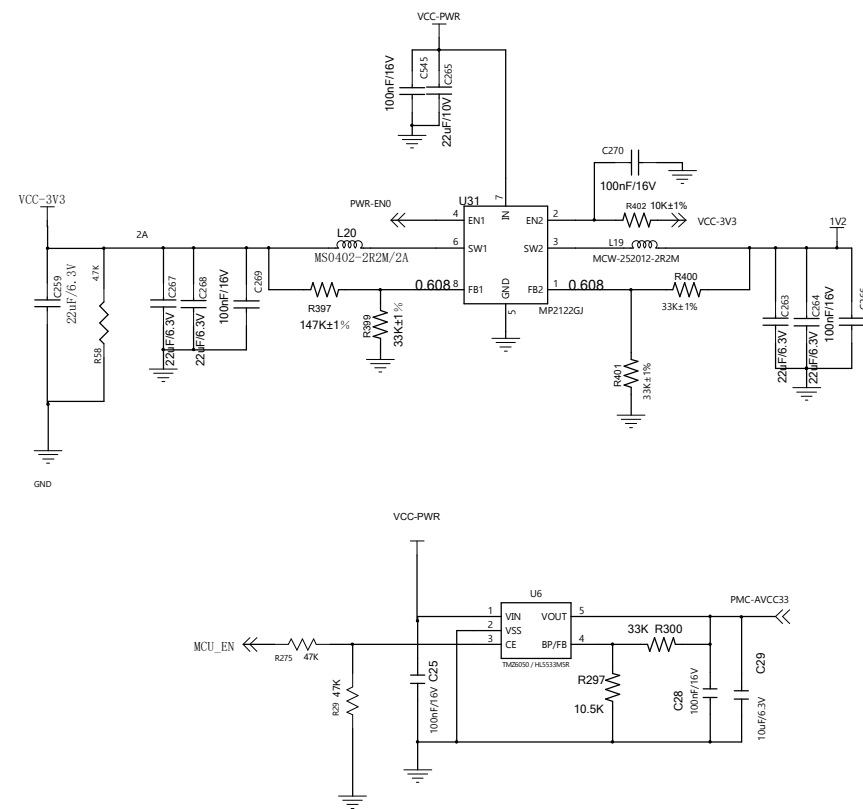
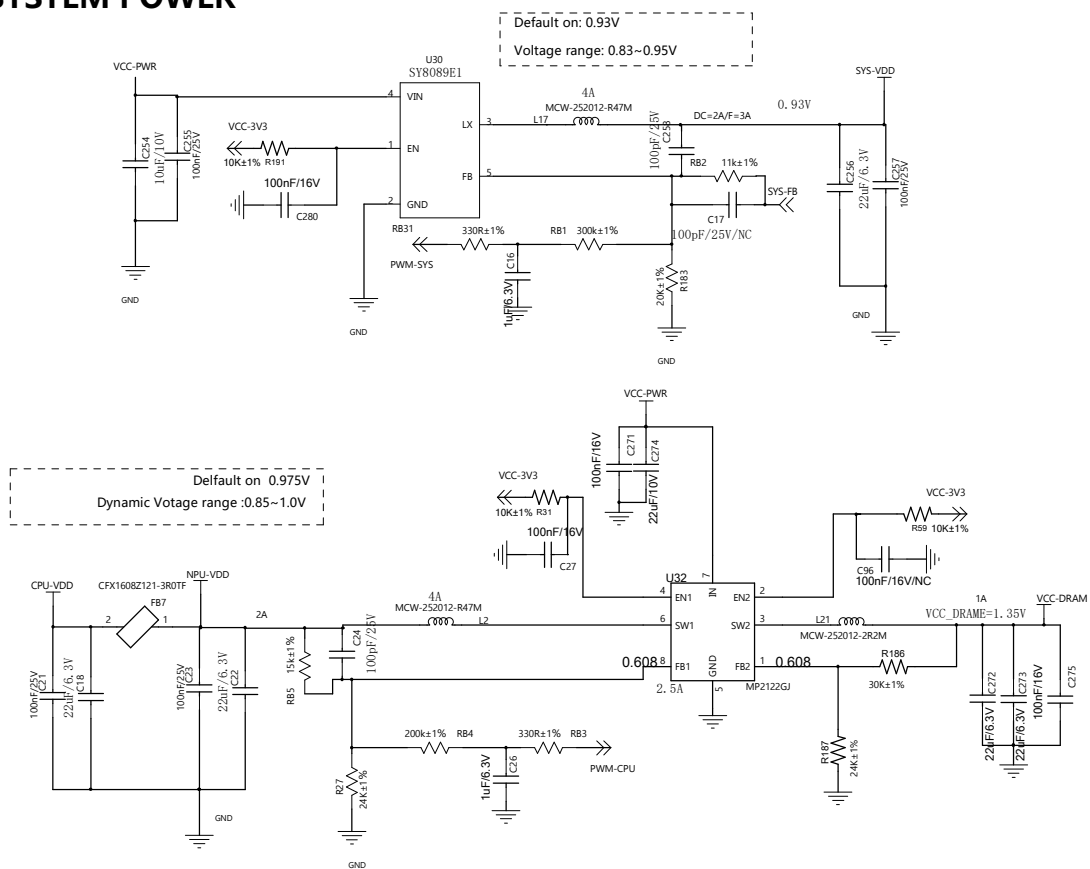
IO Distribution List 不带TFT

SI0 3V3	SI00	PWR-ENOA	PD 1V8	PD0	MCSI0-D3P/MSI1	EN	PC 3V3	PF13	PWM-SYS	
				PD1	MCSI0-D3N/MSI1	PWDN		PF14	UART0-TX	
	SI02	PWR-KEY		PD2	MCSI0-D1P/TP9930-D0			PF15	UART0-RX	
	SI03	PWR-WAKE0/UART3TX		PD3	MCSI0-D1N/TP9930-D1			PC2	SENSOR1	
	SI04	GS-WAKE/UART3RX		PD4	MCSI0-CLKP/TP9930-D2			PC3	SENSOR2	
	SI05	SIO5/ACC		PD5	MCSI0-CLKN/TP9930-D3			PC4	SENSOR3	
	SI06	SIO6/POWER_EN		PD6	MCSI0-D0P/TP9930-D4	MIPI CAMERA1		PC5	SENSOR4	
PA 3V3	PA0	SD0-D1	SD CARD	PD7	MCSI0-D0N/TP9930-D5		PC6	SENSOR5		
	PA1	SD0-D0		PD8	MCSI0-D2P/TP9930-D6		PC7	4G_EN		
	PA2	SD0-CLK		PD9	MCSI0-D2N/TP9930-D7		PC10	GPS_EN		
	PA3	SD0-CMD		PD10	TP9930-PCLK		PC11	5VOUT_EN		
	PA4	SD0-D3		PD11	MCSI0-REST/TP9930-RST		PC12	MDSI-D3P		
	PA5	SD0-D2		PD12	AC-SHUTDOWN		PC13	MDSI-D3N		
PB 3V3	PB0	SD2-D1/SPI-CSN	SPI-NAND	PD13	MCSI0-MCLK/TP9930-MCLK		PC24	0104-SCL		
	PB1	SD2-D0/SPI-CLK		PD14	I2C4-SCK		PC25	0104-SDA		
	PB2	SD2-CLK/SPI-D0		PD15	I2C4-SDA		PC26	SD0_CDIN		
	PB3	SD2-CMD/SPI-D1		ADC0	BAT_ADC	ADC	PC27	SD0_CDOOUT		
	PB4	SD2-D3/SPI-D2		ADC1	KEY_ADC		POL	WEG		
	PB5	SD2-D2/SPI-D3		ADC2			32KOUT	WIFI-PWR-EN		
PE 3V3	PE0	MCSI1-D1P	MIPI CAMERA2	GPADC 1V8	ADC3	SENSOR_OUT	PIO 3V3	BOOT-SEL0	SYS_LED	
	PE1	MCSI1-D1N			PF0	IR-RX		BOOT-SEL1	MSI1-RST	
	PE2	MCSI1-CLKP			PF1	PWM-CPU				
	PE3	MCSI1-CLKN			PF2	WIFI-D1				
	PE4	MCSI1-D0P			PF3	WIFI-D0				
	PE5	MCSI1-D0N			PF4	WIFI-CLK				
	PE6	MCSI1-MCLK			PF5	WIFI-CMF				
	PE7	I2C1-SCK			PF6	WIFI-D3				
	PE8	I2C1-SDA			PF7	WIFI-D2				
	PE9	GPS-RX			PF8	UART1-TX				
	PE10	SD0_CD			PF9	UART1-RX				
					PF10	CAM-PWR-EN/TP9930-IRQ				
					PF11	TP-RESET				
					PF12	VO-PWM				





SYSTEM POWER

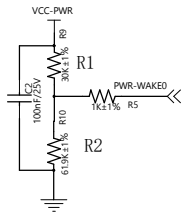


Notice: if eMMC is used,Mount A,NC B;
if SPI NAND is used ,Mount B ,NC A

eMMC

A

PWR-WAKE0 << PWR-WAKE0
GPADC0 << GPADC0
PWR-KEY << PWR-KEY

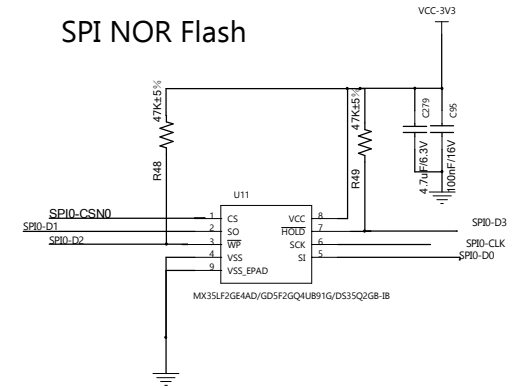


Notice:The value of R1 and R2 is fixed

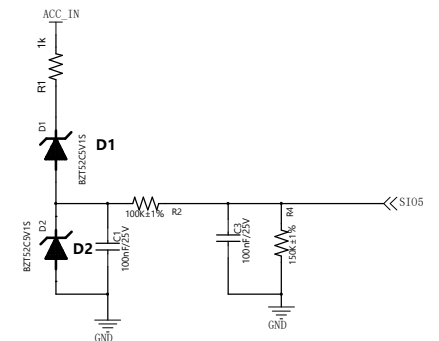
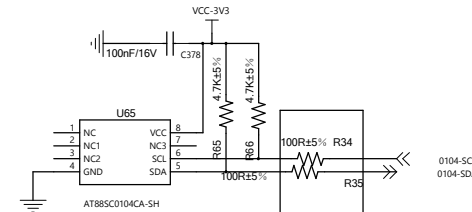
SPI-NAND FLASH

VCC-PB and the power supply voltage of SPI Flash should be the same,
using 1V8 or 3V3 refer to the flash spec.

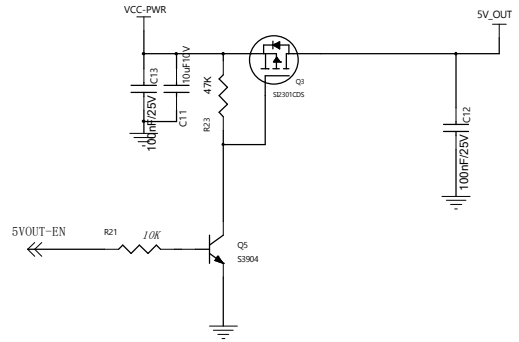
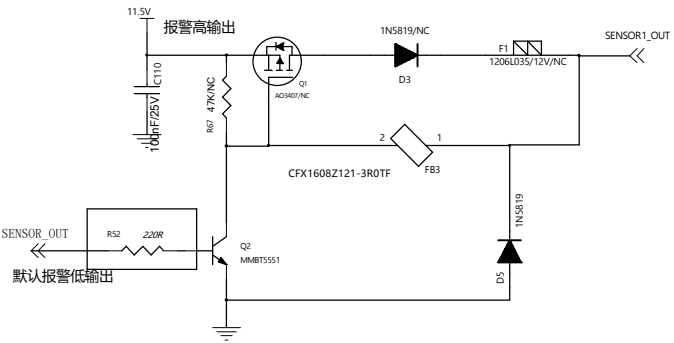
SPI NOR Flash



B



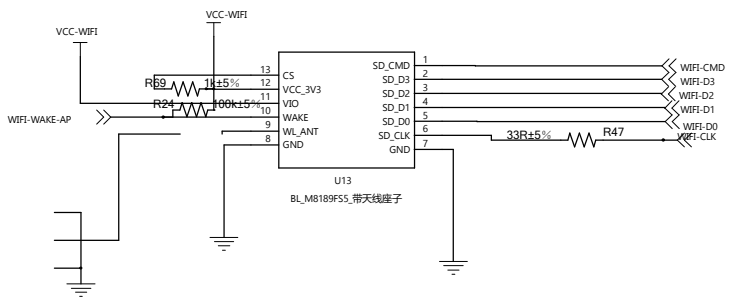
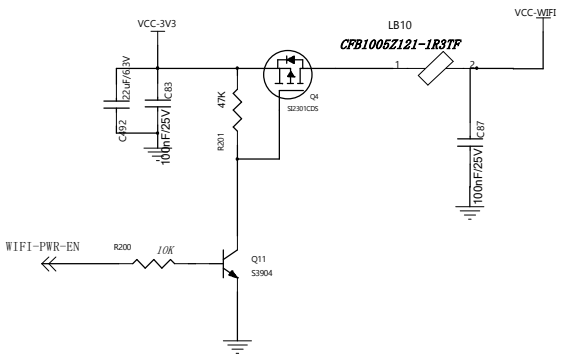
ACC	D1	D2
5V	0R	NC
12V/24V	5.1V Stabilivolt	5.1V Stabilivolt



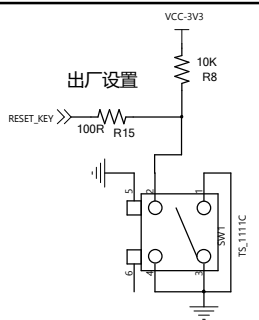
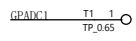
Notice:

- 1.IOVDD=1.8V as default;
- 2.Suggest to place a 1nF capacitor close to the sensor reset pin on the sensor board;
- 3.GND Solder mask area is suggested to reserved for ESD rectification.

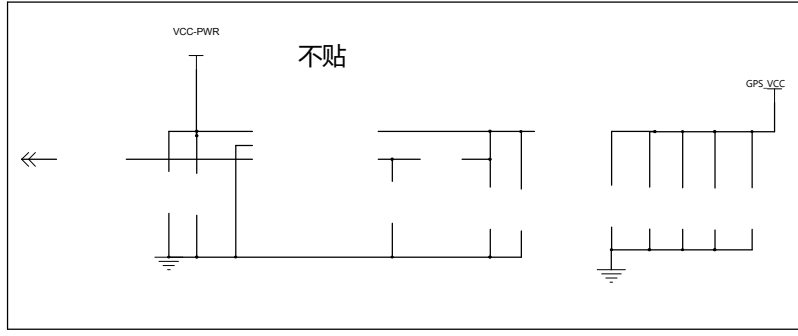
WIFI



KEY

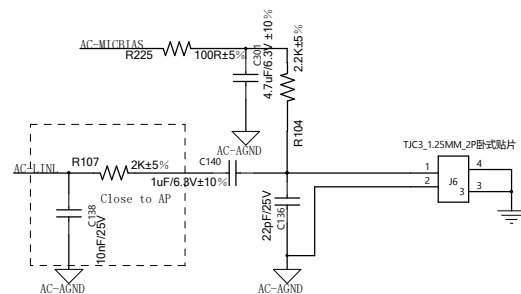


GPS_EN



AUDIO

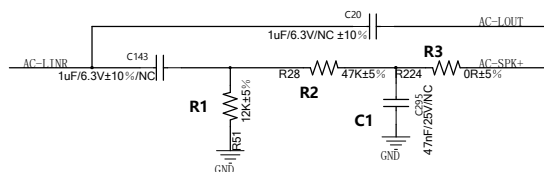
AMIC



NOTICE: A and B can not be used at the same time.

A

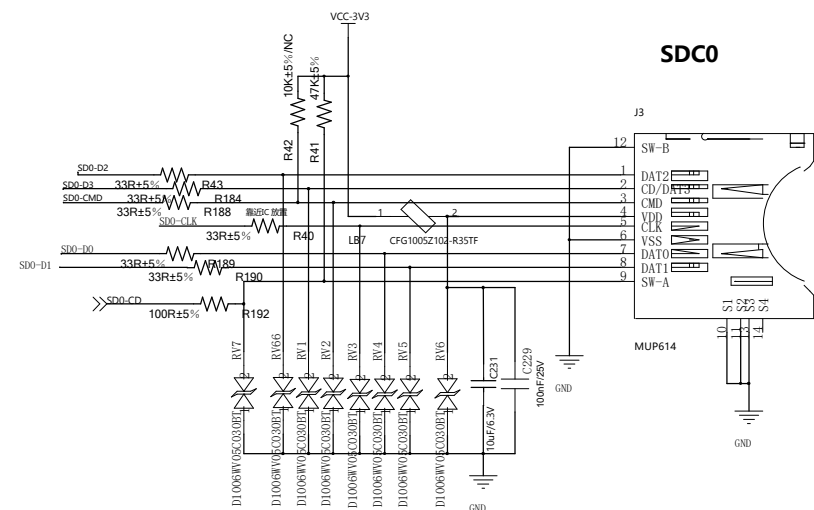
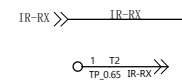
Return pass for echo cancellation



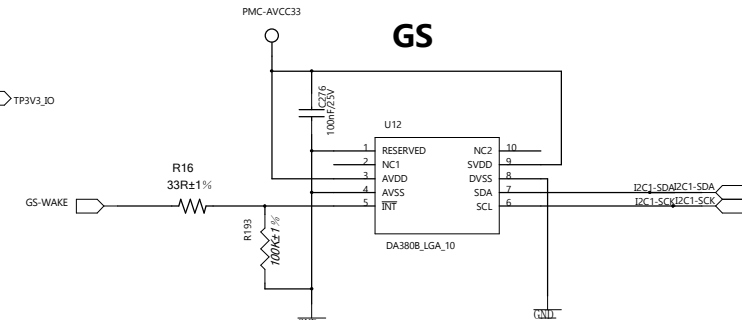
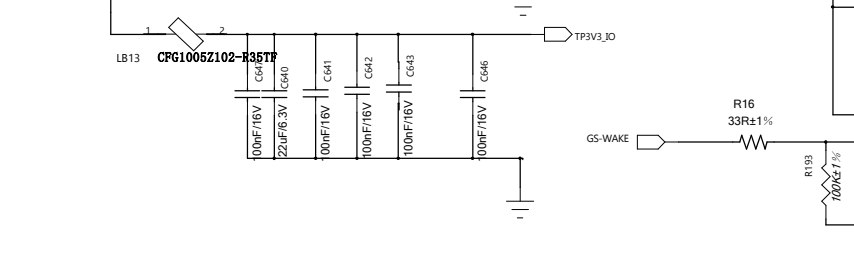
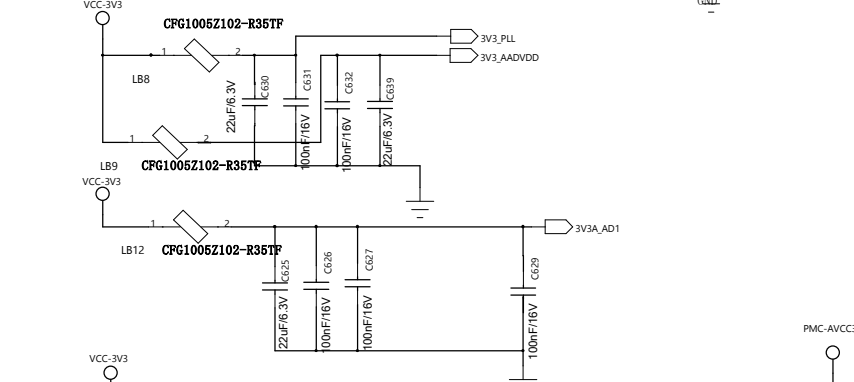
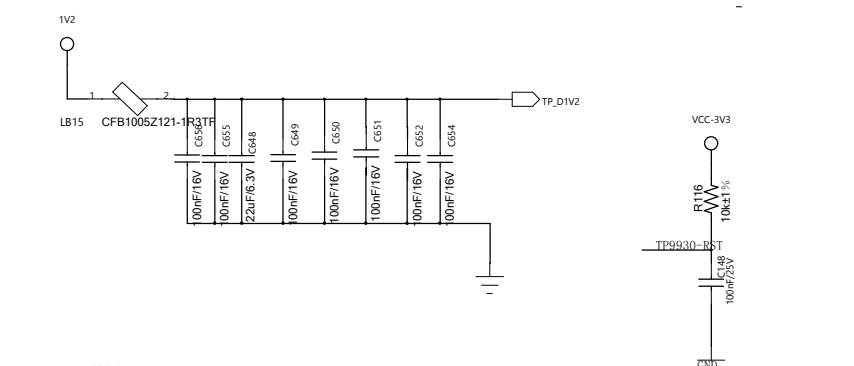
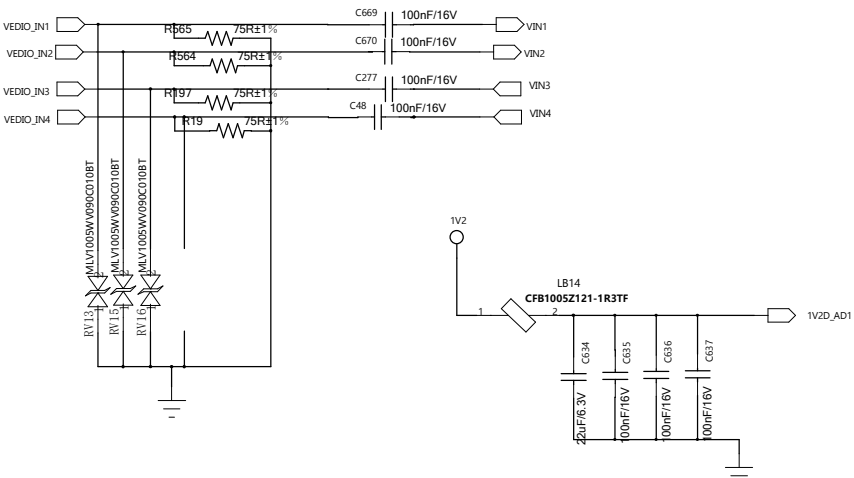
AP	R1	R2	R3	C1
Analog	12K	47K	0R	NC
Digital	12K	47K	100R	47nF

B

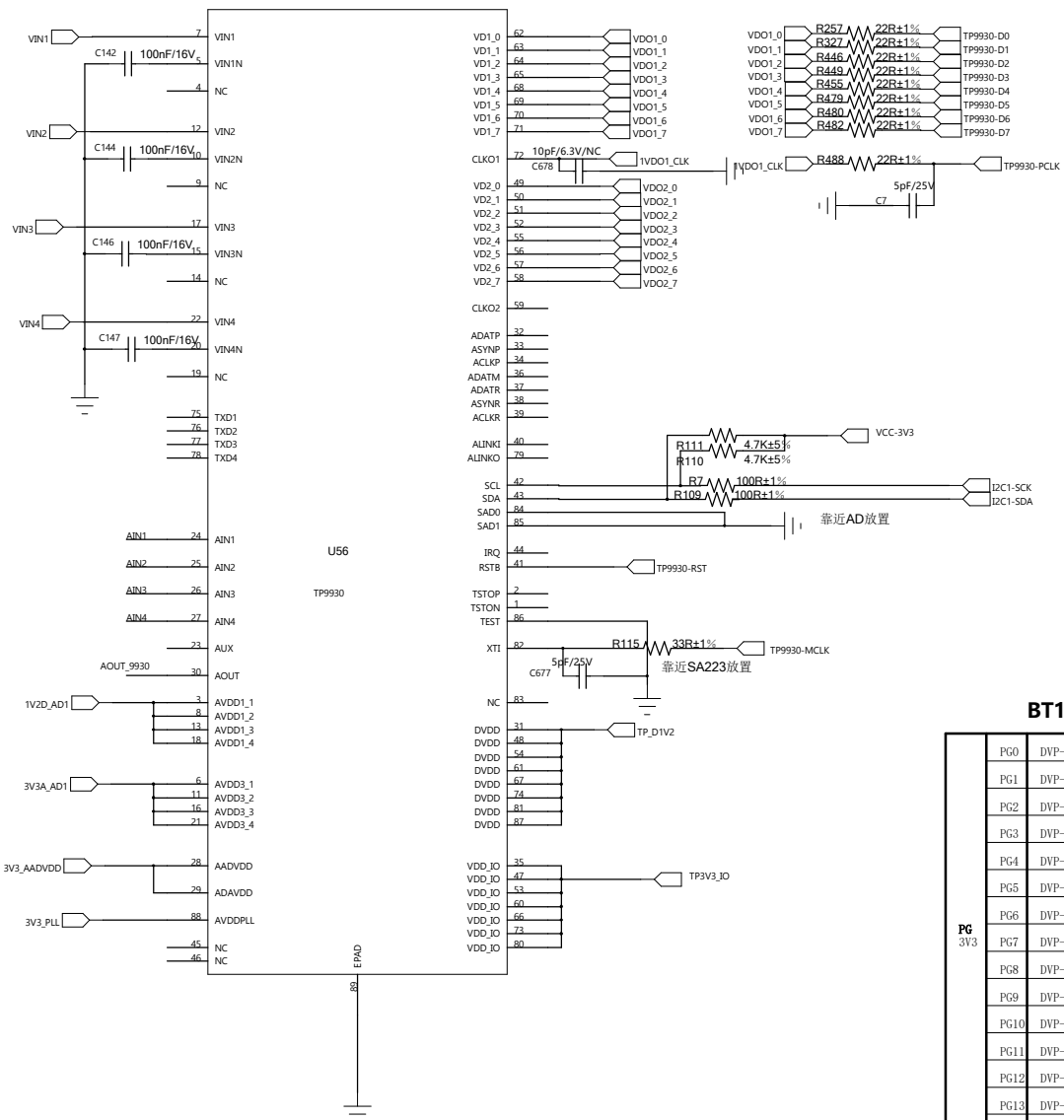
SD CARD

**IR RX**

AD1

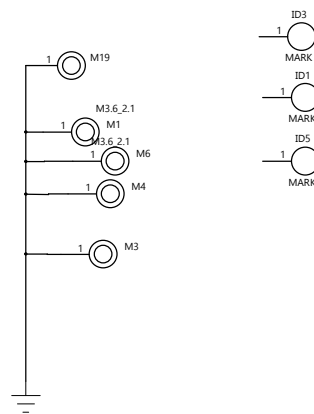
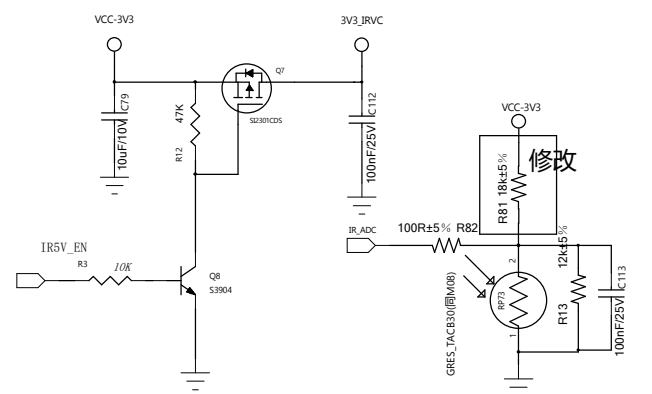
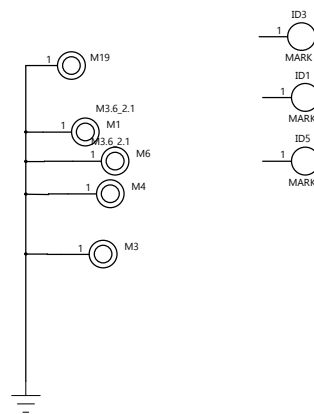
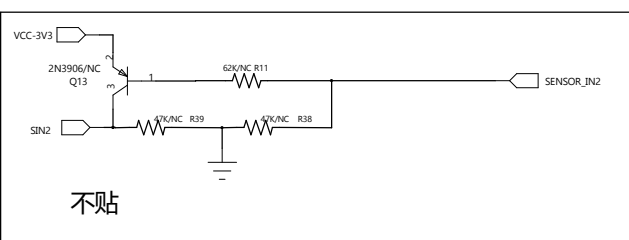


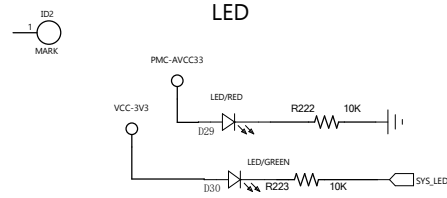
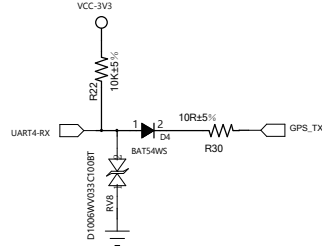
TP9930



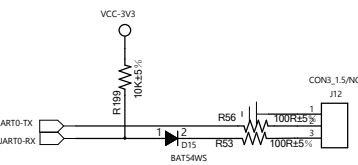
BT1120		BT656	
PG0	DVP-D0	0	/
PG1	DVP-D1	1	/
PG2	DVP-D2	2	/
PG3	DVP-D3	3	/
PG4	DVP-D4	4	DVP-D4
PG5	DVP-D5	5	DVP-D5
PG6	DVP-D6	6	DVP-D6
PG7	DVP-D7	7	DVP-D7
PG8	DVP-D8	8	DVP-D8
PG9	DVP-D9	9	DVP-D9
PG10	DVP-D10	10	DVP-D10
PG11	DVP-D11	11	DVP-D11
PG12	DVP-D12	12	/
PG13	DVP-D13	13	/
PG14	DVP-D14	14	/
PG15	DVP-D15	15	/

SADO	SAD1	I2c address
0	0	0x44
0	1	0x45
1	0	0x46
1	1	0x47

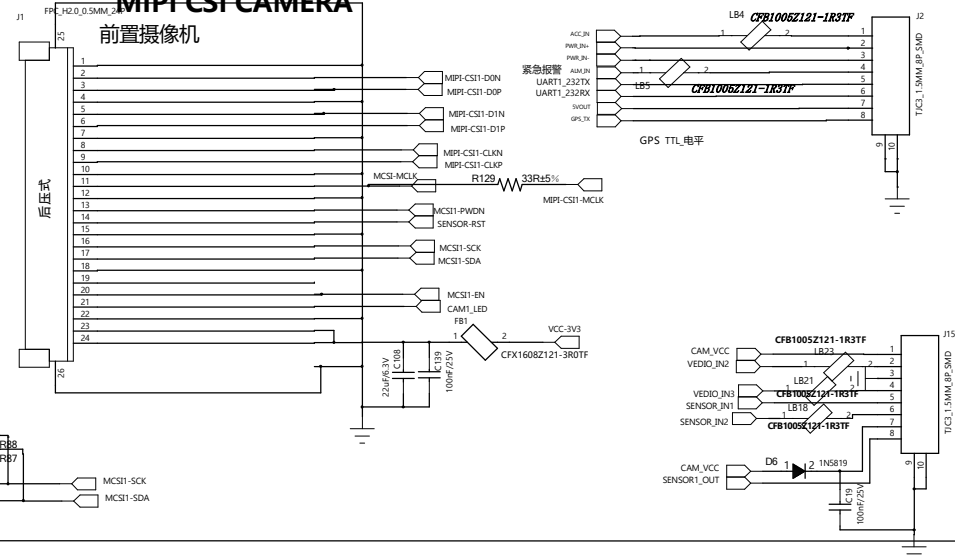




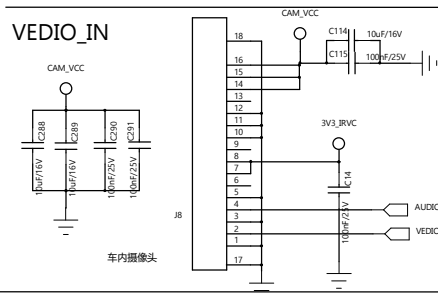
Connector for Debug



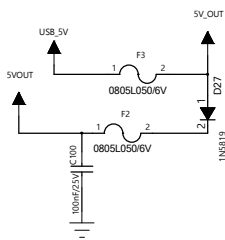
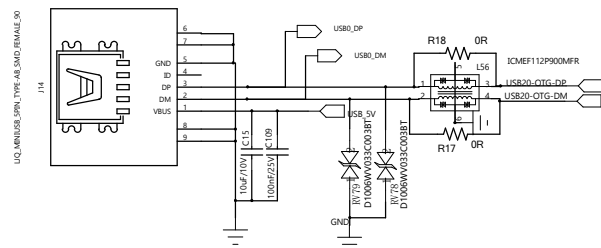
GC2053 TO_镜头板 MIPI CSI CAMERA 前置摄像头



VEDIO_IN

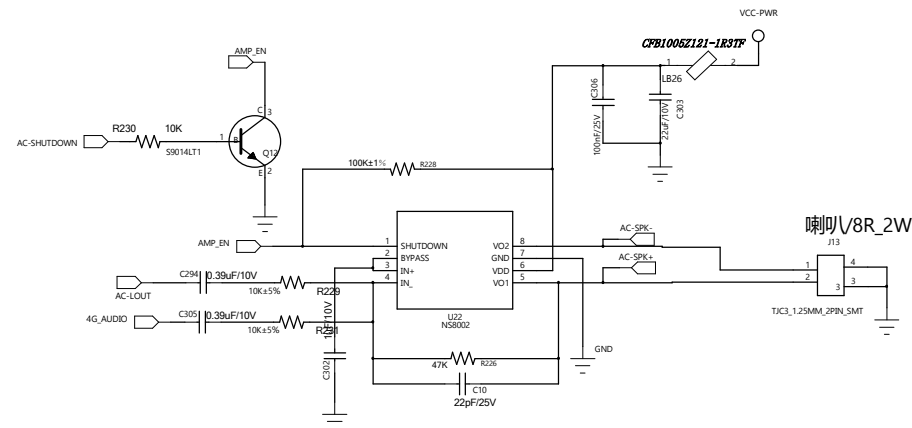


USB



SPEAKER

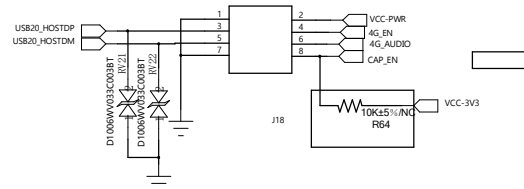
Notice:
LPA4871:8C 1W Load typically



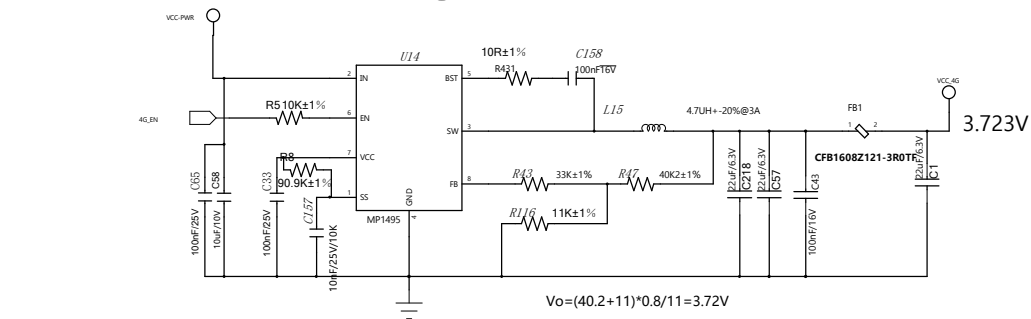
Notice:
1. 0dB Peak-to-Peak output amplitude of lineout is 1.4V.
2. Gain of PA powered with 5V is setted to 5 by R1 and R2, then the output waveform will not distorted when playing audio files with a volume lower than -3dB.

4G

TO_4G



4G



$$V_o = (40.2 + 11) \cdot 0.8 / 11 = 3.72V$$

