


**Schematics Index:**

Revision	Description	Date	Drawn	Checked
Ver 1.0	Ver 1.0	2021-08-31	ZQ	
Ver 2.0	P13页: 主控端PALMIPIB-CSI-CKN/CKP交换; P14页: PE16改为CSI0-SCK; PE17改为CSI0-SDA; P16页: VCC-PL改为VCC-PE;	2021-12-24		

- D
- P01: REVISION HISTORY
  - P02: BLOCK
  - P03: POWER TREE
  - P04: GPIO ASSIGNMENT
  - P05: POWER
  - P06: CPU
  - P07: PF/PG/PH/PI
  - P08: DDR3\_16X1
  - P09: eMMC/NOR
  - P10: CARD/JTAG/UART
  - P11: AUDIO/KEY/ADC
  - P12: LCD/CTP/DSI
  - P13: MIPI CSI/PI
  - P14: CSI/RGMII/RMII
  - P15: SENSOR/USB
  - P16: WIFI
  - P17: POWER TEST

B

A

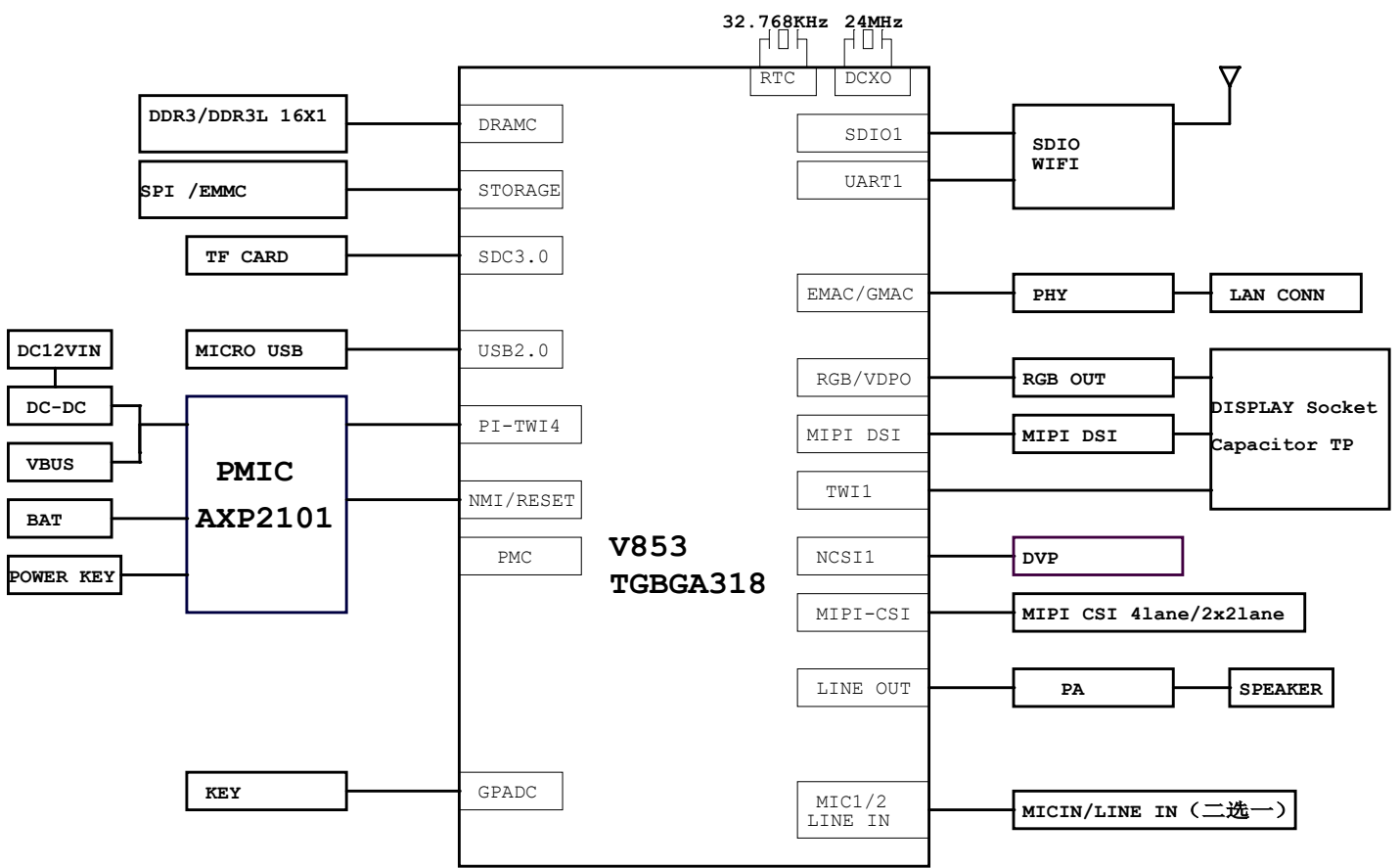
			<b>AllWinner Technology Co., Ltd</b>		
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D

C

B

A



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# POWER TREE

4

3

2

1

DEFAULT POWER ON  
 DEFAULT POWER OFF

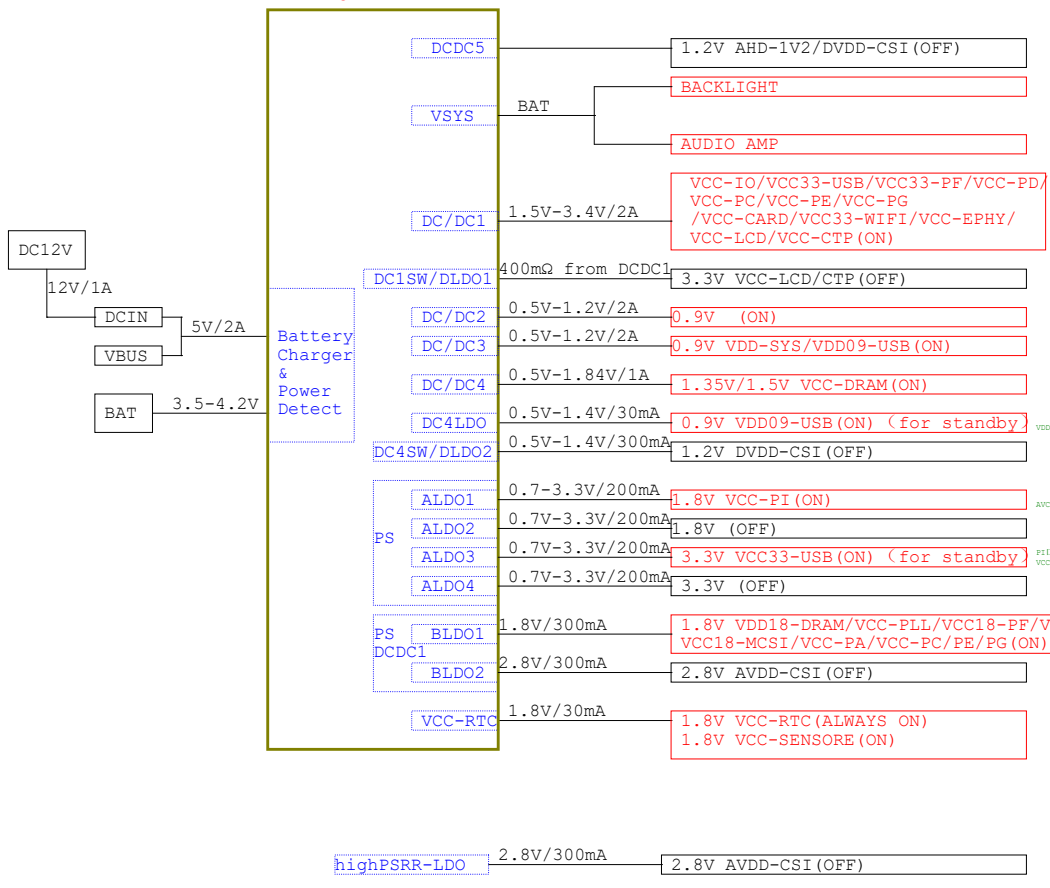
D

C

B

A

## AXP2101



VCC-PC/VCC-PE/VCC-PG 开发板默认为3.3V  
 VCC-PA/PD开发板默认为1.8V

VDD09-USB for usb standby

AVCC 默认使用内部LDO输出

PI口供电外挂一个100nF(开发板)  
 VCC33-USB for usb standby



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5

4

3

2

1

D

C

B

A


5

4

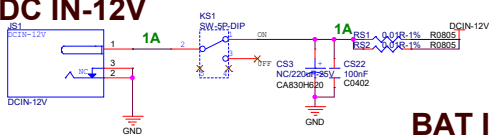
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2

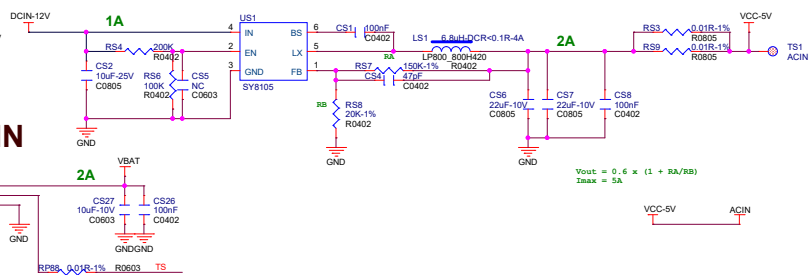
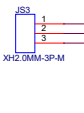
1

	<b>AllWinner Technology Co., Ltd</b>	
	Design Name: V853-PER1	
	Size: A3	Page Name: GPIO ASSIGNMENT
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# DC IN-12V

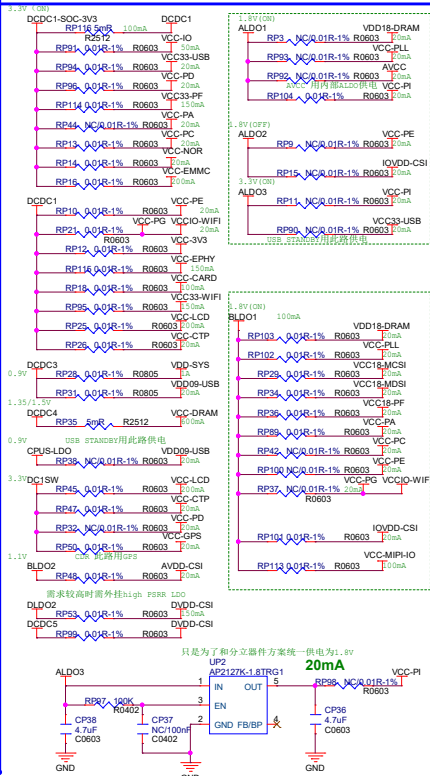


# BAT IN

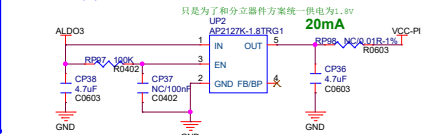
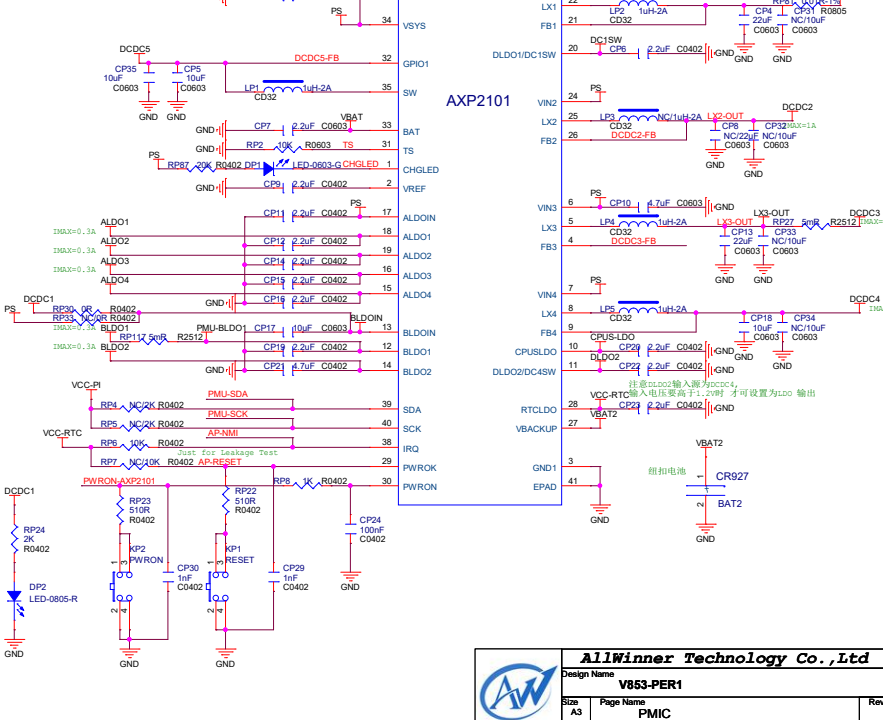


$$V_{out} = 0.6 \times (1 + \frac{R_{A2}}{R_{A1}})$$

$$I_{max} = 5A$$

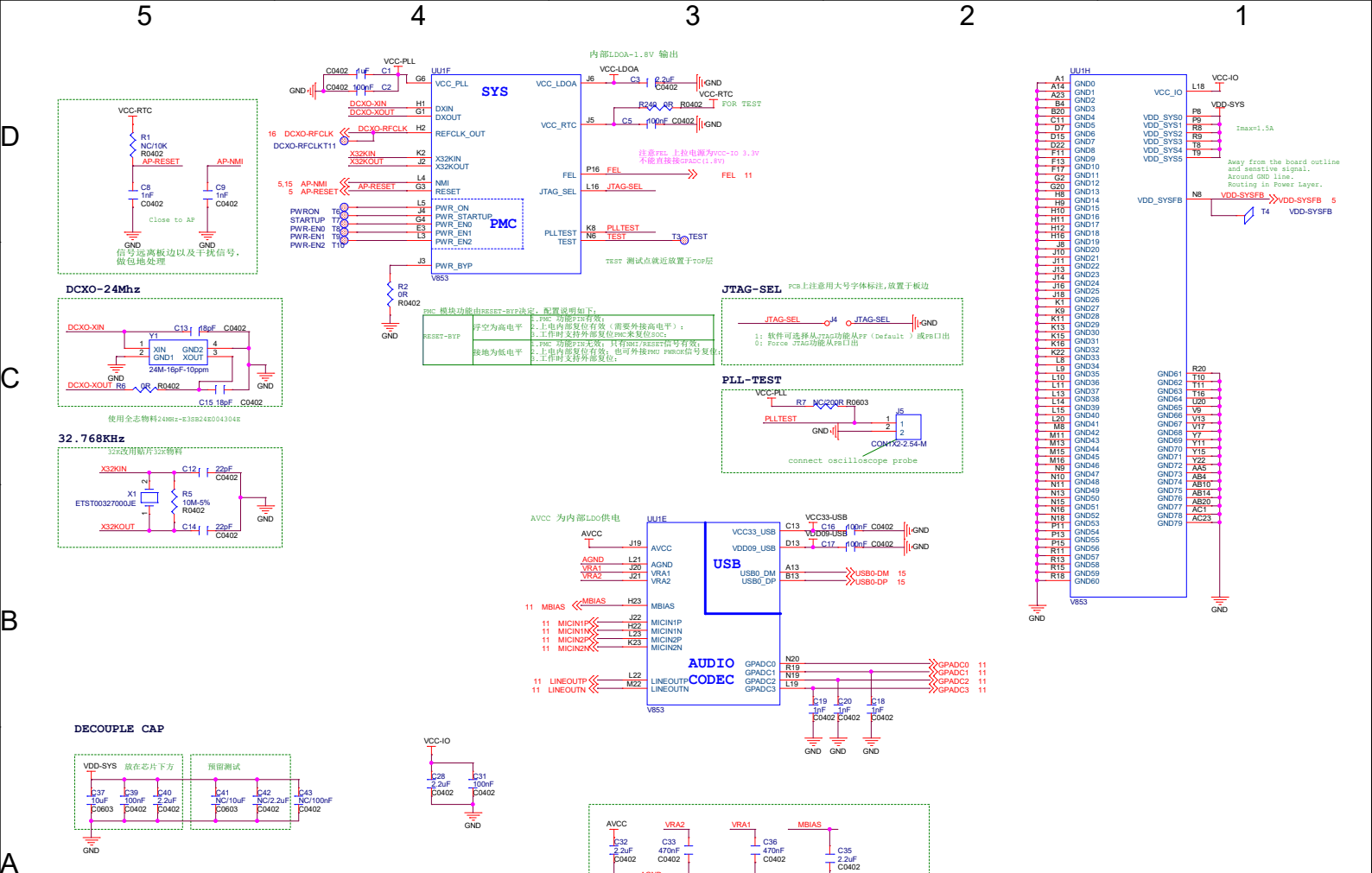


# AXP2101



只是为了和分立器件方案统一供电为1.8V

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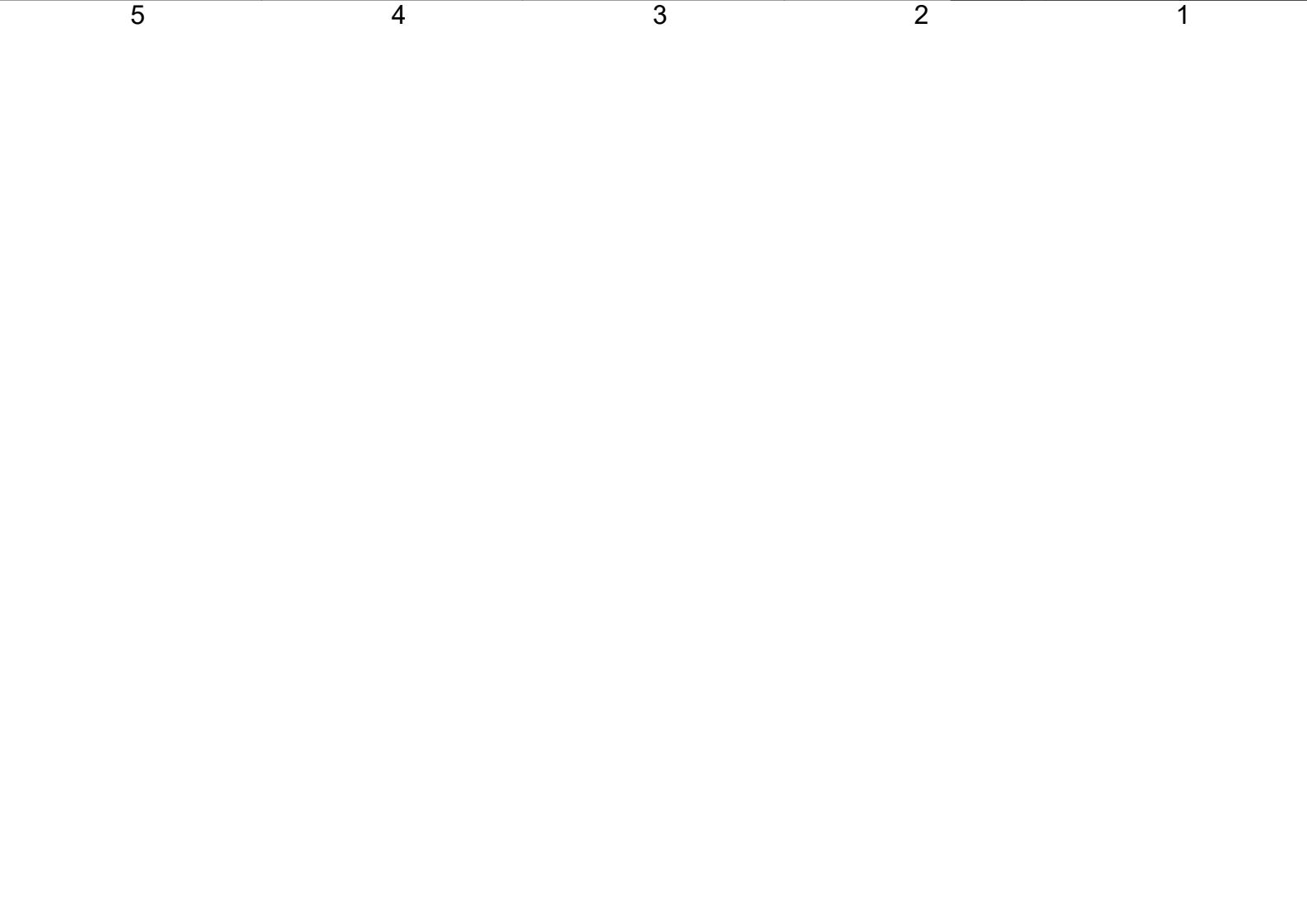
Close to IO

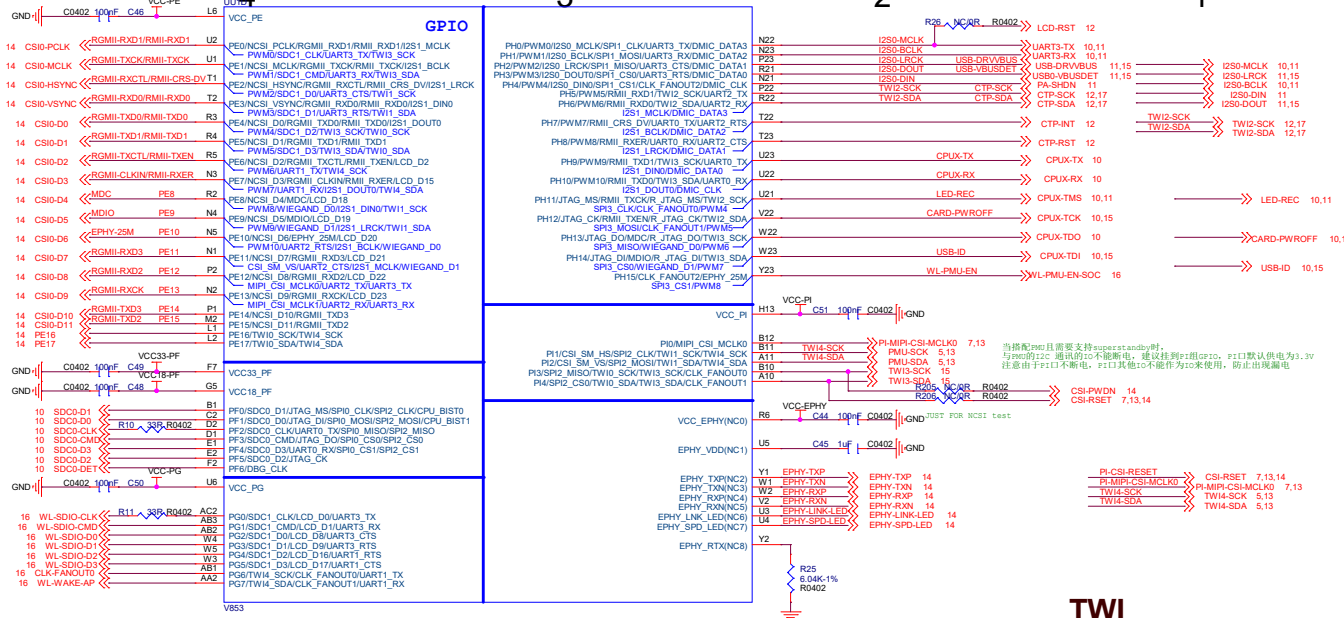
**Allwinner Technology Co., Ltd**

Design Name: **V853-PER1**

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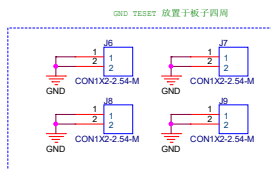
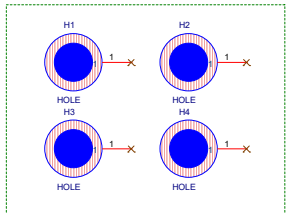
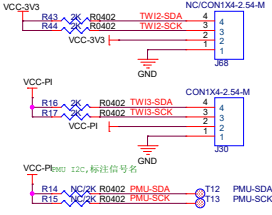
PE

OR 电阻默认贴上, 验证时可将其其他模块电阻去掉

16 BT-RST-N-SOC	R12	OR	R0402	PE8
16 BT-UART-CT	R18	OR	R0402	PE10
16 BT-UART-R1	R19	OR	R0402	PE11
16 BT-UART-RV	R20	OR	R0402	PE12
16 BT-UART-TX	R21	OR	R0402	PE13
16 BT-WAKE-AP-SOC	R22	OR	R0402	PE14
16 AP-WAKE-BT-SOC	R23	OR	R0402	PE15

串口注意反向  
蓝牙BT和RGMII/DVP不能同时使用

TWI



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Design Name: V853-PER1

Rev: CPU

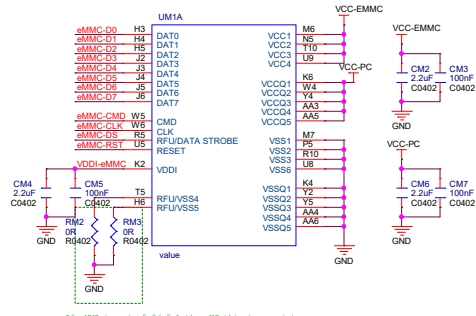
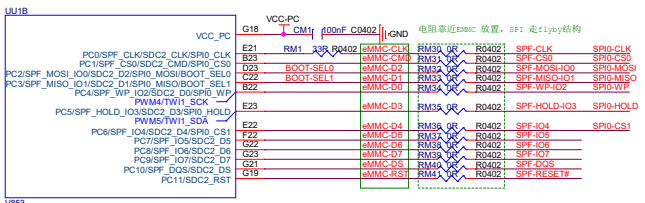
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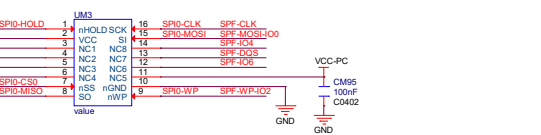
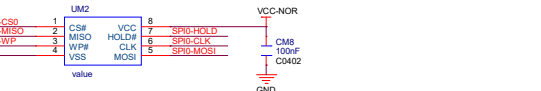
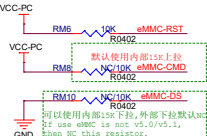
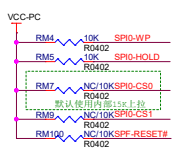
eMMC



BOOT-SEL

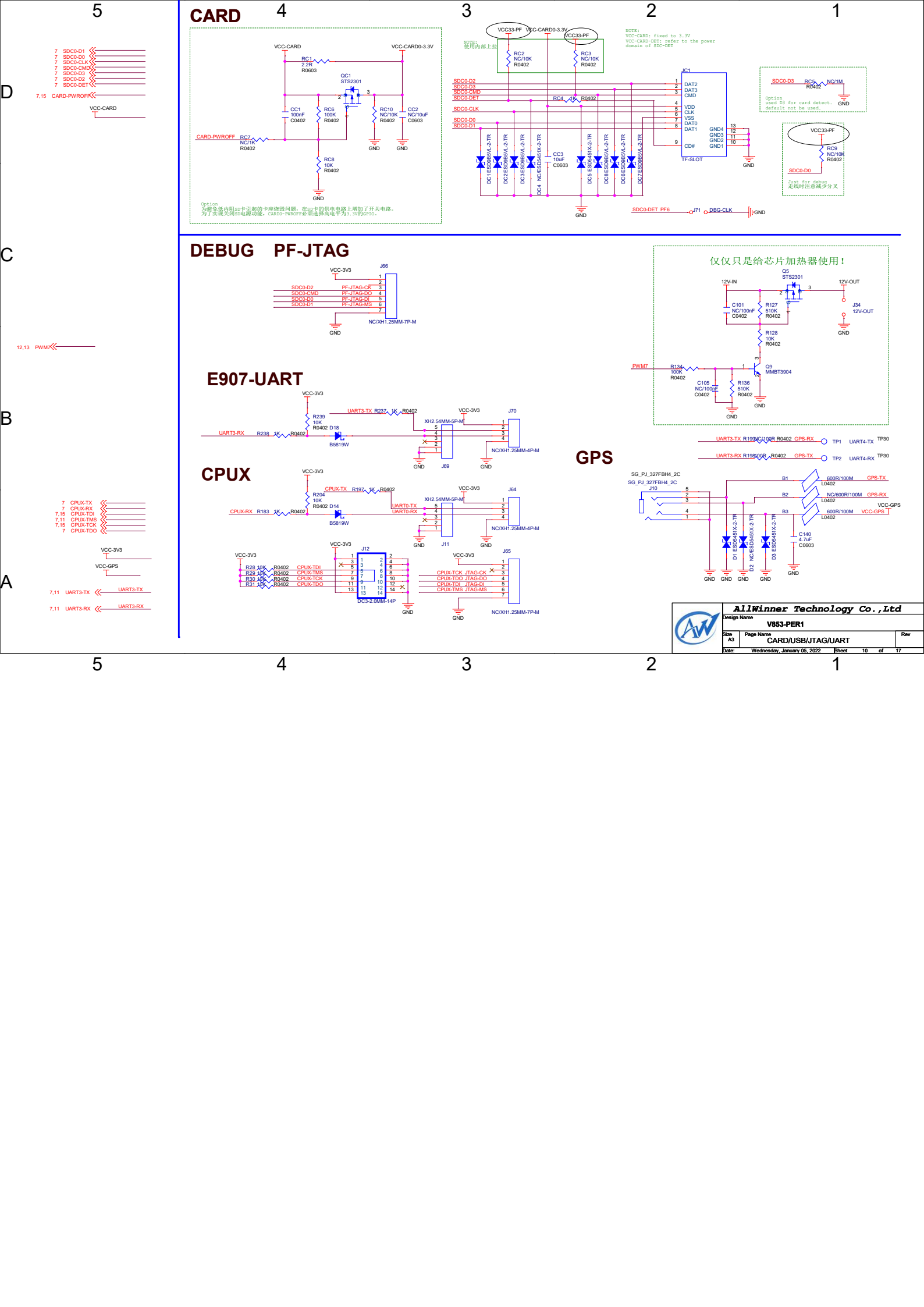


PC-SPI0

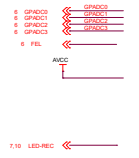


A

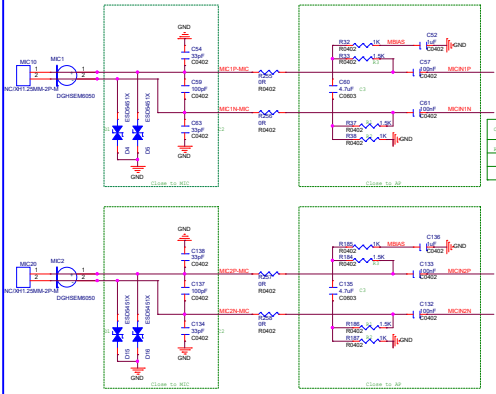
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		Design Name	V853-PER1
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# AUDIO/KEY



## MIC

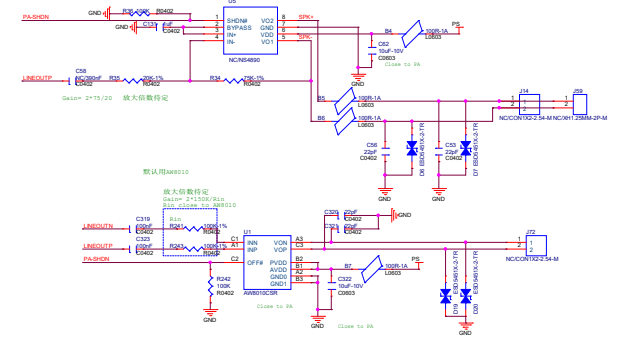


CSM00001	CSM00014	CSM00044
R1	R2	R3
R4	R5	R6
R7	R8	R9

## I2S



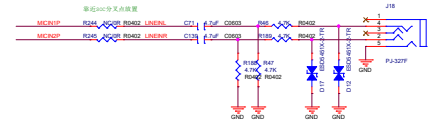
# SPEAKER



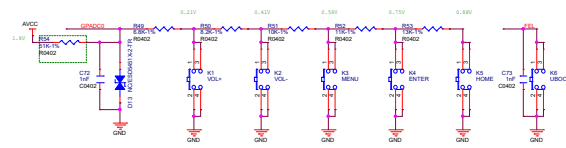
## LINE OUT



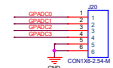
## LINE IN



## KEY



## GPADC



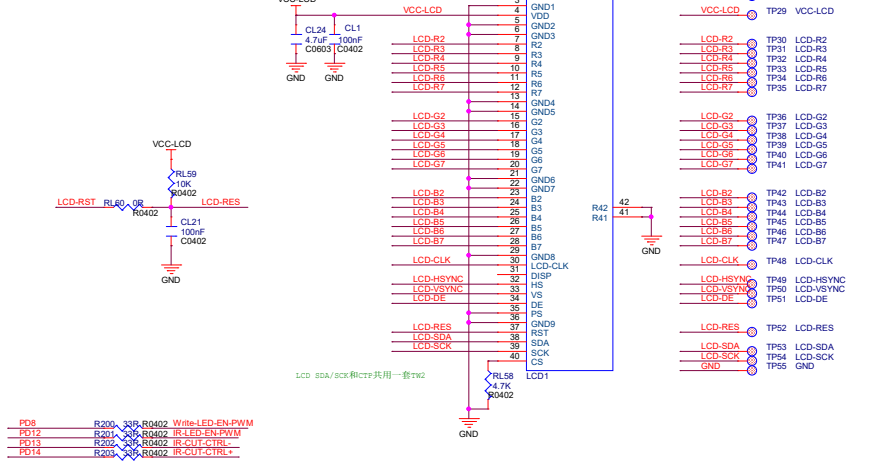
## LED



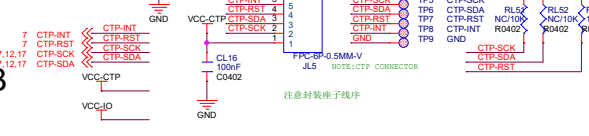
# LCD/PWM



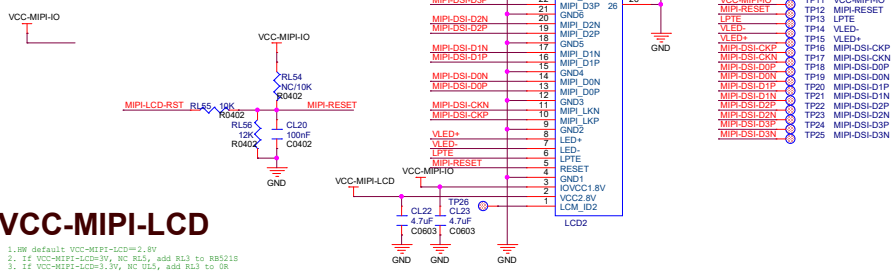
# RGB LCD 4.3" 480x854



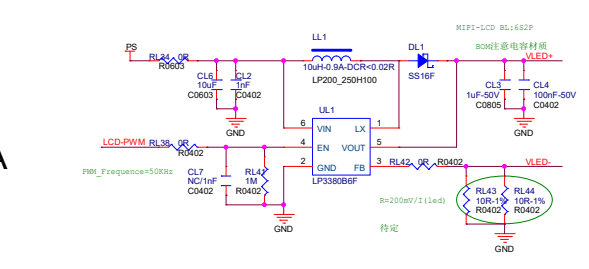
# CTP CN



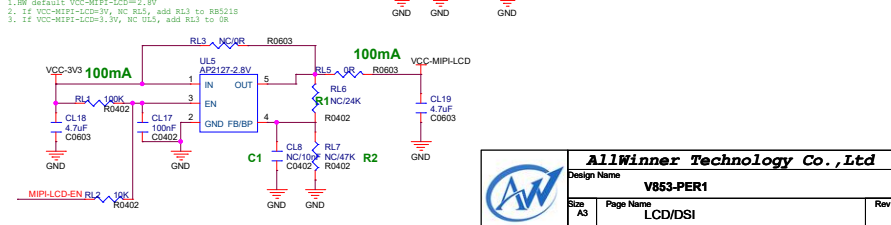
# MIPI



# Backlight



# VCC-MIPI-LCD



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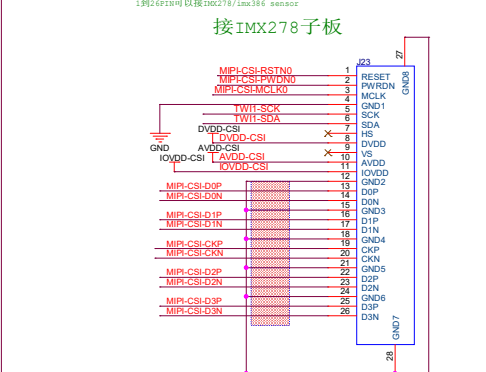
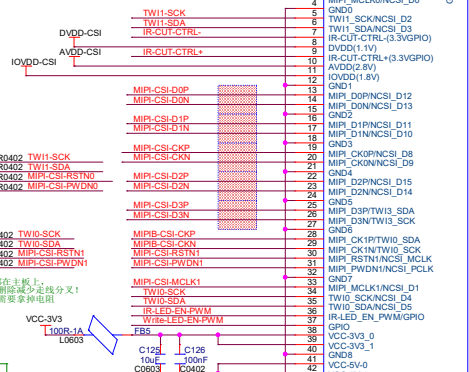
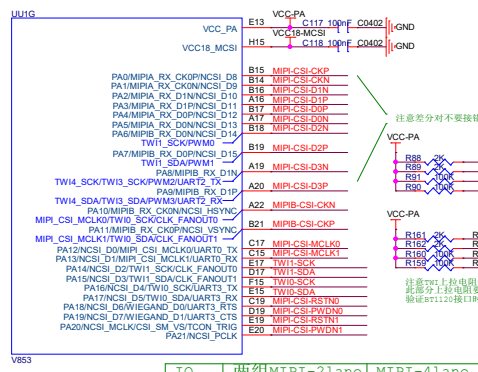
Page Name: LCD/DSI

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1到4pin可以接IMX278/Imx386 sensor

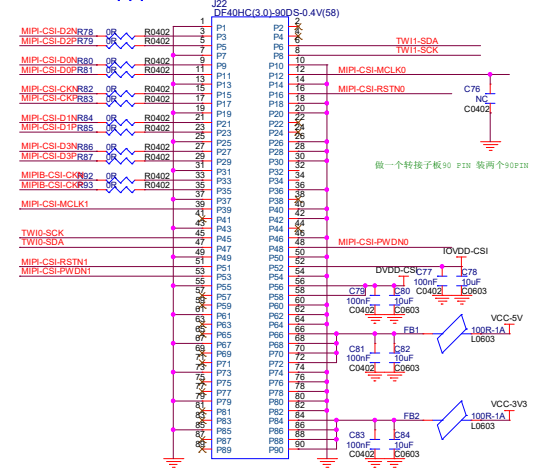
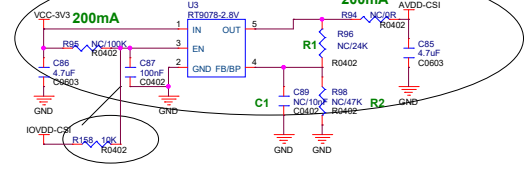
接IMX278子板



IO	两组MIPI-2lane	MIPI-4lane
PA0	MIPIA-CST-DON	MIPI-CST-DON
PA1	MIPIA-CST-DON	MIPI-CST-DON
PA2	MIPIA-CST-DON	MIPI-CST-DON
PA3	MIPIA-CST-DON	MIPI-CST-DON
PA4	MIPIA-CST-DON	MIPI-CST-DON
PA5	MIPIA-CST-DON	MIPI-CST-DON
PA6	MIPIB-CST-DON	MIPI-CST-DON
PA7	MIPIB-CST-DON	MIPI-CST-DON
PA8	MIPIB-CST-DON	MIPI-CST-DON
PA9	MIPIB-CST-DON	MIPI-CST-DON
PA10	MIPIB-CST-DON	MIPI-CST-DON
PA11	MIPIB-CST-DON	MIPI-CST-DON

- 12 IR-CUT-CTRL+ IR-CUT-CTRL+
- 12 IR-CUT-CTRL- IR-CUT-CTRL-
- 12 IR-LED-EN-PWM IR-LED-EN-PWM
- 10,12 Write-LED-EN-PWM Write-LED-EN-PWM
- 7,14 CSI-RESET MIPI\_CSI\_MCLK0
- 7 MIPI\_CSI\_MCLK0 MIPI\_CSI\_MCLK0
- 5,7 TW14-SCK MIPI\_CSI\_D3P
- 5,7 TW14-SDA MIPI\_CSI\_D3N

前置摄像头AVDD供电



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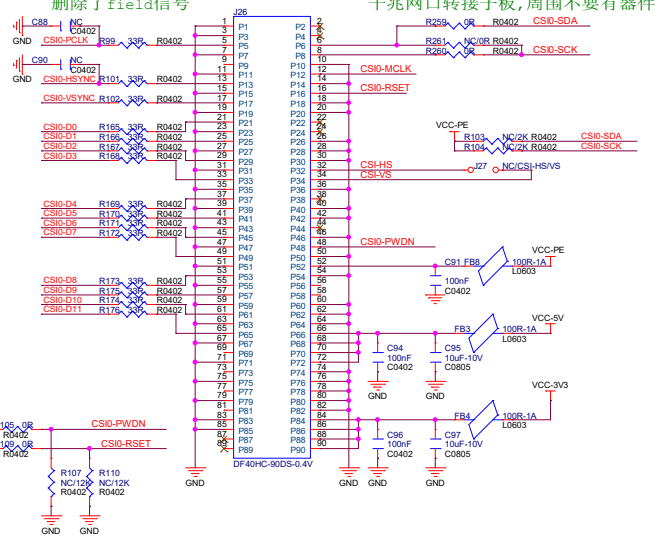
Design Name: **V853-PER1**

Size: AS Page Name: MIPI CSI/CSI Rev:

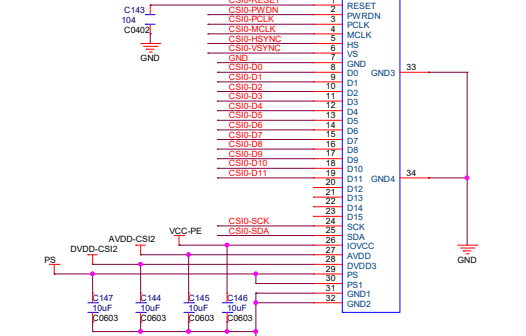
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# PE CSI&RGMI

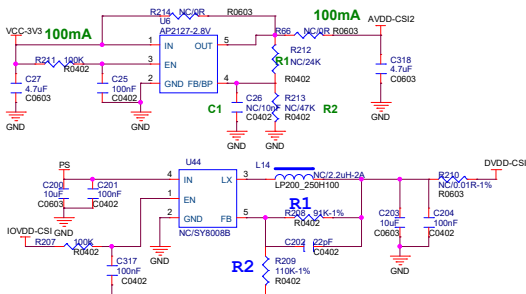
- 7 CSIO-CLK << RGMI-RXD1/RMIL-RXD1
- 7 CSIO-MCLK << RGMI-TXCK/RMIL-TXCK
- 7 CSIO-HSYNC << RGMI-RXCLK/RMIL-CRS-DV
- 7 CSIO-VSYNC << RGMI-RXD0/RMIL-RXD0
- 7 CSIO-D0 << RGMI-TXD0/RMIL-TXD0
- 7 CSIO-D1 << RGMI-TXD1/RMIL-TXD1
- 7 CSIO-D2 << RGMI-TXCLK/RMIL-TXEN
- 7 CSIO-D3 << RGMI-CLK/RMIL-RXER
- 7 CSIO-D4 << MDC
- 7 CSIO-D5 << MBI0
- 7 CSIO-D6 << EPHY-25M
- 7 CSIO-D7 << RGMI-RXD3
- 7 CSIO-D8 << RGMI-RXD2
- 7 CSIO-D9 << RGMI-RXCK
- 7 CSIO-D10 << RGMI-TXD3
- 7 CSIO-D11 << RGMI-TXD2
- 7 PE16 << CSIO-SCK RGMI/RMIL-RESET
- 7 PE17 << CSI-PWDN
- 7,13 CSI-RESET



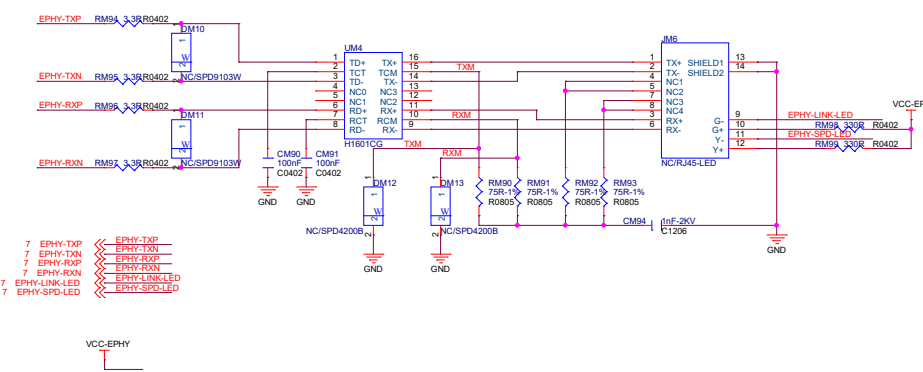
# DVP-CSI



# CSI2-POWER



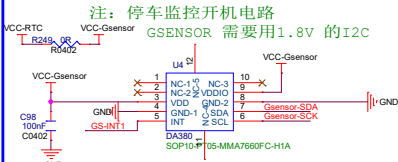
# JUST FOR TEST



**Allwinner Technology Co., Ltd**

Design Name		
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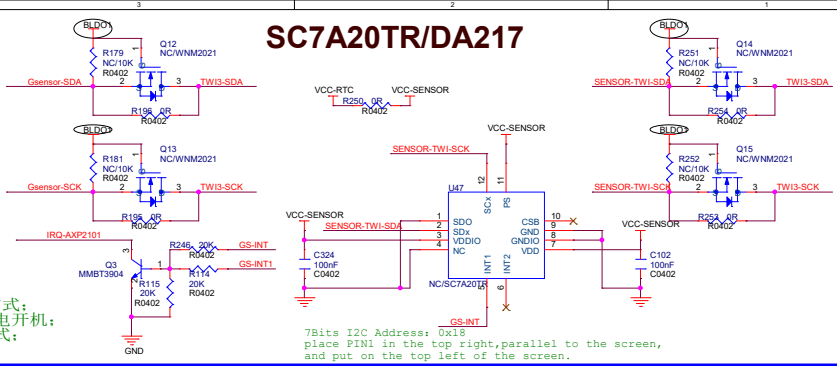
# G-SENSOR (DA380)



G-SENSOR IC与屏平行放置, 放在屏的左上方, 右上方放置PIN1脚。

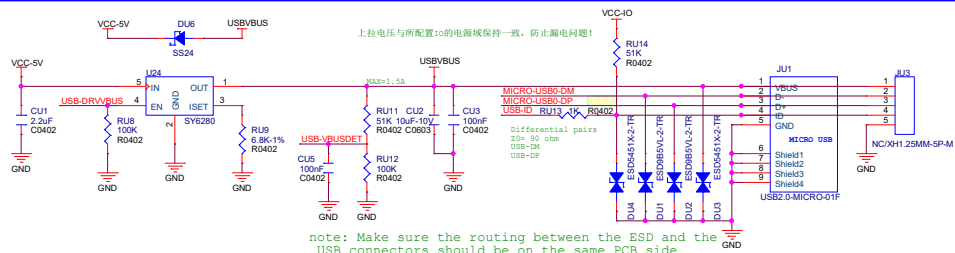
- 1、关机前配置为中断输出, 采用高电平脉冲中断方式;
- 2、PMU接收到上述产生的16ms以上低电平后快速上电开机;
- 3、开机之后, 配置屏蔽中断输出, 采用I2C轮询方式;

# SC7A20TR/DA217



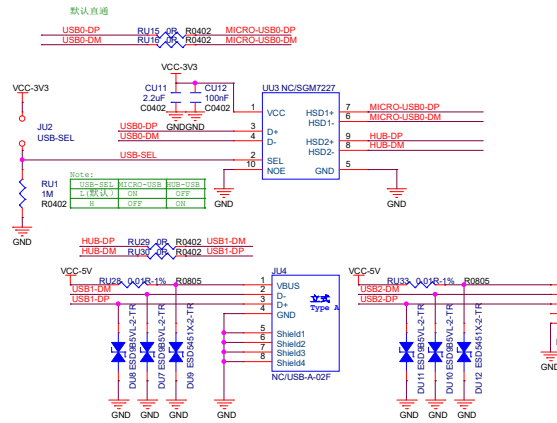
7Bits I2C Address: 0x38  
place PIN1 in the top right, parallel to the screen,  
and put on the top left of the screen.

# microUSB

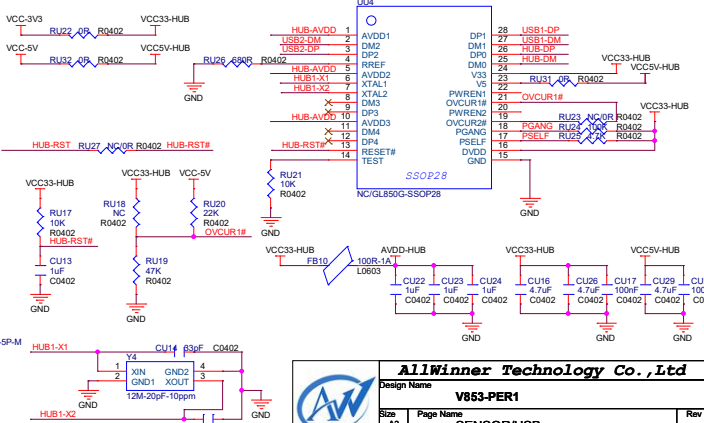


note: Make sure the routing between the ESD and the USB connectors should be on the same PCB side

# USB switch



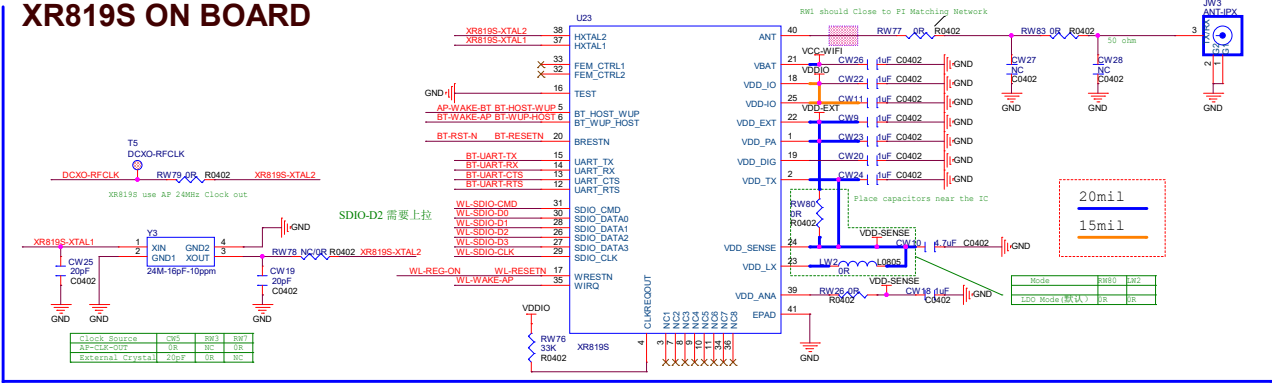
# HUB



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Design Name: <b>V853-PER1</b>		
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# SDIOWIFI

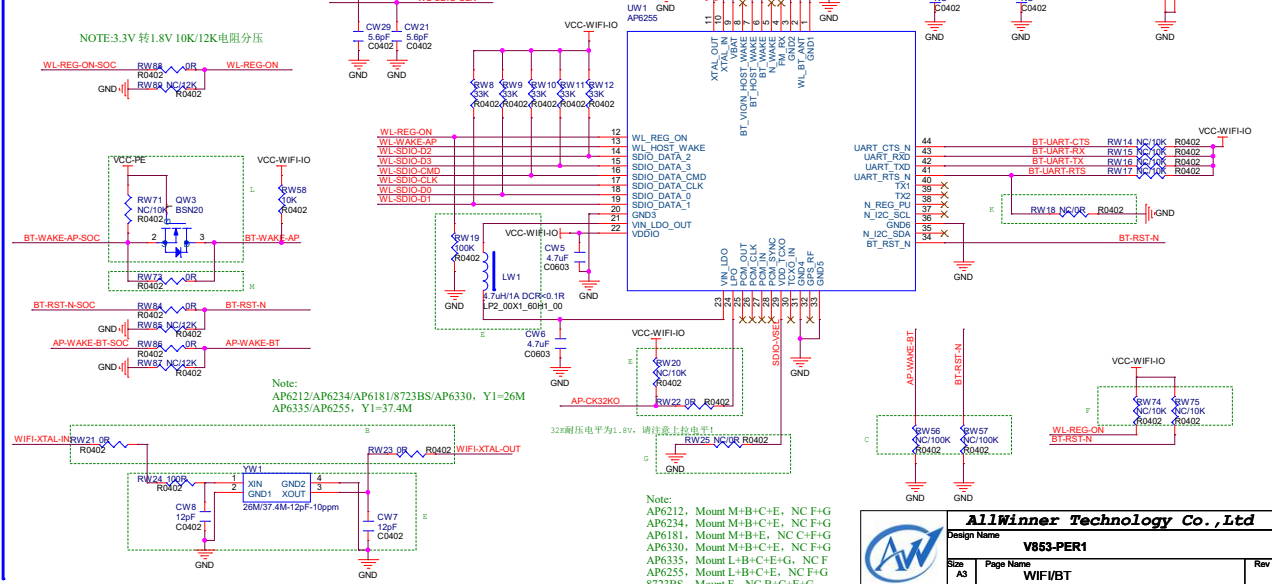
# XR819S ON BOARD



## APXXX/XR819S

Reltek 8919ftv BL-M8189FS

NOTE: 注意SOC端GPIO和WiFi-I/O电平匹配



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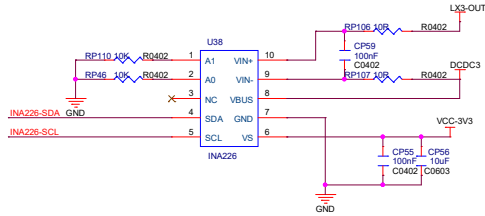
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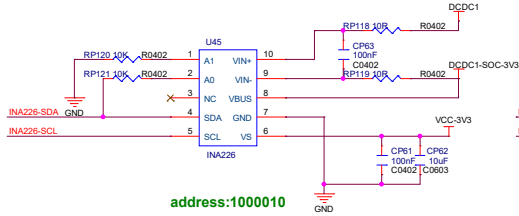
### 测试VDD-SYS 功耗



address:1000000

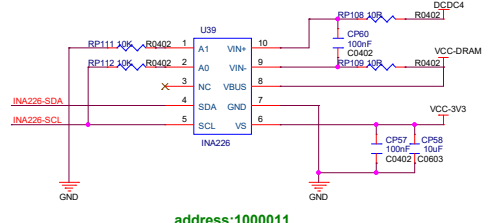
7.12 TWI2-SDA << INA226-SDA  
7.12 TWI2-SCL << INA226-SCL

### 测试VCC-3V3-SOC功耗



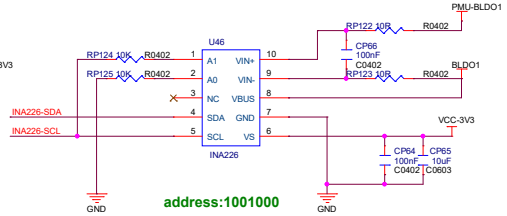
address:1000010

### 测试VCC-DRAM功耗




address:1000011

### 测试VCC-1V8-SOC功耗



address:1001000

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