

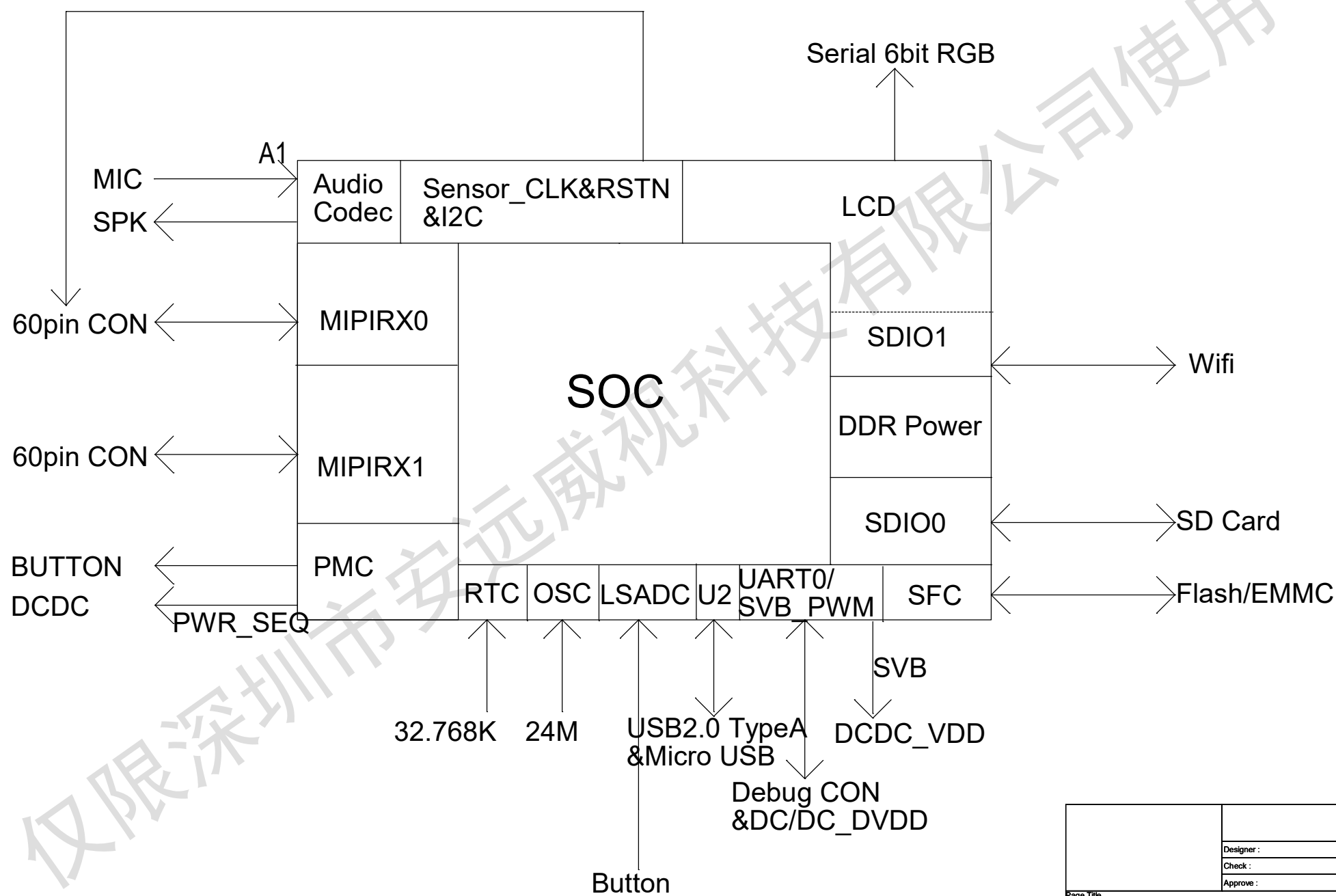
7206V10B_RB_A_VB

4L

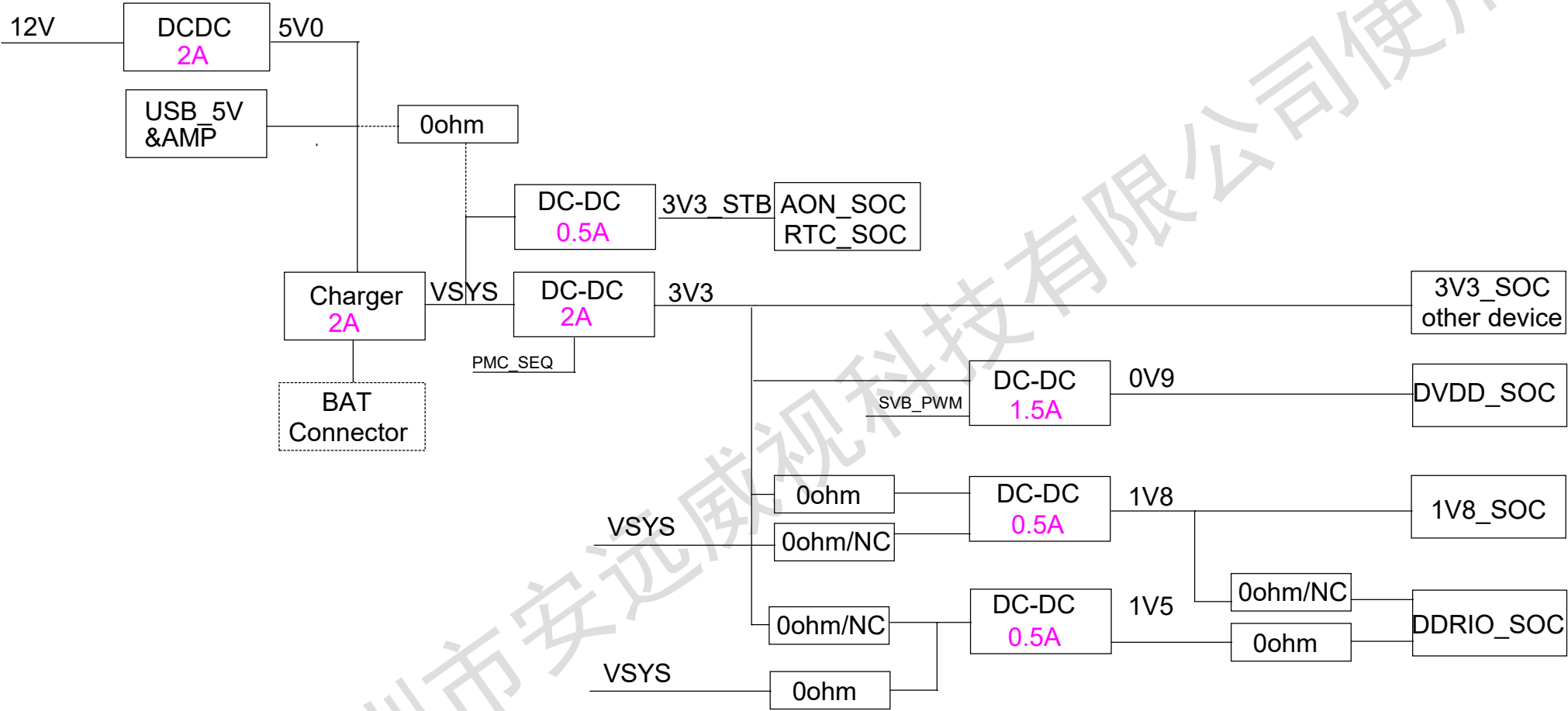
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Block Diagram

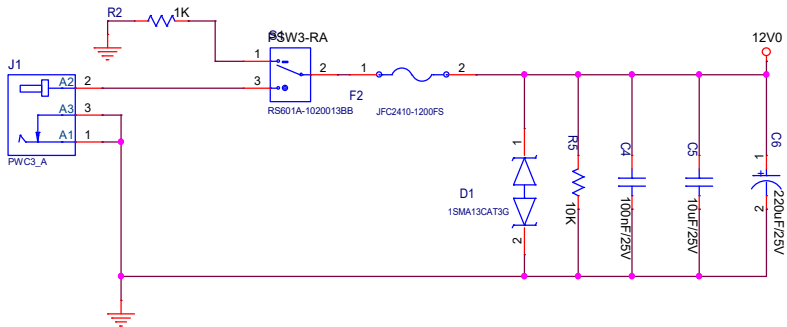


Power Tree

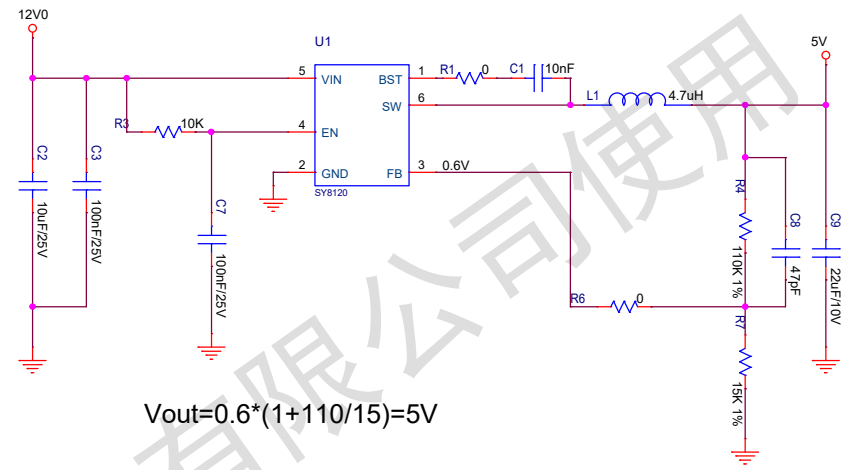


Power1

12V POWER IN

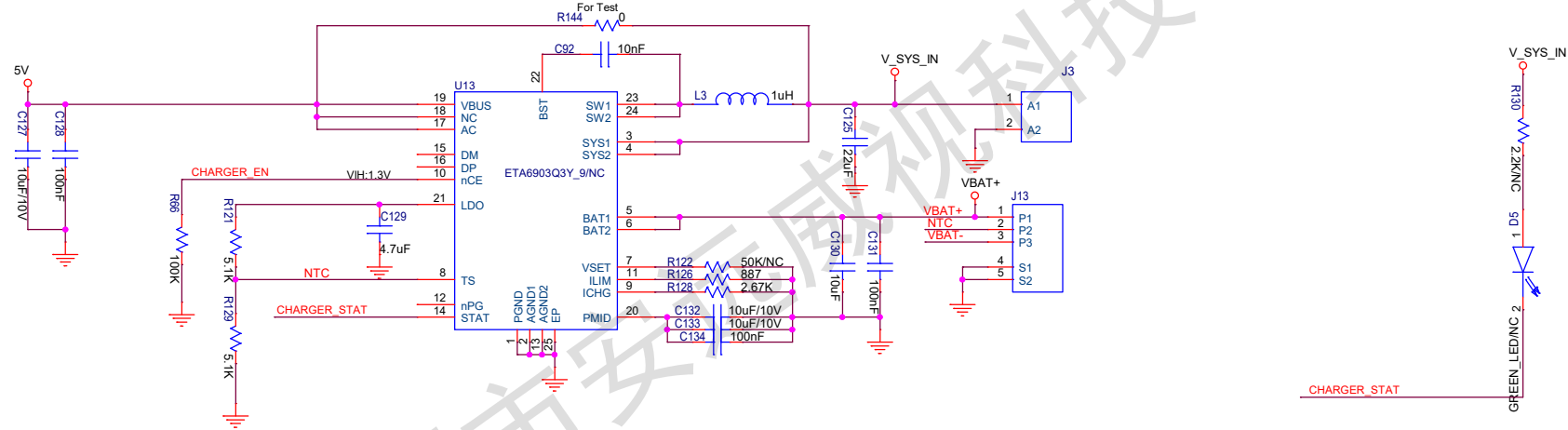


12V-->5V

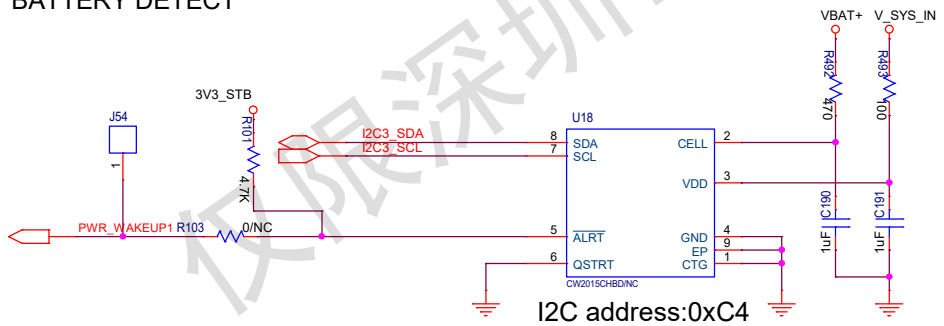


$V_{out} = 0.6 * (1 + 110/15) = 5V$

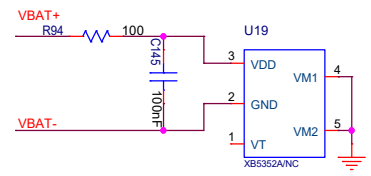
Charger



BATTERY DETECT



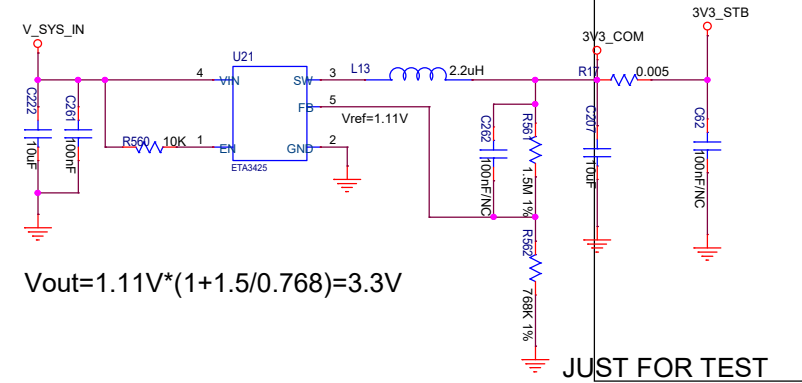
Battery Protection



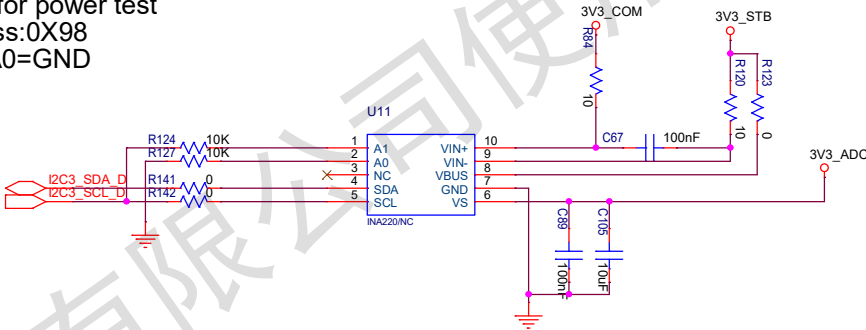
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Power2

V_SYS_IN-->3V3_STB

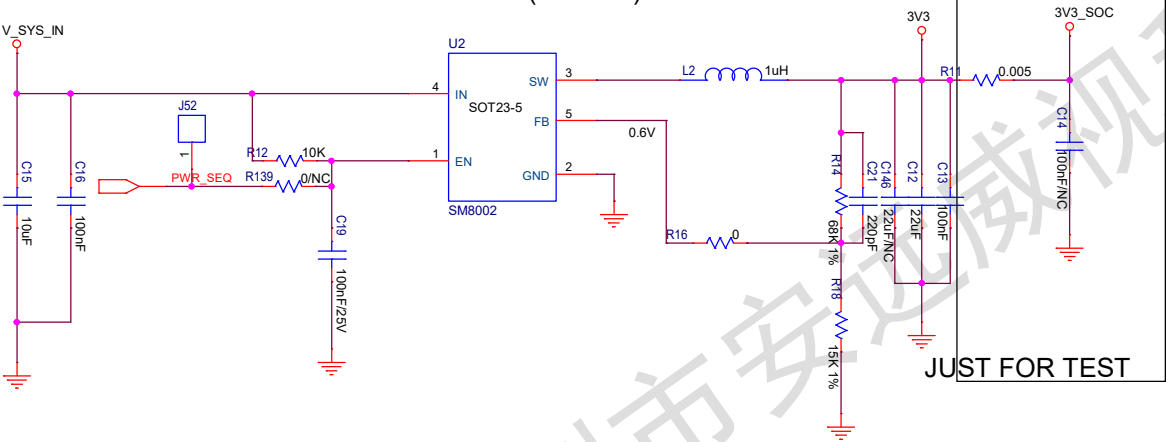


Note: Just for power test
I2C address: 0X98
A1=SCL A0=GND

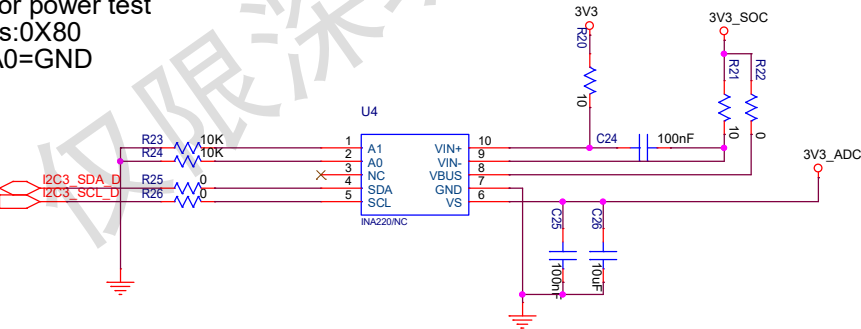


V_SYS_IN-->3V3

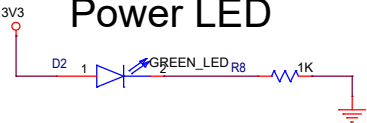
$V_{out} = 0.6 * (1 + 68 / 15) = 3.32V$



Note: Just for power test
I2C address: 0X80
A1=GND A0=GND



Power LED



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Power3

3V3-->0V9 VDD

Close to SOC

$$T_{delay}=0.452RC=0.452*51k*100n=2.3ms$$

Vout(min)=0.65V
Vout(max)=1.1V

JUST FOR TEST

3V3-->1V8

$$V_{out}=0.6*(1+30k/15k)=1.8V$$

$$T_{delay}=0.452RC=0.452*20k*100n=0.9ms$$

JUST FOR TEST

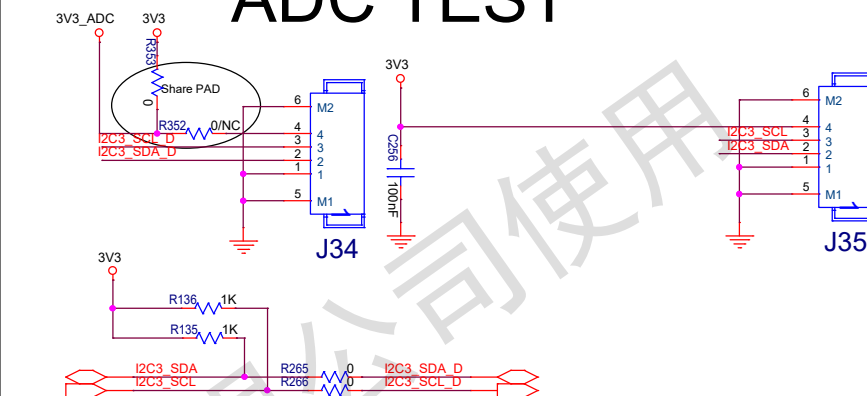
3V3-->1V5

$$V_{out}=0.6*(1+15k/10k)=1.5V$$

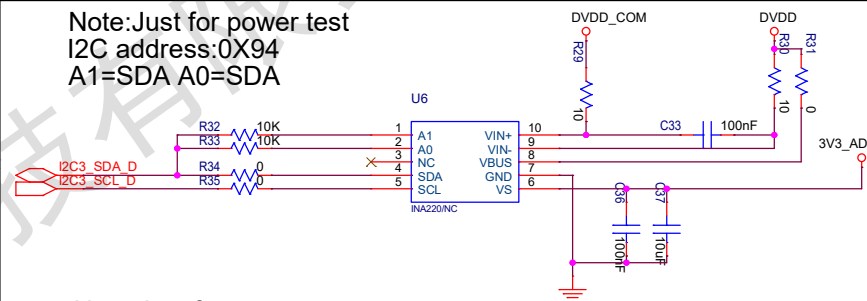
$$T_{delay}=0.452RC=0.452*30k*100n=1.3ms$$

JUST FOR TEST

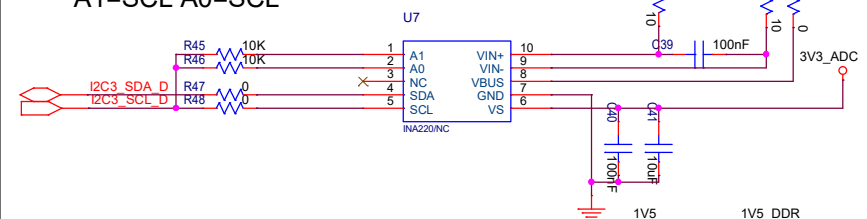
ADC TEST



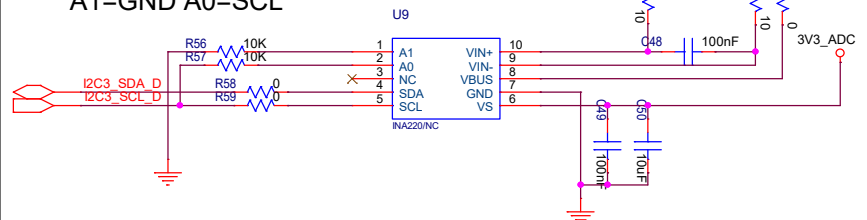
Note:Just for power test
I2C address:0X94
A1=SDA A0=SDA



Note:Just for power test
I2C address:0X9E
A1=SCL A0=SCL

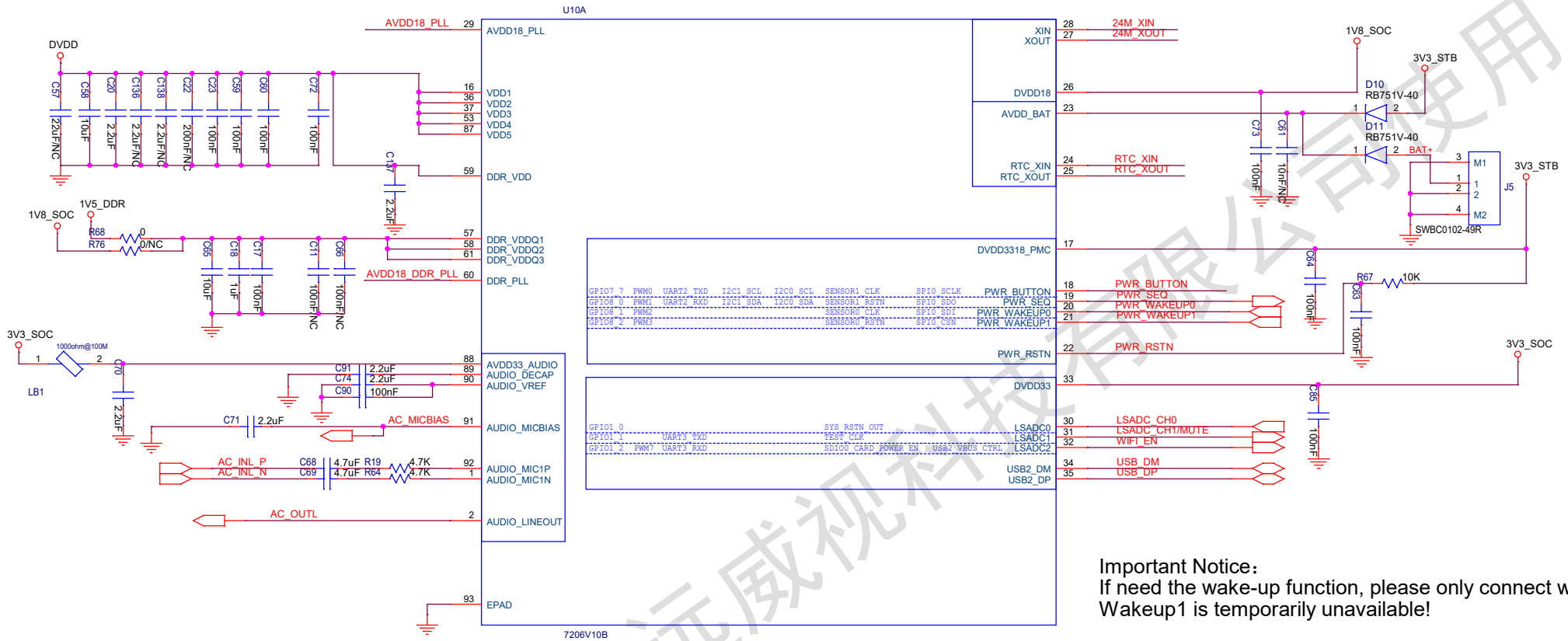


Note:Just for power test
I2C address:0X86
A1=GND A0=SCL

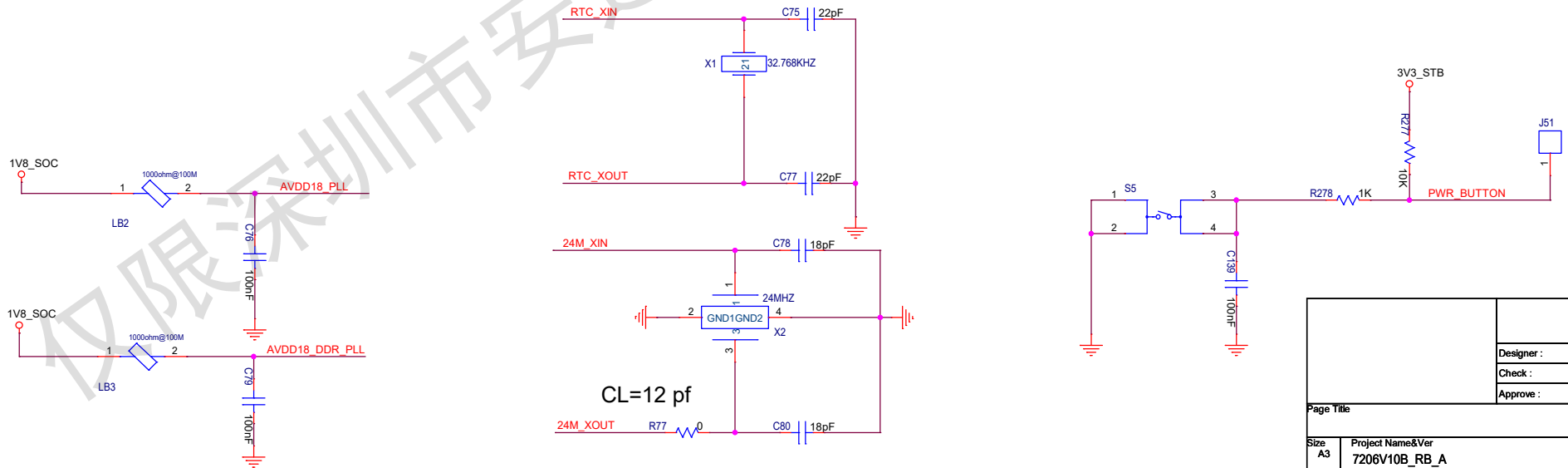


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MISC1 for SOC

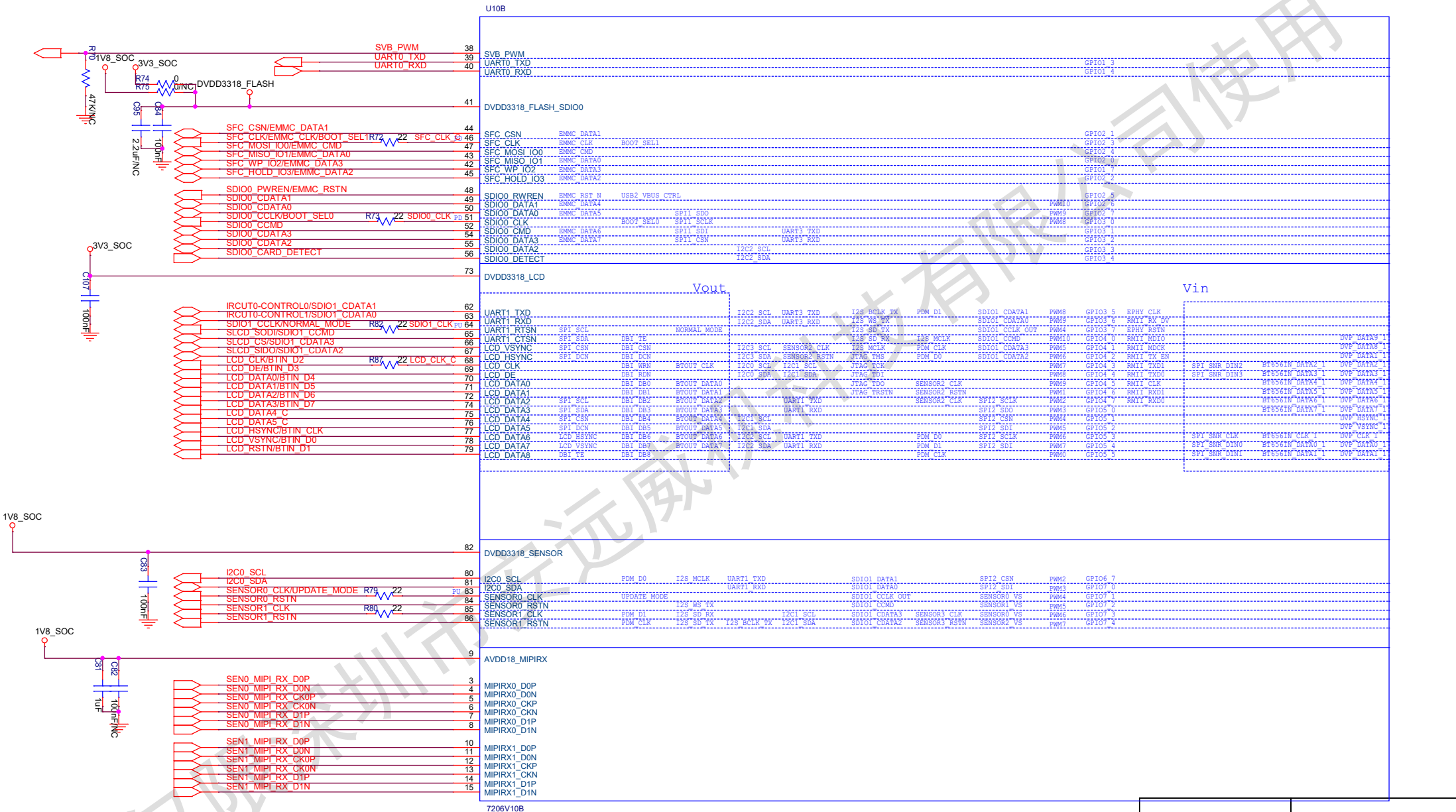


Important Notice:
If need the wake-up function, please only connect wakeup0.
Wakeup1 is temporarily unavailable!



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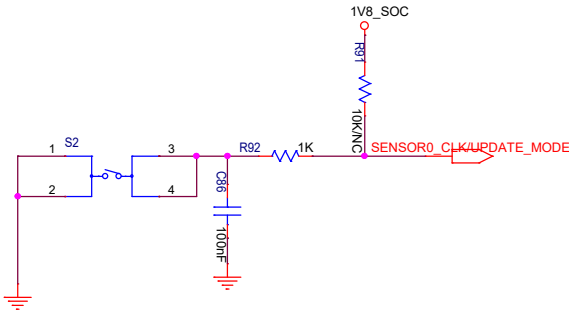
MISC2 for SOC



POWER ON SETTING

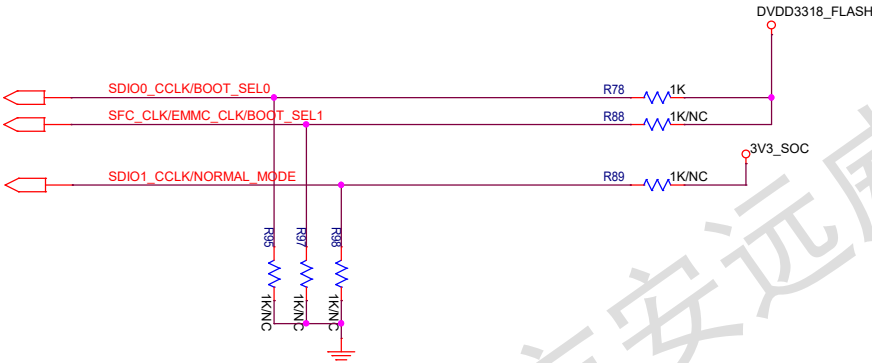
POWER ON SETTING of SOC

Notes: Power on Setting can use internal pull-up and pull-down if it doesn't reuse other function, else it need to think about actual status.



UPDATE_MODE	FUNCTION
0	Enable UPDATE FROM SDIO0 or USB
1	Disable UPDATE_MODE(default)

UPDATE_MODE is internal pull up.

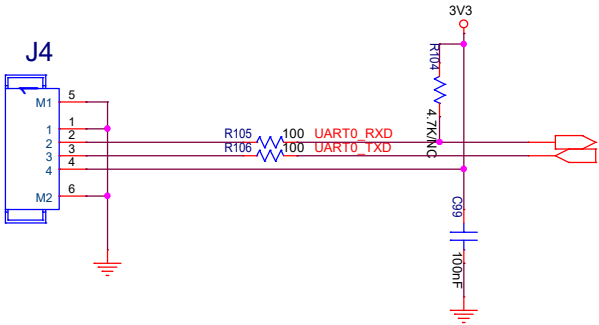


BOOT_SEL0	BOOT_SEL1	FUNCTION
1	0	BOOT FROM SPI NOR FLASH(default)
	1	BOOT FROM SPI NAND FLASH
0	0	BOOT FROM EMMC 4bit
	1	BOOT FROM EMMC 8bit

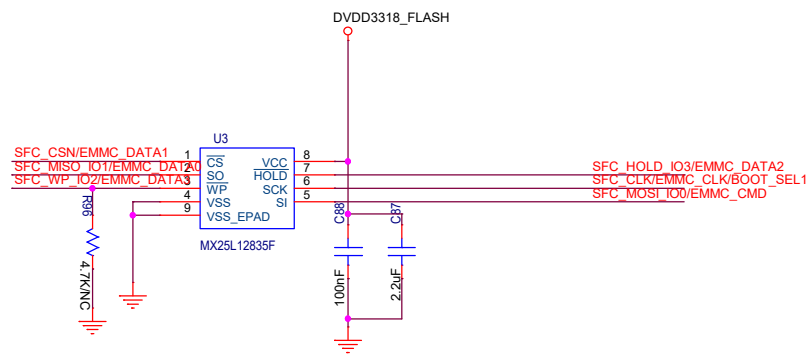
BOOT_SEL1 is internal pull down.
BOOT_SEL0 is internal pull down.

NORMAL_MODE	FUNCTION
0	Test Mode
1	Normal Mode(Default)

UART0 FOR DEBUG

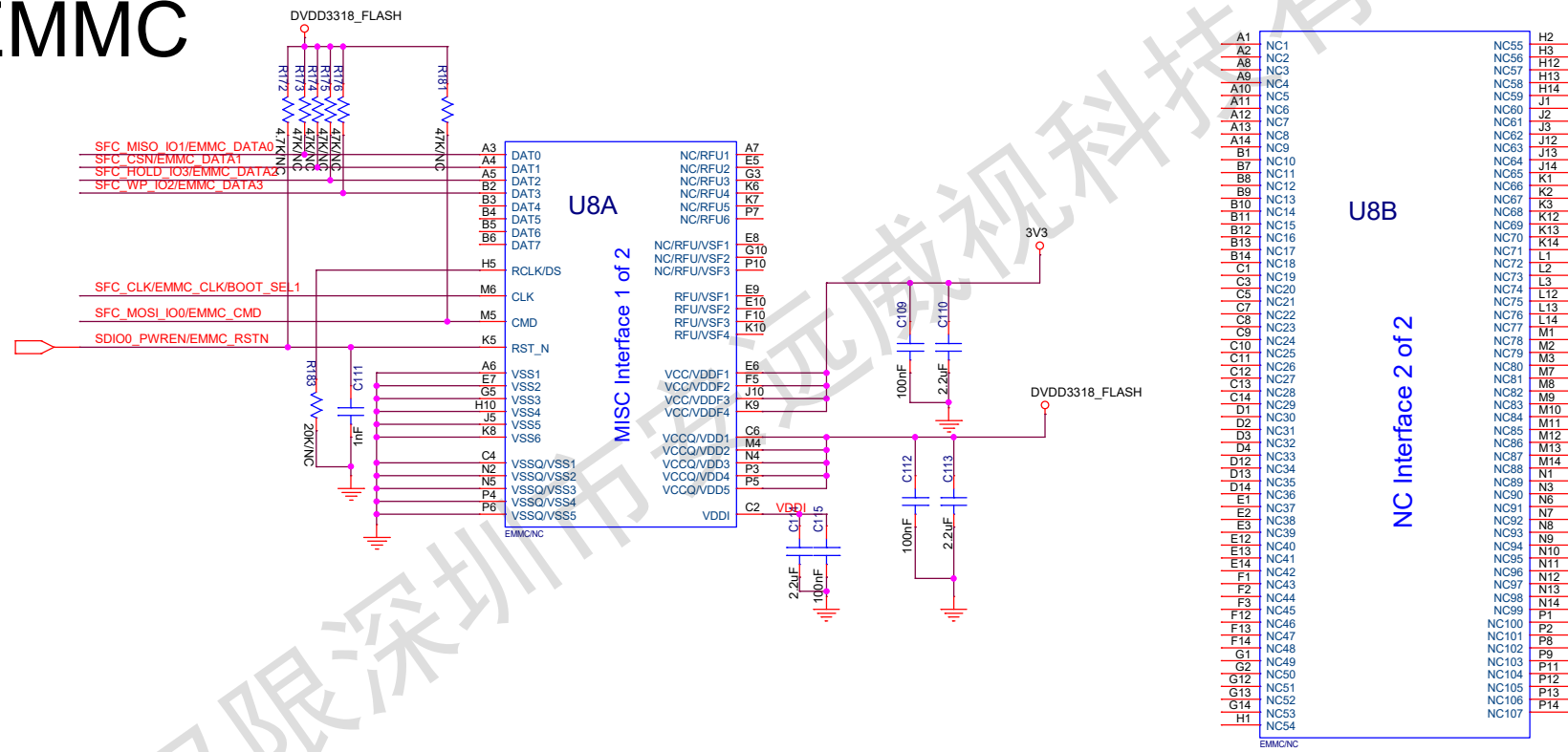


SPI FLASH



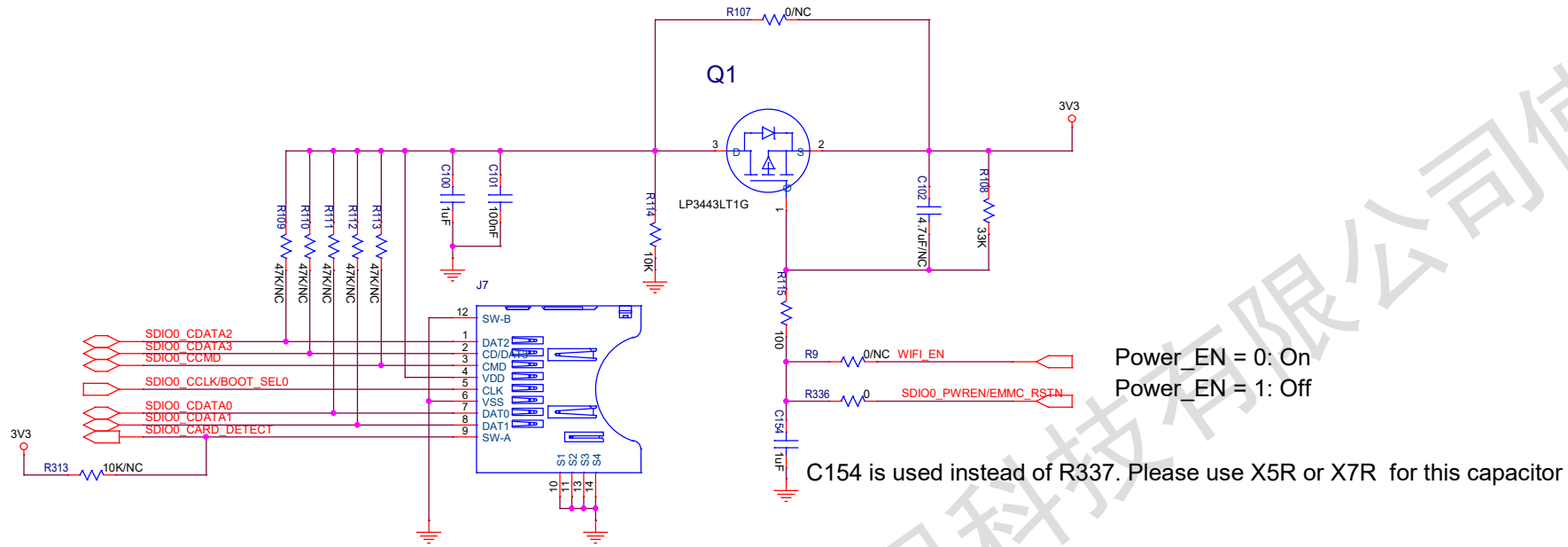
- SFC_CSN/EMMC_DATA1
- SFC_CLK/EMMC_CLK/BOOT_SEL1
- SFC_MOSI_IO0/EMMC_CMD
- SFC_MISO_IO1/EMMC_DATA0
- SFC_WP_IO2/EMMC_DATA3
- SFC_HOLD_IO3/EMMC_DATA2

EMMC

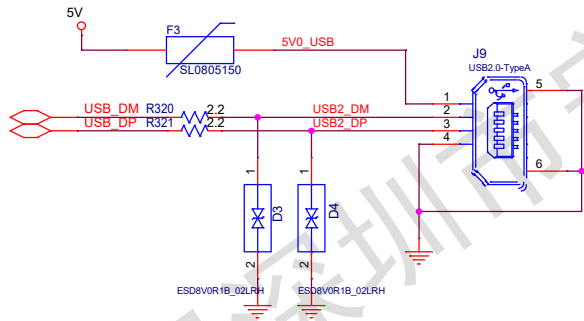


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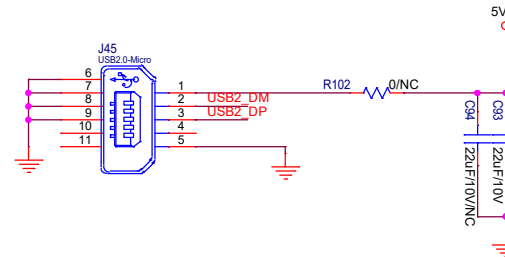
Micro-SD Card



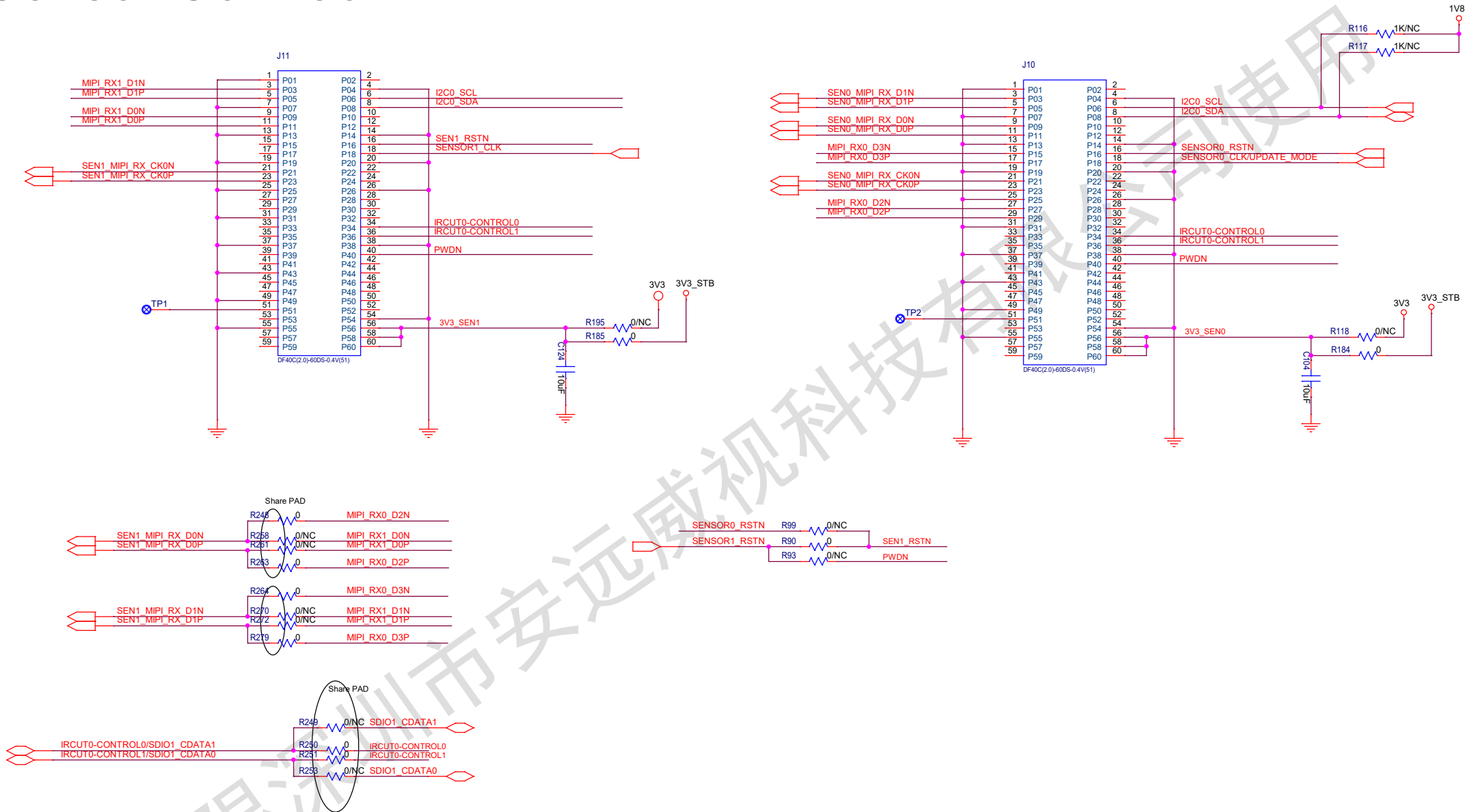
USB Type-A



USB Micro

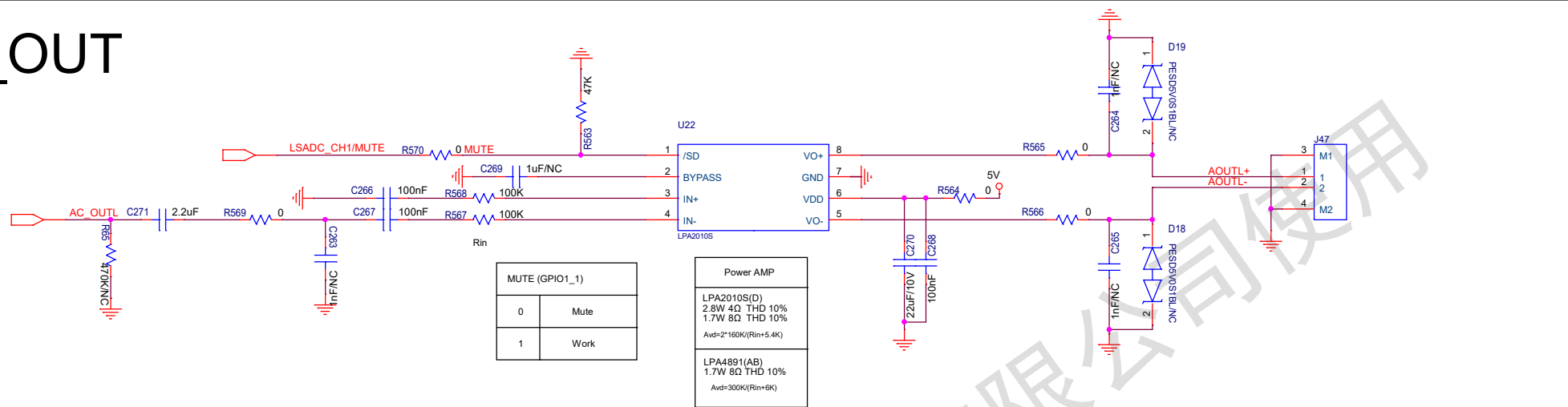


Sensor Connect

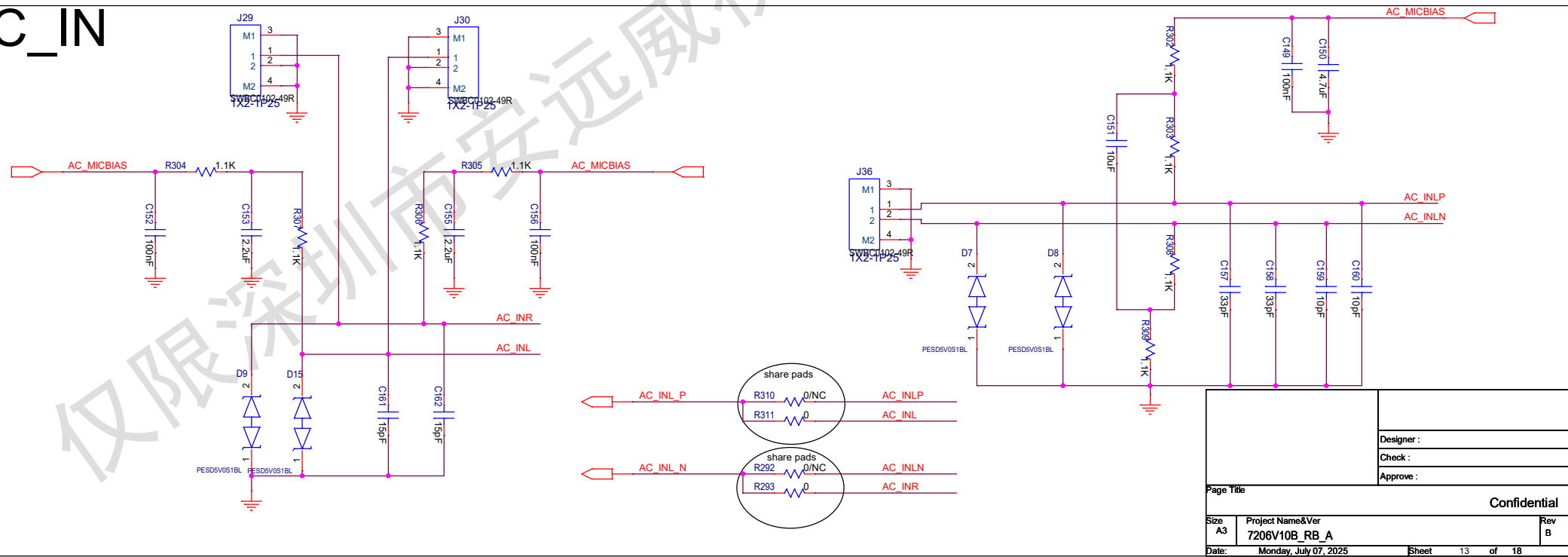


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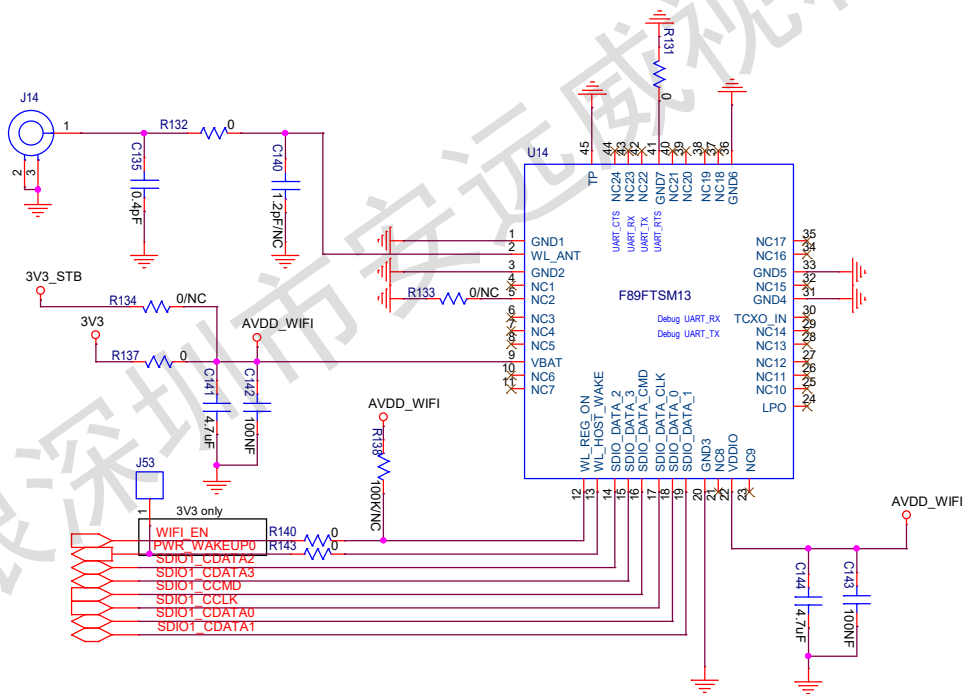
AUDIO_OUT



MIC_IN

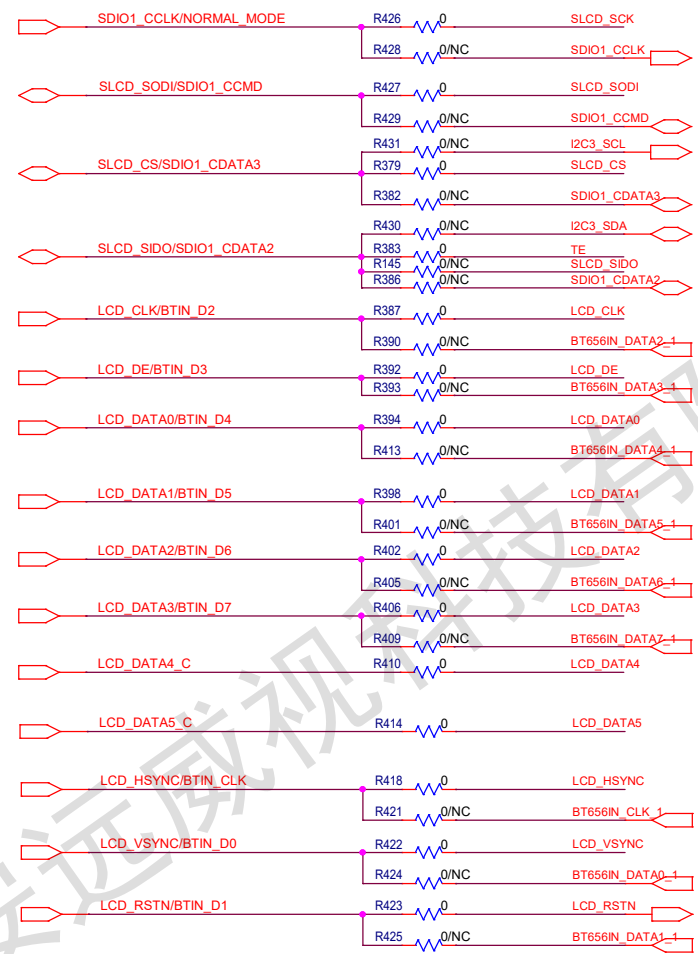
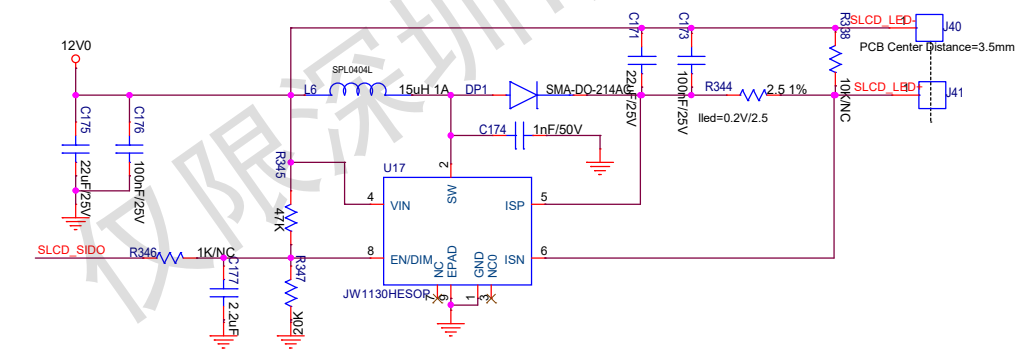
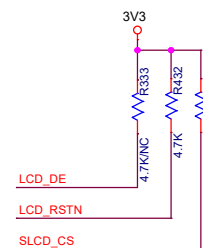
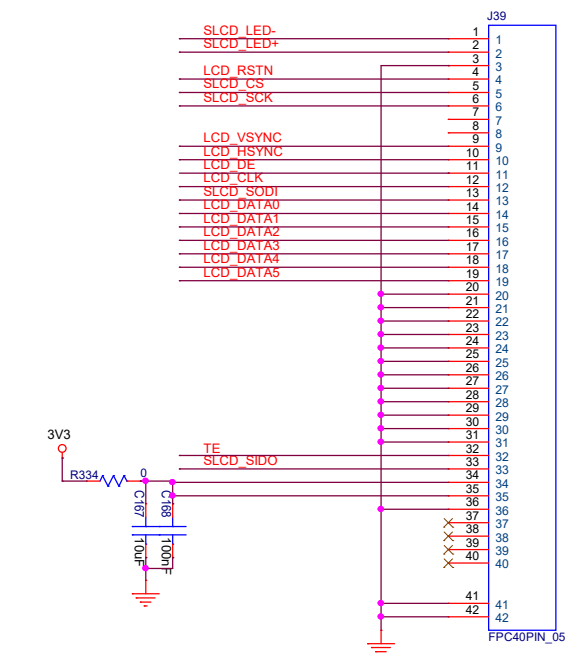


Wifi



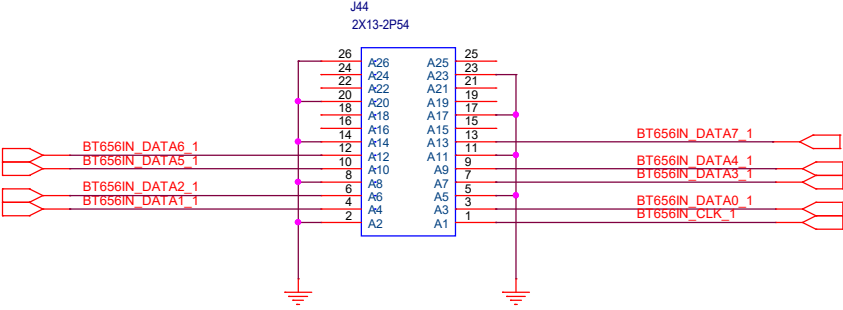
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6bit Serial RGB

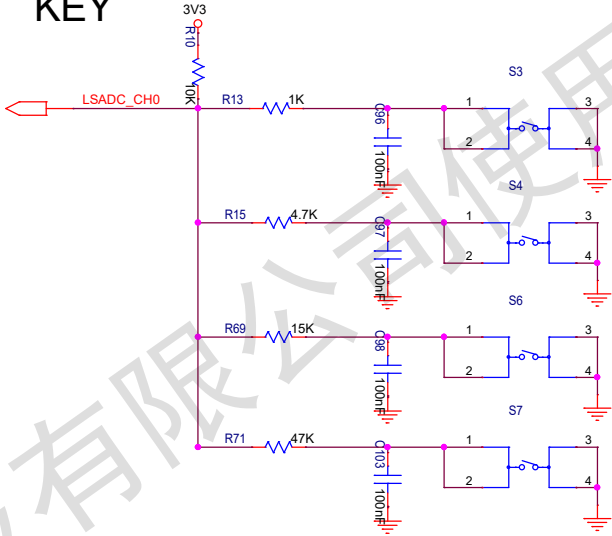


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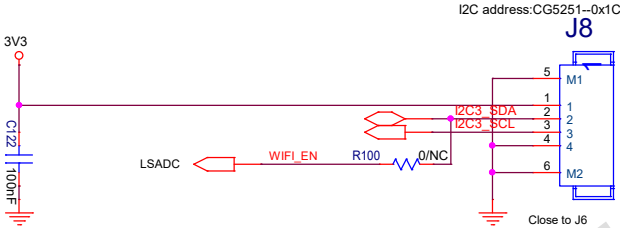
BT656IN_1



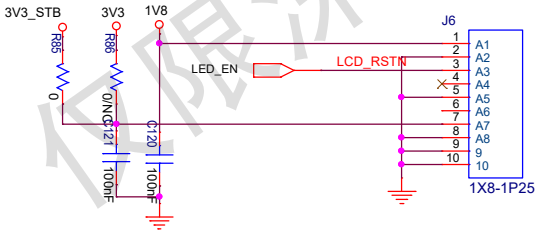
KEY



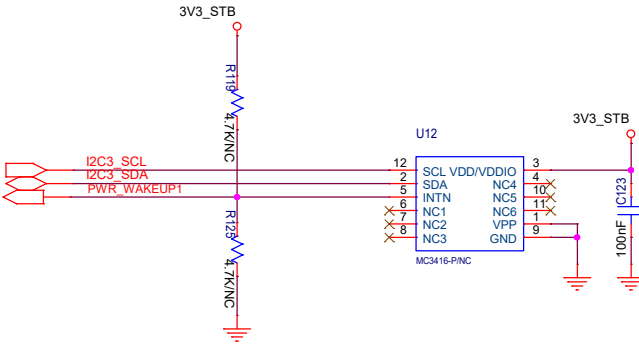
Light Sensor Connector



LED Connector

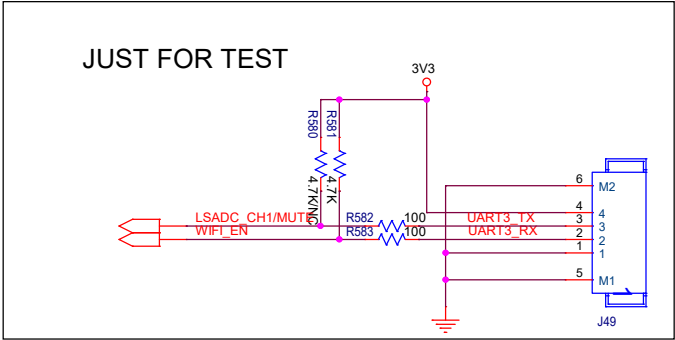


Gsensor

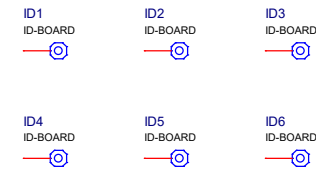
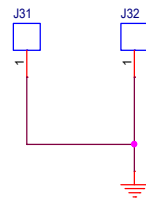
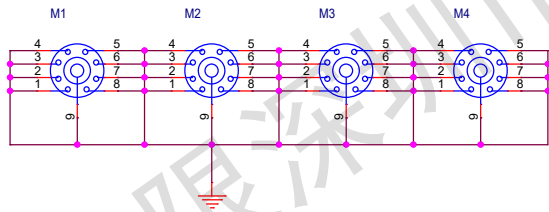


I2C address:
7-bit Device ID:0x4C
8-bit Address- Write:0x98
8-bit Address- Read:0x99

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INSALLNATION HOLES GND TEST PIN PCB MARK POINT



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SCH Update Record

Version	Date	Author	Description
A	2025.01	XX	The First Version
B	2025.06	XX	1.Add R337 to solve the problem of configuration errors when powering on with an SD card 2.Update the package of SOC for easier soldering
	2025.08	XX	1.Optimize the parameters of SM8002:L2→1uH,C21→220pF 2.Replace U16 with RT5750B to reduce ripple noise （R62→30K 1% R63→20K 1%） 3.Delete R104 4.Optimize the circuit parameters of the SD card:C102→NC,R108→33K,R337→C154 1uF

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