

# 野火\_STM32MP157底板 邮票孔\_原理图\_V1.0

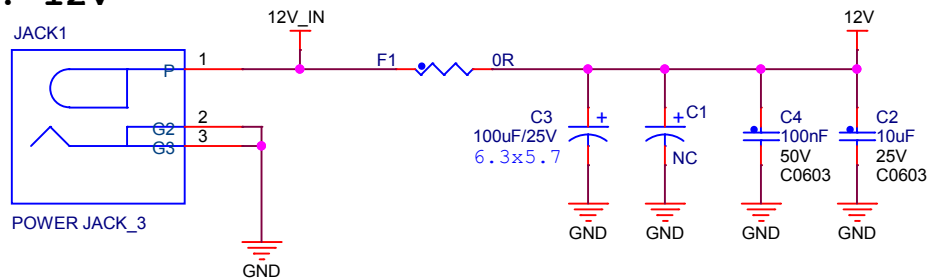
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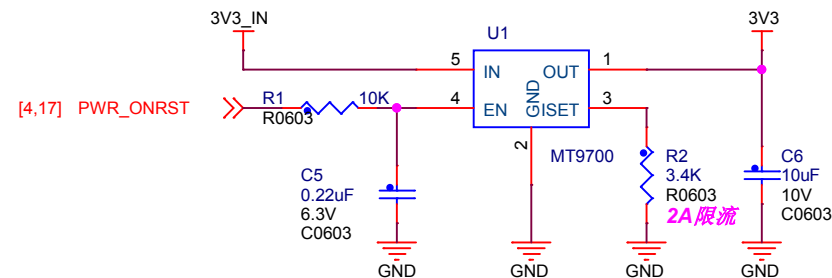
历史版本

版本号	日期	设计	描述
V1.0	2020-09-18	xgh	初始版本
V1.0	2021-02-23	xgh	整理对外发布，稳定版

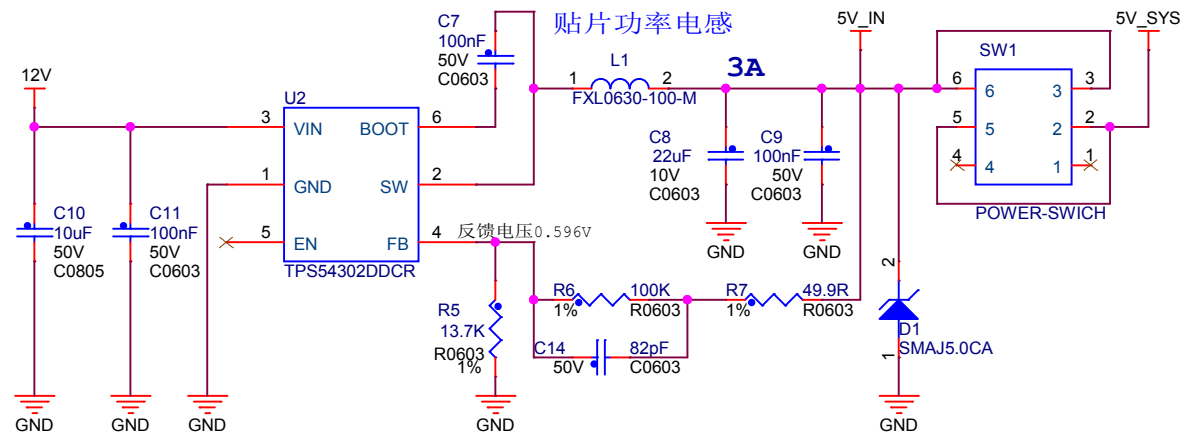
## DC IN : 12V



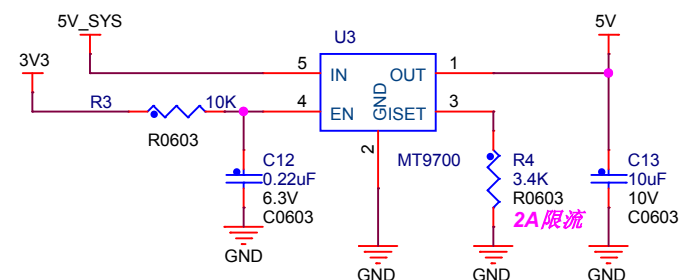
## 3.3V 输出控制及过流保护



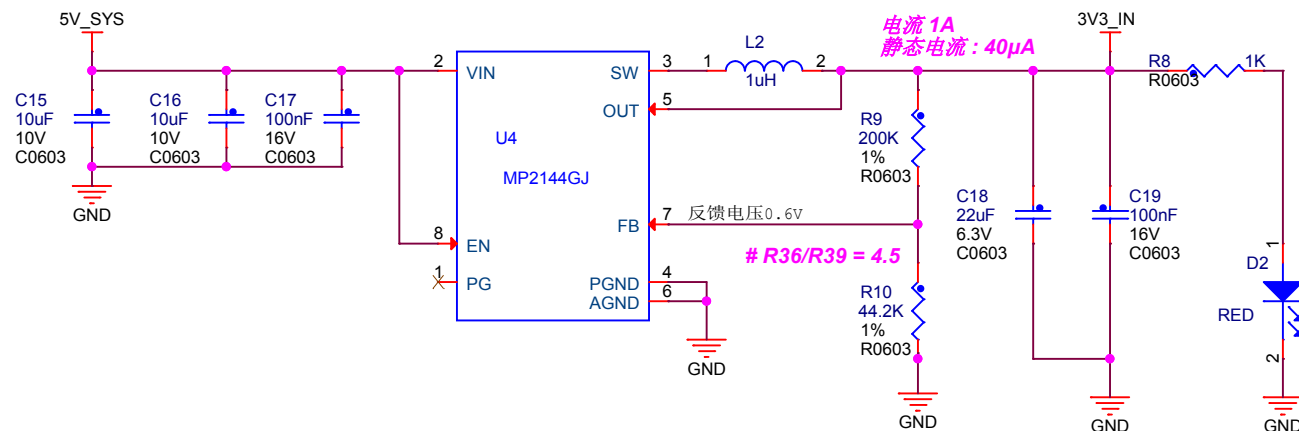
## DC/DC 5V



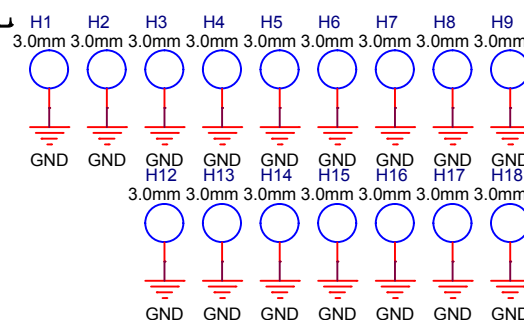
## 5V输出控制及过流保护



## 5V转3.3V



## 定位孔



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Title

野火\_STM32MP157底板\_原理图

Size  
A4

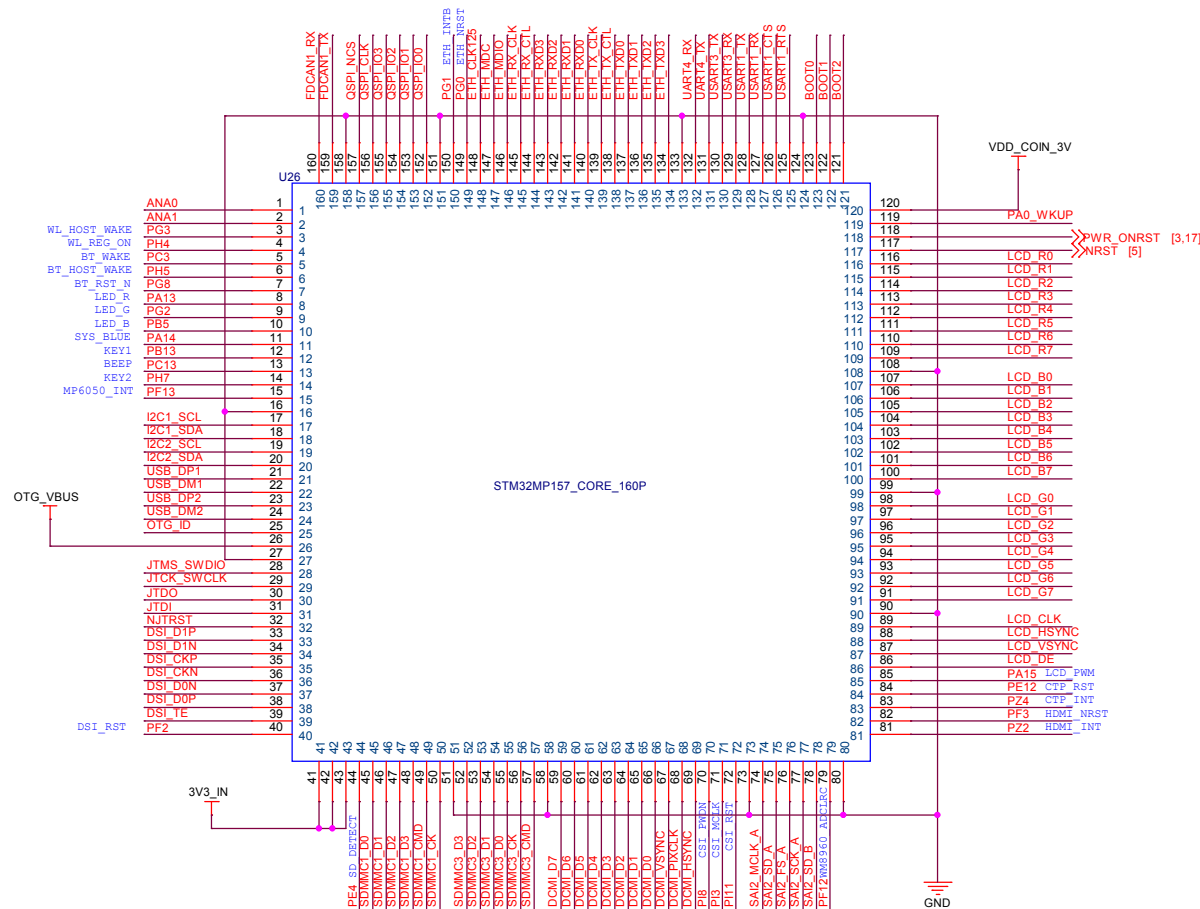
Document Number

电源

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邮票孔连接器



WIFI

[6] SDMMC3\_D0 >> SDMMC3\_D0  
[6] SDMMC3\_D1 >> SDMMC3\_D1  
[6] SDMMC3\_D2 >> SDMMC3\_D2  
[6] SDMMC3\_D3 >> SDMMC3\_D3  
[6] SDMMC3\_CMD >> SDMMC3\_CMD  
[6] SDMMC3\_CK >> SDMMC3\_CK

SD

[9] SDMMC1\_D0 >> SDMMC1\_D0  
[9] SDMMC1\_D1 >> SDMMC1\_D1  
[9] SDMMC1\_D2 >> SDMMC1\_D2  
[9] SDMMC1\_D3 >> SDMMC1\_D3  
[9] SDMMC1\_CMD >> SDMMC1\_CMD  
[9] SDMMC1\_CK >> SDMMC1\_CK

QSPI

[5,9] QSPI\_I00 >> QSPI\_I00  
[5,9] QSPI\_I01 >> QSPI\_I01  
[5,9] QSPI\_I02 >> QSPI\_I02  
[5,9] QSPI\_I03 >> QSPI\_I03  
[5,9] QSPI\_CLK >> QSPI\_CLK  
[5,9] QSPI\_NCS >> QSPI\_NCS

JTAG

[5] JTDO >> JTDO  
[5] JTDI >> JTDI  
[5] JTKC\_SWCLK >> JTKC\_SWCLK  
[5] JTMS\_SWCLK >> JTMS\_SWCLK  
[5] NJTRST >> NJTRST

LCD

[14,16] LCD\_R7 >> LCD\_R7  
[14,16] LCD\_R6 >> LCD\_R6  
[14,16] LCD\_R5 >> LCD\_R5  
[14,16] LCD\_R4 >> LCD\_R4  
[14,16] LCD\_R3 >> LCD\_R3  
[14,16] LCD\_R2 >> LCD\_R2  
[14,16] LCD\_R1 >> LCD\_R1  
[14,16] LCD\_R0 >> LCD\_R0  
[14,16] LCD\_G7 >> LCD\_G7  
[14,16] LCD\_G6 >> LCD\_G6  
[14,16] LCD\_G5 >> LCD\_G5  
[14,16] LCD\_G4 >> LCD\_G4  
[14,16] LCD\_G3 >> LCD\_G3  
[14,16] LCD\_G2 >> LCD\_G2  
[14,16] LCD\_G1 >> LCD\_G1  
[14,16] LCD\_G0 >> LCD\_G0  
[14,16] LCD\_B7 >> LCD\_B7  
[14,16] LCD\_B6 >> LCD\_B6  
[14,16] LCD\_B5 >> LCD\_B5  
[14,16] LCD\_B4 >> LCD\_B4  
[14,16] LCD\_B3 >> LCD\_B3  
[14,16] LCD\_B2 >> LCD\_B2  
[14,16] LCD\_B1 >> LCD\_B1  
[14,16] LCD\_B0 >> LCD\_B0  
[14,16] LCD\_HSYNC >> LCD\_HSYNC  
[14,16] LCD\_VSYNC >> LCD\_VSYNC  
[14,16] LCD\_DE >> LCD\_DE  
[14,16] LCD\_CLK >> LCD\_CLK  
[9,16] PE12 >> PE12  
[9,16] P24 >> P24  
[9,16] PA15 >> PA15  
[14] P22 >> P22  
[14] PF3 >> PF3

GPIO

[8] PA0\_WKUP >> PA0\_WKUP  
[9] PE4 >> PE4  
[6] PG8 >> PG8  
[6] PC3 >> PC3  
[6] PH5 >> PH5  
[6] PH4 >> PH4  
[6] PG3 >> PG3  
[11] PA13 >> PA13  
[11] PG2 >> PG2  
[11] PB5 >> PB5  
[11] PA14 >> PA14  
[11] PB13 >> PB13  
[11] PH7 >> PH7  
[11] PC13 >> PC13  
[12] PF12 >> PF12

ADC

[5,11] ANA0 >> ANA0  
[5] ANA1 >> ANA1

DSI

[9] DSI\_D0N >> DSI\_D0N  
[9] DSI\_D0P >> DSI\_D0P  
[9] DSI\_D1N >> DSI\_D1N  
[9] DSI\_D1P >> DSI\_D1P  
[9] DSI\_CKN >> DSI\_CKN  
[9] DSI\_CKP >> DSI\_CKP  
[9] DSI\_TE >> DSI\_TE  
[9] PF2 >> PF2

I2C

I2C2\_SCL >> I2C2\_SCL [5,9,12,14]  
I2C2\_SDA >> I2C2\_SDA [5,9,12,14]  
I2C1\_SCL >> I2C1\_SCL [5,9,11,16]  
I2C1\_SDA >> I2C1\_SDA [5,9,11,16]

FDCCAN

FDCCAN1\_RX >> FDCCAN1\_RX [5,7]  
FDCCAN1\_TX >> FDCCAN1\_TX [5,7]

USB

USB\_DP1 >> USB\_DP1 [13]  
USB\_DM1 >> USB\_DM1 [13]  
USB\_DP2 >> USB\_DP2 [13]  
USB\_DM2 >> USB\_DM2 [13]  
OTG\_ID >> OTG\_ID [13]

UART

UART4\_TX >> UART4\_TX [5,8]  
UART4\_RX >> UART4\_RX [5,8]  
USART3\_TX >> USART3\_TX [5,7]  
USART3\_RX >> USART3\_RX [5,7]  
USART1\_RTS >> USART1\_RTS [5,6,7]  
USART1\_CTS >> USART1\_CTS [5,6,7]  
USART1\_TX >> USART1\_TX [5,6,7]  
USART1\_RX >> USART1\_RX [5,6,7]

DCMI

DCMI\_D0 >> DCMI\_D0 [9]  
DCMI\_D1 >> DCMI\_D1 [9]  
DCMI\_D2 >> DCMI\_D2 [9]  
DCMI\_D3 >> DCMI\_D3 [9]  
DCMI\_D4 >> DCMI\_D4 [9]  
DCMI\_D5 >> DCMI\_D5 [9]  
DCMI\_D6 >> DCMI\_D6 [9]  
DCMI\_D7 >> DCMI\_D7 [9]  
DCMI\_HSYNC >> DCMI\_HSYNC [9]  
DCMI\_VSYNC >> DCMI\_VSYNC [9]  
DCMI\_PIXCLK >> DCMI\_PIXCLK [9]  
CSI\_MCLK >> CSI\_MCLK [9]  
CSI\_PWDN >> CSI\_PWDN [9]  
CSI\_RST >> CSI\_RST [9]

SAI

SAI2\_FS\_A >> SAI2\_FS\_A [12]  
SAI2\_SD\_A >> SAI2\_SD\_A [12]  
SAI2\_SCK\_A >> SAI2\_SCK\_A [12]  
SAI2\_MCLK\_A >> SAI2\_MCLK\_A [12]  
SAI2\_SD\_B >> SAI2\_SD\_B [12]

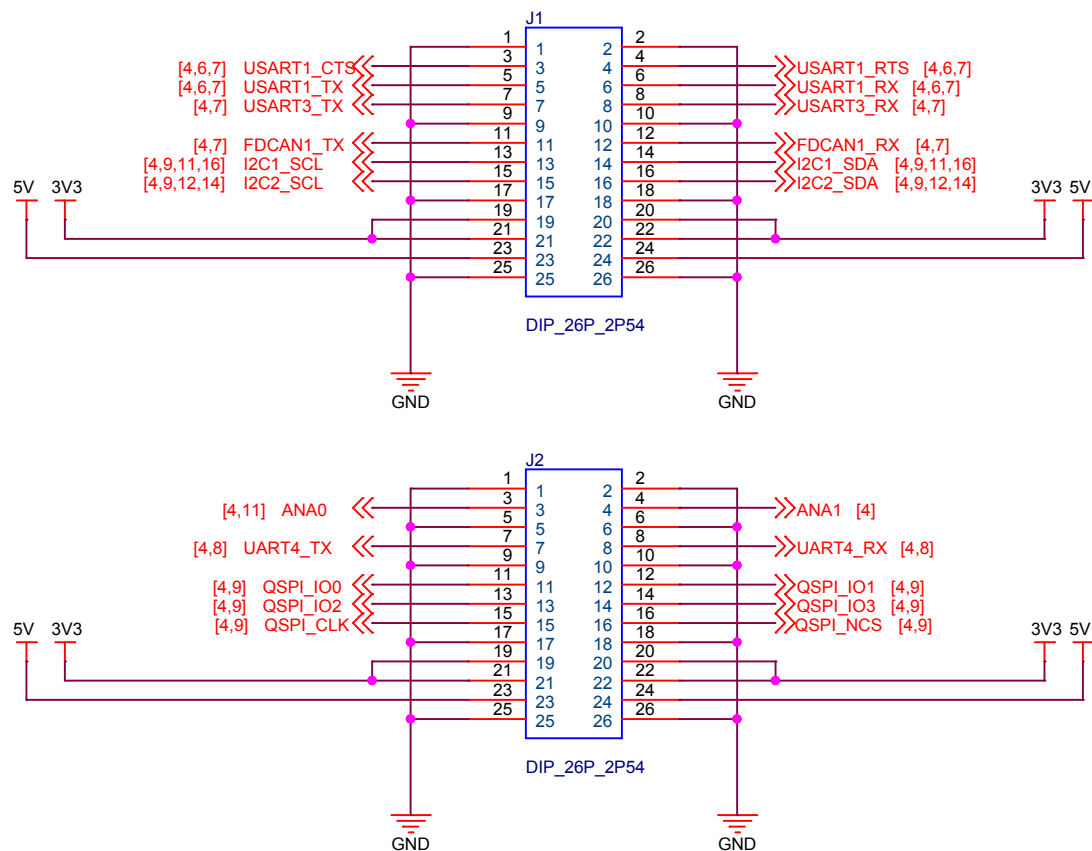
ETH

ETH\_TXD0 >> ETH\_TXD0 [10]  
ETH\_TXD1 >> ETH\_TXD1 [10]  
ETH\_TXD2 >> ETH\_TXD2 [10]  
ETH\_TXD3 >> ETH\_TXD3 [10]  
ETH\_TX\_CTL >> ETH\_TX\_CTL [10]  
ETH\_TX\_CLK >> ETH\_TX\_CLK [10]  
ETH\_RXD0 >> ETH\_RXD0 [10]  
ETH\_RXD1 >> ETH\_RXD1 [10]  
ETH\_RXD2 >> ETH\_RXD2 [10]  
ETH\_RXD3 >> ETH\_RXD3 [10]  
ETH\_RX\_CTL >> ETH\_RX\_CTL [10]  
ETH\_RX\_CLK >> ETH\_RX\_CLK [10]  
ETH\_MDIO >> ETH\_MDIO [10]  
ETH\_MDC >> ETH\_MDC [10]  
ETH\_CLK125 >> ETH\_CLK125 [10]  
ETH\_RST >> ETH\_RST [10]  
ETH\_INTB >> ETH\_INTB [10]

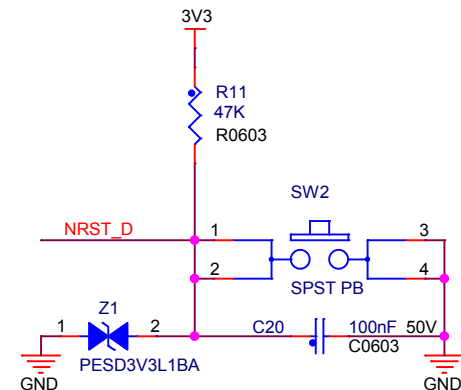
BOOT

BOOT0 >> BOOT0 [16]  
BOOT1 >> BOOT1 [16]  
BOOT2 >> BOOT2 [16]

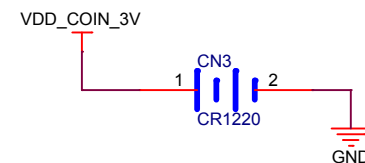
## 引出IO口(排针)



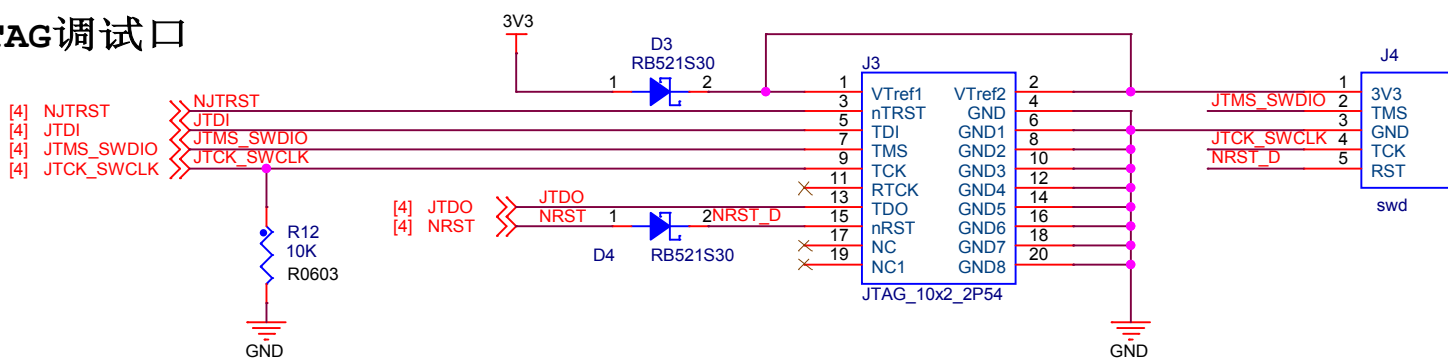
## 复位



## RTC电池



## JTAG调试口



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Title

野火\_STM32MP157底板\_原理图

Size  
A4

Document Number

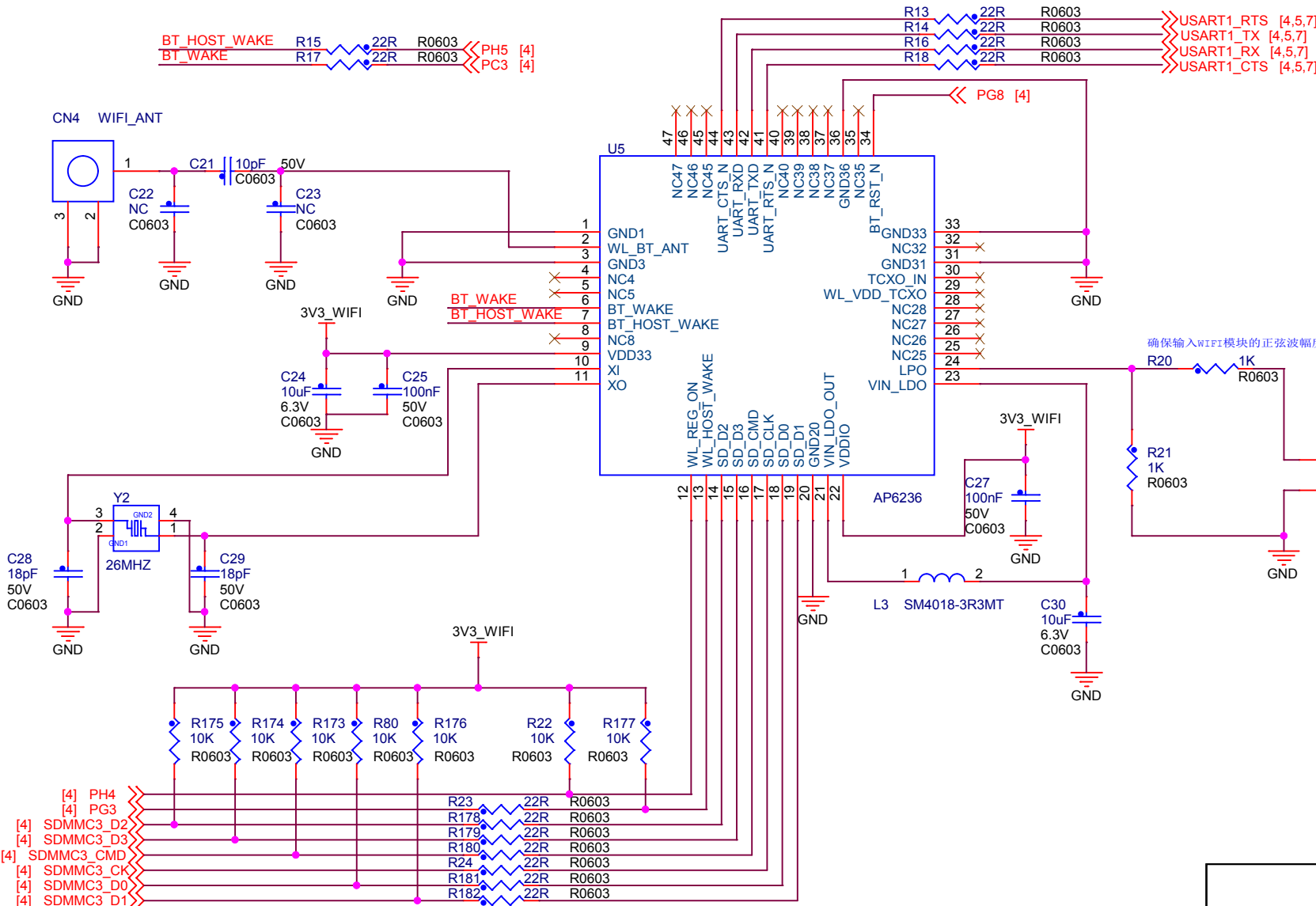
引出IO

Rev  
V1.0

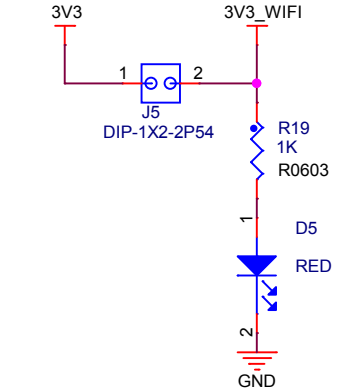
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WIFI&Bluetooth



WIFI电源指示灯

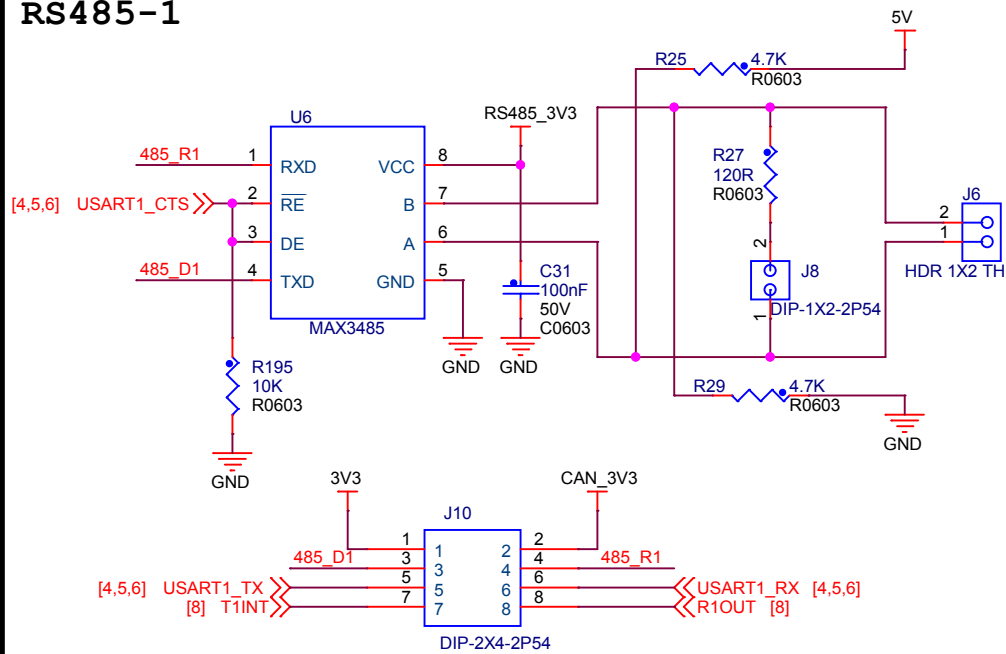


确保输入WIFI模块的正弦波幅度低于1.9V

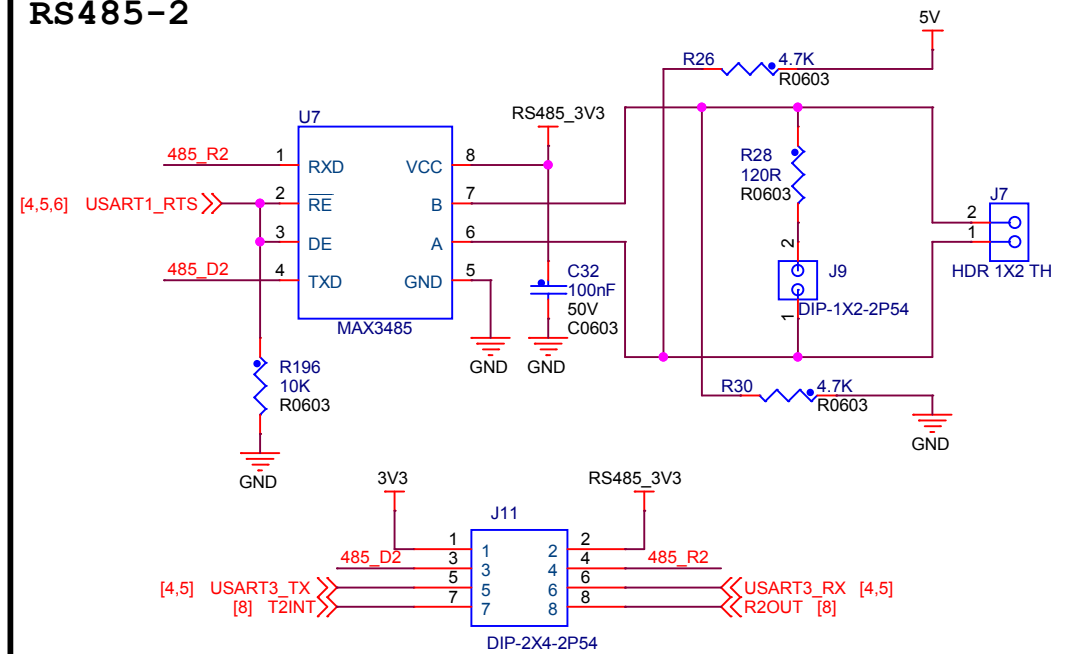
有源晶振

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Title 野火_STM32MP157底板_原理图		
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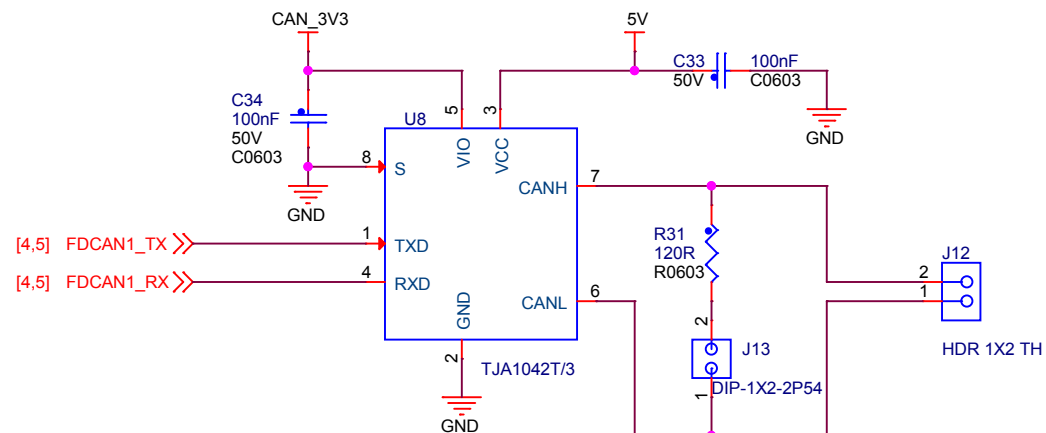
**RS485-1**



RS485-2



**CAN**



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ID	Title	Author	Date	Status
1	Introduction	John Doe	2023-10-27	Draft
2	Methodology	Jane Smith	2023-10-28	Review
3	Results	Mike Johnson	2023-10-29	Final
4	Conclusion	Emily White	2023-10-30	Draft
5	References	David Brown	2023-10-31	Review

野火\_STM32MP157底板\_原理图

Size  
A4

Document Number	CAN/RS485
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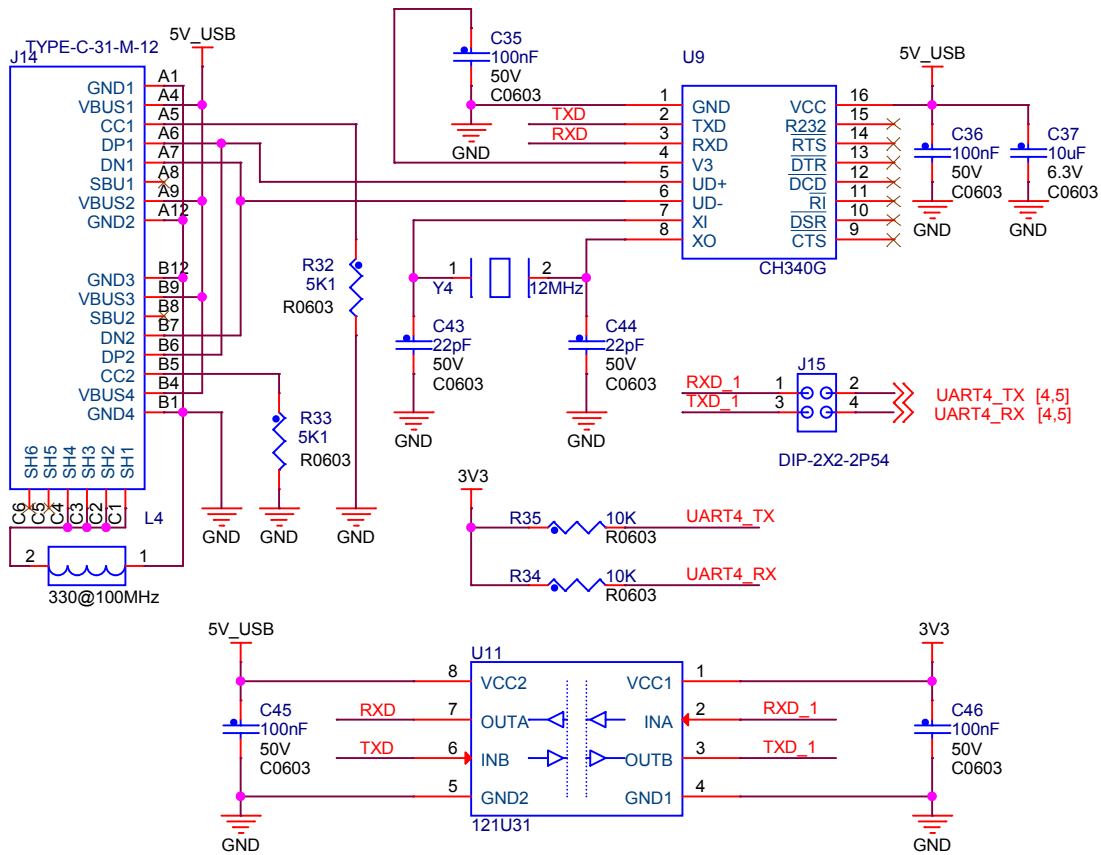
Rev  
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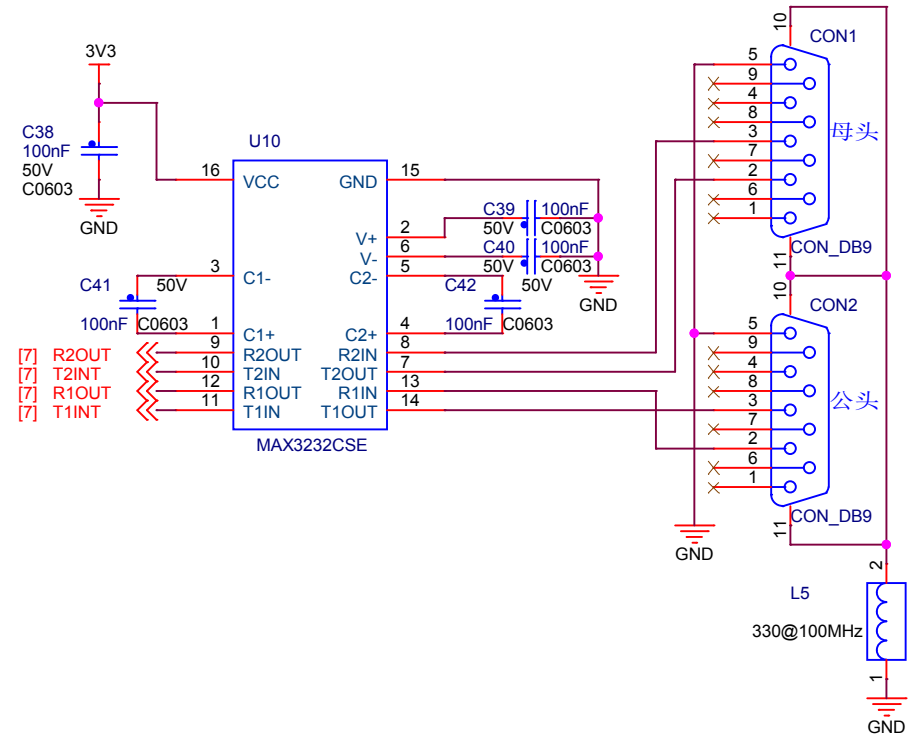
## USB转串口

注意：5V\_USB仅给CH340G供电，不用于底板供电

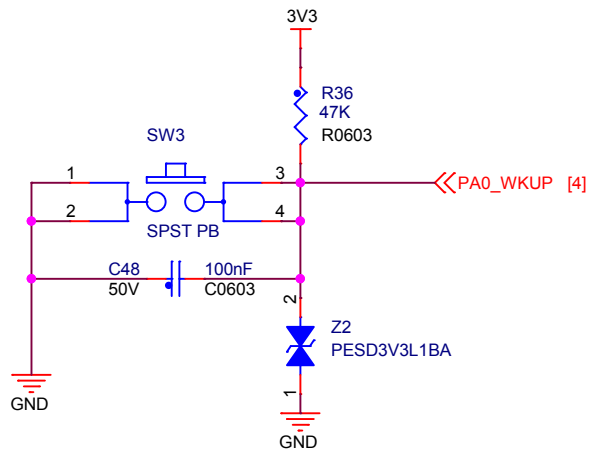


## RS232串口

2路RS232串口



## WAKE UP

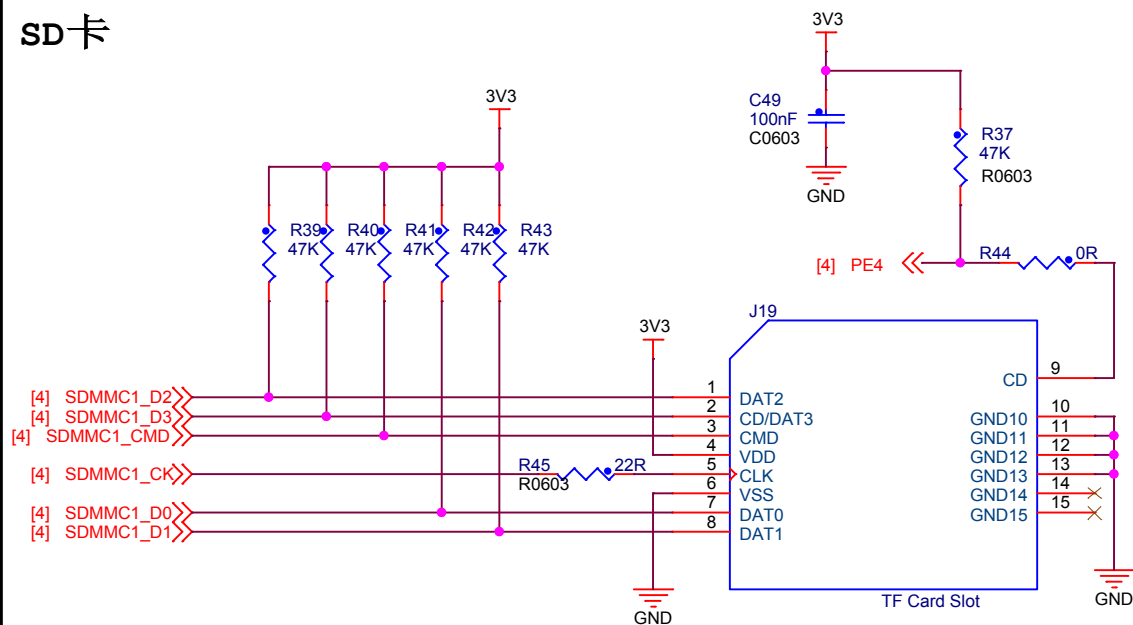


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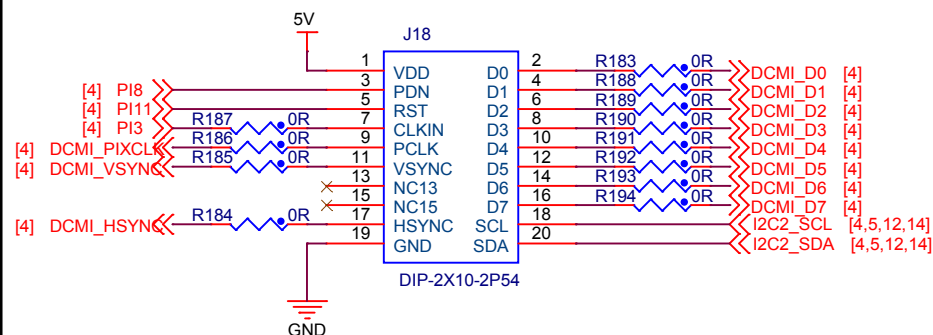
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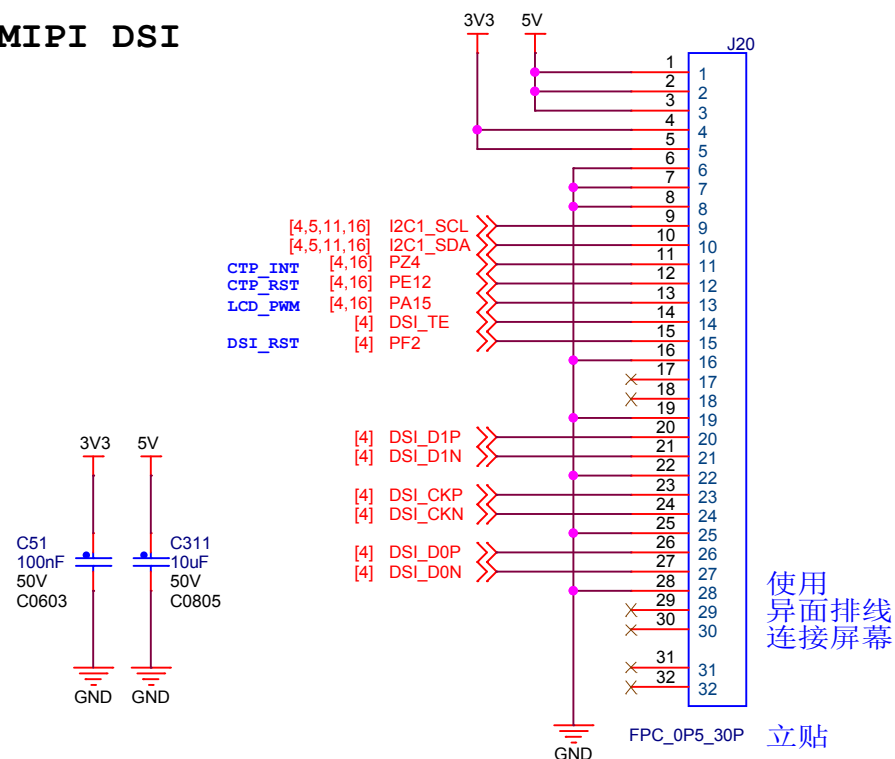
## SD卡



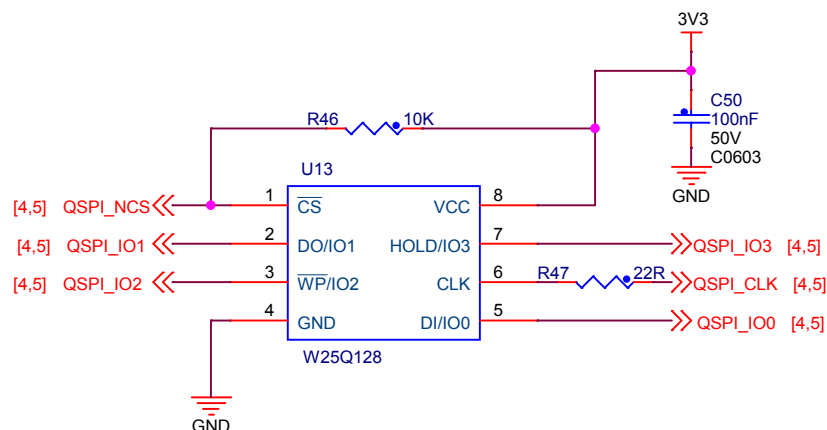
## 摄像头接口



## MIPI DSI



**SPI    FLASH**



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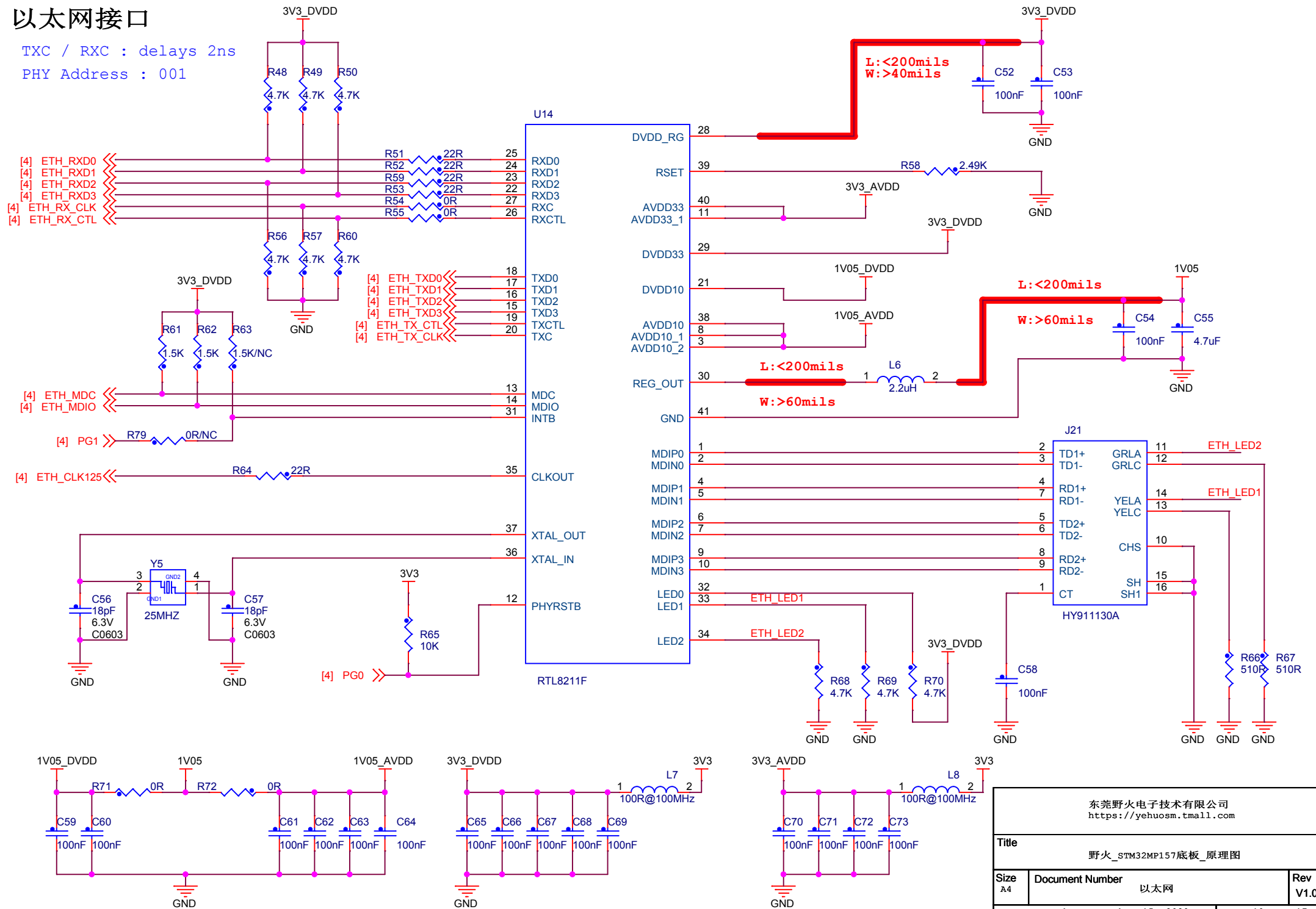
Title	野火 STM32MP157底板 原理图
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Size A4	Document Number SD卡/摄像头/FLASH	Rev V1.0
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# 以太网接口

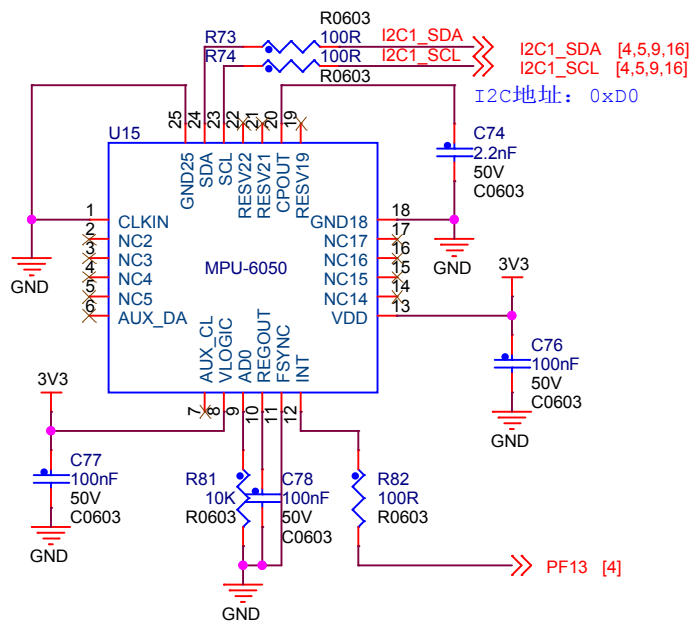
TXC / RXC : delays 2ns  
PHY Address : 001



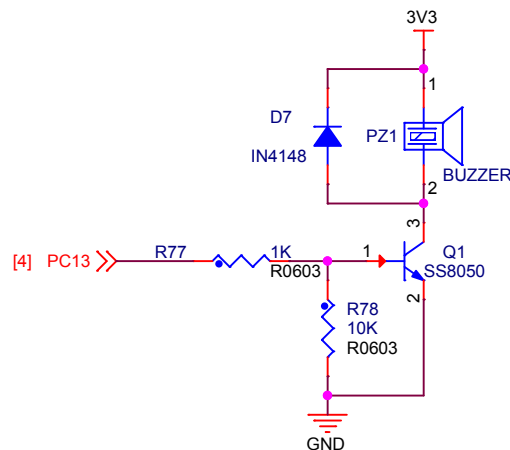
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Title			野火_STM32MP157底板_原理图		
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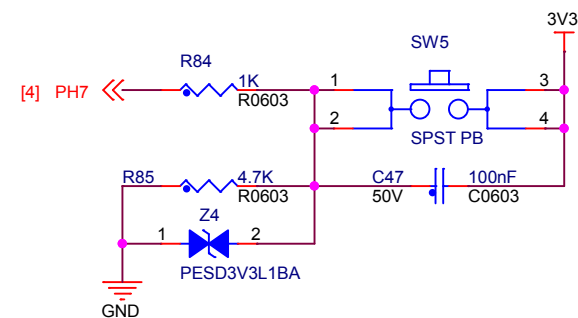
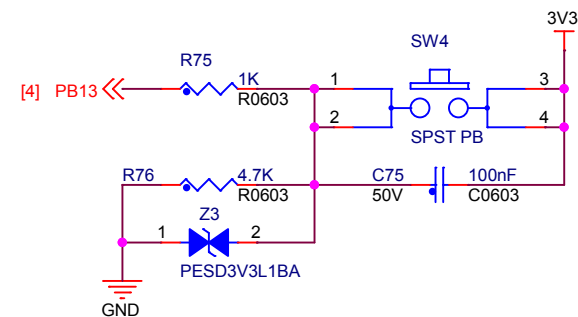
## 六轴传感器



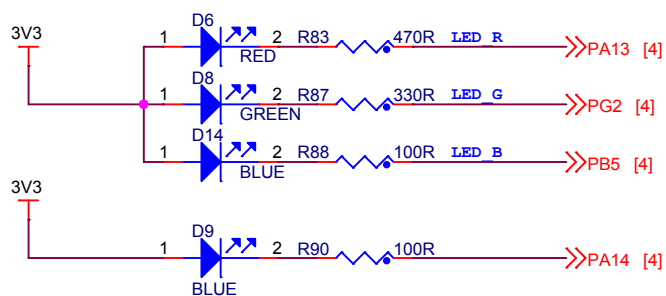
## 有源蜂鸣器



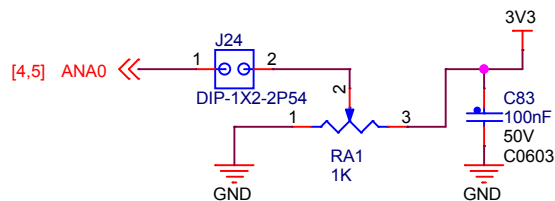
## 按键



## 彩色LED



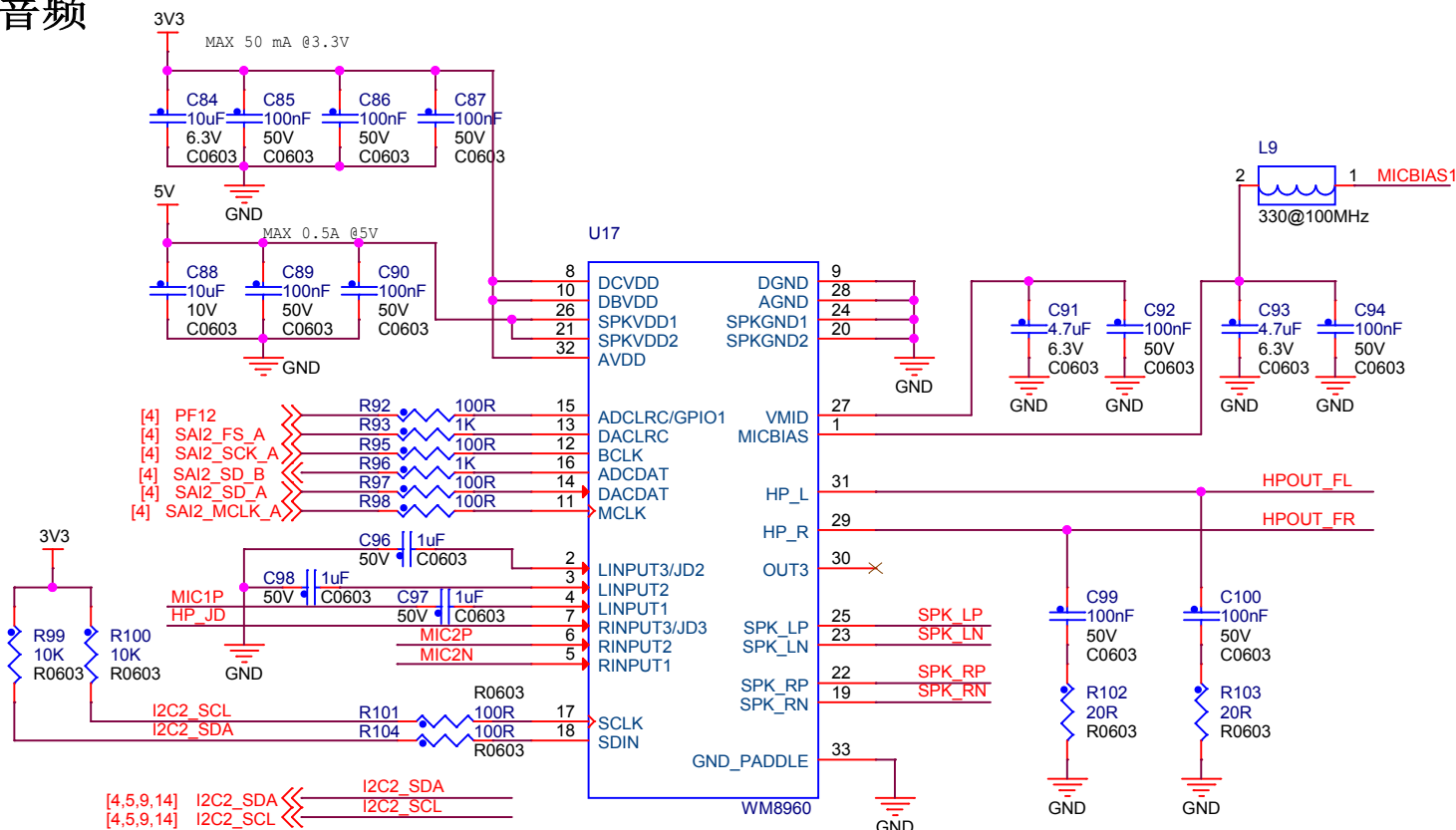
## 可调电阻



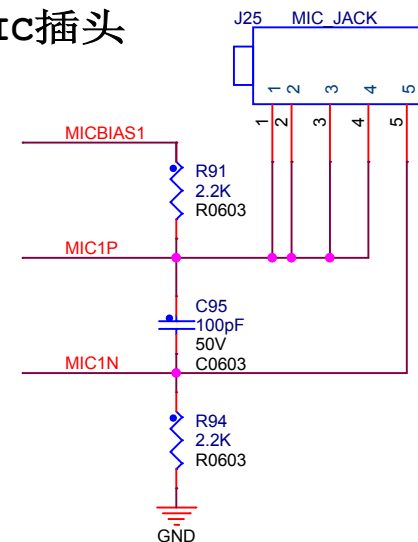
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# 音频

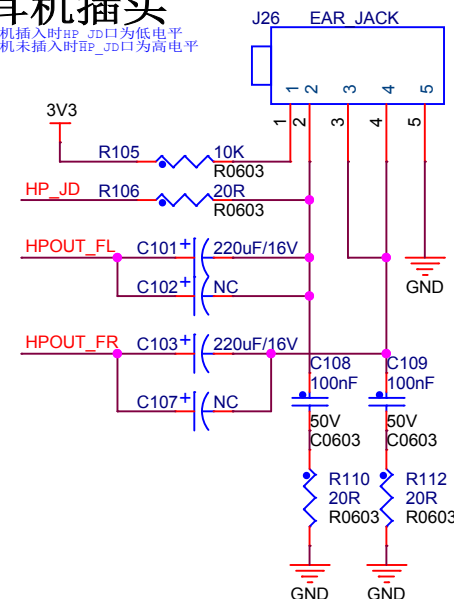


# MIC插头

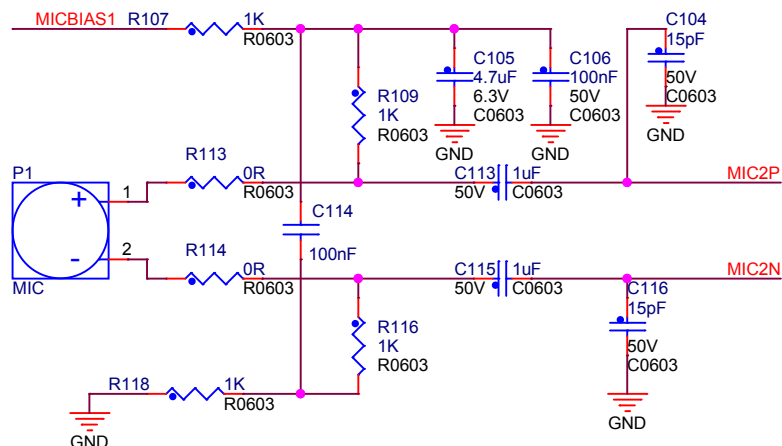


# 耳机插头

耳机插入时HP\_JD口为低电平  
耳机未插入时HP\_JD口为高电平

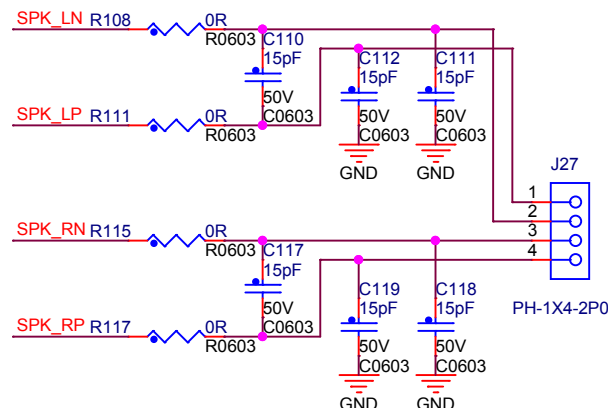


# MIC



# 喇叭插座

可以驱动2个8Ω 1W的喇叭（BTL方式）



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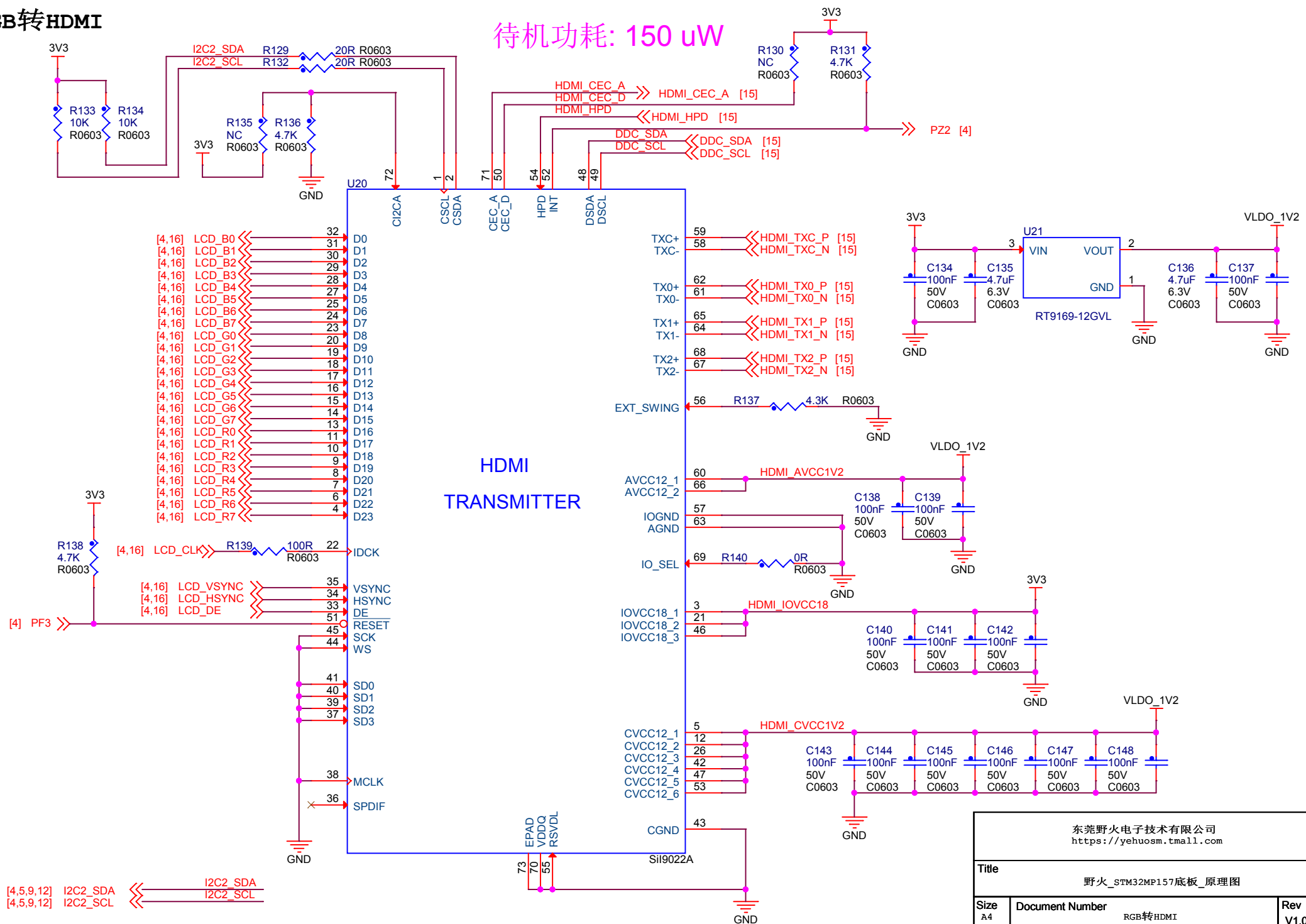
Title		
野火_STM32MP157底板_原理图		
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## C

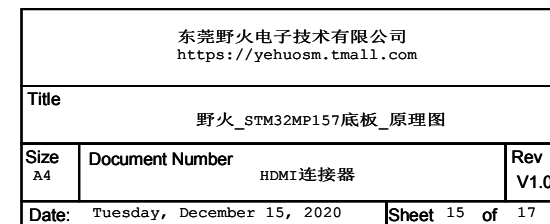


# A

## RGB转HDMI



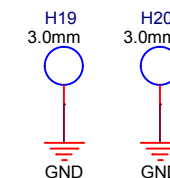
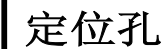
## Type A型



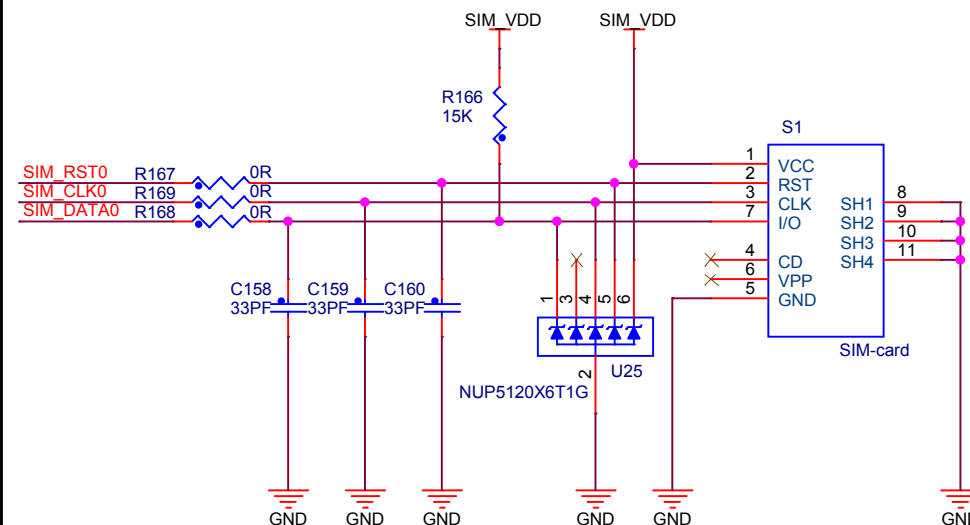




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## SIM CARD



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