

This diagram illustrates the circuit connections for two microcontroller modules: the CH554G and the ESP12F.

CH554G 电路

The CH554G module (U2) is connected to a USB interface. The pin connections are as follows:

- Pin 16:** Connected to V33.
- Pin 15:** Connected to VCC/VDD.
- Pin 14:** Connected to GND/VSS.
- Pin 13:** Connected to USB_N through a 10K resistor (R1).
- Pin 12:** Connected to USB_P.
- Pin 11:** Connected to P3.4/PWM2/RXD1_/T0.
- Pin 10:** Connected to P3.3/INT1.
- Pin 9:** Connected to P1.1/T2EX/CAP2/TIN1/VBUS2/AIN0.
- Pin 8:** Connected to P3.0/PWM1/_RXD.
- Pin 7:** Connected to P3.1/PWM2/_TXD.
- Pin 6:** Connected to RST/T2EX/_CAP2_.
- Pin 5:** Connected to P1.7/SCK/TXD1/TIN5.
- Pin 4:** Connected to P1.6/MISO/RXD1/TIN4.
- Pin 3:** Connected to P1.5/MOSI/PWM1/TIN3/UCC2/AIN2.
- Pin 2:** Connected to P1.4/T2_/CAP1_/SCS/TIN2/UCC1/AIN1.
- Pin 1:** Connected to P3.2/TXD1_/INT0/VBUS1/AIN3.

Additional components include a 100nF capacitor (C1) connected to V33 and GND, and a 10K resistor (R1) connected to USB_N and GND. A test point (TP1) is located near the USB_N pin.

ESP12F 模块

The ESP12F module (U3) is connected to a USB interface. The pin connections are as follows:

- Pin 1:** Connected to RST.
- Pin 2:** Connected to ADC.
- Pin 3:** Connected to EN.
- Pin 4:** Connected to GPIO16.
- Pin 5:** Connected to GPIO14.
- Pin 6:** Connected to GPIO12.
- Pin 7:** Connected to GPIO13.
- Pin 8:** Connected to VCC.
- Pin 9:** Connected to GND.
- Pin 10:** Connected to GPIO15.
- Pin 11:** Connected to GPIO2.
- Pin 12:** Connected to GPIO0.
- Pin 13:** Connected to GPIO4.
- Pin 14:** Connected to GPIO5.
- Pin 15:** Connected to RXD0.
- Pin 16:** Connected to TXD0.

Additional components include a 10K resistor (R4) connected to V33 and GND, and a test point (TP1) located near the USB_N pin.

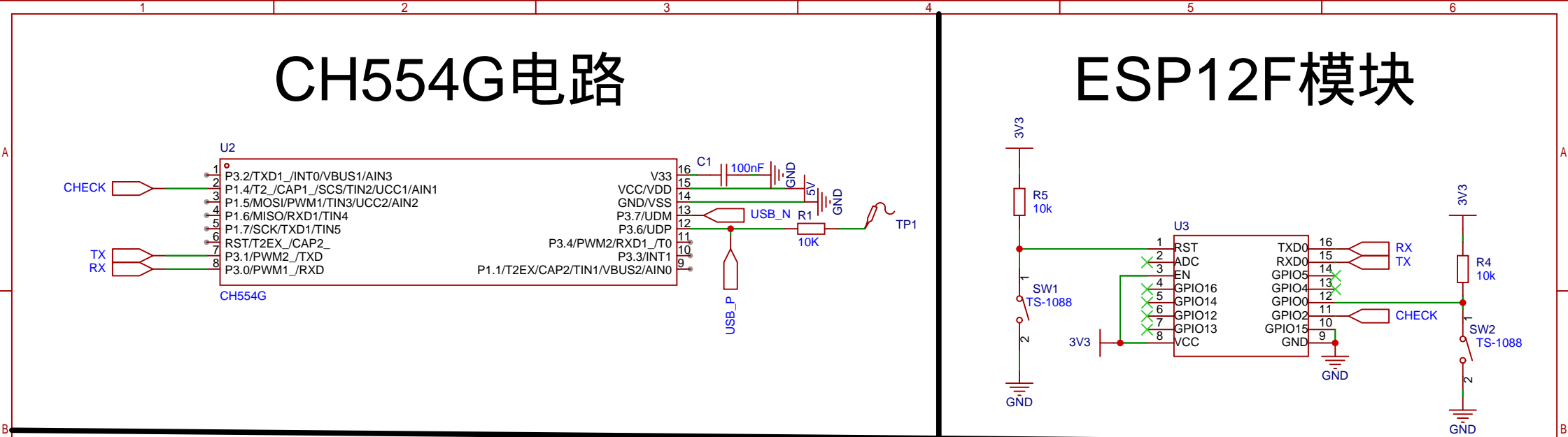


Diagram illustrating the circuit connections for the CH554G module and the ESP12F module.

CH554G 电路

The CH554G module (U2) is connected to the USB_P and USB_N pins. The module pins are labeled as follows:

- P3.2/TXD1_/INT0/VBUS1/AIN3
- P1.4/T2_/CAP1_/SCS/TIN2/UCC1/AIN1
- P1.5/MOSI/PWM1/TIN3/UCC2/AIN2
- P1.6/MISO/RXD1/TIN4
- P1.7/SCK/TXD1/TIN5
- RST/T2EX_/CAP2_
- P3.1/PWM2_/TXD
- P3.0/PWM1_/RXD
- P3.4/PWM2/RXD1_/T0
- P3.3/INT1
- P1.1/T2EX/CAP2/TIN1/VBUS2/AIN0

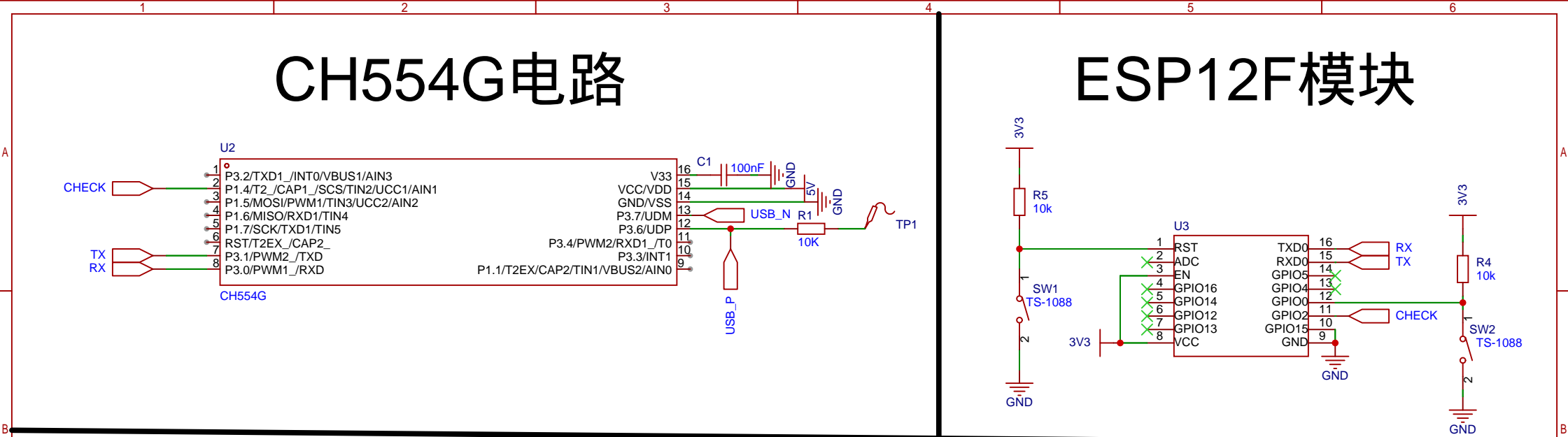
The module is connected to a 5V supply (V33) and ground (GND). A 100nF capacitor (C1) is connected between V33 and GND. A 10K resistor (R1) is connected between USB_N and GND. The USB_P and USB_N pins are connected to the USB_P and USB_N pins of the module.

ESP12F 模块

The ESP12F module (U3) is connected to the 3V3 supply and ground (GND). The module pins are labeled as follows:

- RST
- ADC
- EN
- GPIO16
- GPIO14
- GPIO12
- GPIO13
- VCC
- TXD0
- RXD0
- GPIO5
- GPIO4
- GPIO0
- GPIO2
- GPIO15
- GND

The module is connected to a 3V3 supply and ground (GND). A 10K resistor (R5) is connected between 3V3 and GND. A switch (SW1) is connected between 3V3 and GND. The TXD0 and RXD0 pins are connected to the TX and RX pins of the module. The GPIO5 pin is connected to the CHECK pin of the module. The GPIO15 pin is connected to the GND pin of the module.



电源电路

5V

TP2

U1

VIN

VOUT(TAB)

ADJ(GND)

D4

1N5819

C2

10uF

C3

100nF

C4

10uF

C5

100nF

U10

OUT

IN

GND

ISET

EN

R2

6.8k

R3

10k

C6

10uF

C7

100nF

VCC

GND

3V3

USB电路

5V

GND

D1

USB1

VCC

VCC

D-

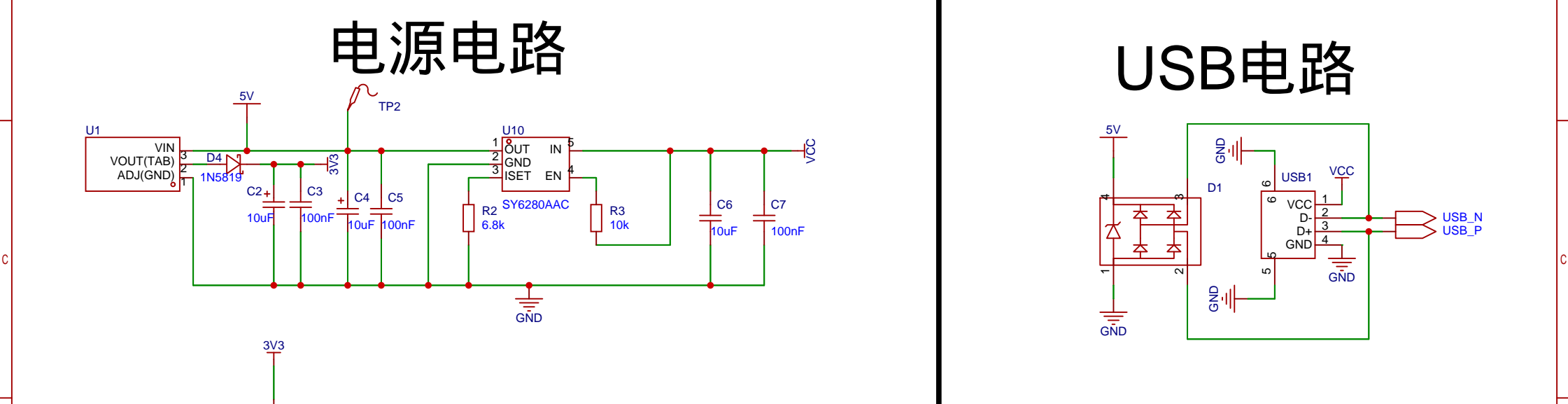
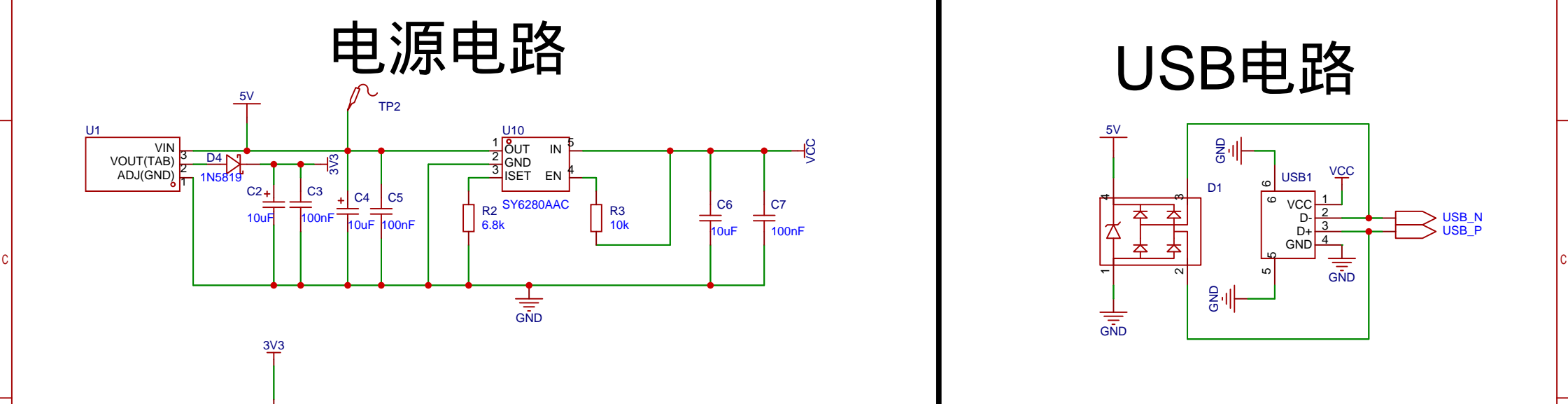
D+

GND

GND

USB_N

USB_P



电源电路

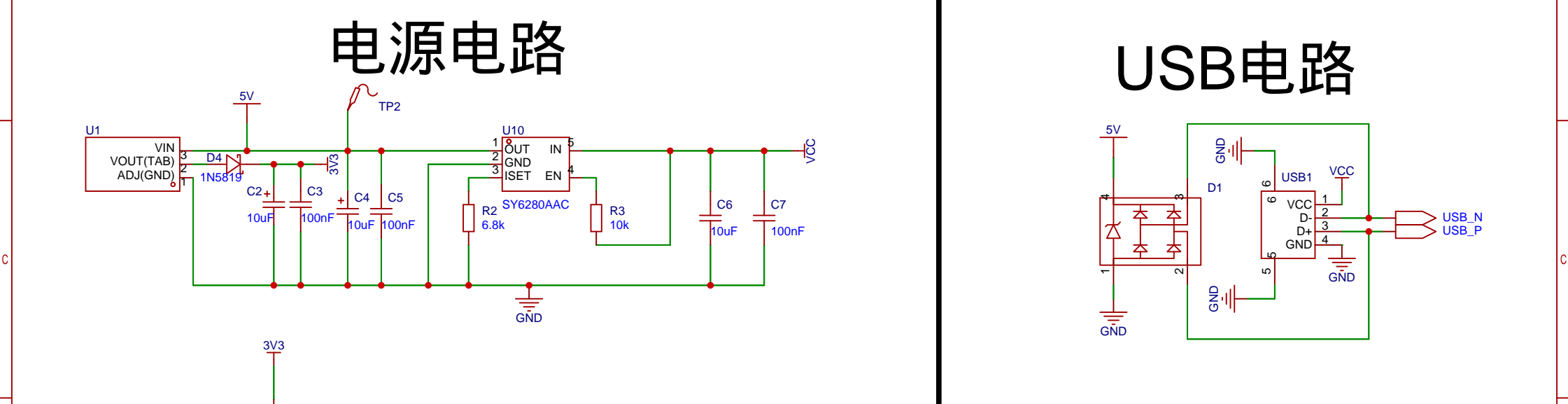
电源电路

该电路将5V输入电压通过1N5819二极管整流，并经过10uF电容（C2）和100nF电容（C3）滤波。随后，3V3电压通过6.8k电阻（R2）连接到SY6280AAC电压调节器的IN引脚。该调节器的EN引脚通过10k电阻（R3）连接到地，GND引脚也连接到地。调节器的OUT引脚输出3V3电压，经过10uF电容（C6）和100nF电容（C7）滤波后，连接到USB模块的VCC引脚。测试点TP2位于100nF电容（C3）之后。

USB电路

USB电路

该电路展示了USB模块的接口。5V输入通过10uF电容（C2）连接到模块的VCC引脚。模块的GND引脚连接到地。模块的D+和D-引脚分别连接到USB模块的D+和D-引脚。模块的VCC引脚连接到5V输入，GND引脚连接到地。模块的D+和D-引脚分别连接到USB模块的D+和D-引脚。



R6
470

LED1

GND

GND RX TX 3V3

H1

PZ254V-11-04P

原理图	Schematic1			更新日期	2024-12-20
图页	P1			创建日期	2024-12-07
绘制		ESP32S3多功能调试器			
审阅					
		版本	尺寸	页	共
		V1.0	A4	1	1
			嘉立创EDA		

1

2

3

4

5

6