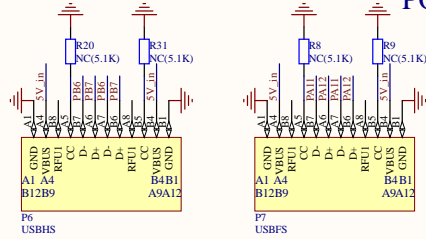
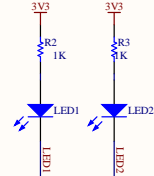
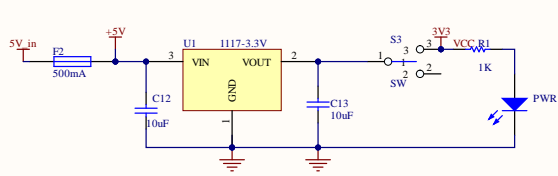
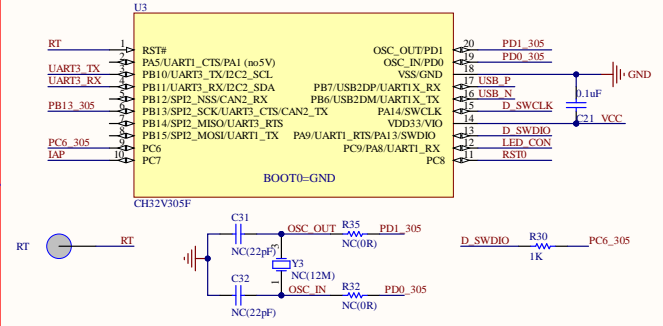


# CH32V307/CH32F207/CH32V303/CH32F203VC最小系统



## POWER&USB

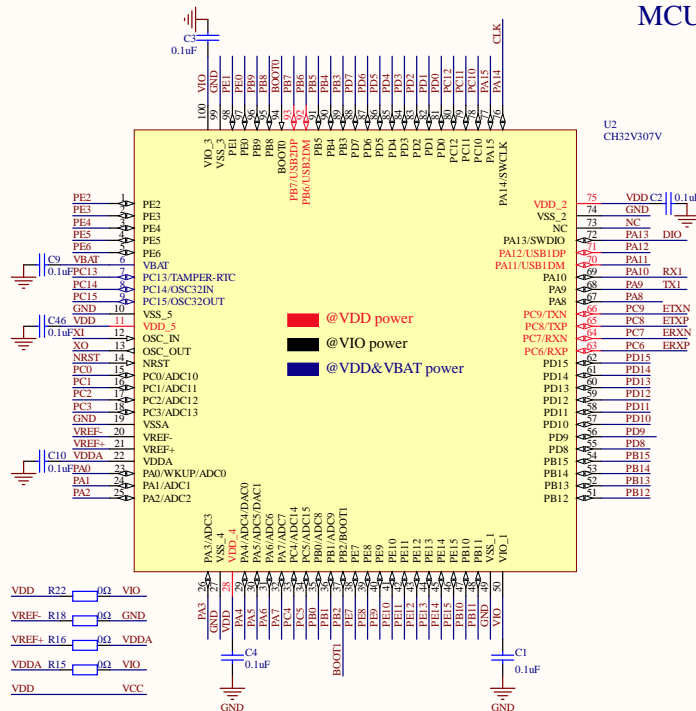
## WCH\_LinkE MCU



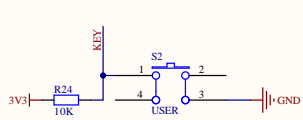
## XTAL



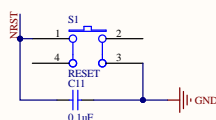
## MCU



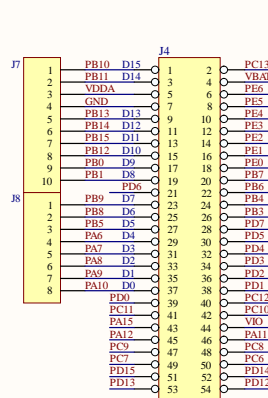
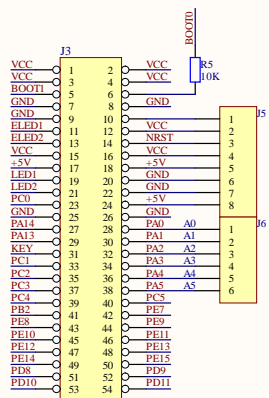
## KEY



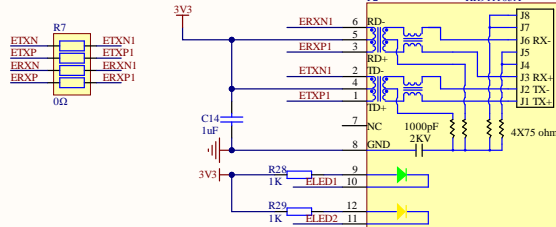
## RST



## ARDUINO

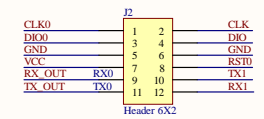
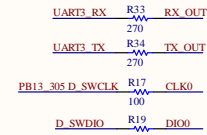
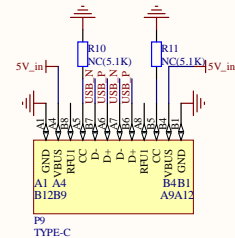


When using ETH PC6 PC7 PC8 PC9 polling up



## ETH

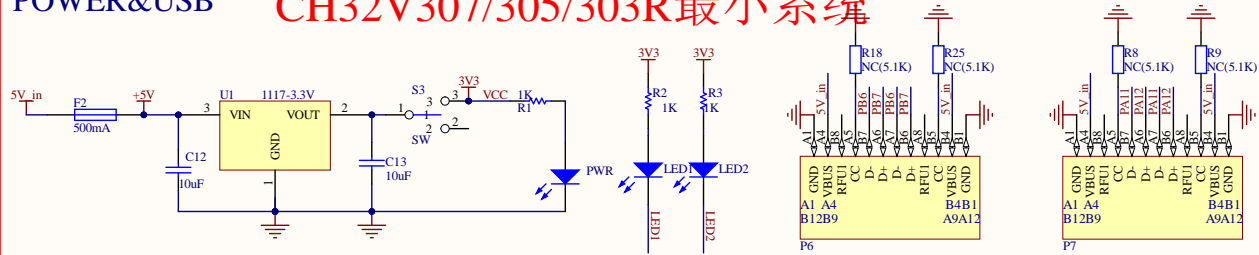
## POWER&USB



空闲时蓝灯常亮-ANOV模式  
空闲时蓝灯常亮-RISC-V模式

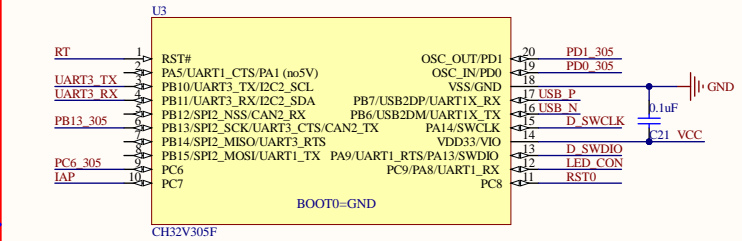
## POWER&amp;USB

## CH32V307/305/303R最小系统



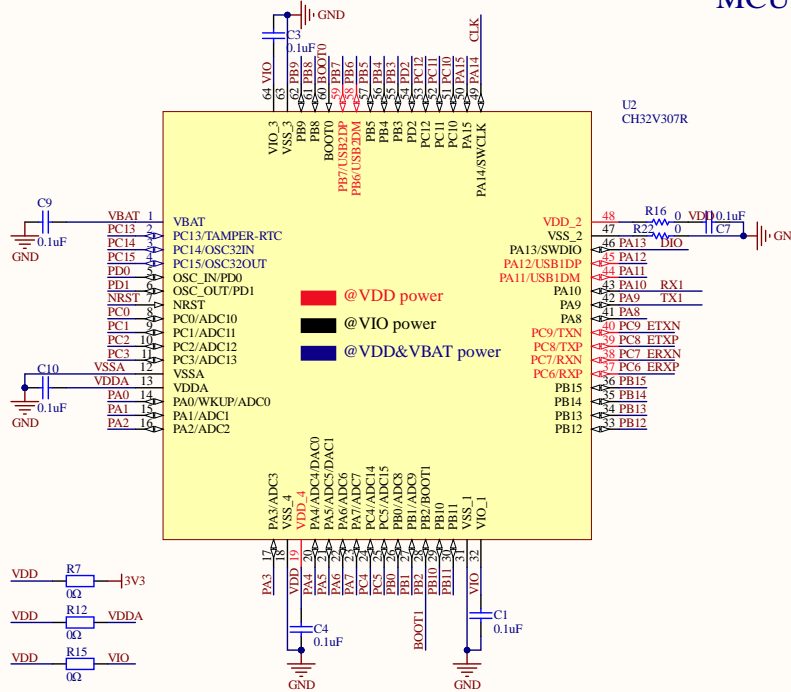
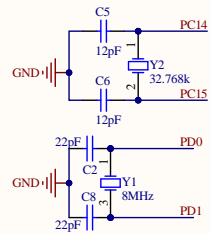
## WCH\_LinkE

## MCU

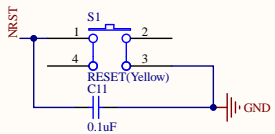


## XTAL

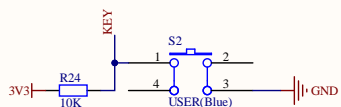
## MCU



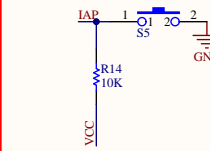
## RST



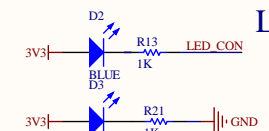
## KEY



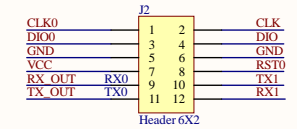
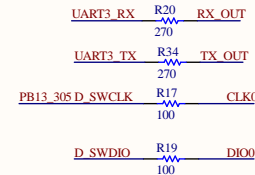
## IAP



## LED



## SWD&amp;UART

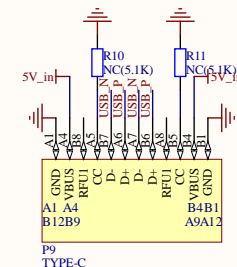
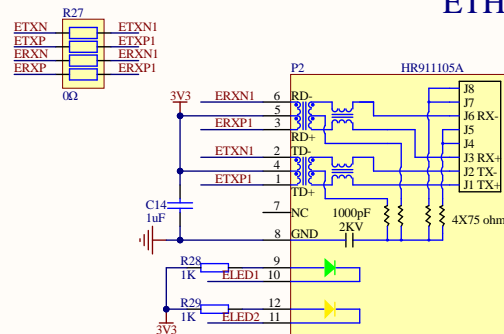
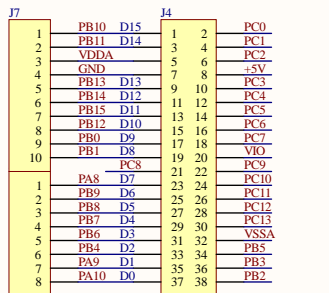
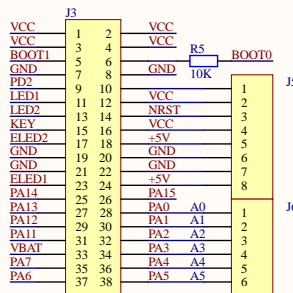


空闲时蓝灯常亮-ARM模式  
空闲时蓝灯常亮-Risc-V模式

## ARDUINO

## ETH

## POWER&amp;USB



### POWER&USB CH32V307/305/303R最小系统

J3				J7				J4			
VCC	1	2	VCC	1	2	PB10	D15	1	2	PC0	
VCC	3	4	VCC	3	4	PB11	D14	3	4	PC1	
BOOT1	5	6	R5	5	6	VDDA		5	6	PC2	
GND	7	8	10K	7	8	GND		7	8	+V5	
FD5	9	10		9	10	PB13	D13	9	10	PC3	
LED1	11	12	VCC	11	12	PB13	D12	11	12	PC4	
LED2	13	14	NRST	13	14	PB15	D11	13	14	PC5	
KEY	15	16	VCC	15	16	PB12	D10	15	16	PC6	
ELED2	17	18	+5V	17	18	PB0	D9	17	18	PC7	
GND	19	20	GND	19	20	PB1	D8	19	20	VIO	
GND	21	22	GND	21	22		PC8	21	22	PC9	
ELED1	23	24	+5V	23	24	PA8	D7	23	24	PC10	
PA14	25	26	PA15	25	26	PB9	D6	25	26	PC11	
PA13	27	28	PA0 A0	27	28	PB8	D5	27	28	PC12	
PA12	29	30	PA1 A1	29	30	PB7	D4	29	30	PC13	
PA11	31	32	PA2 A2	31	32	PB6	D3	31	32	VSSA	
VBAT	33	34	PA3 A3	33	34	PB5	D2	33	34	PB5	
PA7	35	36	PA4 A4	35	36	PA9	D1	35	36	PB3	
PA6	37	38	PA5 A5	37	38	PA10	D0	37	38	PB2	

Pin connection diagram for the CH32V305F microcontroller (U3). The diagram shows the microcontroller chip with pins 1 through 10 on the left and pins 1 through 20 on the right. Various pins are connected to external components:

- RT to pin 1
- UART3\_TX to pin 2
- UART3\_RX to pin 3
- PB13\_305 to pin 4
- PC6\_305 to pin 5
- IAP to pin 6
- BOOT0\_GND to pin 7
- PA1/UART1\_CTS/PA1 (noV) to pin 8
- PB10/UART3\_TX/IC2\_SCL to pin 9
- PB11/UART3\_RX/IC2\_SDA to pin 10
- PB12/SPI2\_NSS/CAN2\_RX to pin 11
- PB13/SPI2\_SCK/UART3\_CTS/CAN2\_TX to pin 12
- PB14/SPI2\_MISO/UART3\_RTS to pin 13
- PB15/SPI2\_MOSI/UART1\_TX to pin 14
- PA9/UART1\_RTS/PA13/SWIDIO to pin 15
- PC9/PA8/UART1\_RX to pin 16
- PC8 to pin 17
- OSC\_OUT/PD1 to pin 18
- OSC\_IN/PD0 to pin 19
- VSS/GND to pin 20

Additional connections shown:

- 0.1uF capacitor connected between pin 18 and GND.
- 2.1k resistor connected between pin 18 and VCC.

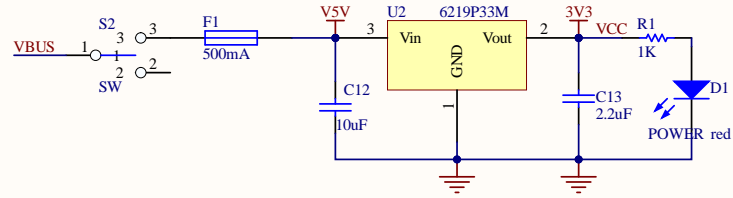
The microcontroller is labeled U3 and CH32V305F.

UART3\_RX R20 RX\_OUT  
 270  
 UART3\_TX R34 TX\_OUT  
 270  
 PB13\_305 D\_SWCLK R17 CLK0  
 100  
 D\_SWKDIO R19 DIO0  
 100

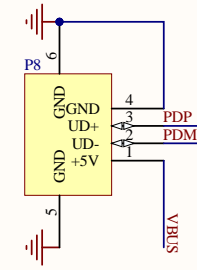
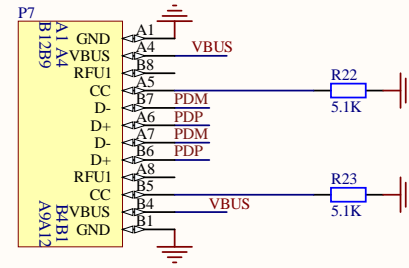
空闲时蓝灯常亮-ARM模式  
空闲时蓝灯常灭-Risc-V模式

[illegible]

# PWR



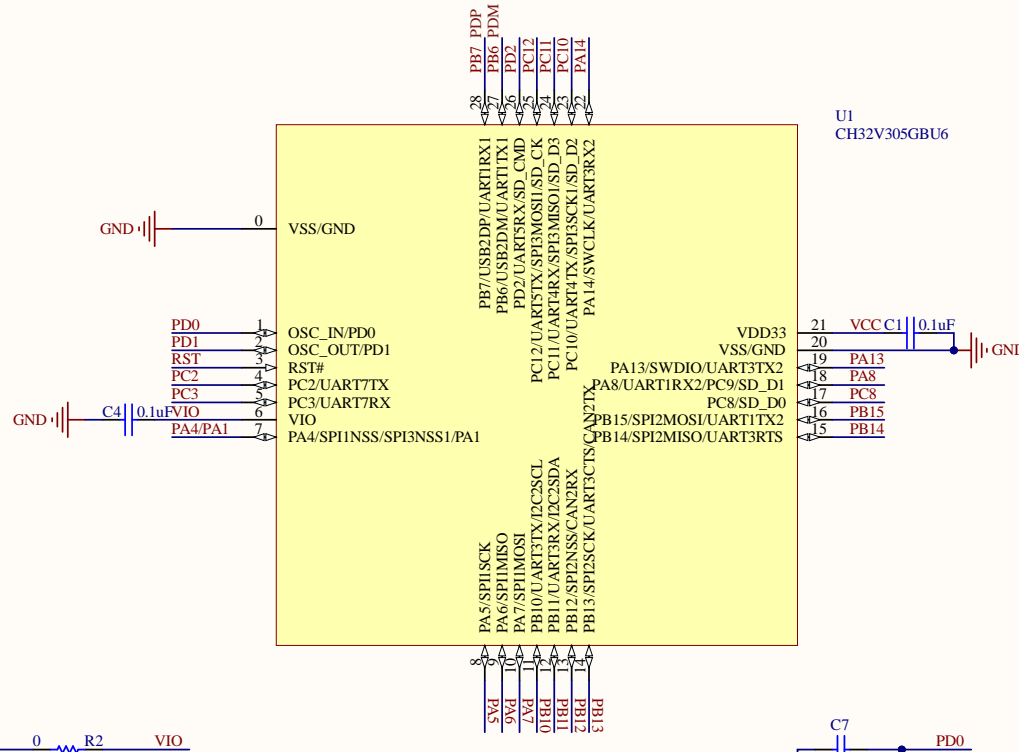
# USB&PWR



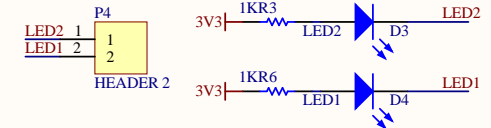
# MCU

没BOOT

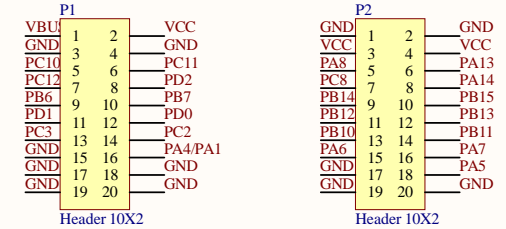
U1  
CH32V305GBU6



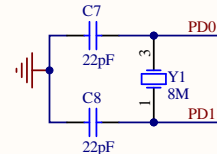
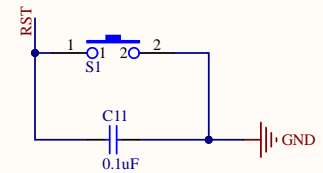
# LED



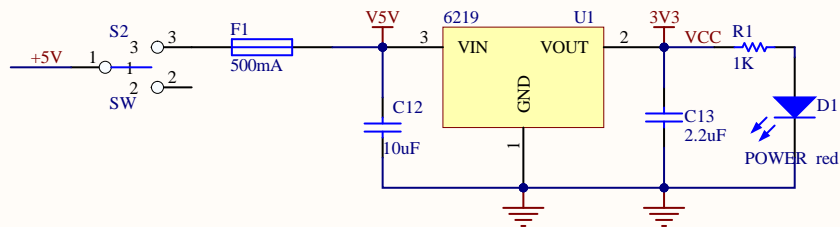
# PIN



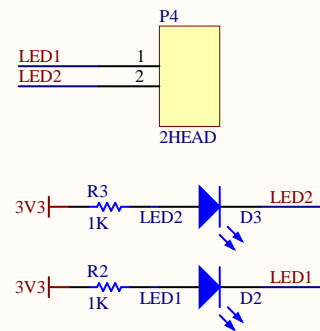
# RST



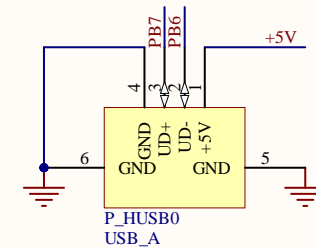
# POWER



# LED



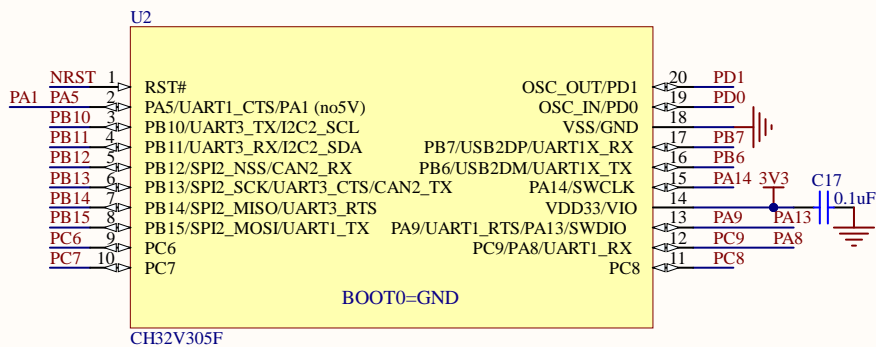
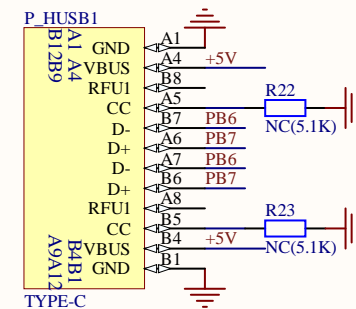
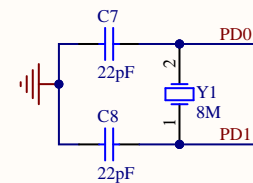
# USB



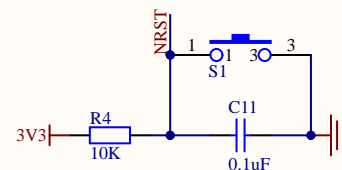
# MCU

CH32V305F

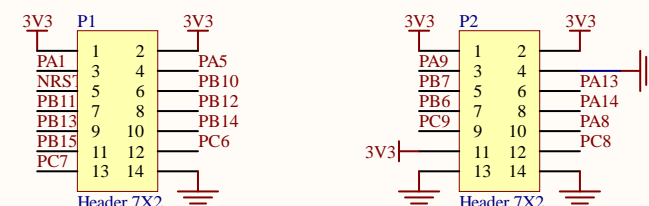
# XTAL



# RST



# PIN

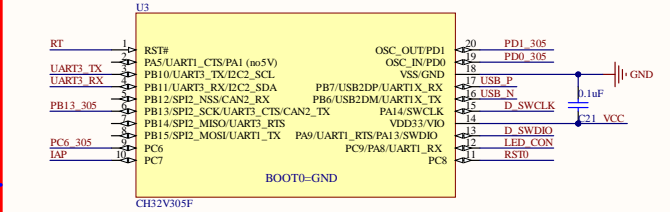
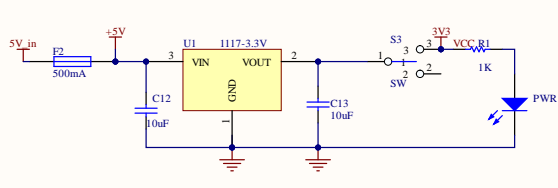


# CH32V307/CH32F207/CH32V303/CH32F203VC最小系统

## POWER&USB

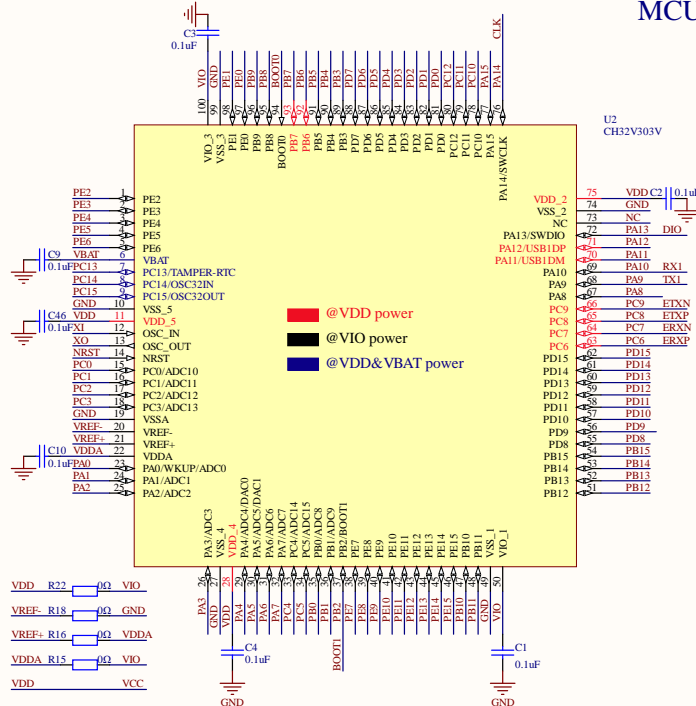
## WCH\_LinkE

## MCU



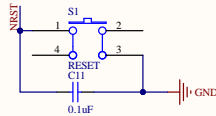
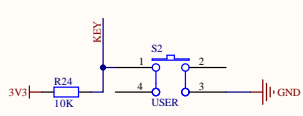
## XTAL

## MCU

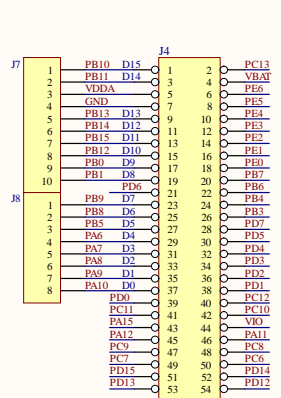
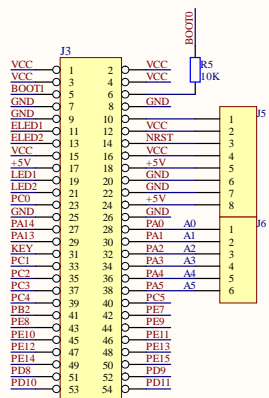


## KEY

## RST

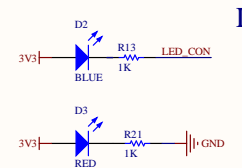
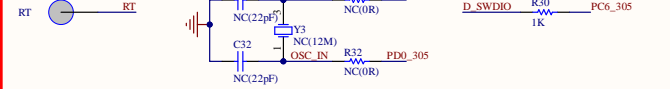


## ARDUINO

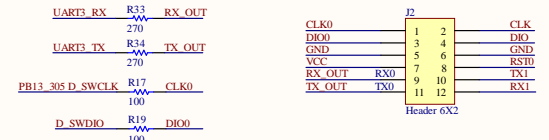


## IAP

## LED

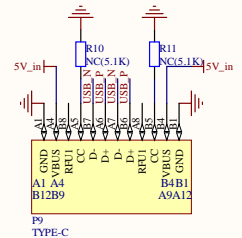


## SWD&UART

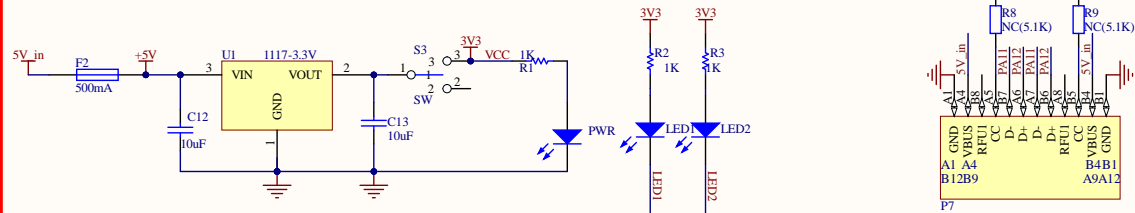


空闲时蓝灯常亮-ARM模式  
空闲时蓝灯常亮-RISC-V模式

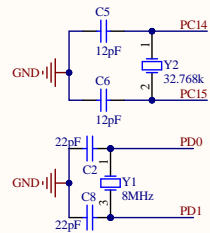
## POWER&USB



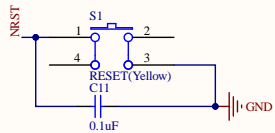
## CH32V307/305/303R最小系统



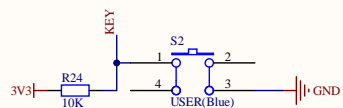
## XTAL



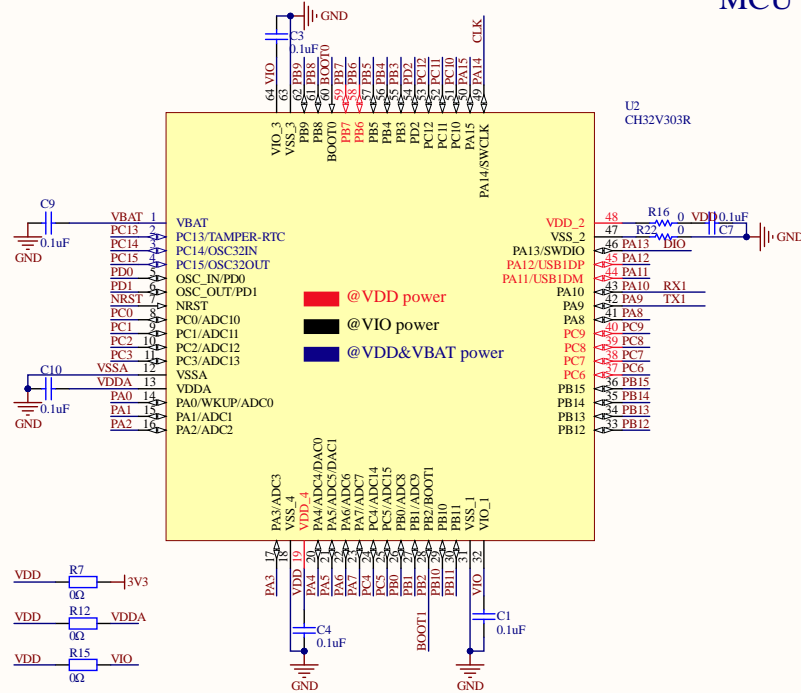
## RST



## KEY

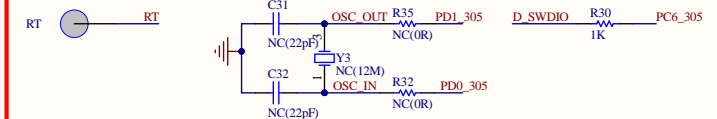
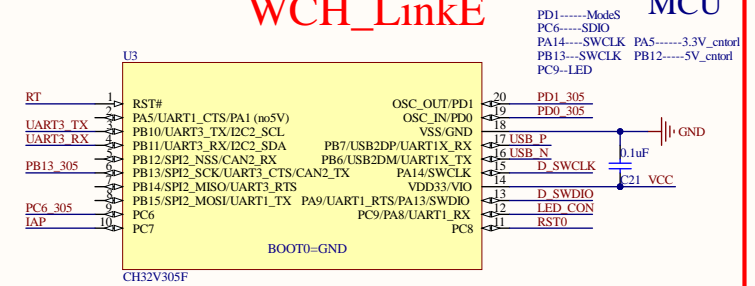


## MCU

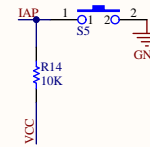


## WCH\_LinkE

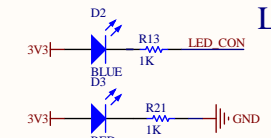
MCU



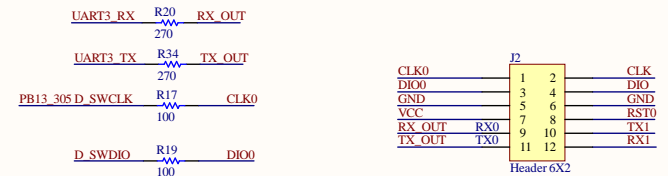
## IAP



## LED

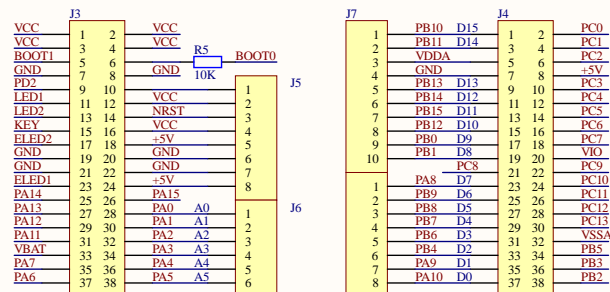


## SWD&amp;UART

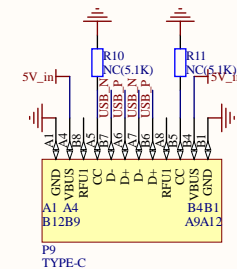


空闲时蓝灯常亮-ARM模式  
空闲时蓝灯常灭-Risc-V模式

## ARDUINO

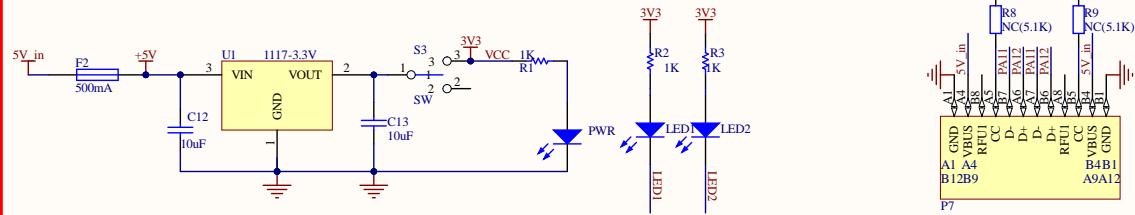


## POWER&amp;USB

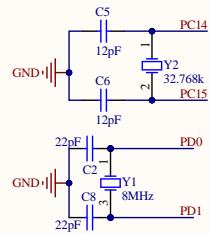




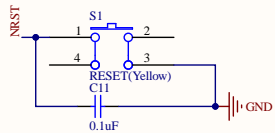
## CH32V307/305/303R最小系统



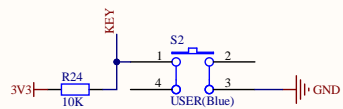
## XTAL



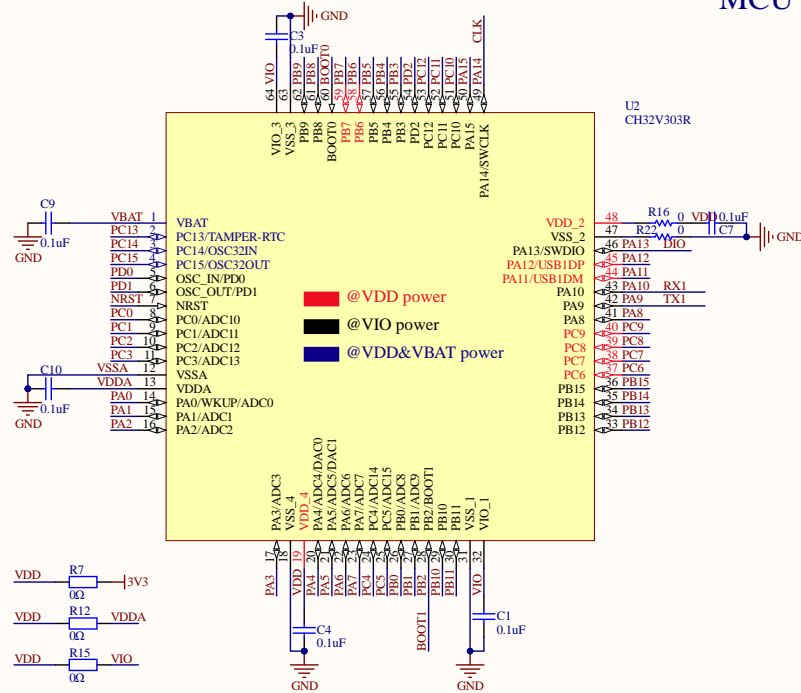
## RST



## KEY

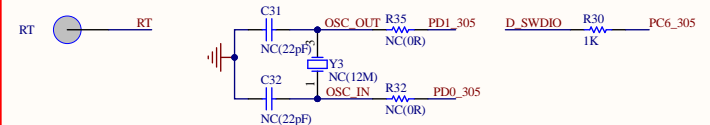
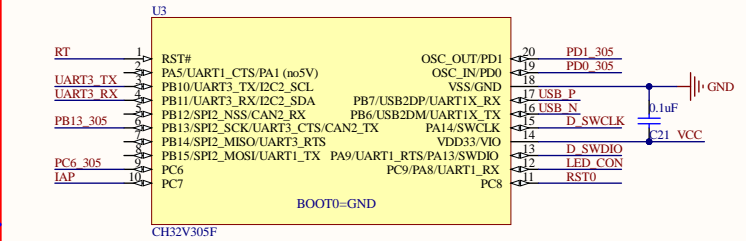


## MCU

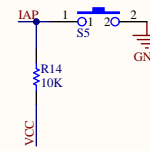


## WCH\_LinkE

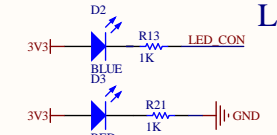
## MCU



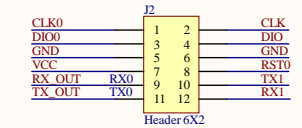
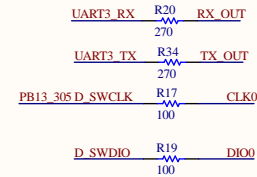
## IAP



## LED

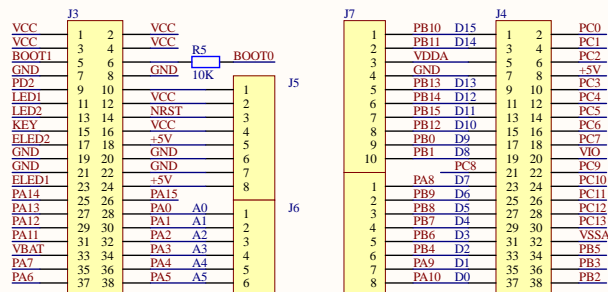


## SWD&amp;UART

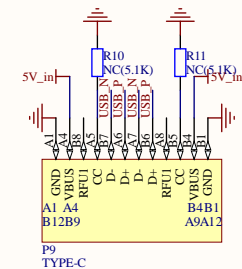


空闲时蓝灯常亮-ARM模式  
空闲时蓝灯常灭-Risc-V模式

## ARDUINO



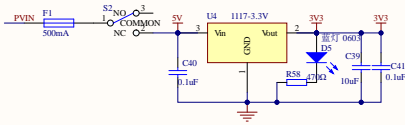
## POWER&amp;USB





## Power Supply

### LDO



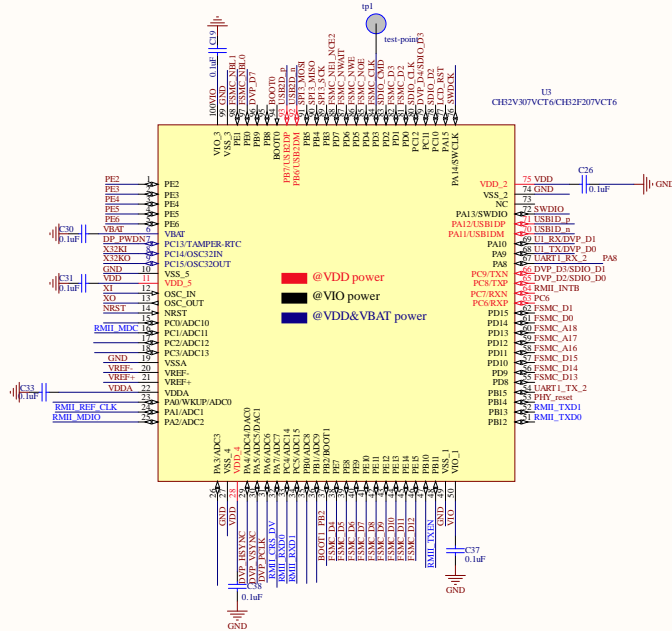
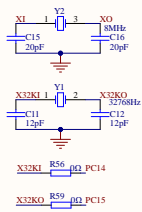
### Power Input



## CH32V307VCT6/CH32F207VCT6

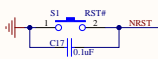
Risc-V v4f  
IMAFc  
144MHz  
128KB RAM  
192KB ROM

### Crystals



## KEY

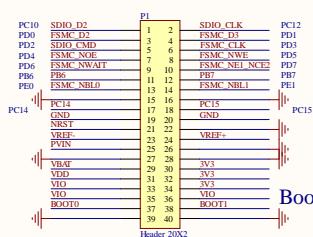
### Reset



### Download

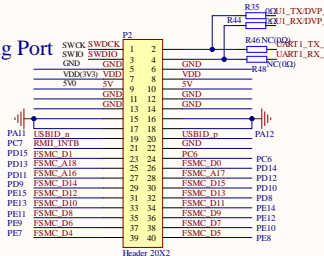


## IO

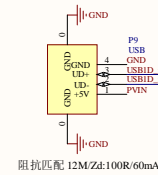


### Boot Config

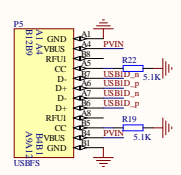
### Debug Port



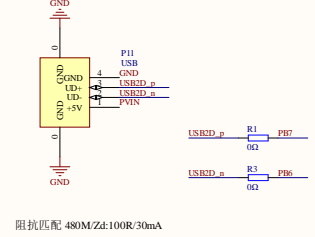
### USB Full Speed



### USB Full Speed Type-C

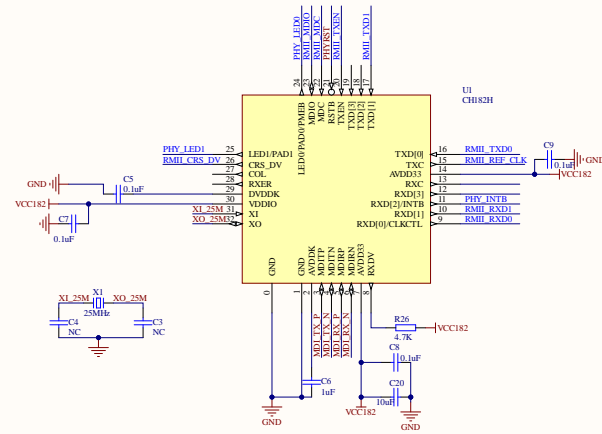


### USB High Speed



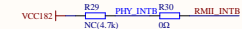
## 100M external PHY

### RMII interface

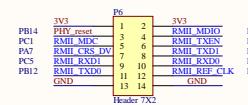


### INTB function

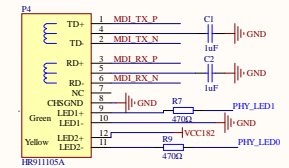
R29 Connect a 4.7K resistor to turn on the interrupt function and WOL function, at this time LED0 (pin 24) is PMEB function. Otherwise, it is LED function and LED0 is displayed normally.



### RMII Interface Related IOs



### Ethernet Interface



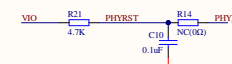
### CH182 power supply



### MDIO pull high



### PHY Reset



1



## 3

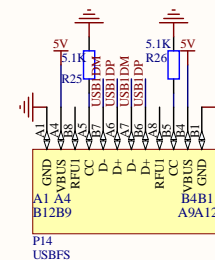
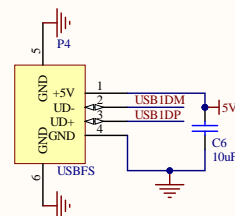


## B

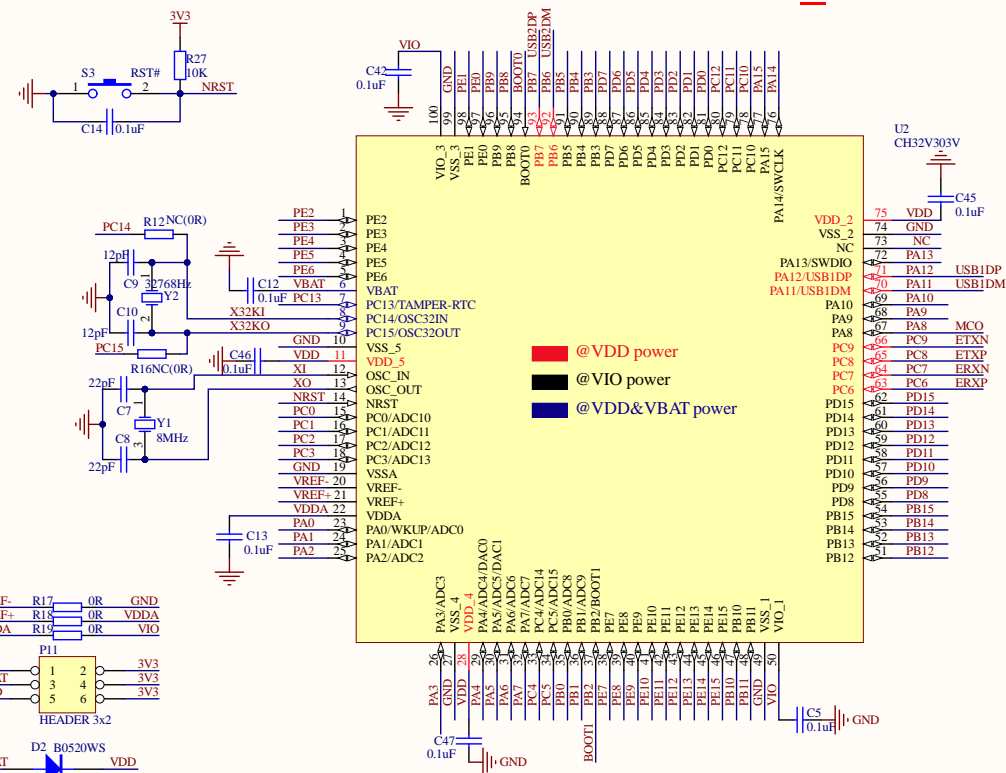
U2  
CH32V303C

## POWER

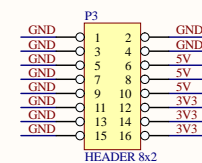
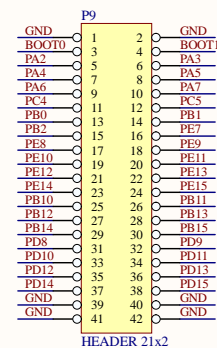
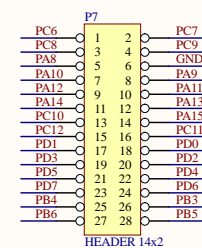
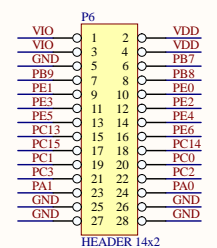
阻抗匹配 12M/50R/60mA



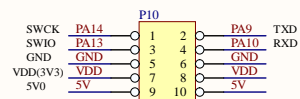
## USB



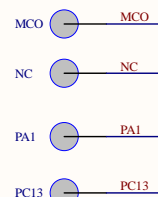
## PIN



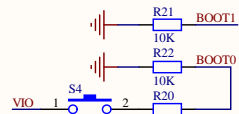
## DEBUG



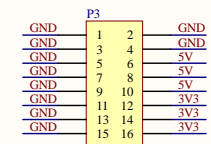
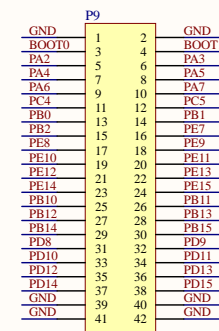
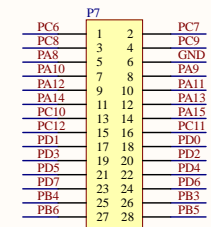
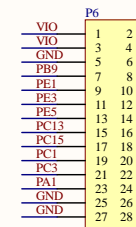
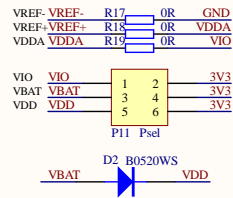
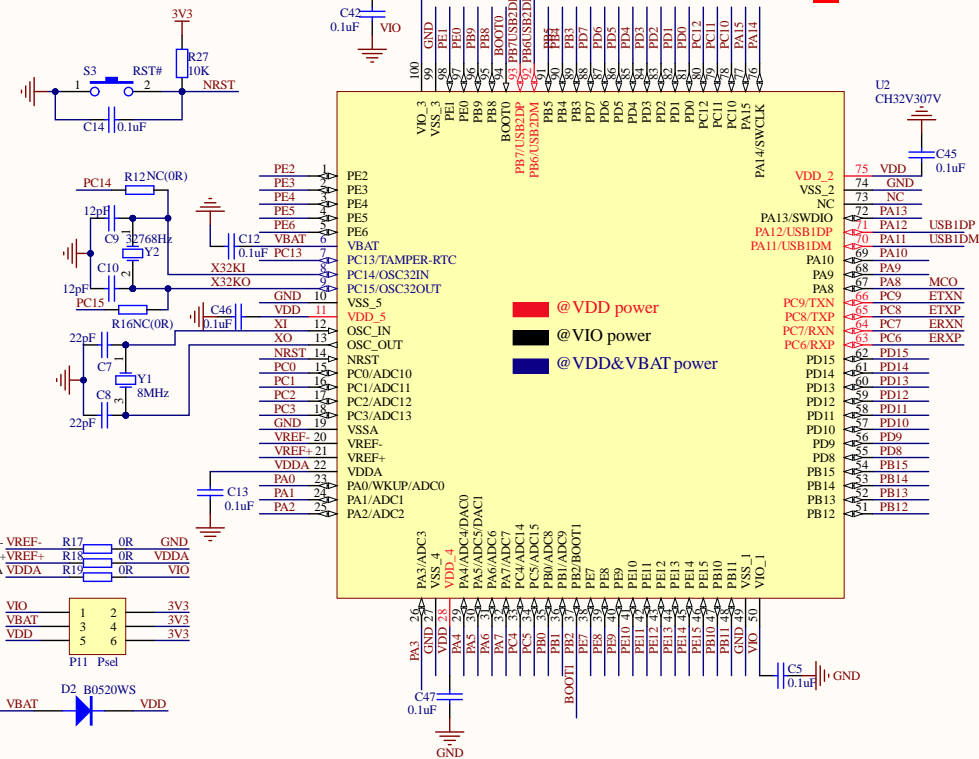
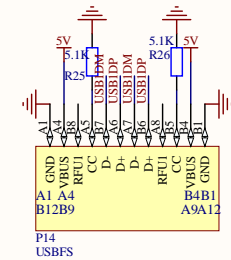
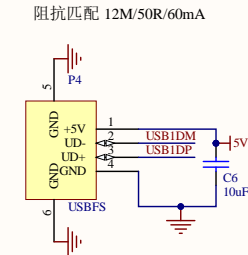
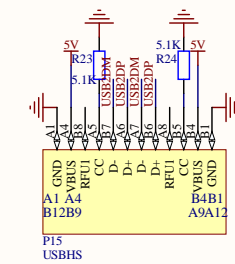
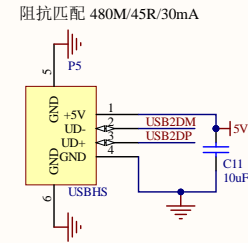
## PAD



DOWNLOAD



## POWER



# CH32V307V\_EVT MCU

## USB

## PIN

## ETH

## DEBUG

PAD

DOWNLOAD

