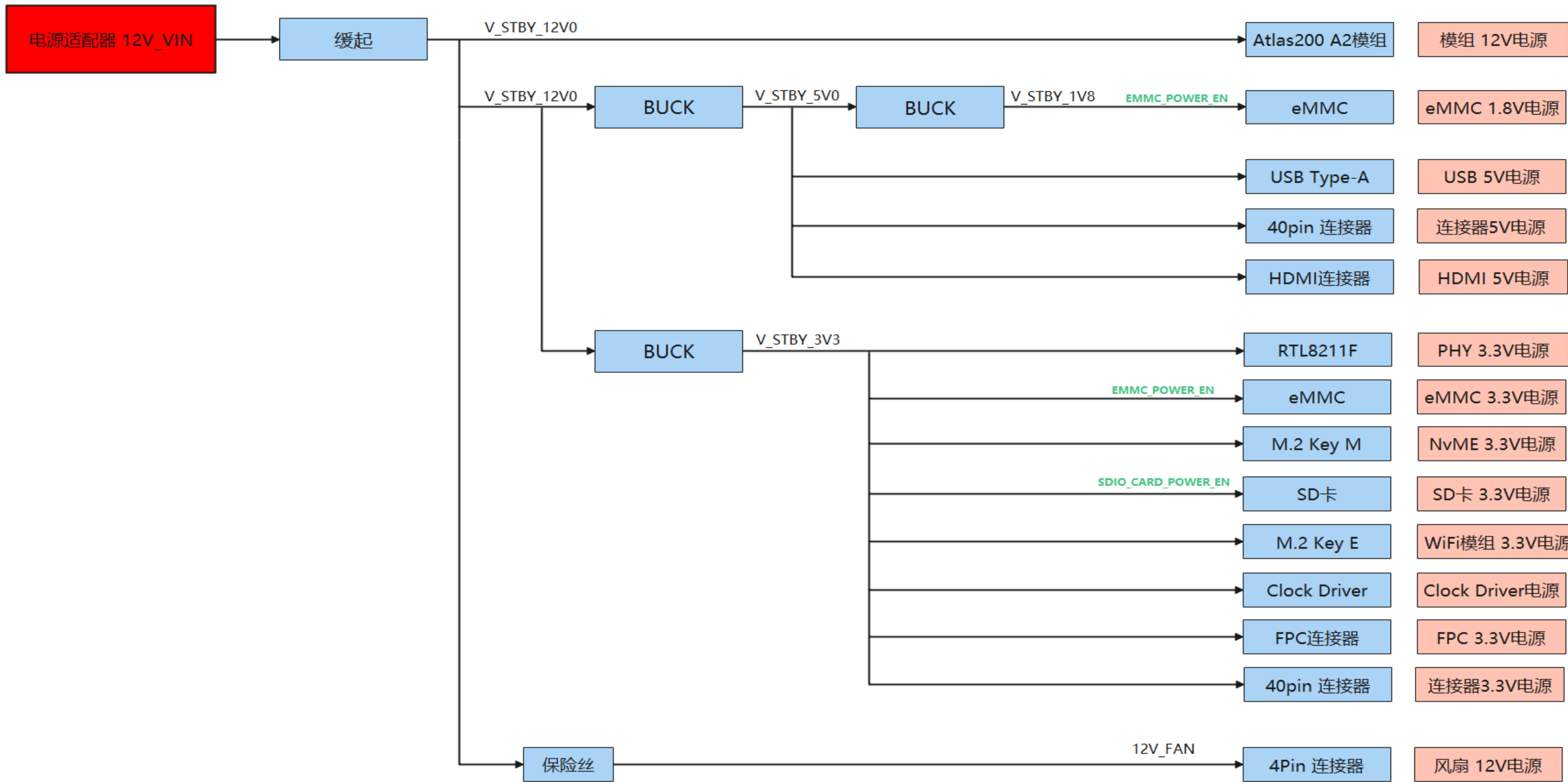


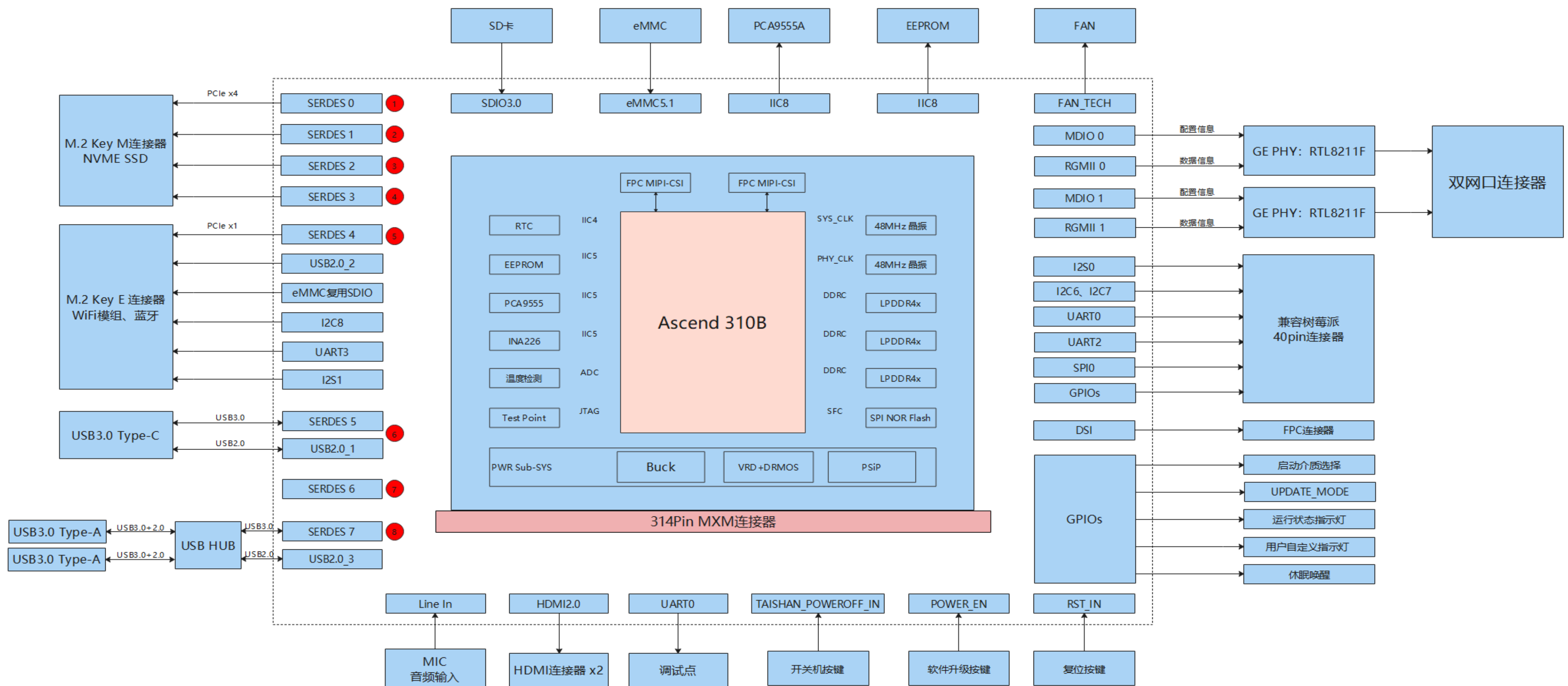
Atlas 200I A2模组底板原理图参考设计

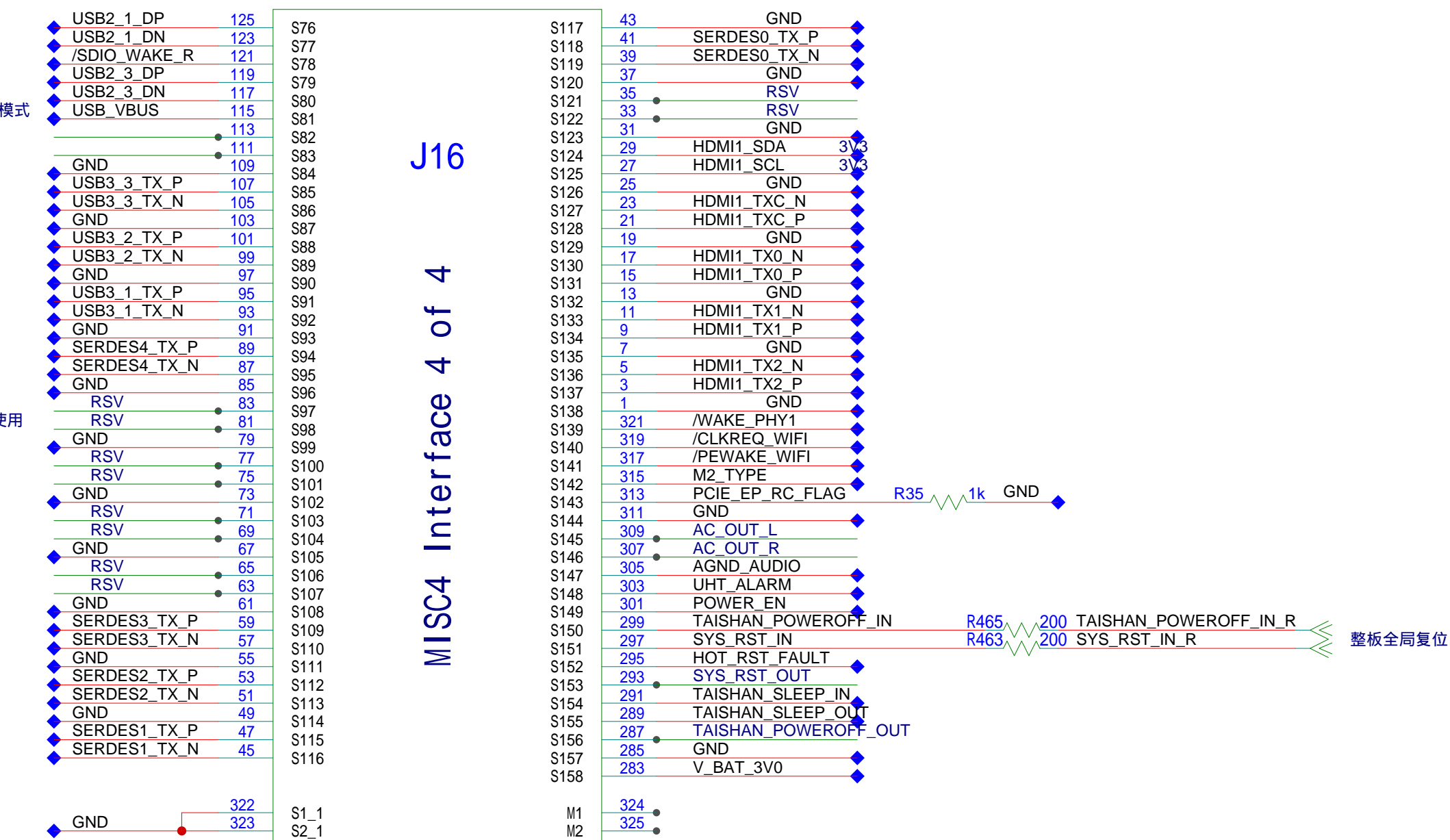
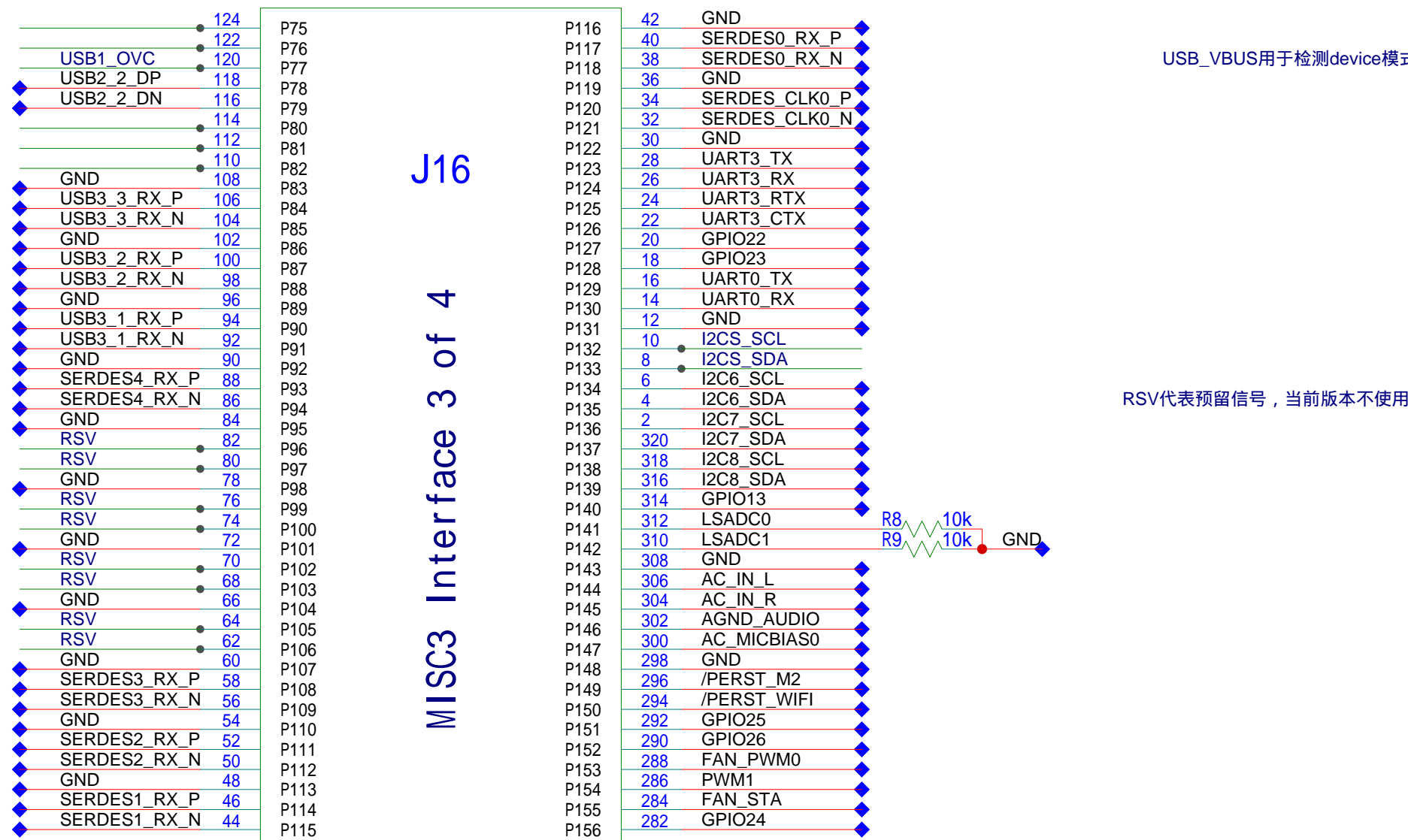
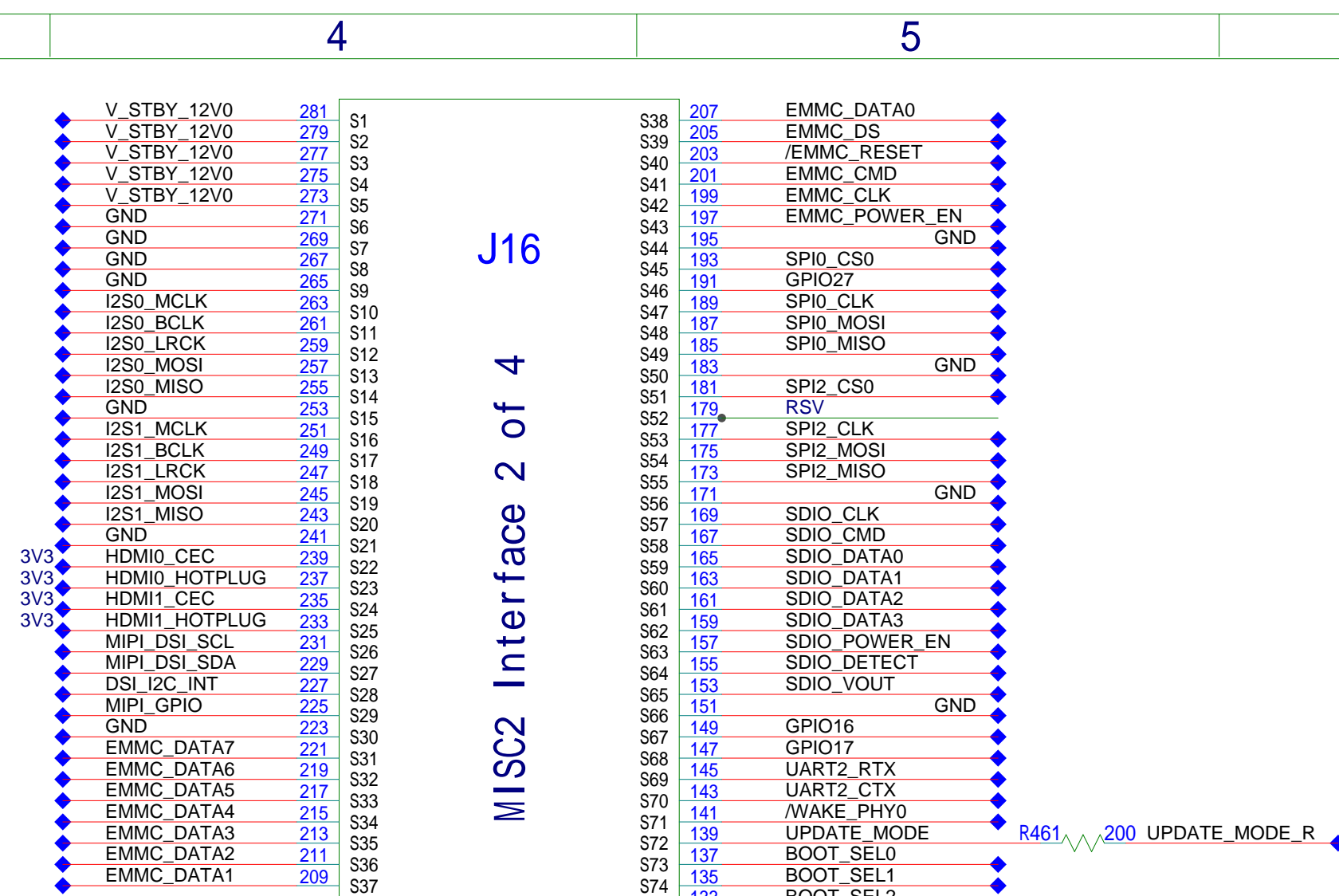
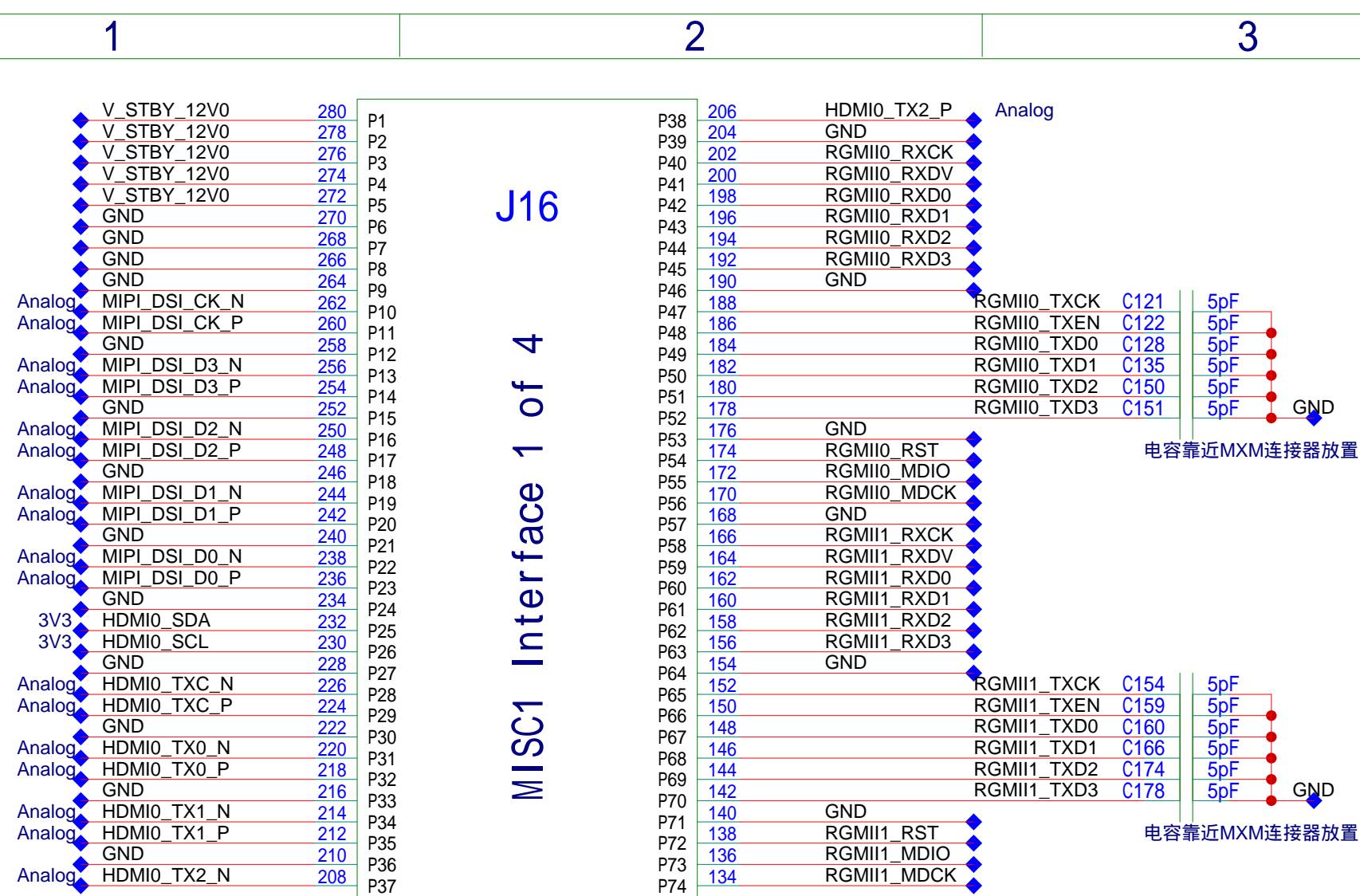
Department : Ascend Computing Hardware Program

Power Tree

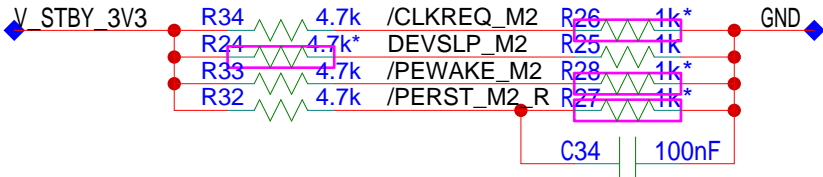
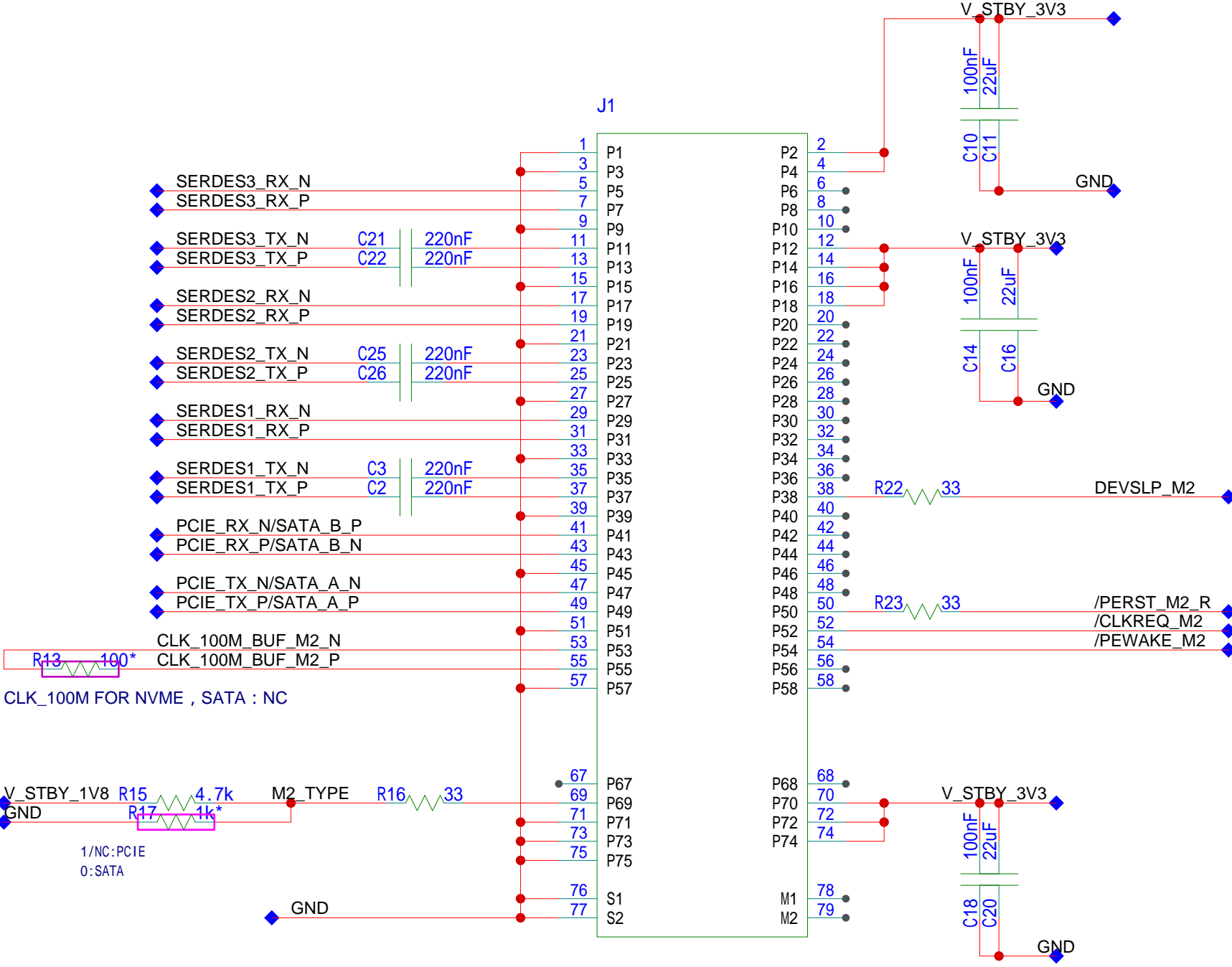


Block Diagram

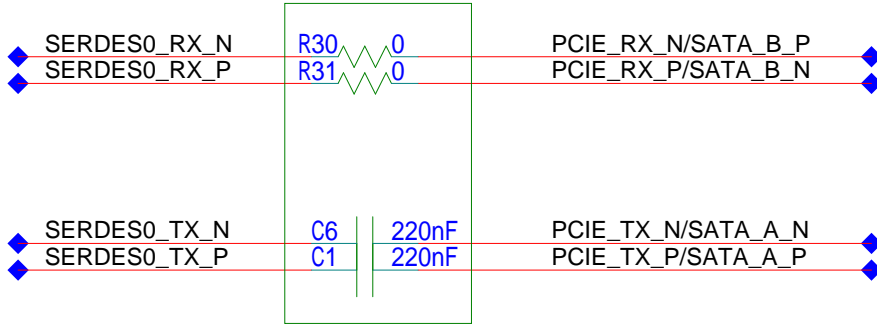




M.2 NVME/SATA SSD



兼容不同厂家SATA盘设计方案，
硬盘端串有10nF电容时上件0ohm电阻（07091470-001），
硬盘端无10nF电容时在底板上件10nF电容（08072292-001）。



NVMe耦合电容，RX端耦合电容在硬盘内

M.2 WiFi&Bluetooth

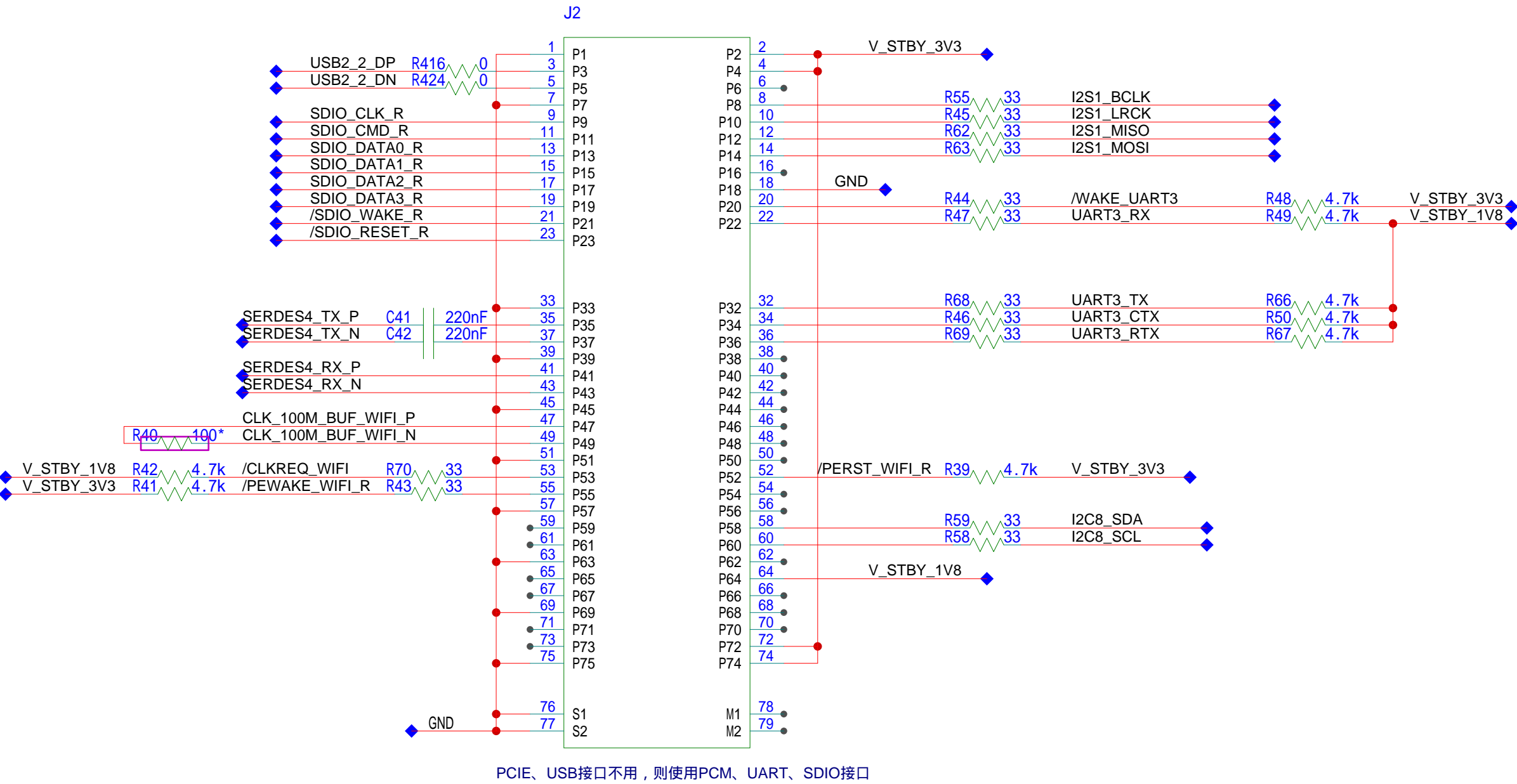
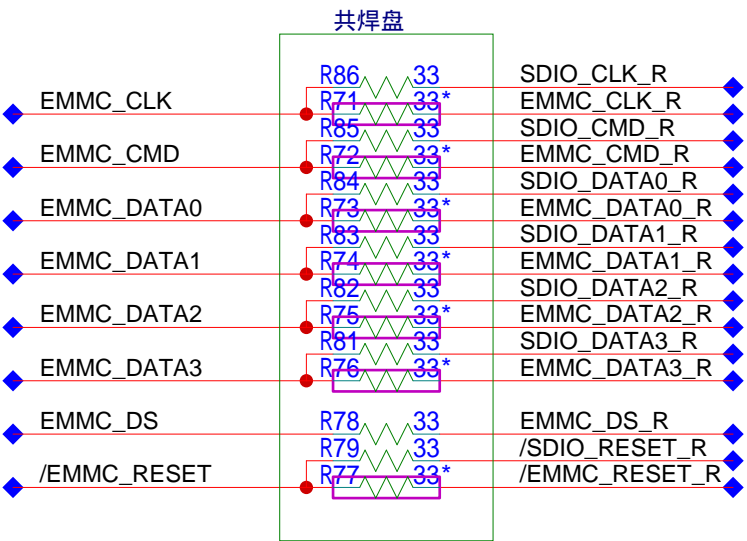
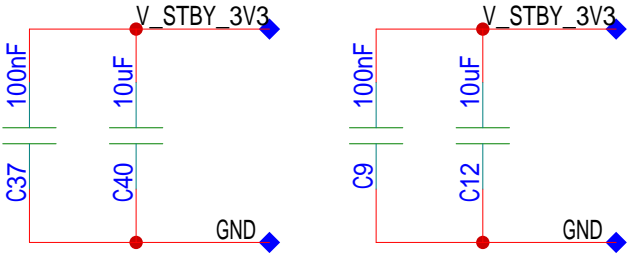


Table 3-11. SDIO Based Add-in Card Pinouts (Key E)

Pin	Signal	Signal	Pin
74	3.3 V	GND	75
72	3.3 V	RESERVED/REFCLKn1	73
		RESERVED/REFCLKp1	71
70	UIM_POWER_SRC/GPIO_1/PEWAKE1#	GND	69
68	UIM_POWER_SNK/CLKREQ1#	RESERVED/PETn1	67
66	UIM_SWP/PERST1#	RESERVED/PETp1	65
64	VIO 1.8 V	GND	63
62	ALERT# (O)(0/1.8 V)	RESERVED/PERn1	61
60	I2C_CLK (I)(0/1.8 V)	RESERVED/PERp1	59
58	I2C_DATA (I/O)(0/1.8 V)	GND	57
56	W_DISABLE1# (I)(0/1.8V/3.3V)	PEWAKE0# (I/O)(0/1.8V/3.3V)	55
54	W_DISABLE2# (I)(0/1.8V/3.3V)	CLKREQ0# (I/O)(0/1.8V/3.3V)	53
52	PERST0# (I)(0/1.8V/3.3V)	GND	51
50	SUSCLK (I)(0/1.8V/3.3V)	REFCLKn0	49
48	COEX_RXD (I)(0/1.8V)	REFCLKp0	47
46	COEX_TXD (O)(0/1.8V)	GND	45
44	COEX3 (I/O)(0/1.8V)	PETn0	43
42	VENDOR DEFINED	PETp0	41
40	VENDOR DEFINED	GND	39
38	VENDOR DEFINED	PERn0	37
36	UART_CTS (I)(0/1.8V)	PERp0	35
34	UART_RTS (O)(0/1.8V)	GND	33
32	UART_RXD (I)(0/1.8V)	ADD-IN CARD KEY E	
	ADD-IN CARD KEY E	ADD-IN CARD KEY E	
	ADD-IN CARD KEY E	ADD-IN CARD KEY E	
	ADD-IN CARD KEY E	ADD-IN CARD KEY E	
	ADD-IN CARD KEY E	SDIO_RESET#/TX_BLANKING (I)(0/1.8V)	23
22	UART_TXD (O)(0/1.8V)	SDIO_WAKE# (O)(0/1.8V)	21
20	UART_WAKE# (O)(0/3.3V)	SDIO_DATA3 (I/O)(0/1.8V)	19
18	VIO_CFG (O)	SDIO_DATA2 (I/O)(0/1.8V)	17
16	LED_2# (O)(OD)	SDIO_DATA1 (I/O)(0/1.8V)	15
14	PCM_IN/I2S_SD_IN (I)(0/1.8V)	SDIO_DATA0 (I/O)(0/1.8V)	13
12	PCM_OUT/I2S_SD_OUT (O)(0/1.8V)	SDIO_CMD (I/O)(0/1.8V)	11
10	PCM_SYNC/I2S_WS (I/O)(0/1.8V)	SDIO_CLK/SYSCLK (I)(0/1.8V)	9
8	PCM_CLK/I2S_SCK (I/O)(0/1.8V)	GND	7
6	LED_1# (O)(OD)	USB_D-	5
4	3.3 V	USB_D+	3
2	3.3 V	GND	1



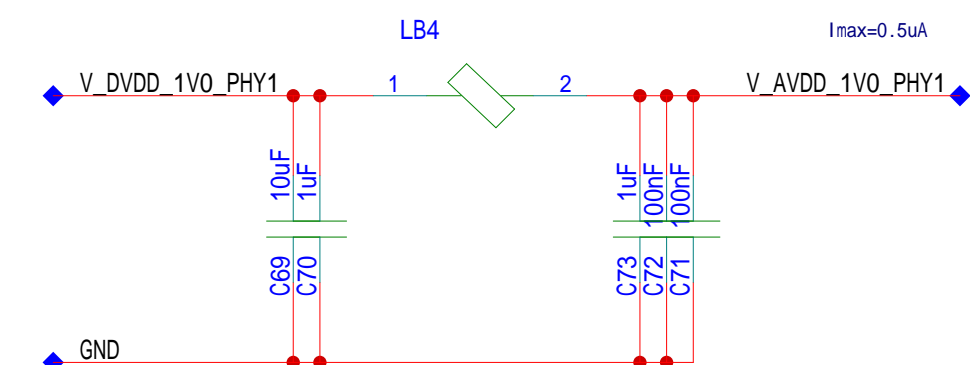
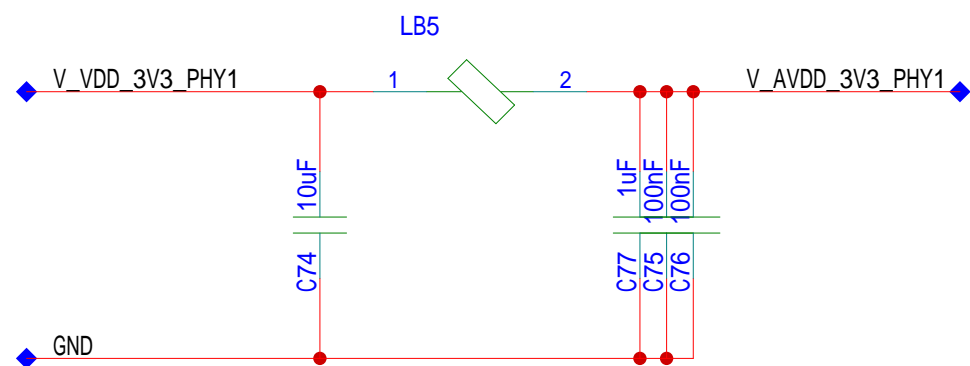
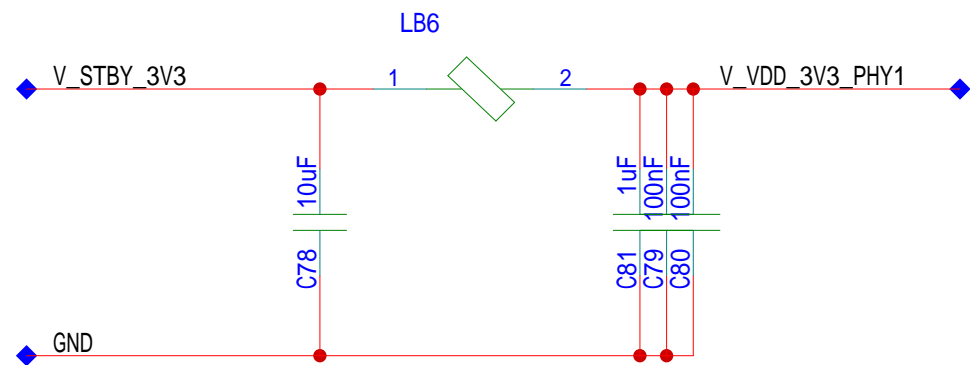
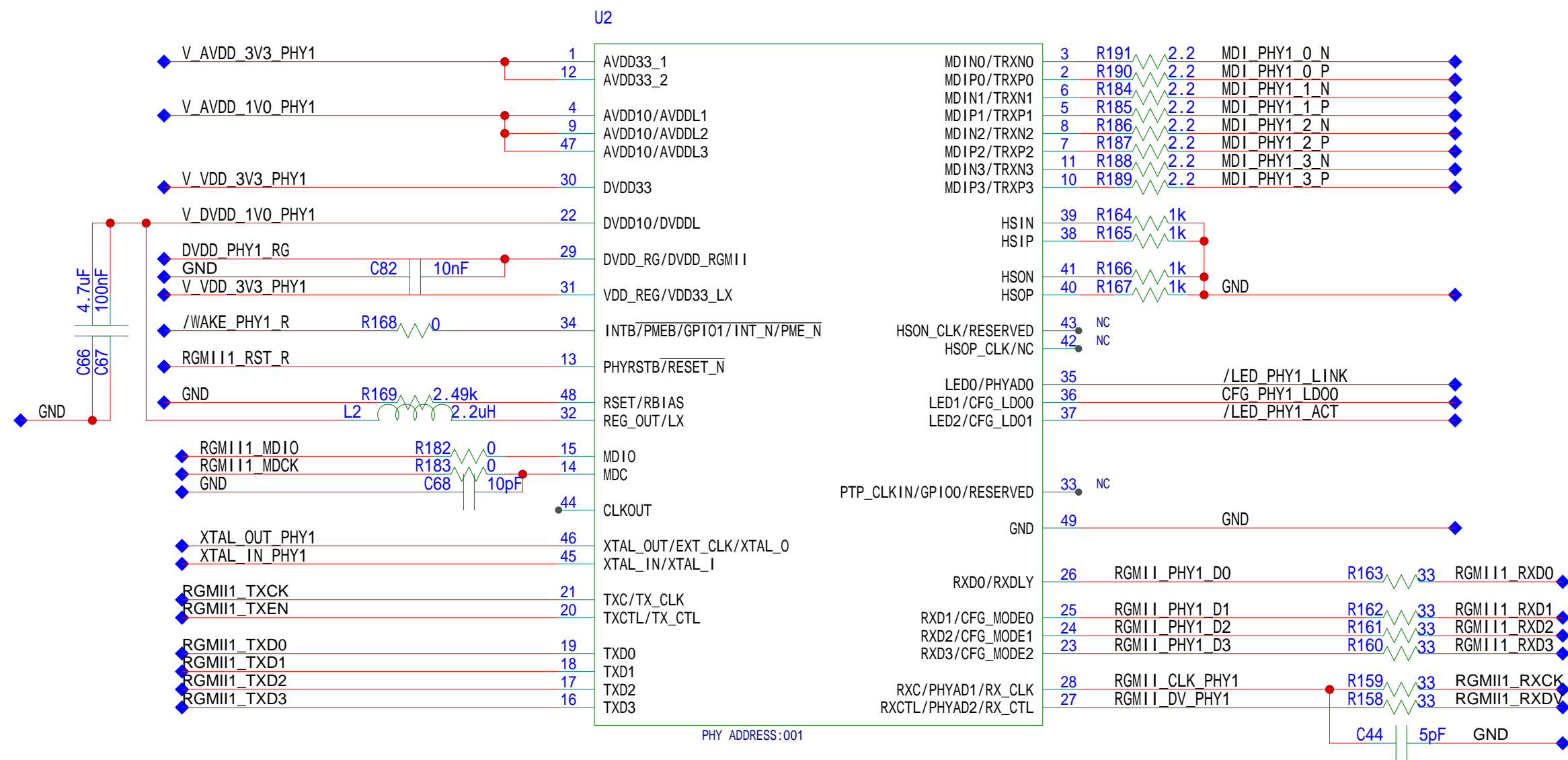
CAD NOTE :
左边两个电容靠近pin 2,4
中间两个电容靠近pin 72,74



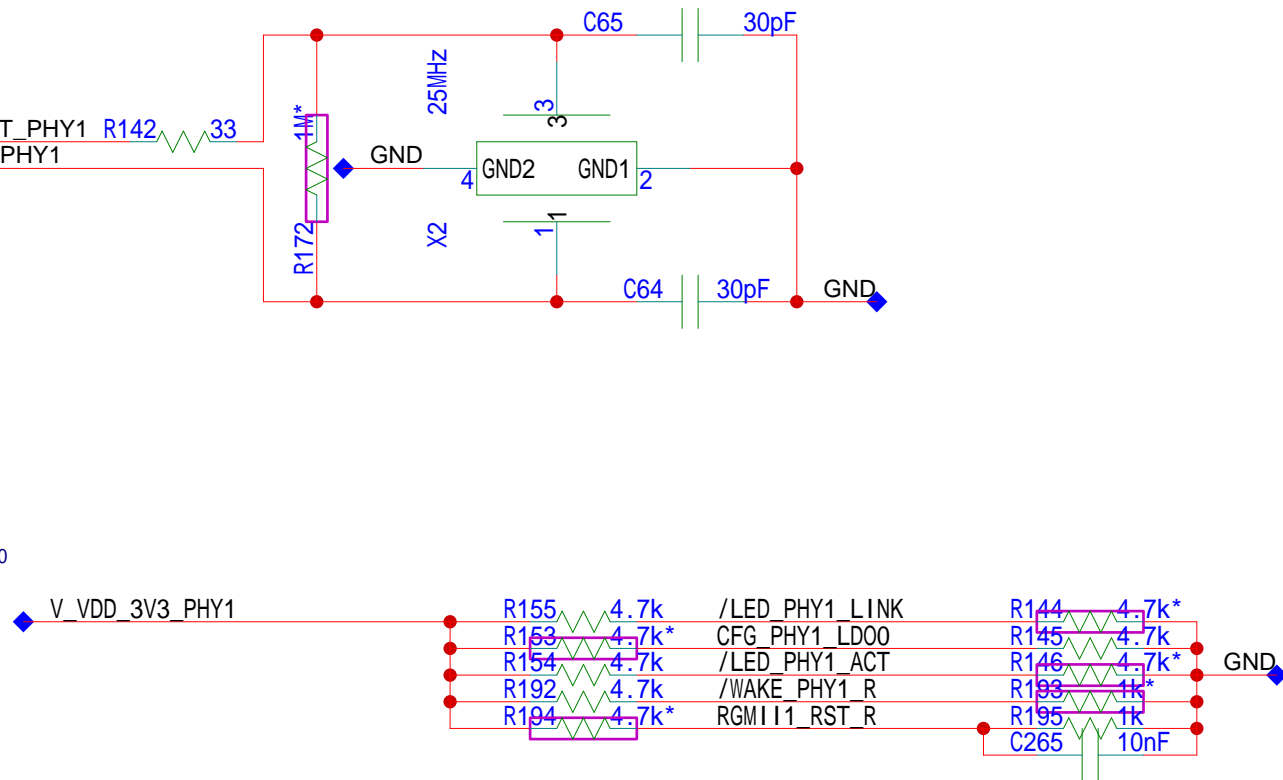
A

D

GE PHY1



PIN	CFG		PIN	
LED0	PHY_ADD0		RXD1	
RXC	PHY_ADD1		RXD2	CFG_MODE1
RXCTL	PHY_ADD2		RXD3	CFG_MODE2
RXD0	RXDLY			CFG_MODE0
LED1	CFG_LD0(0)			
LED2	CFG_LD0(1)			



10	CFG_LD0(1:0)	LED2 LED1
000	CFG_MODE[2:0]	STBY_12V0
011	PHY_ADD[2:0]	01:2.5V
000	PHY_ADD[2:0]	10:1.5V
011	PHY_ADD[2:0]	11:1.5V
000	PHY_ADD[2:0]	RXD3 RXD2 RXD1
000	PHY_ADD[2:0]	000:UTP<->->RGMII
000	PHY_ADD[2:0]	001:FIBER<->->RGMII
000	PHY_ADD[2:0]	010:UTP/FIBER<->->RGMII
000	PHY_ADD[2:0]	011:UTP<->->SGMII
000	PHY_ADD[2:0]	100:SGMII(PHY)<->->RGMII(MAC)
000	PHY_ADD[2:0]	101:SGMII(MAC)<->->RGMII(PHY)
000	PHY_ADD[2:0]	110:UTP<->->FIBER(AUTO MODE)
000	PHY_ADD[2:0]	111:UTP<->->FIBER(FORCE MODE)
011	PHY_ADD[2:0]	RXCTL RXC LED0
011	PHY_ADD[2:0]	RXDLY
011	PHY_ADD[2:0]	1: add 2ns dly to RXC for RXD 0: no delay

EMMC

A

B

C

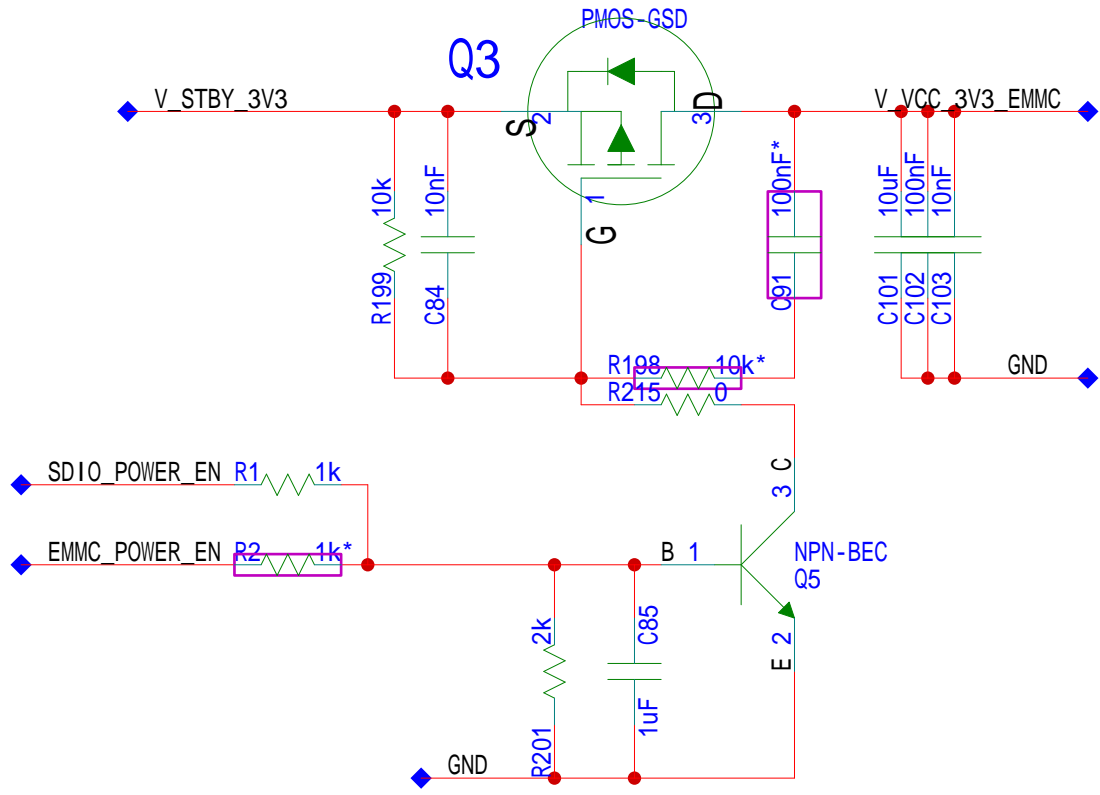
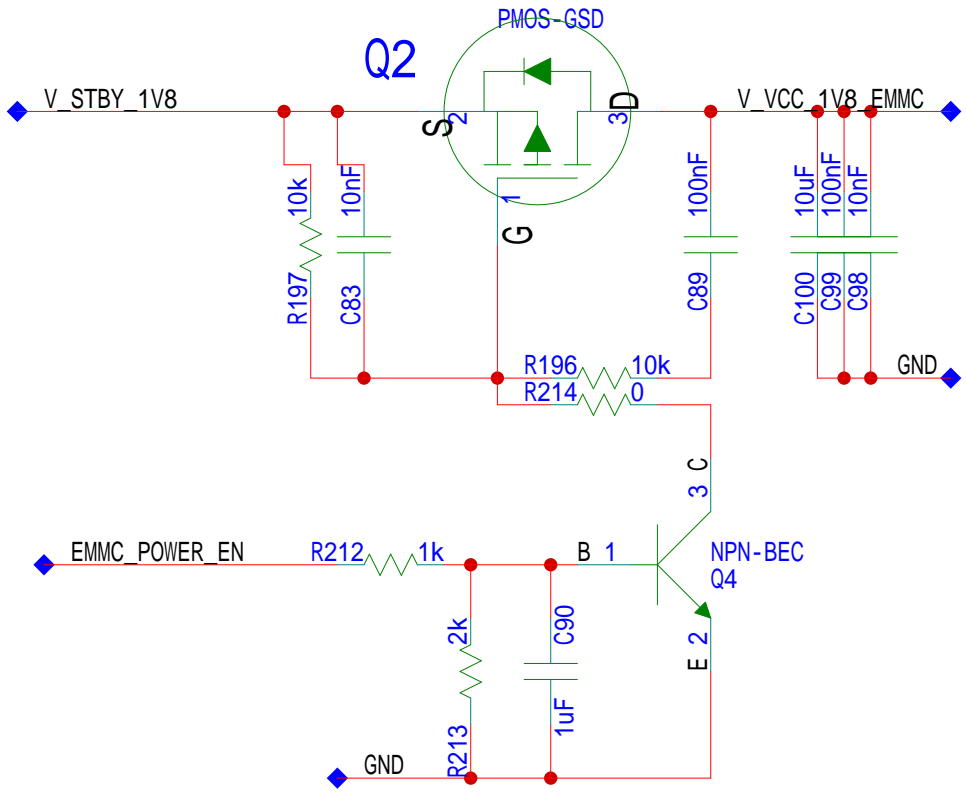
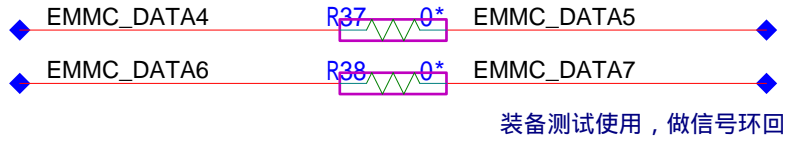
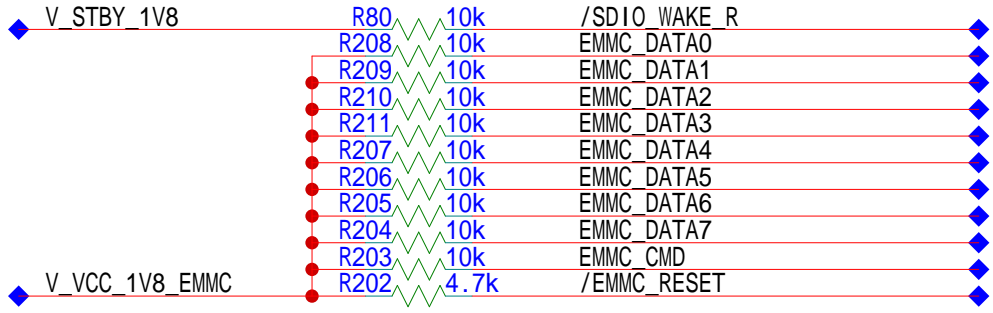
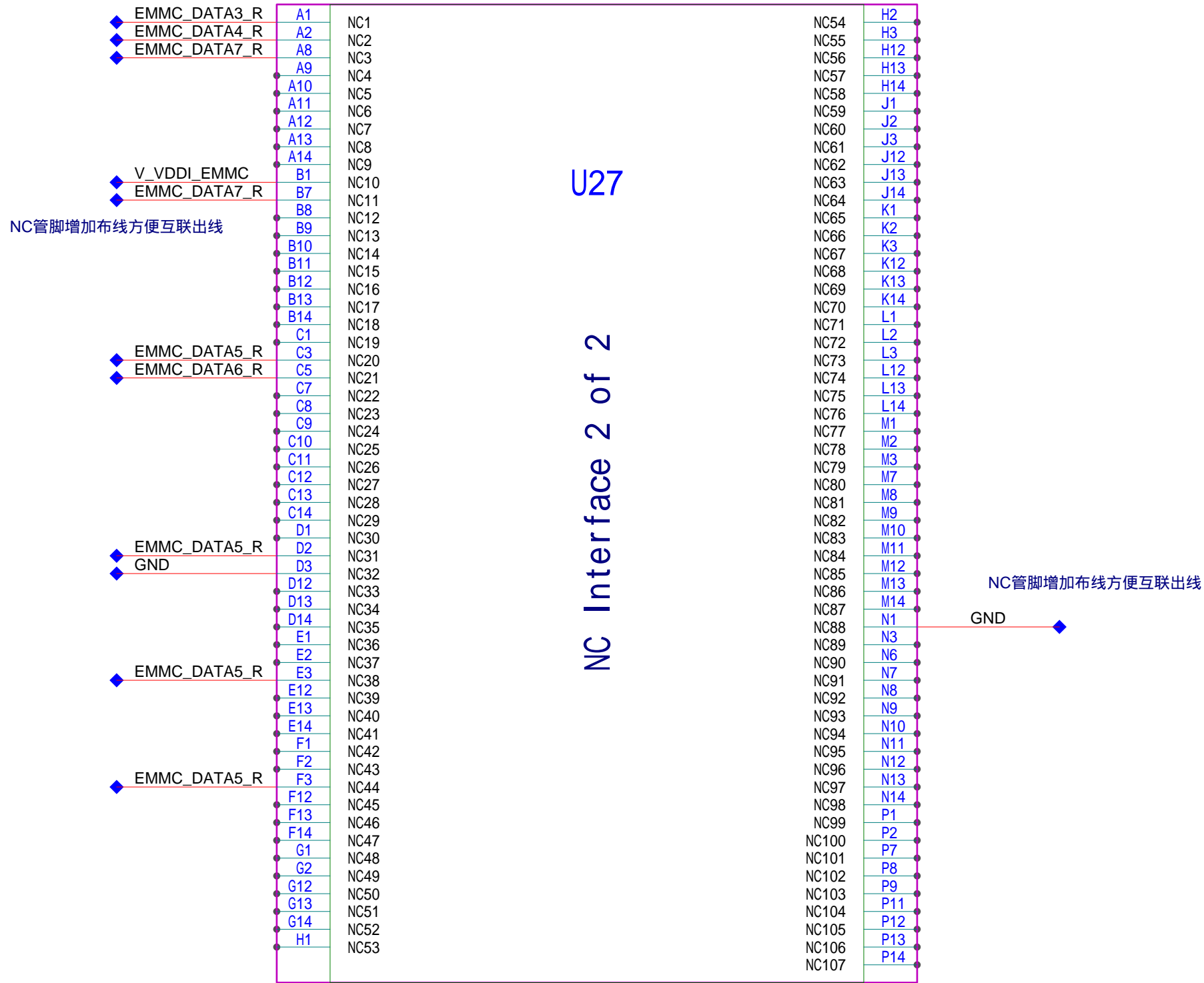
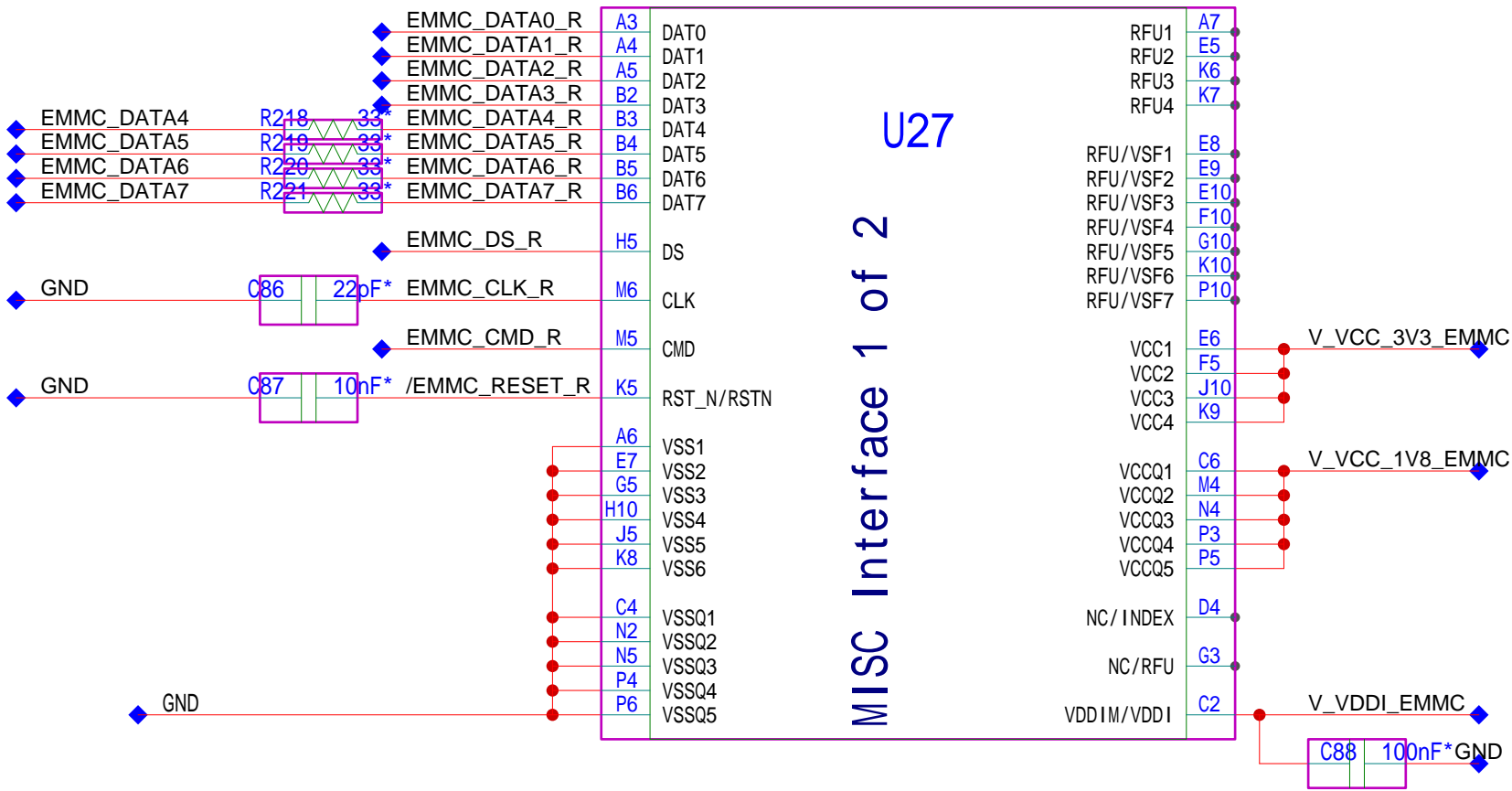
D

A

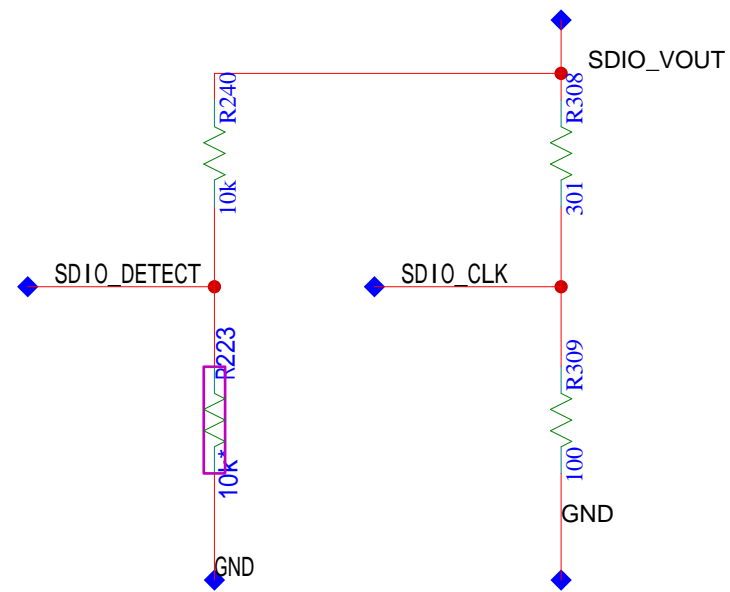
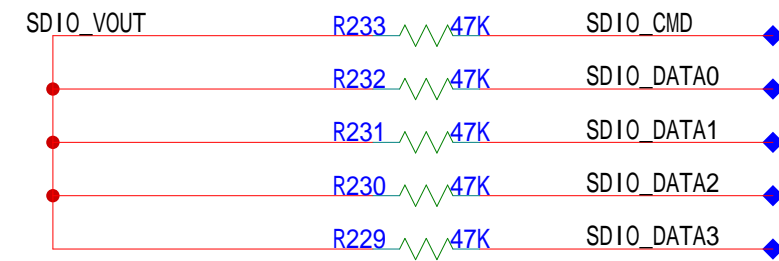
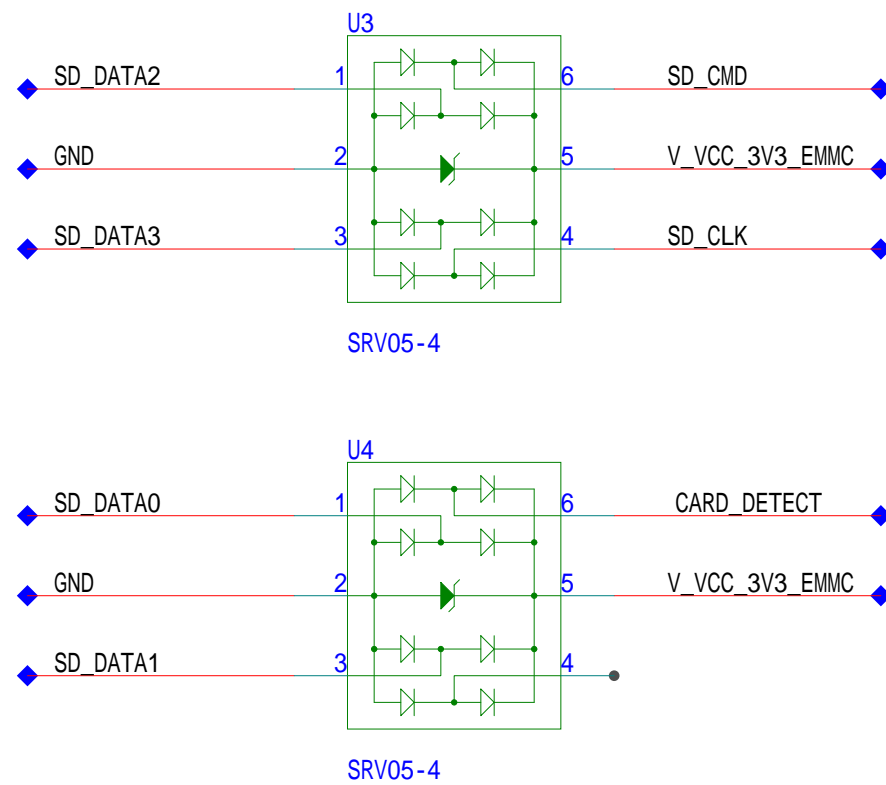
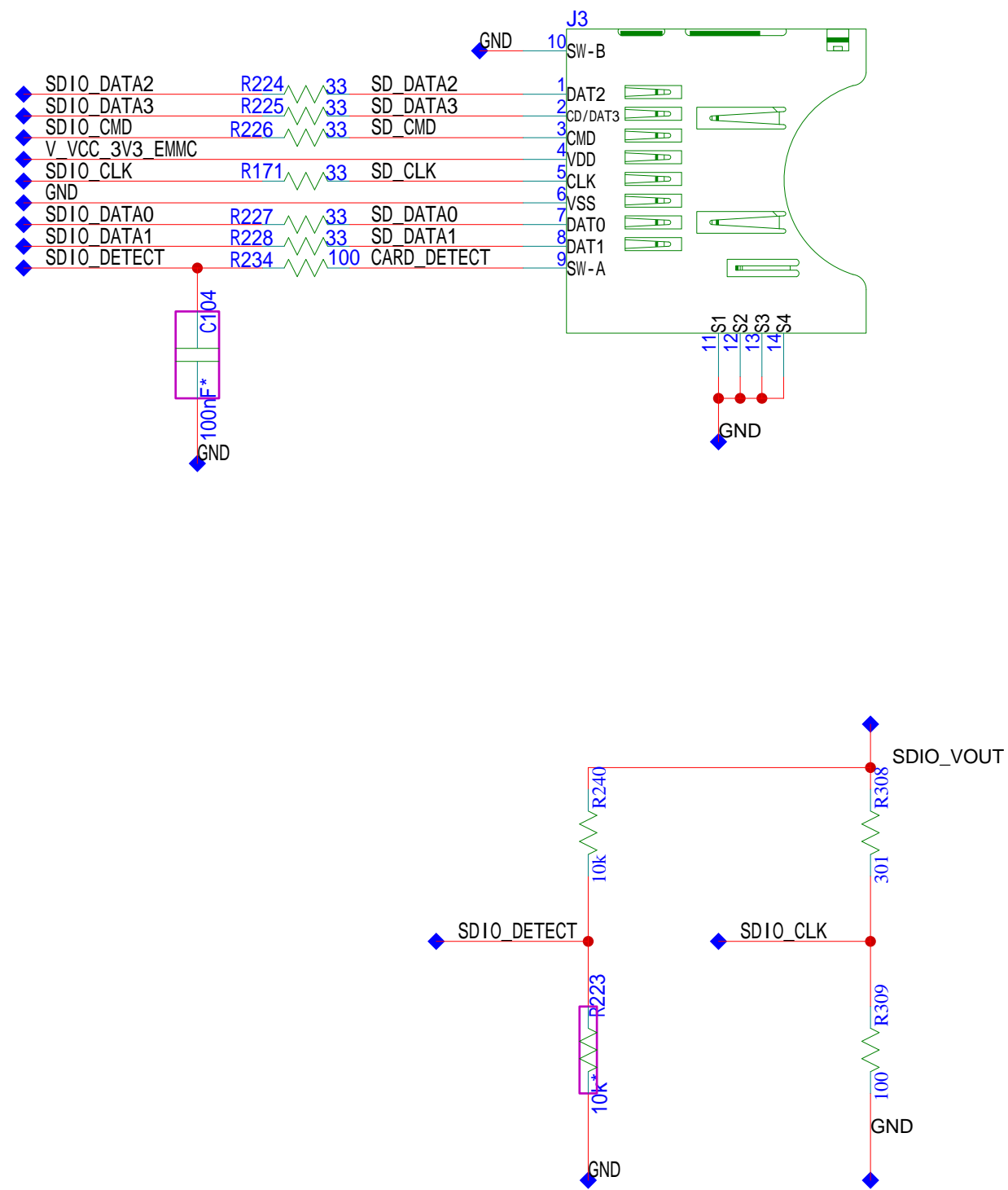
B

C

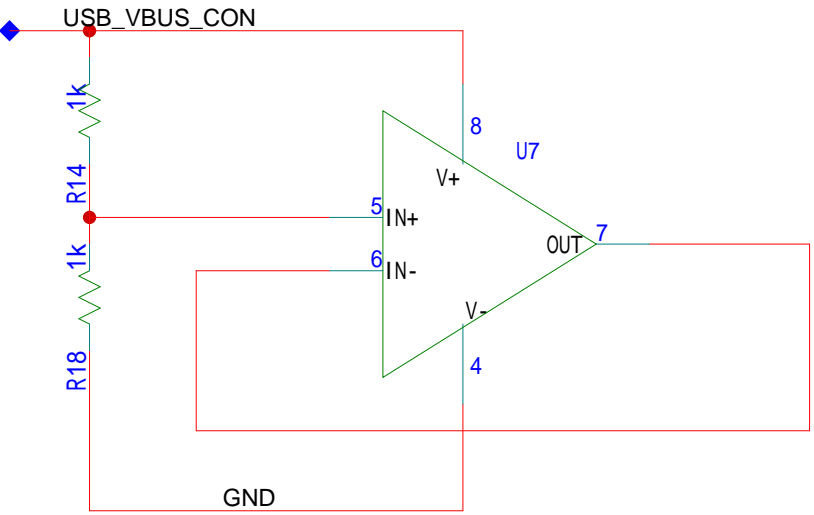
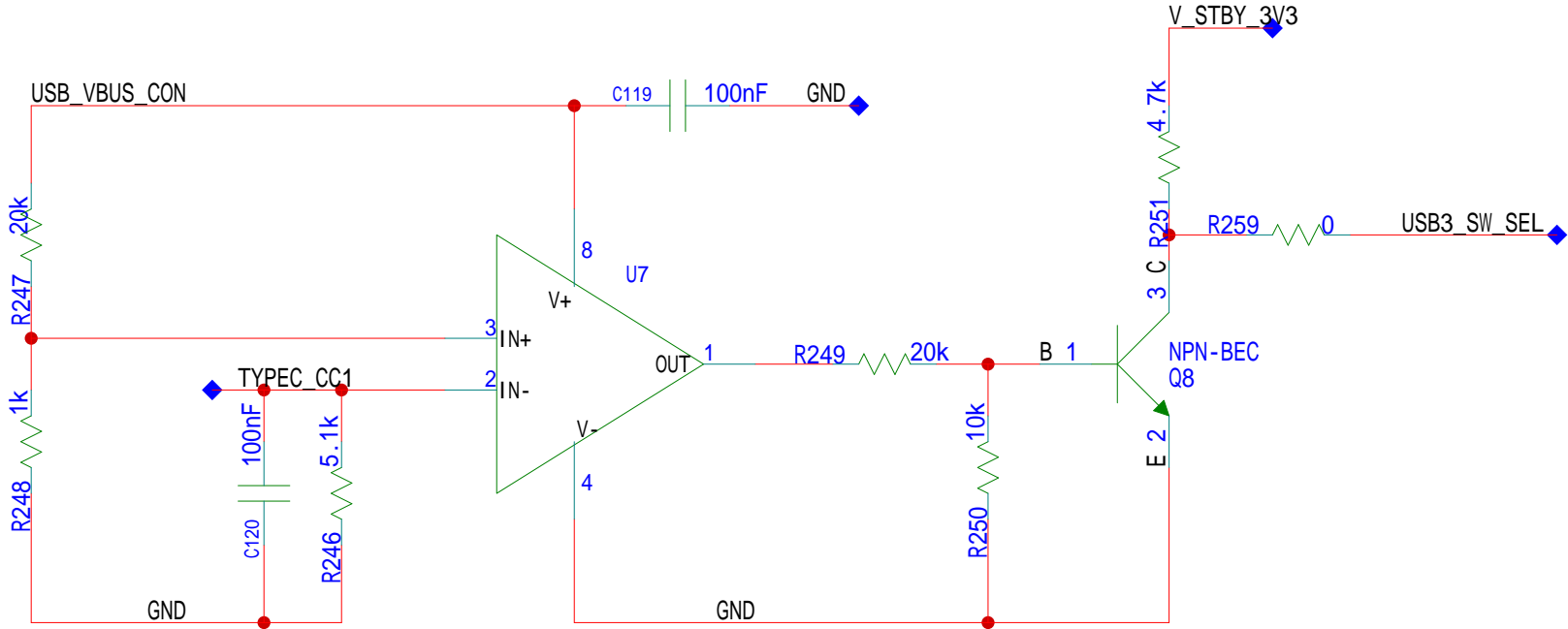
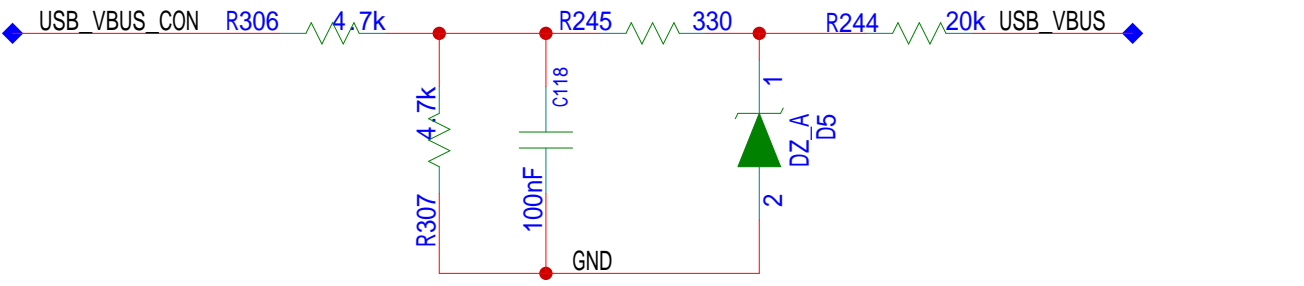
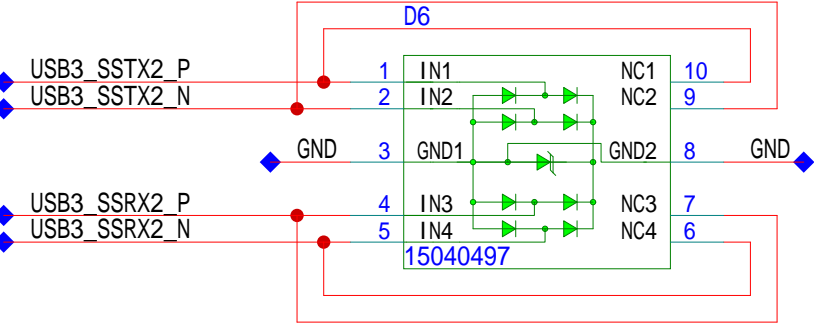
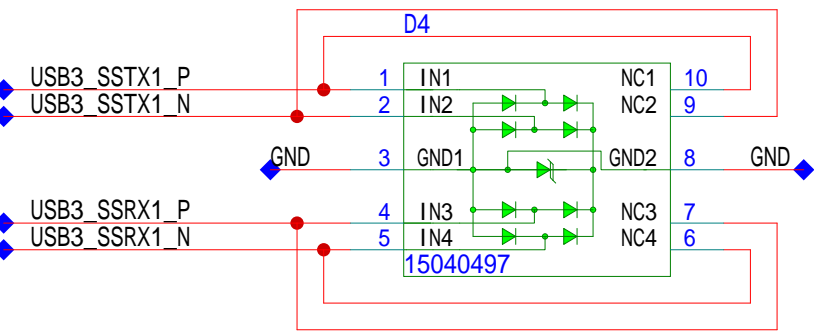
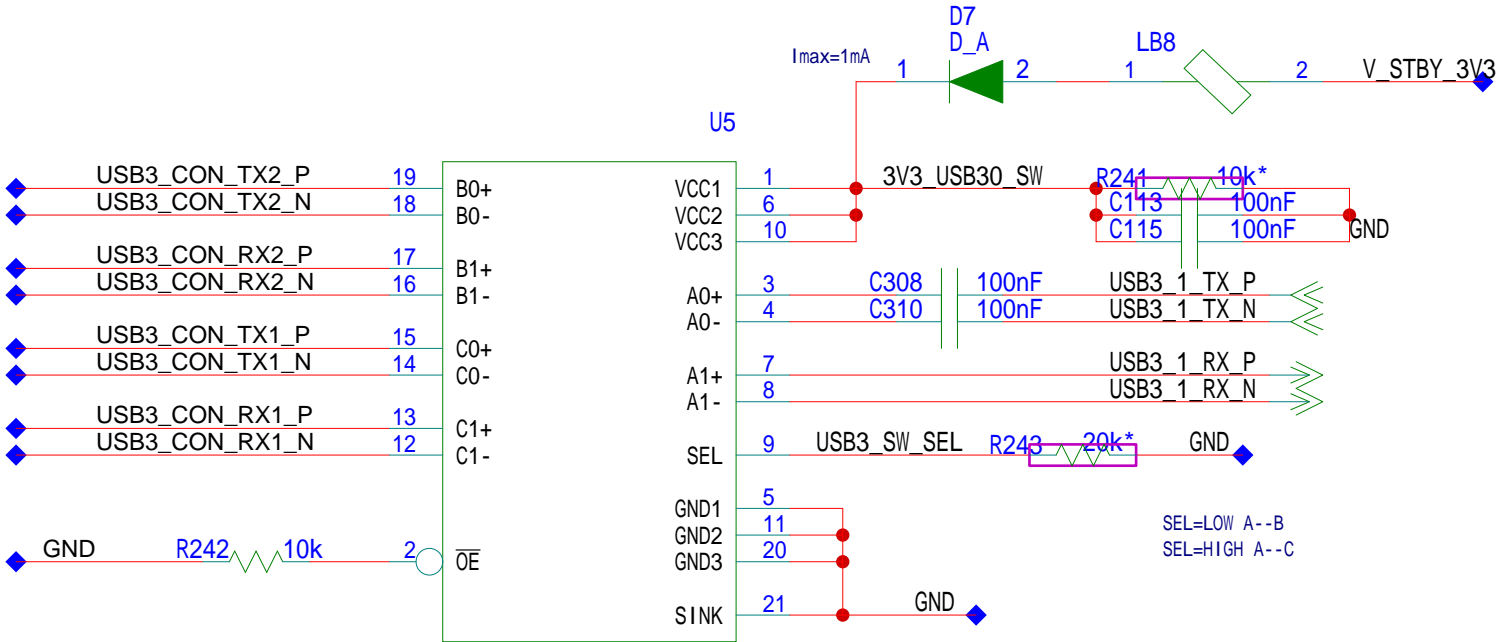
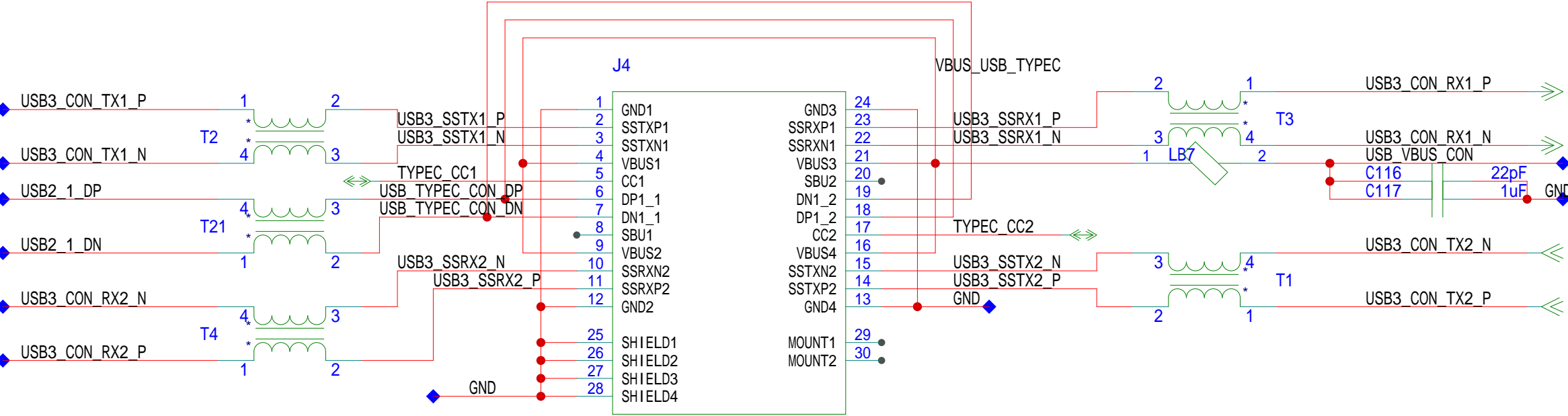
D



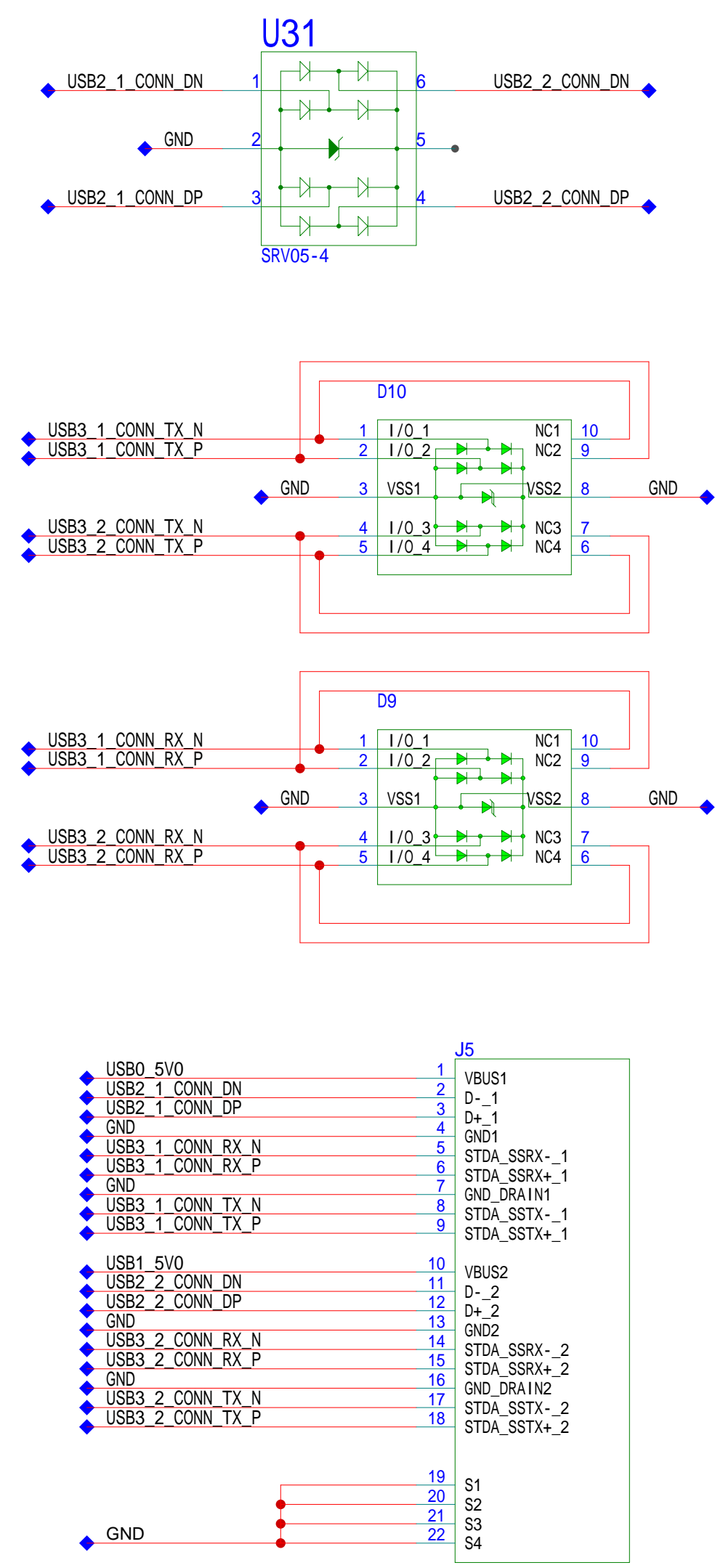
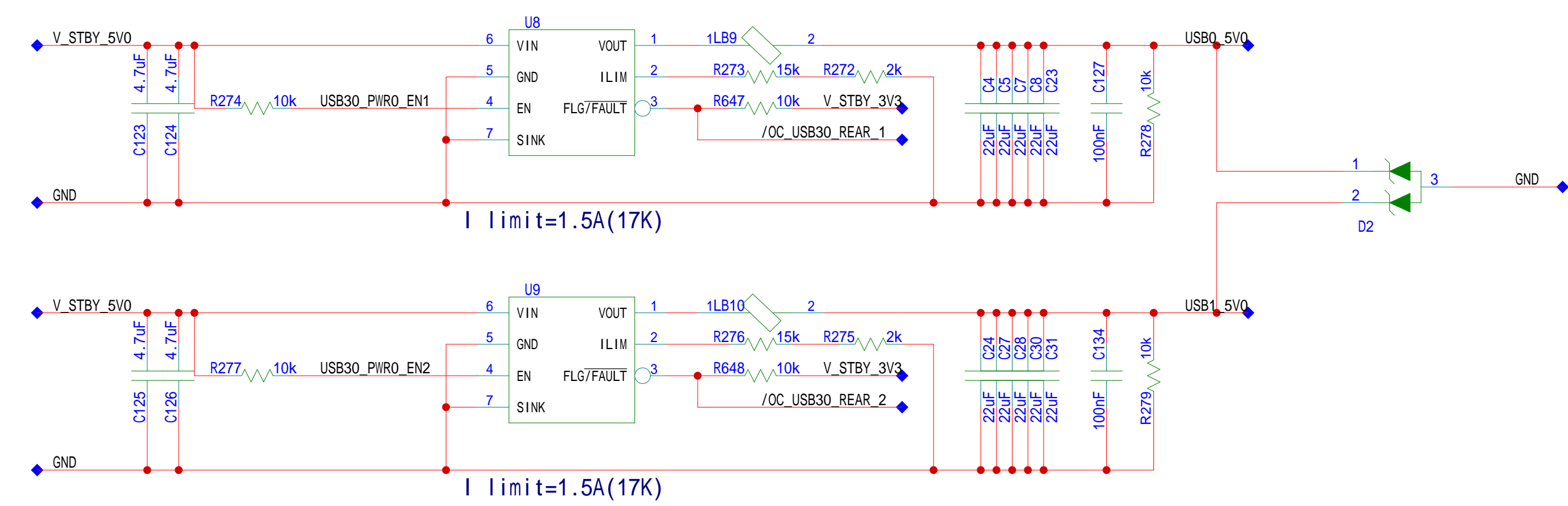
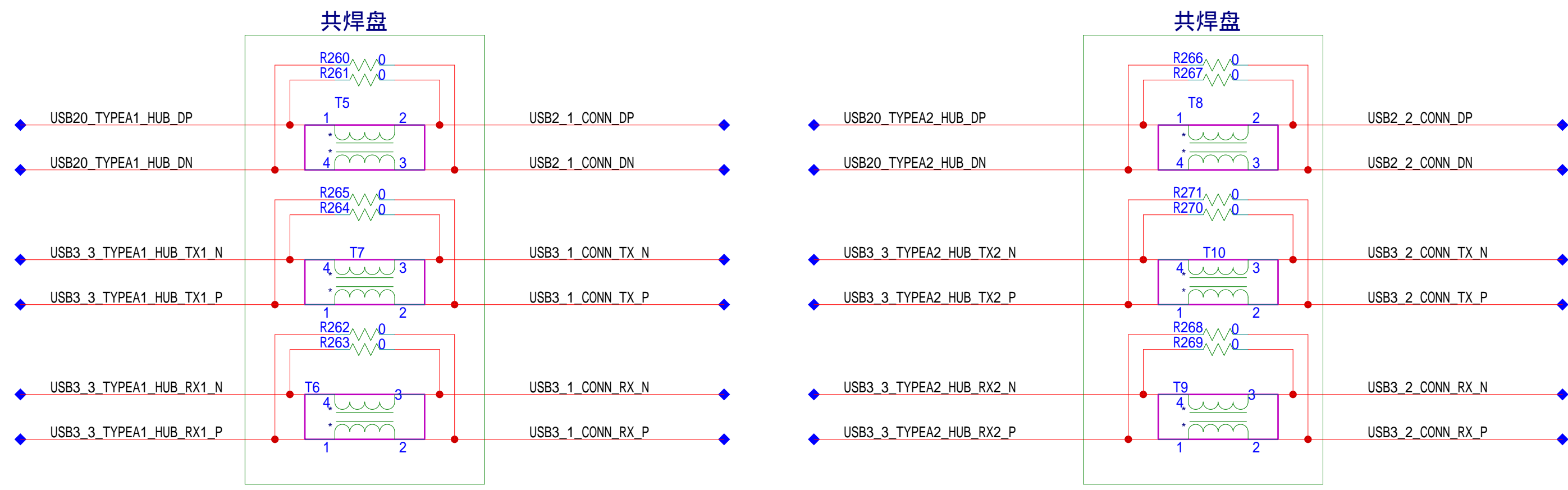
SD卡



USB3.0 Connector(Type-C) Device模式

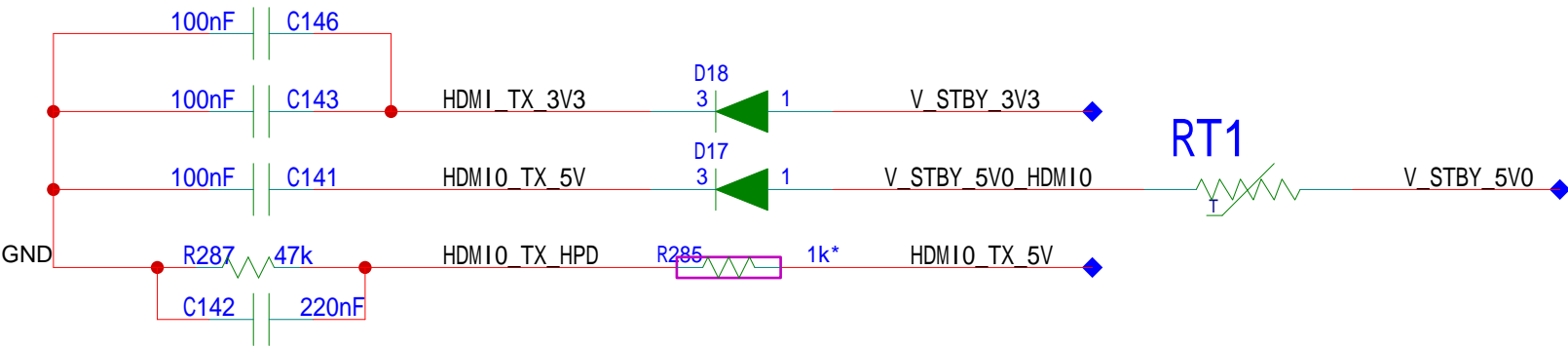
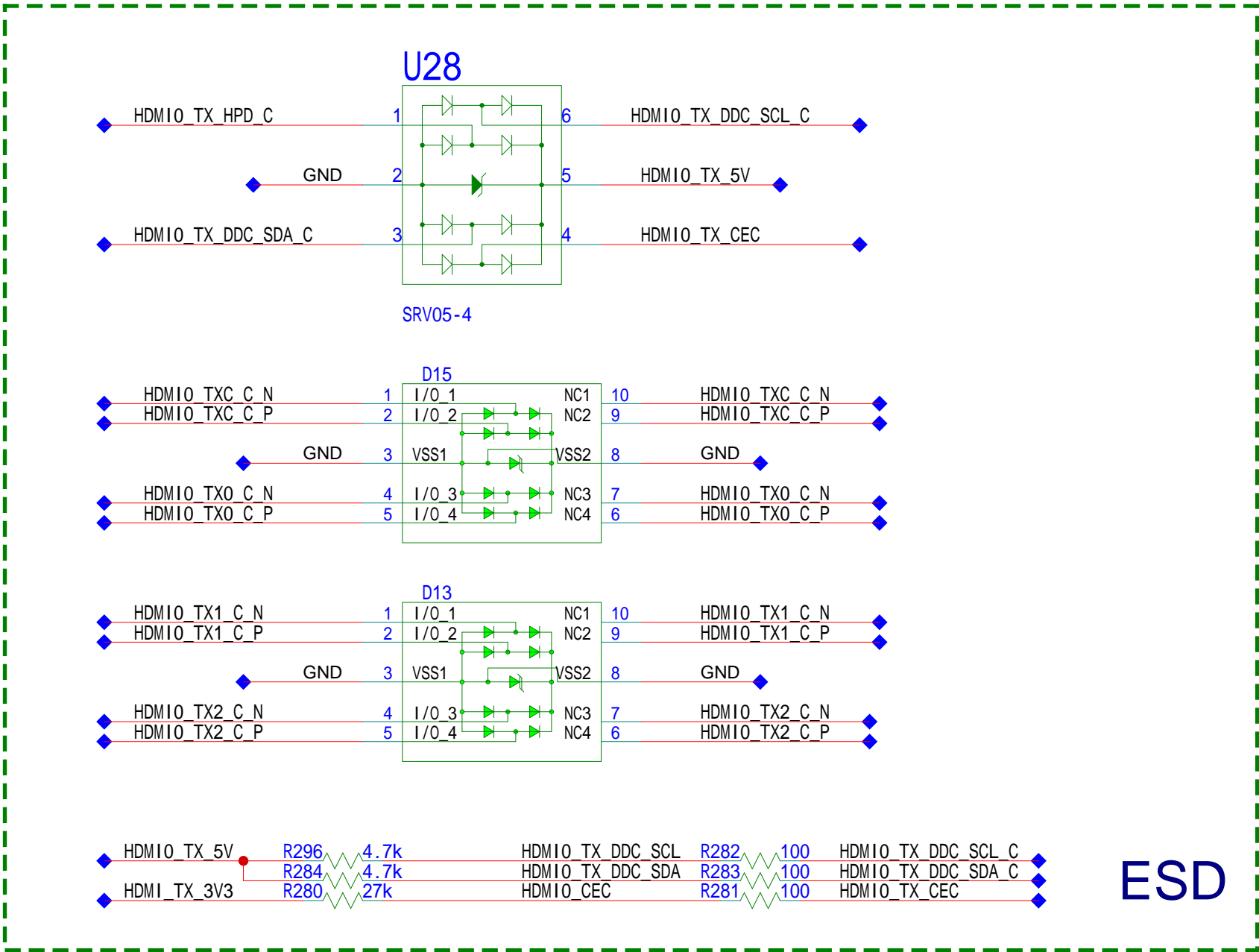
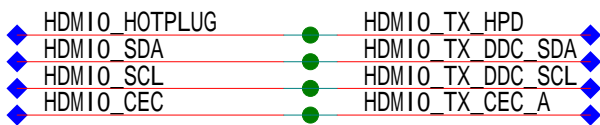
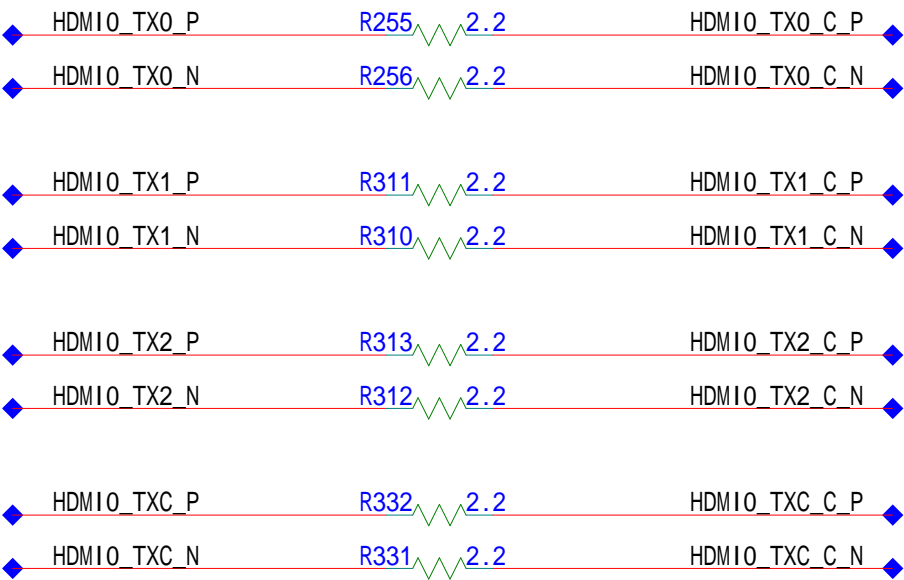
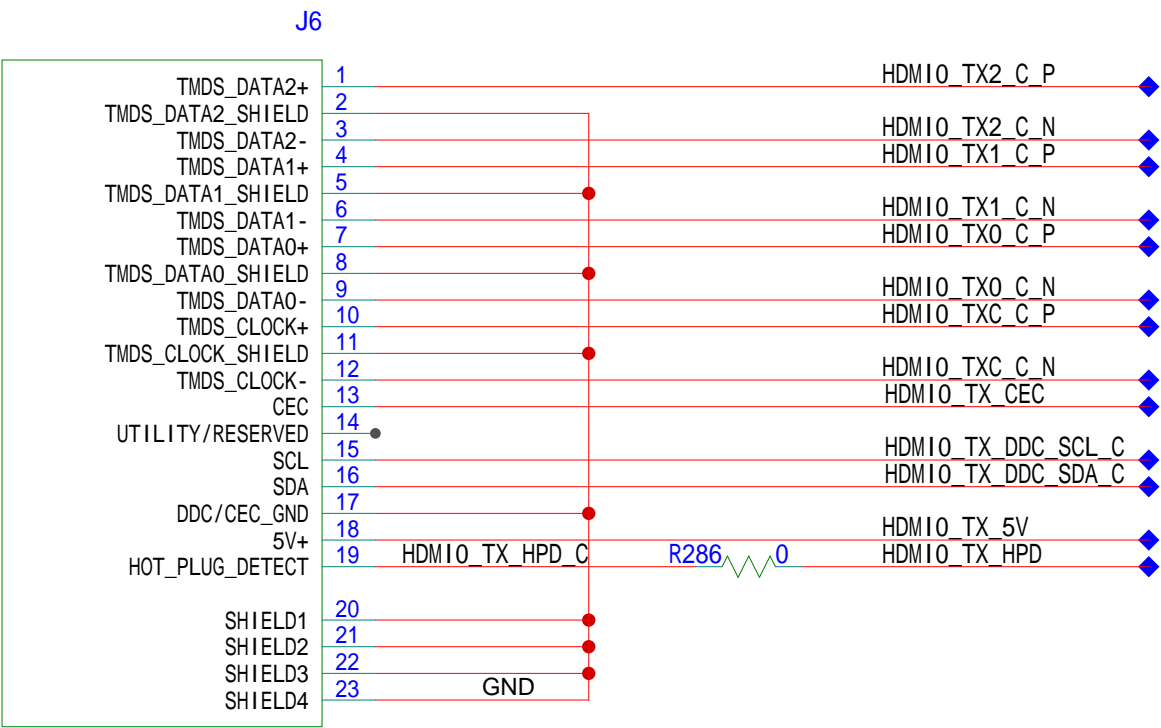


USB3.0 + USB2.0 Connector(Type-A)

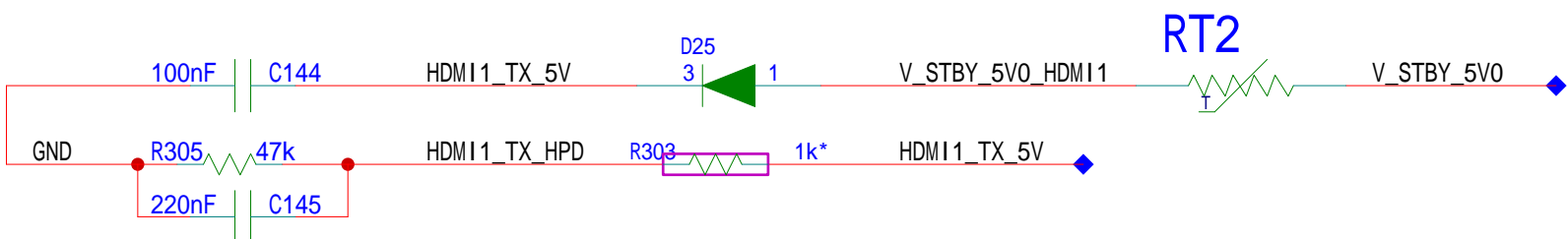
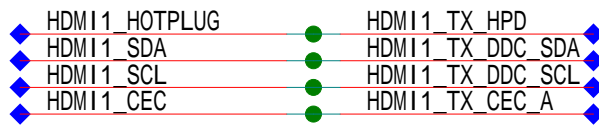
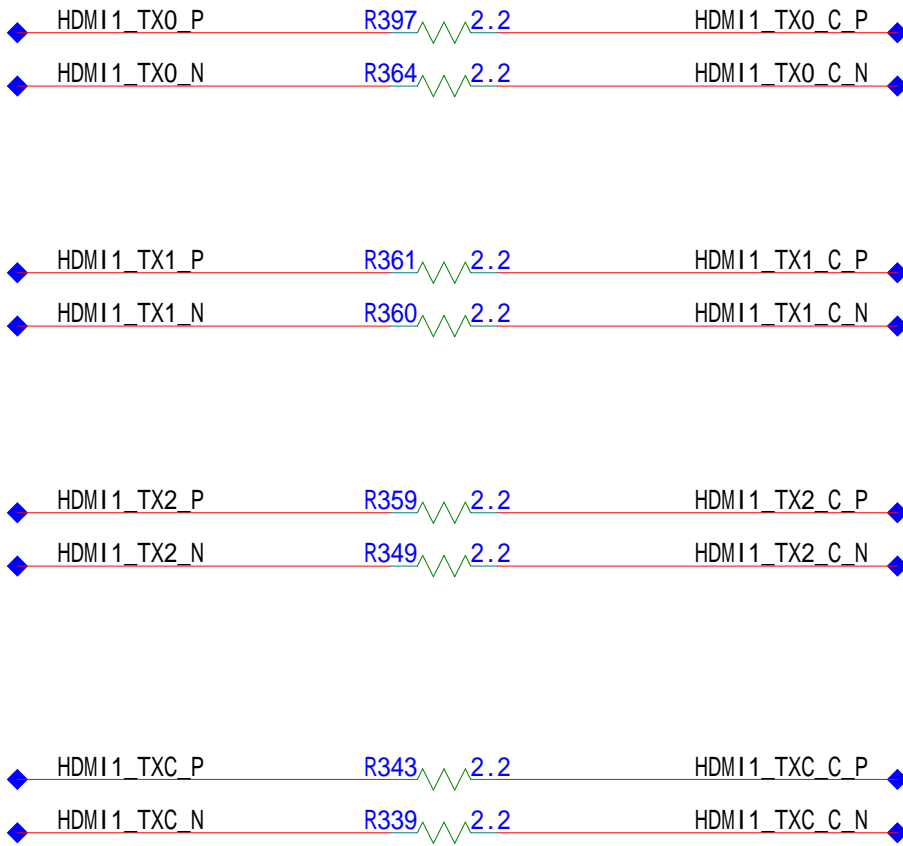
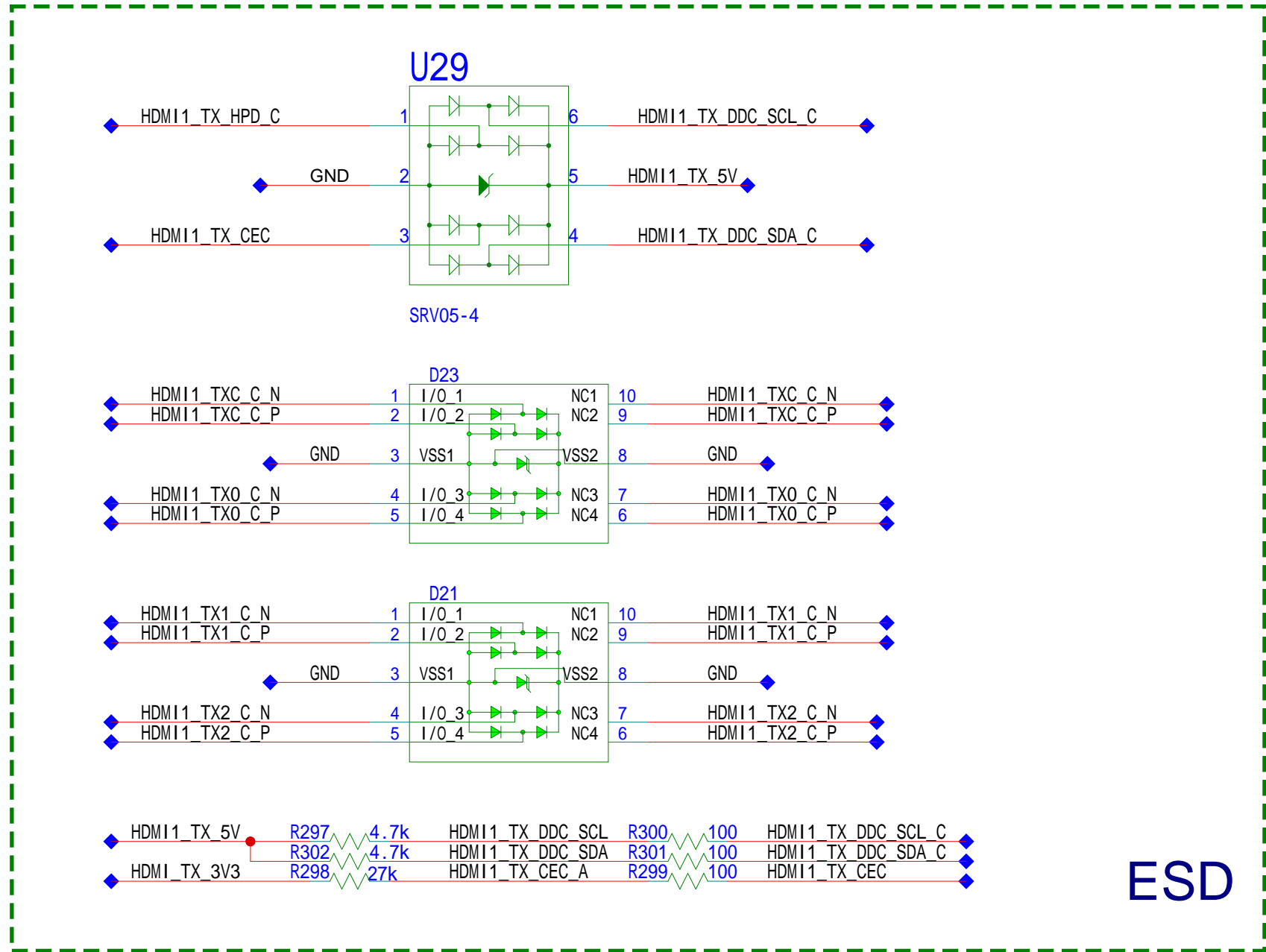
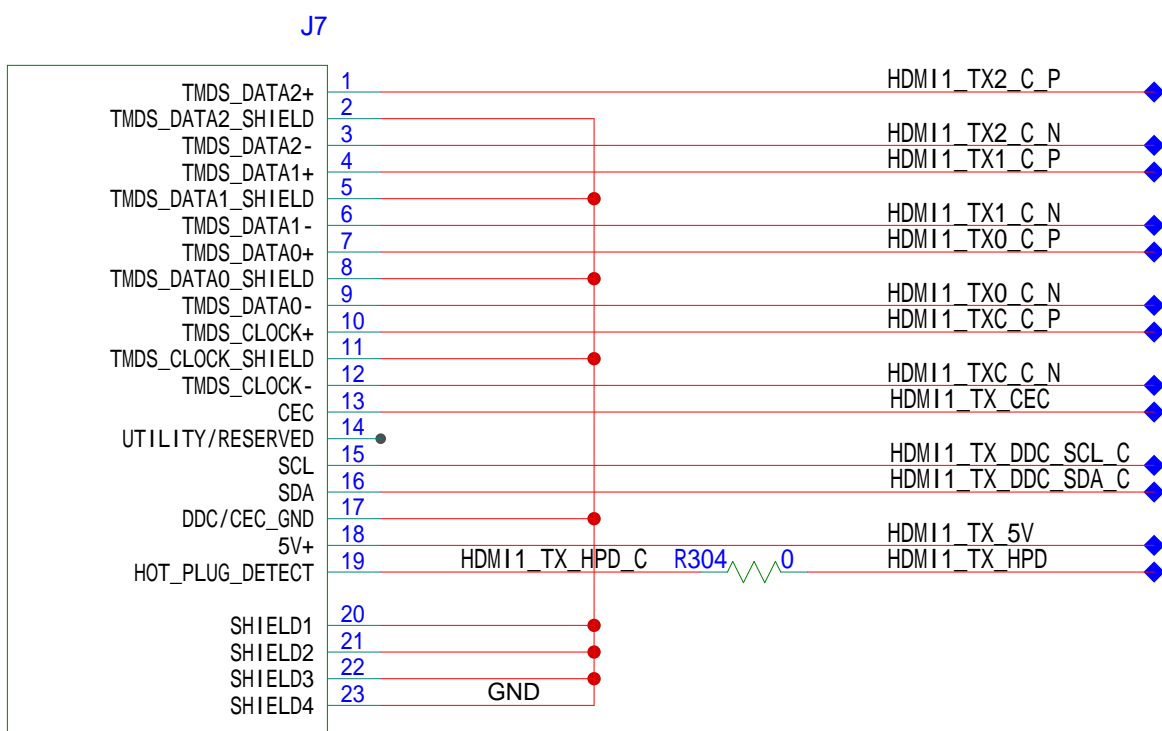


HDMI 2.0 OUT

封装与14240471一致，该编码下有库存

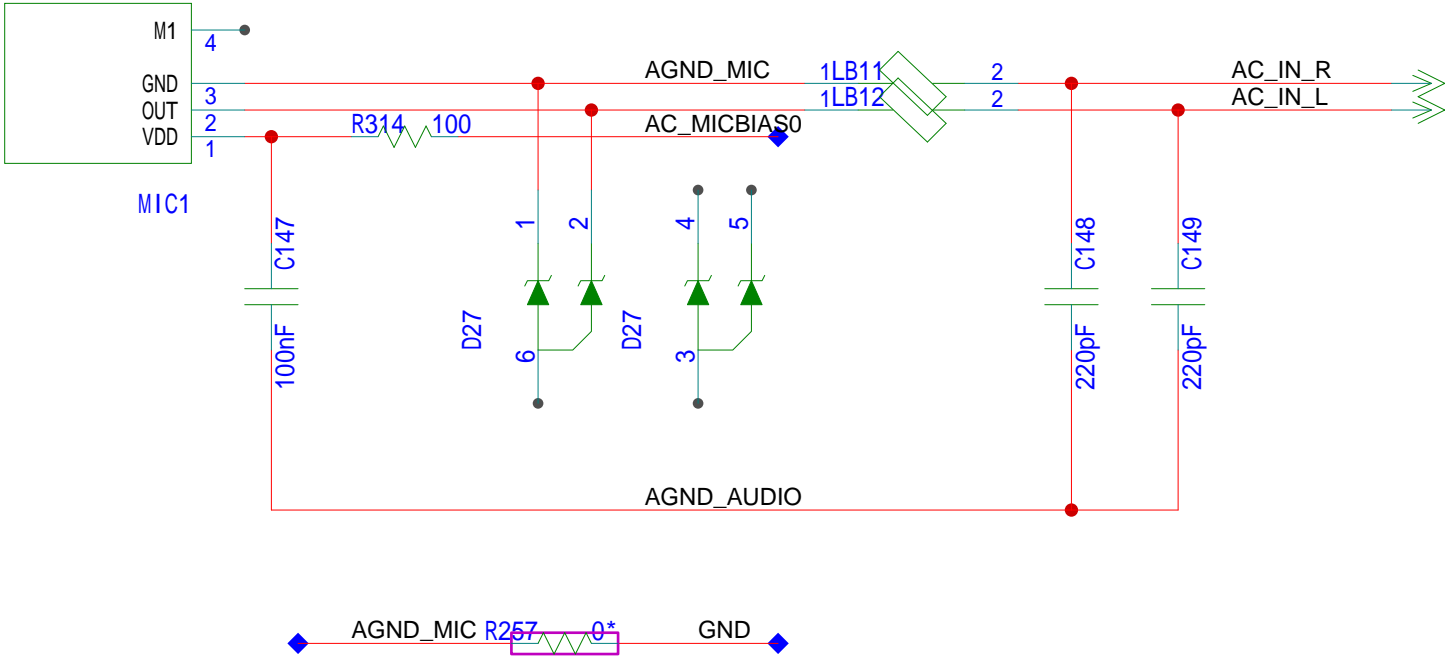


HDMI1 2.0 OUT

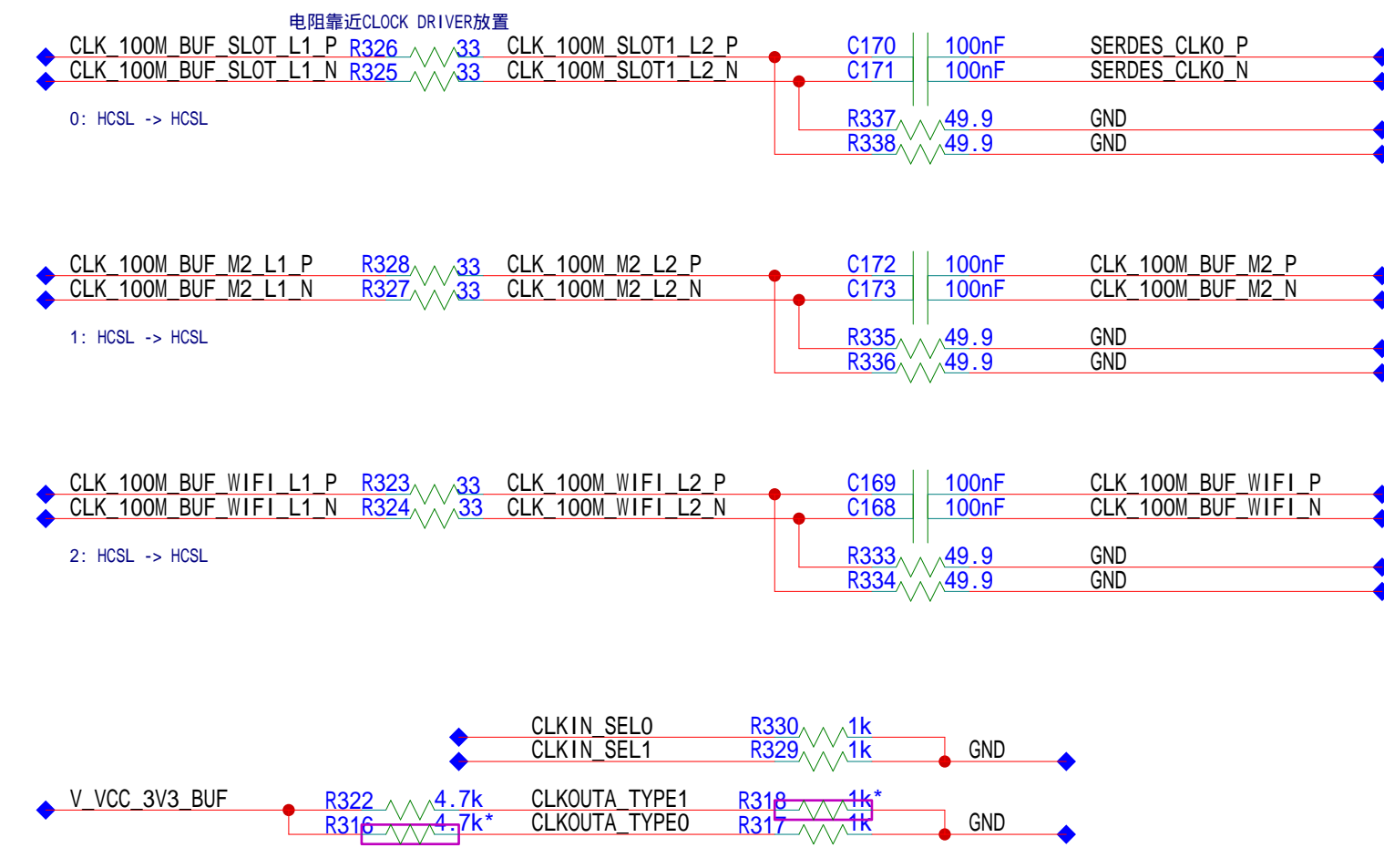
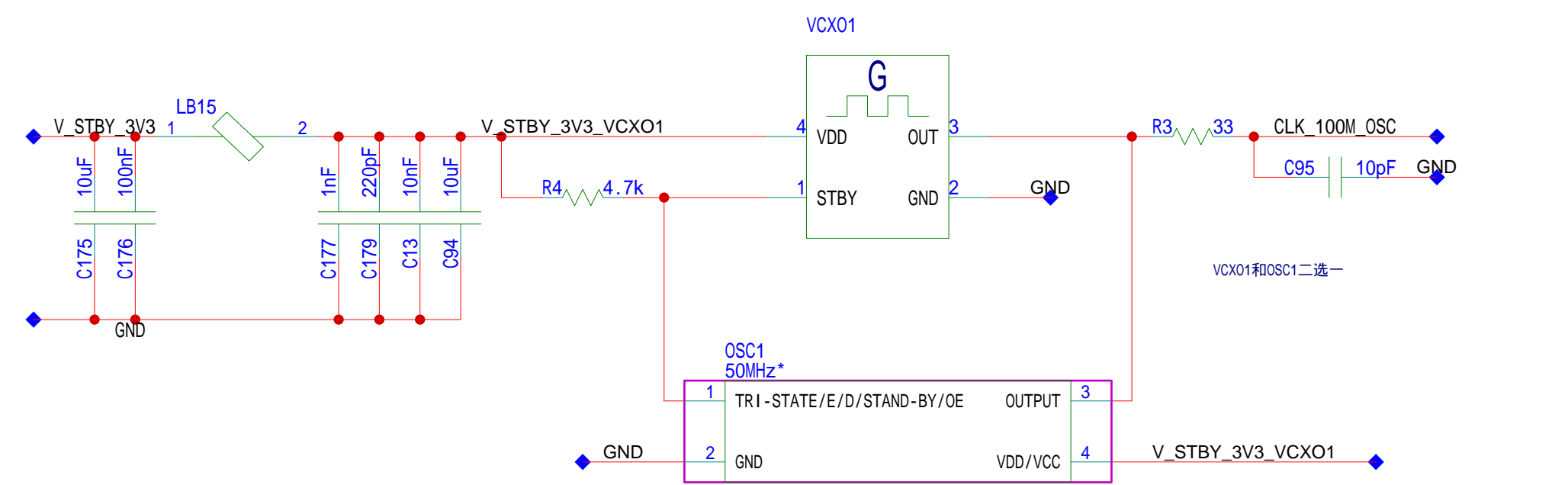
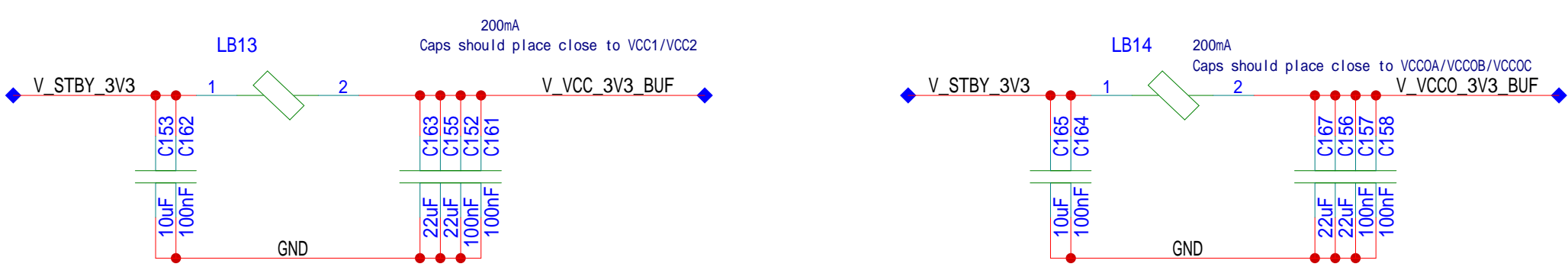
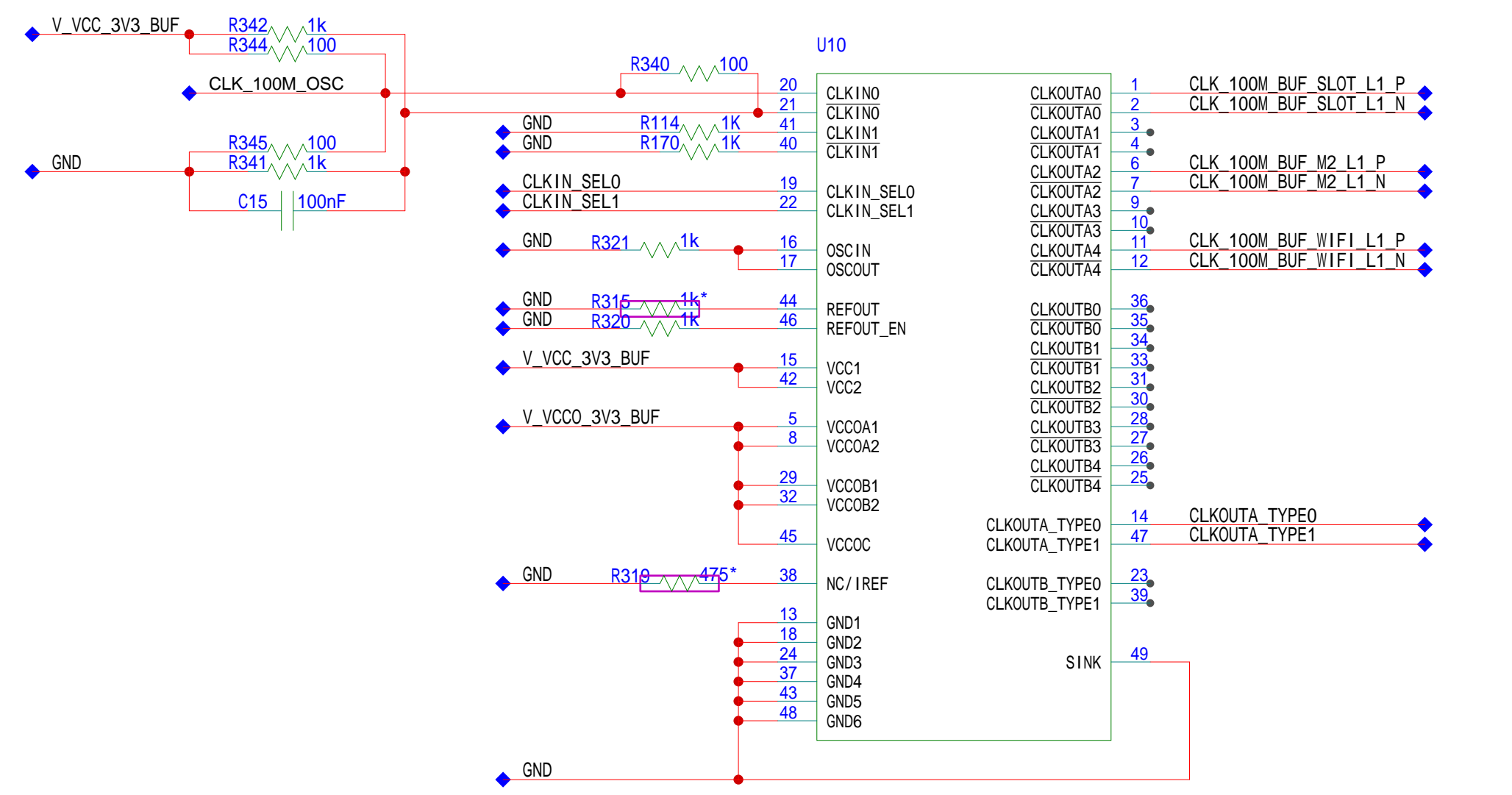


音频接口

Audio in

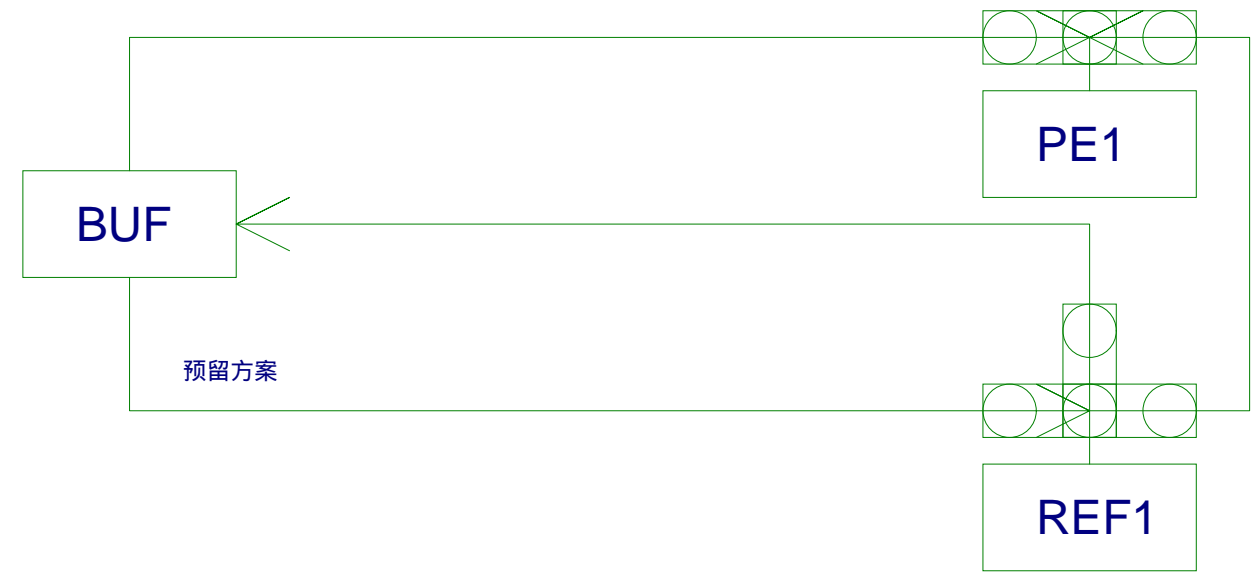


CLOCK

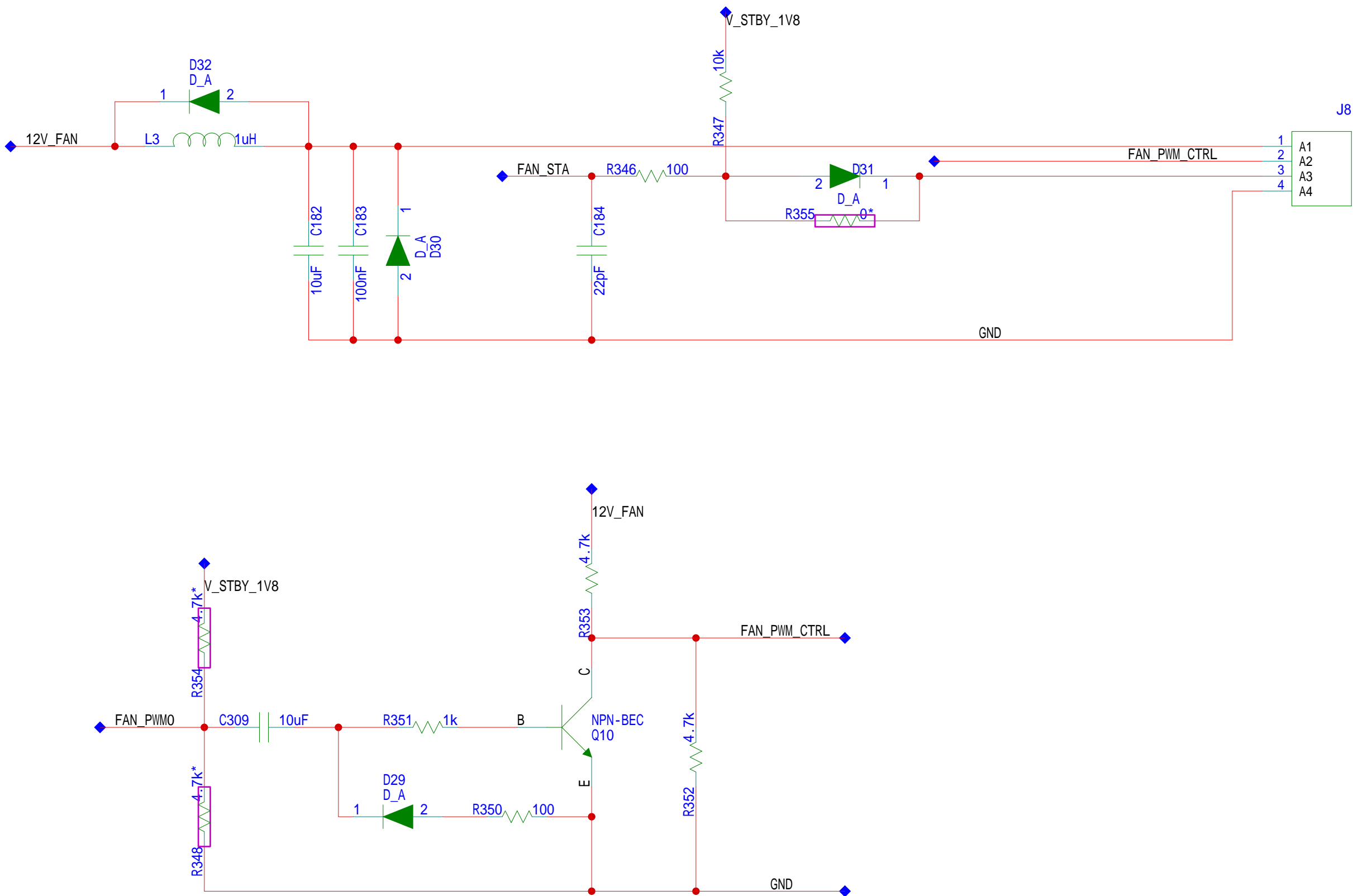


CLKIN_SEL[1:0]	CLK_SOURCE
* 00	PORTA
01	PORTB
10	OSC
11	OSC

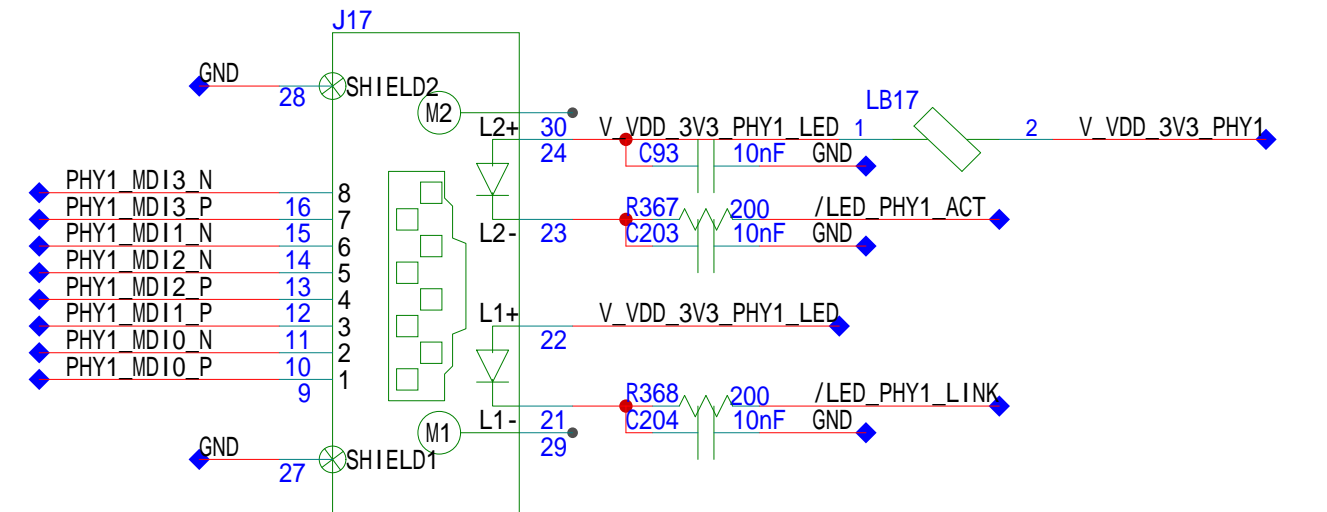
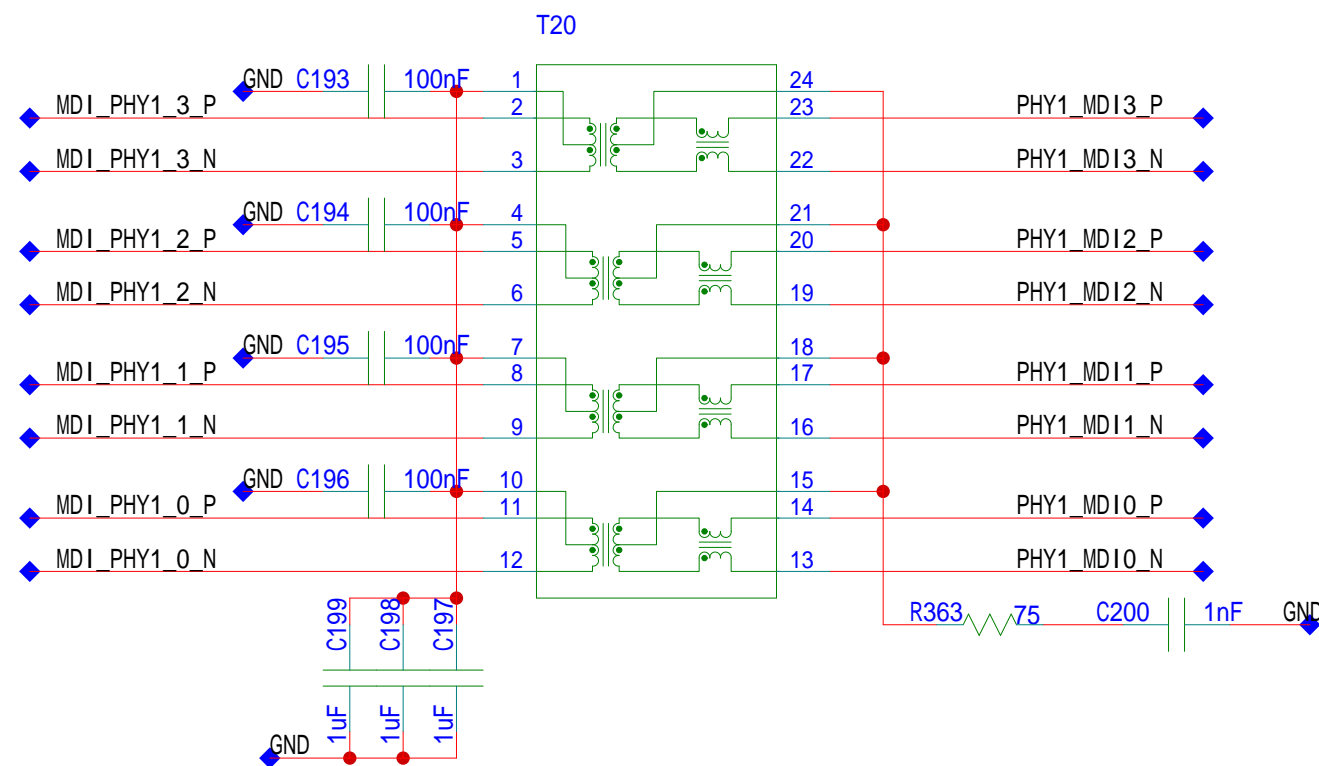
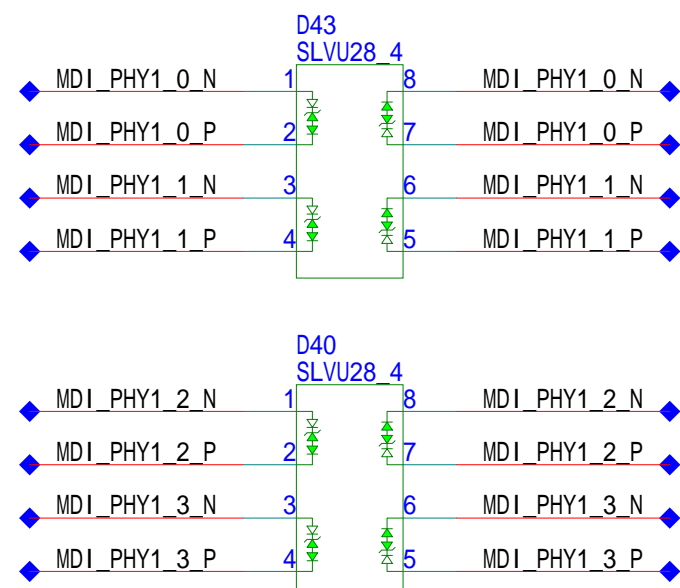
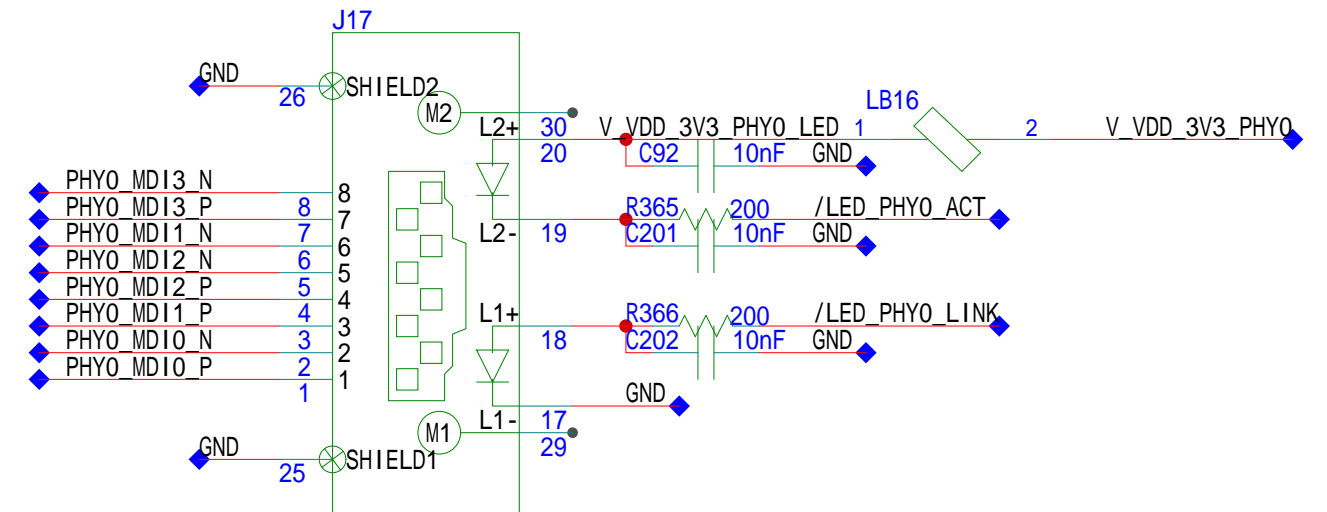
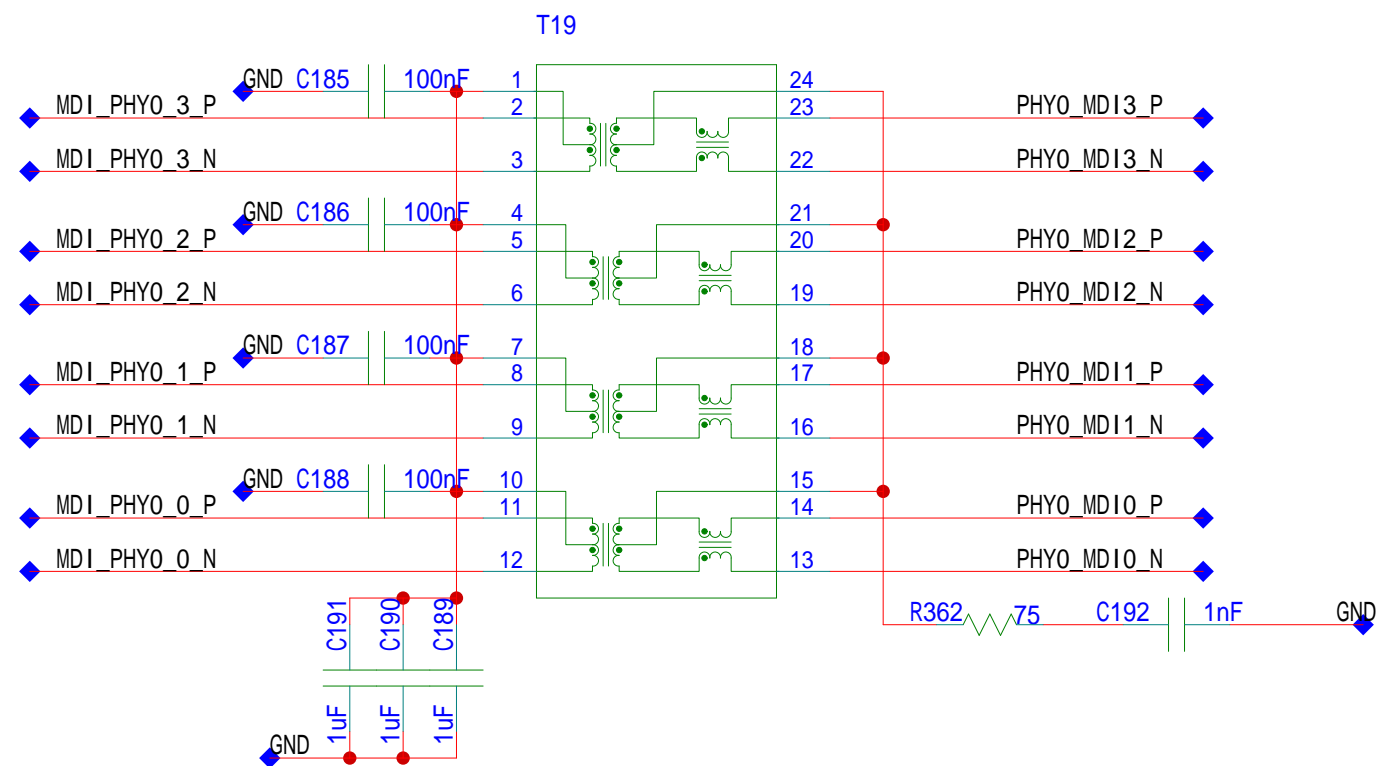
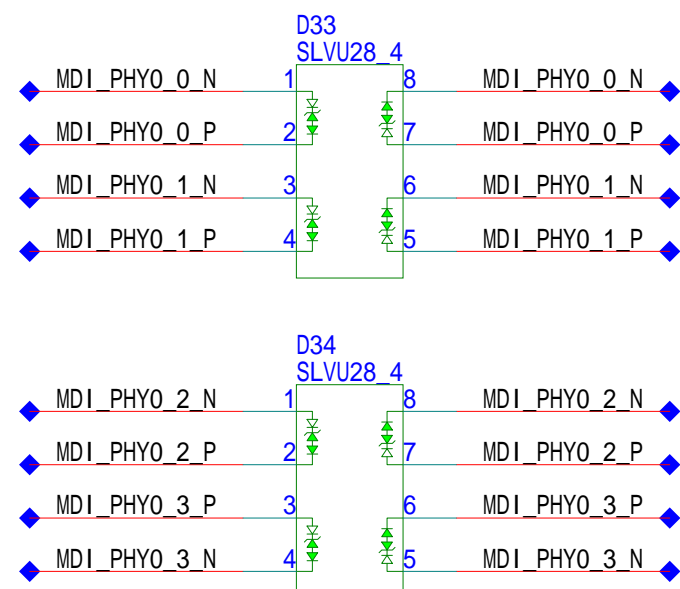
CLKOUT_TYPE[1:0]	OUTPUT_MODE
00	LVPECL
01	LVDS
* 10	HCSL
11	HI-Z



FAN Control

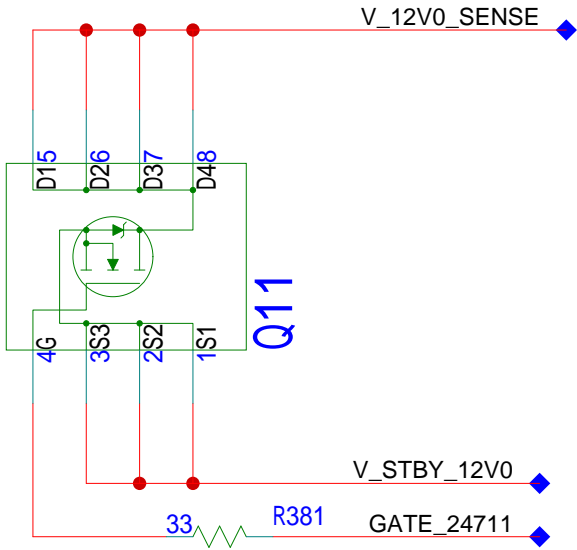
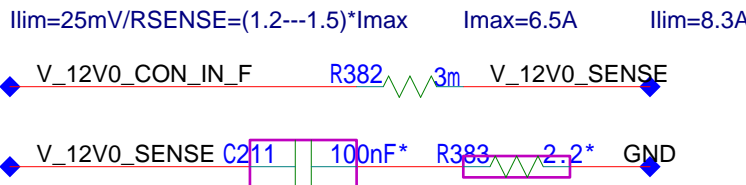
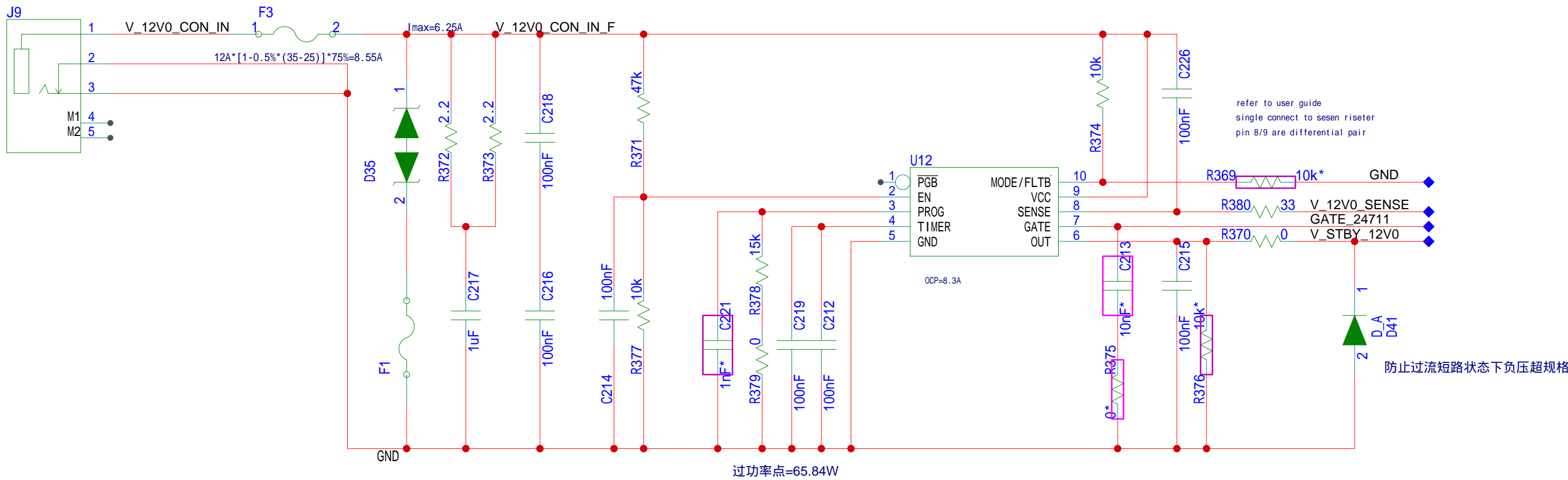


网口连接器

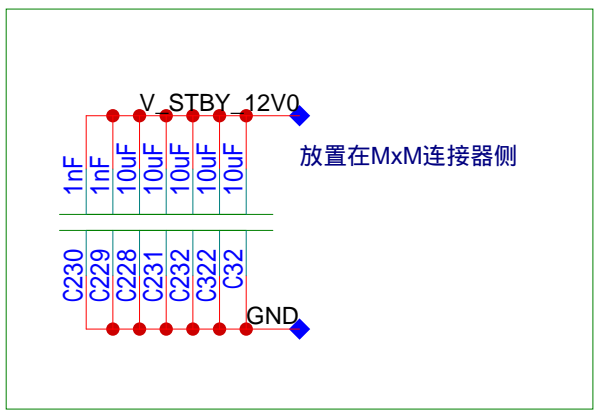
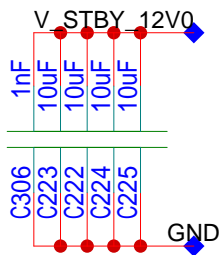
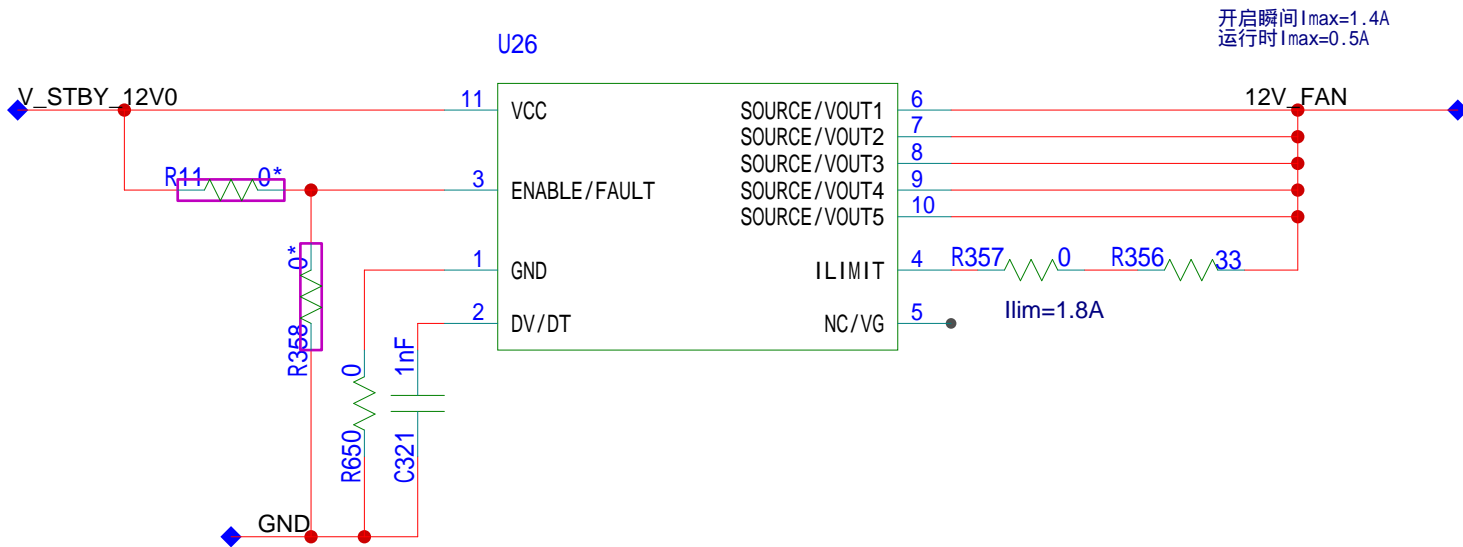


POWER

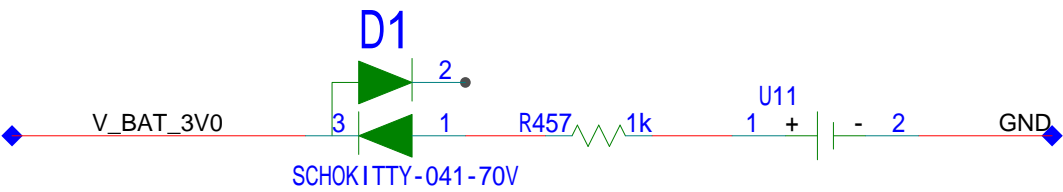
12V Input



FAN电源

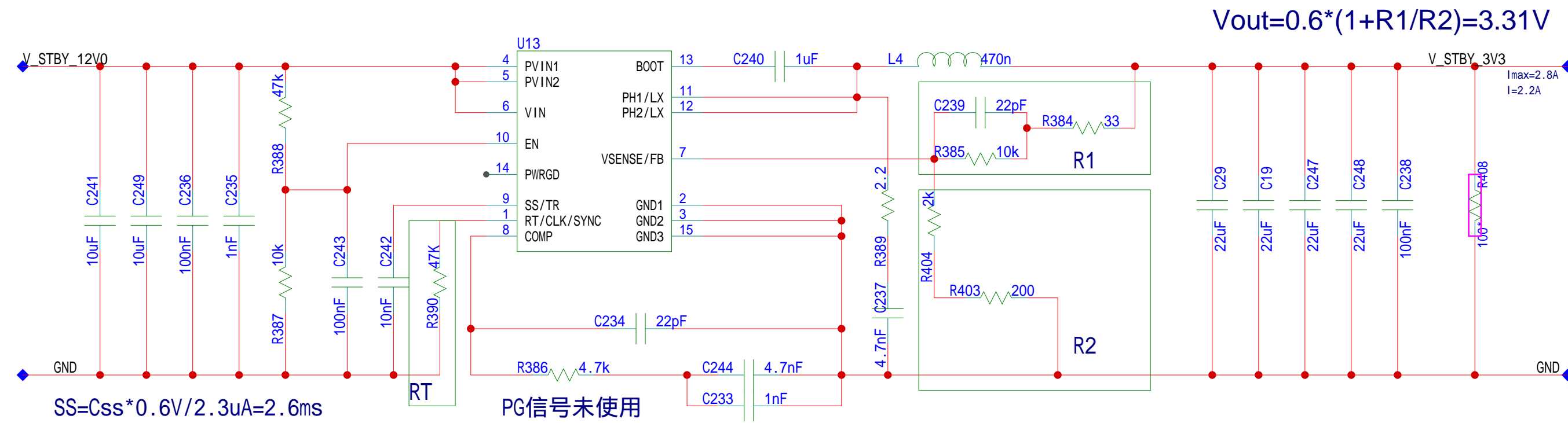


RTC电源

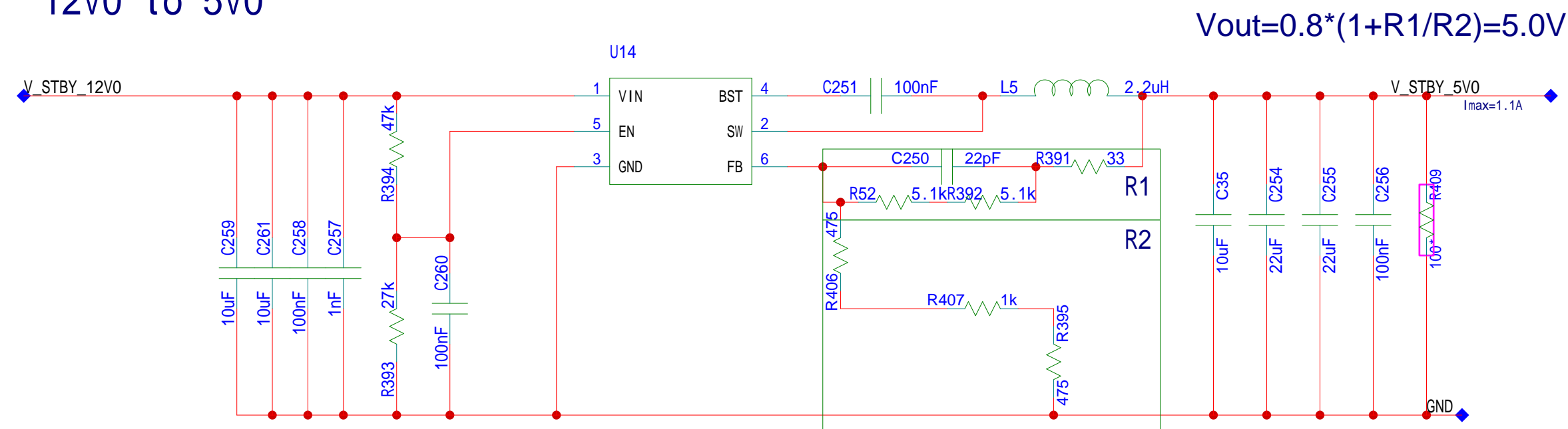


POWER

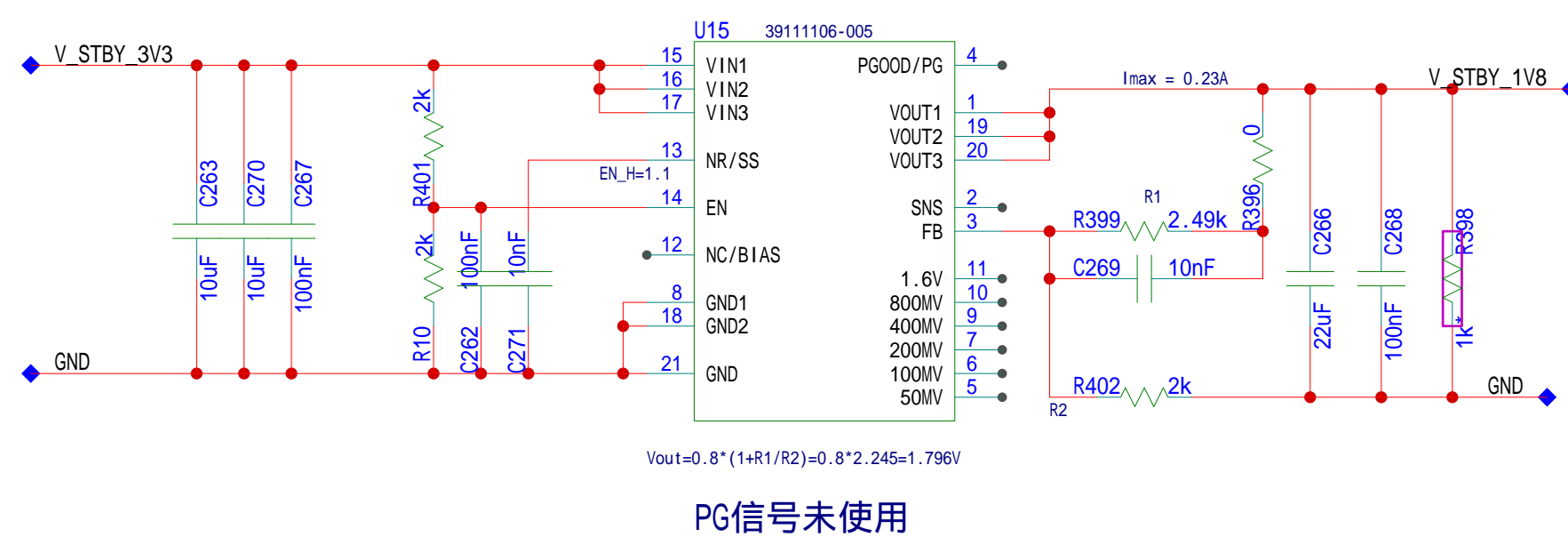
12V0 to 3V3



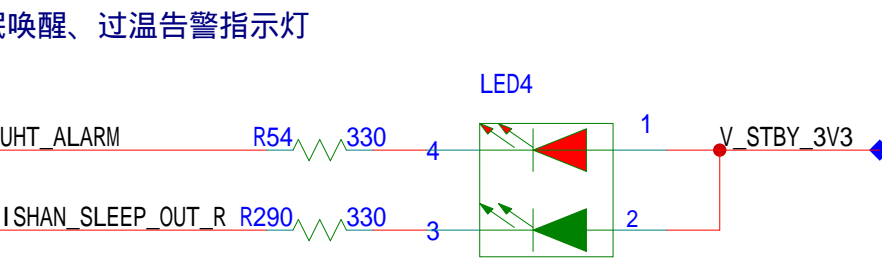
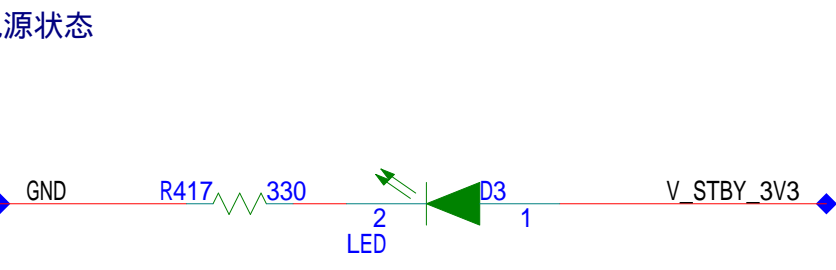
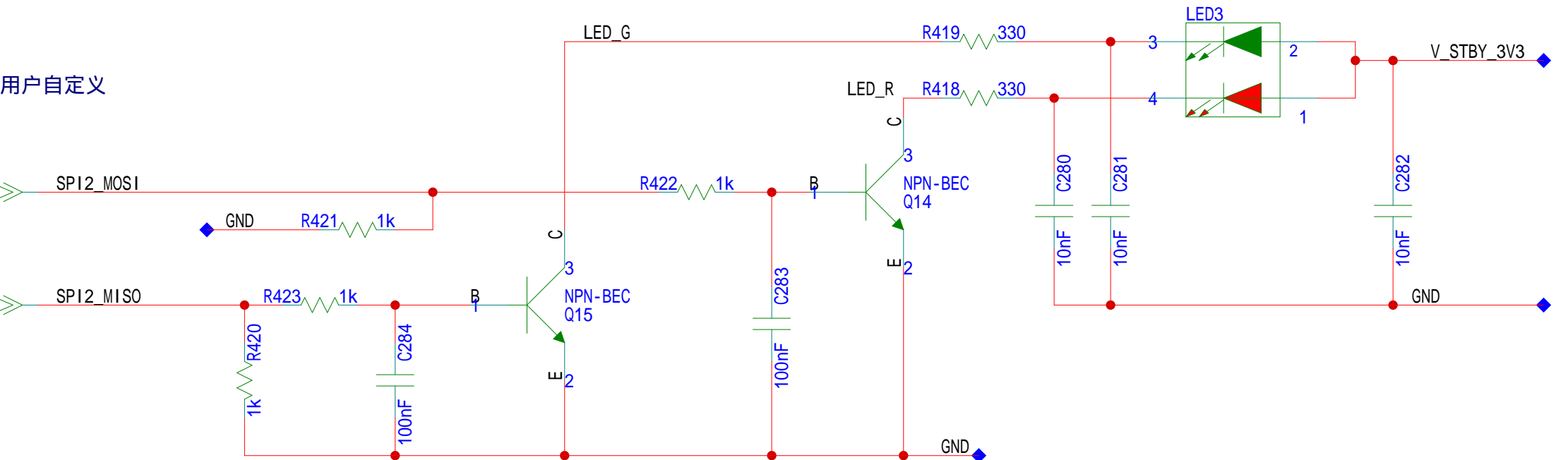
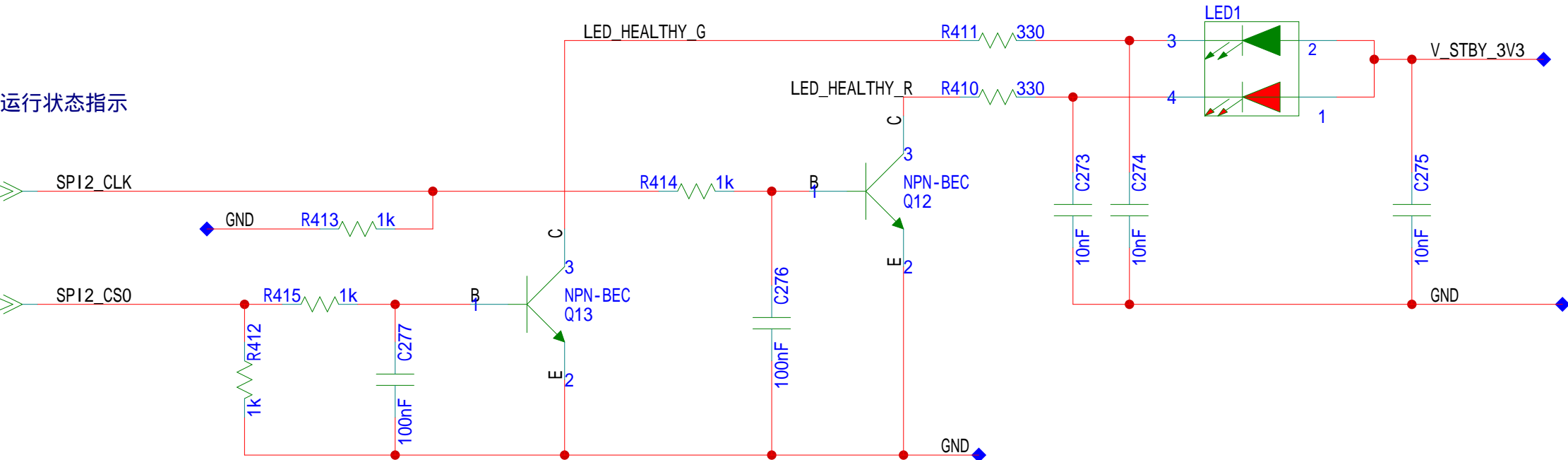
12V0 to 5V0



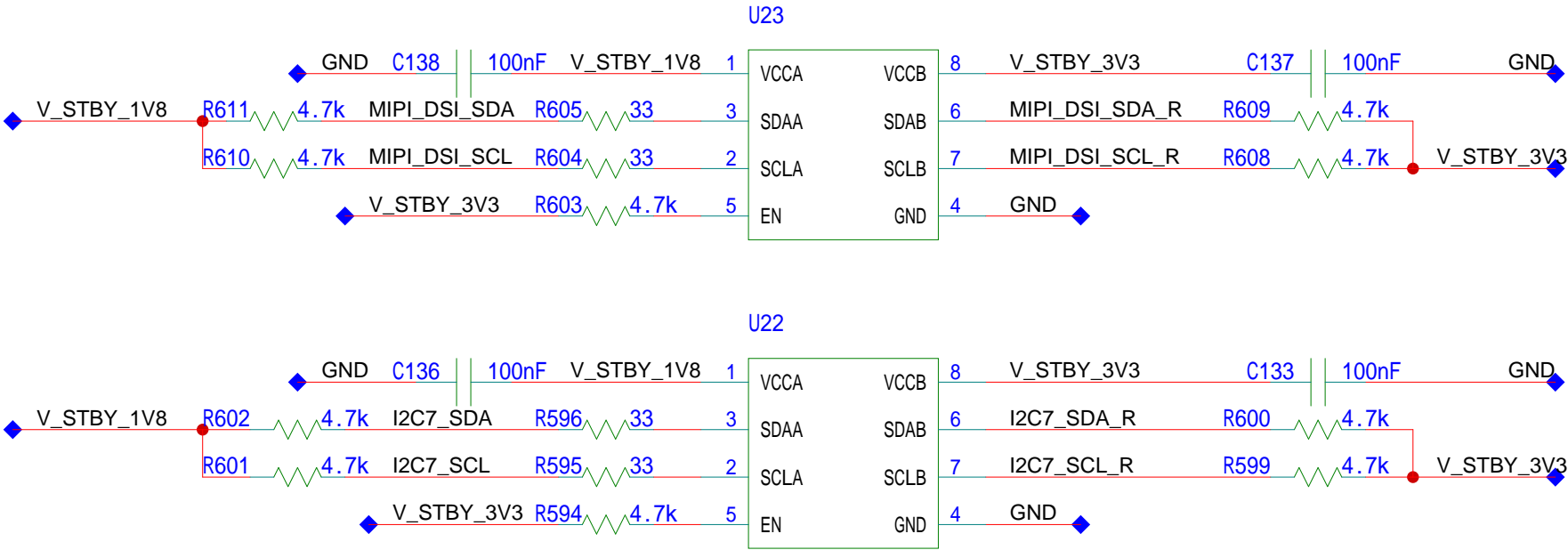
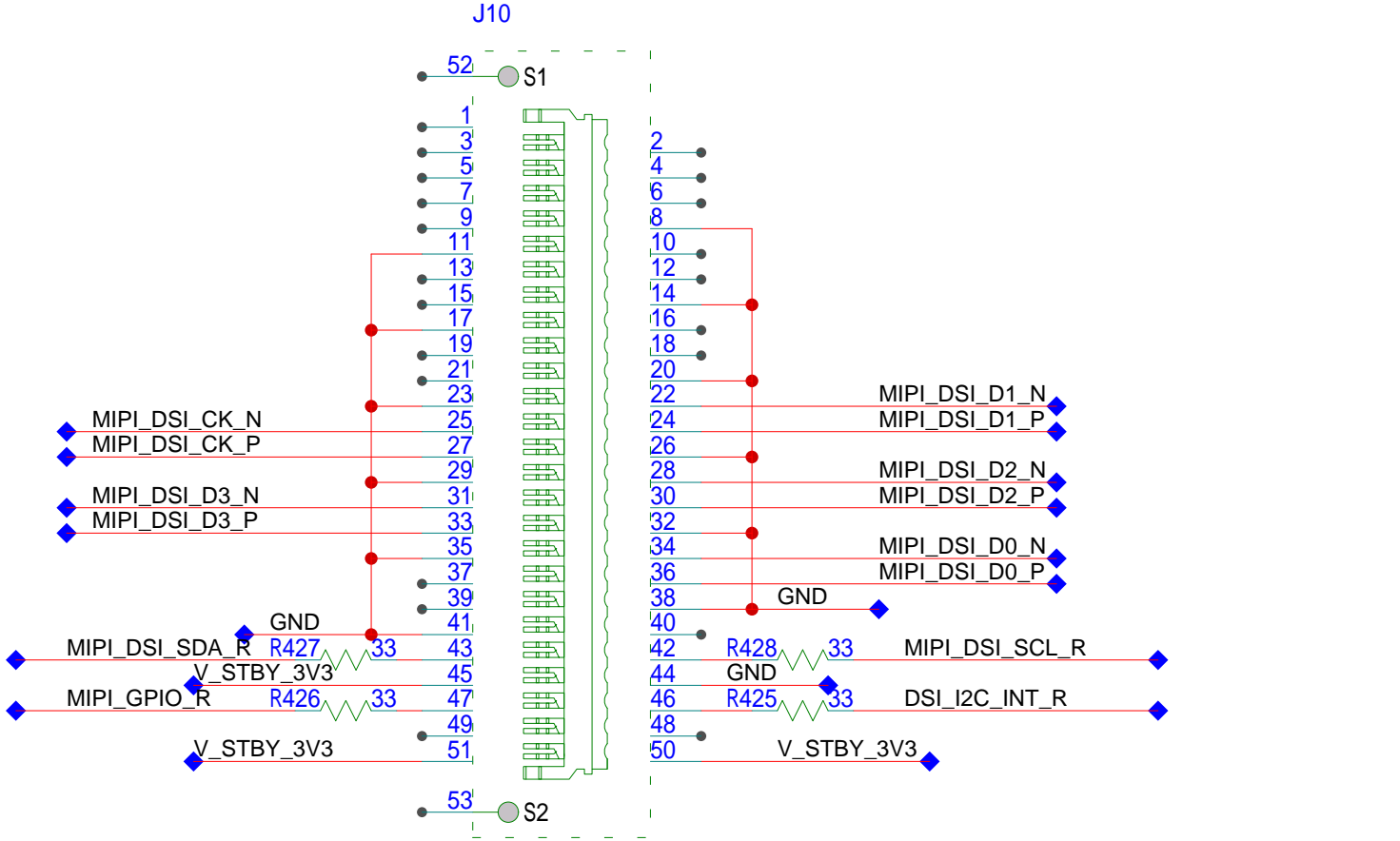
3V3 to 1V8



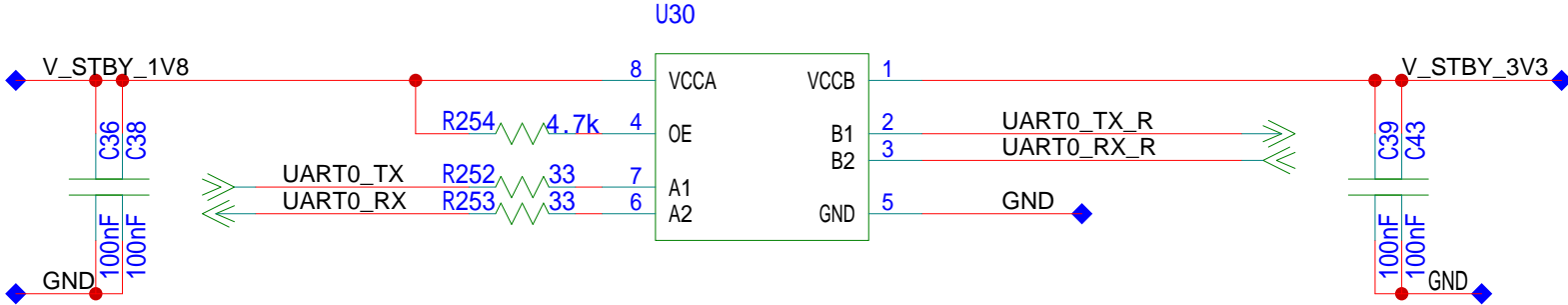
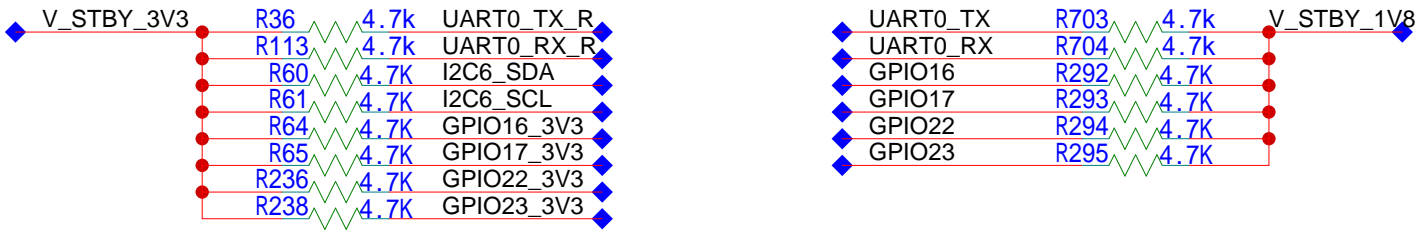
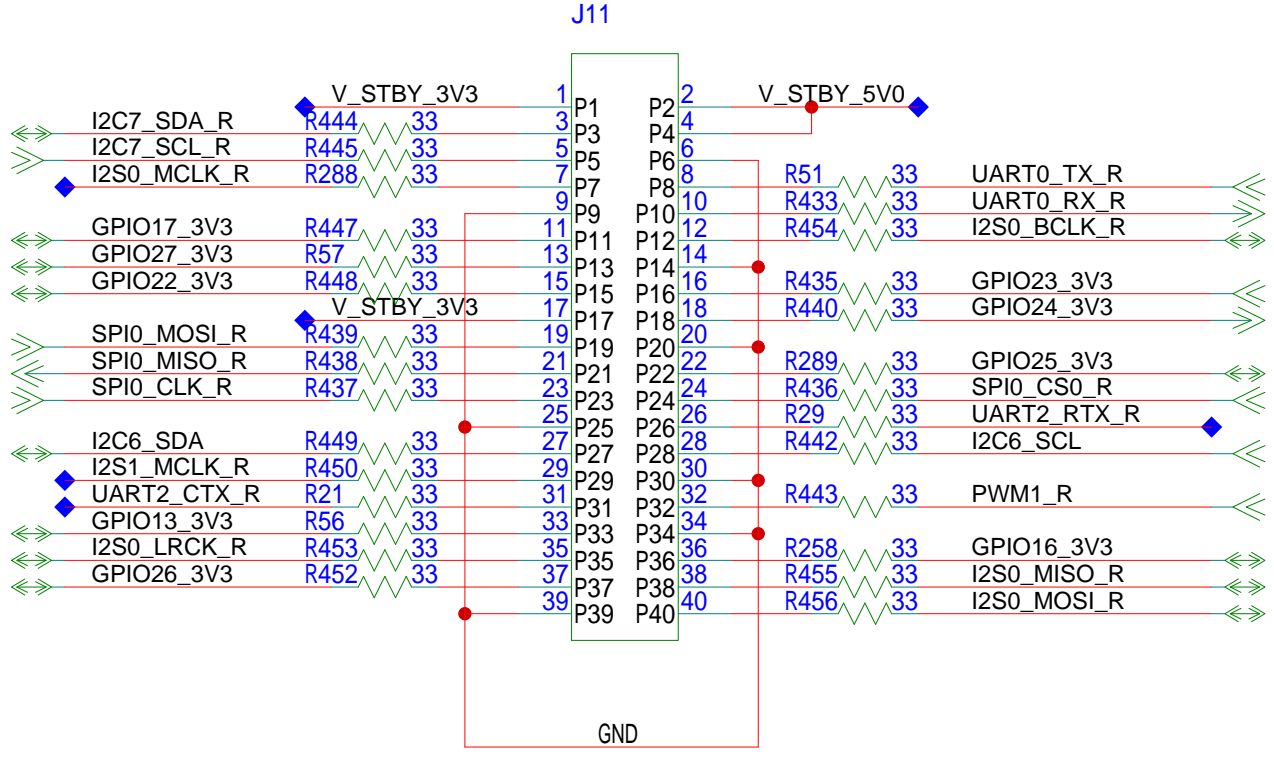
LED



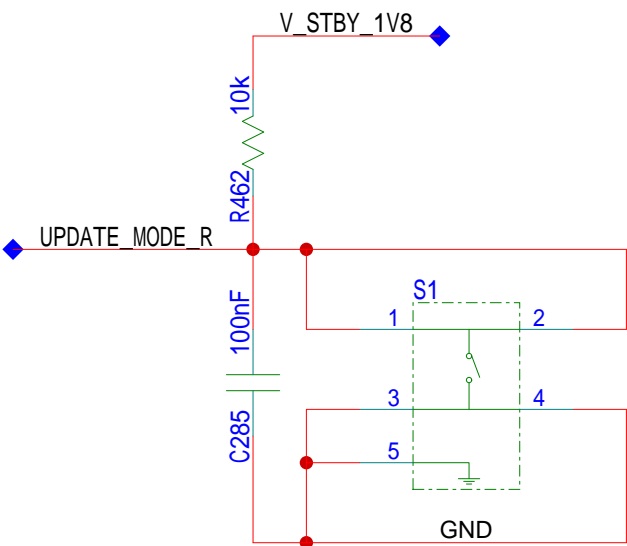
FPC连接器



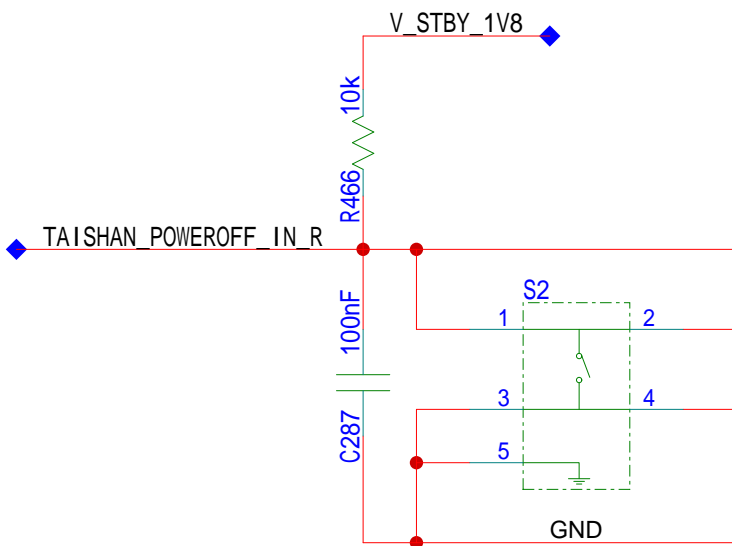
40Pin-Connector



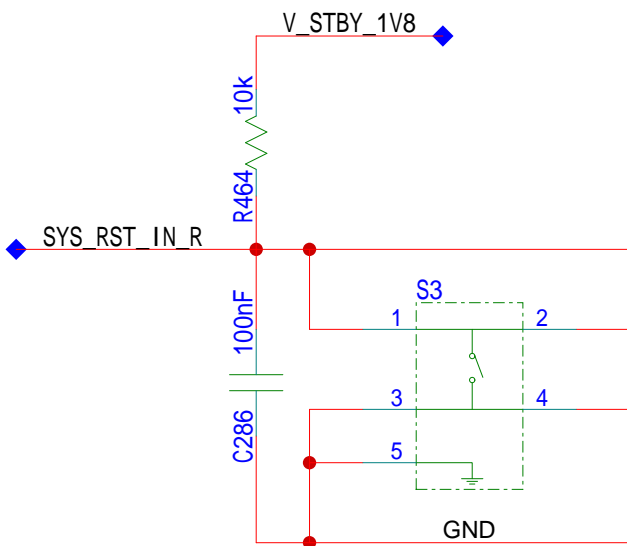
软件升级



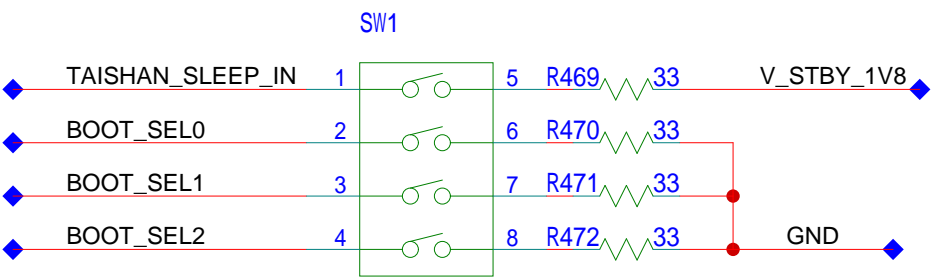
开关机



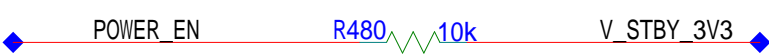
复位按键



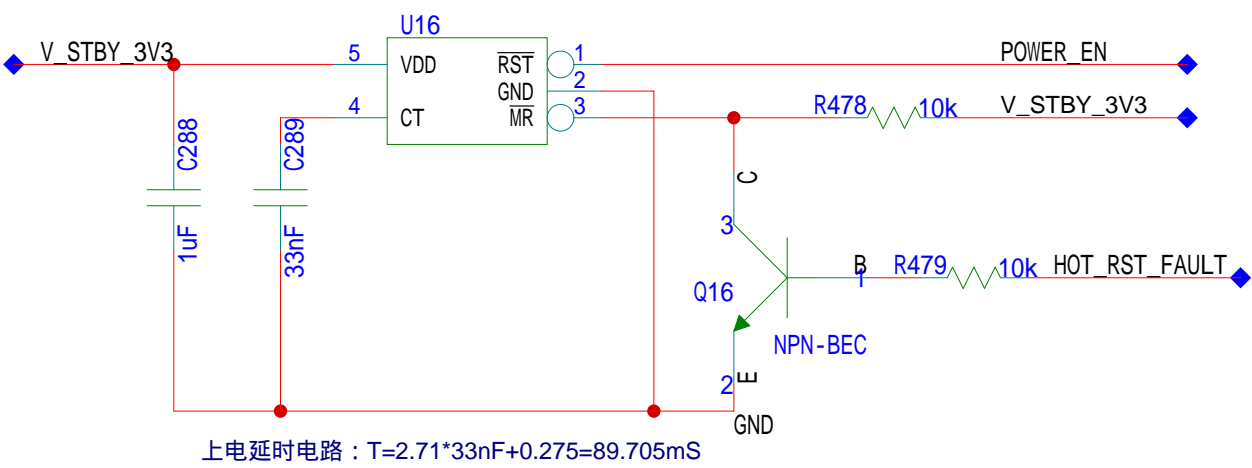
启动介质选择 休眠唤醒控制



POWER_EN

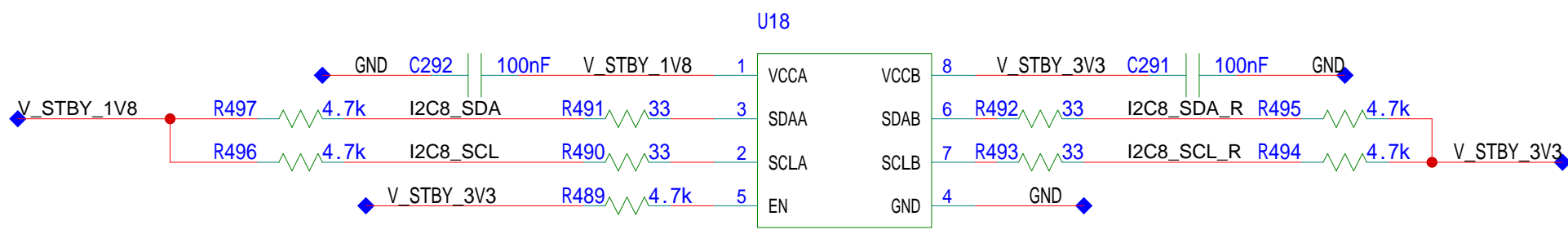
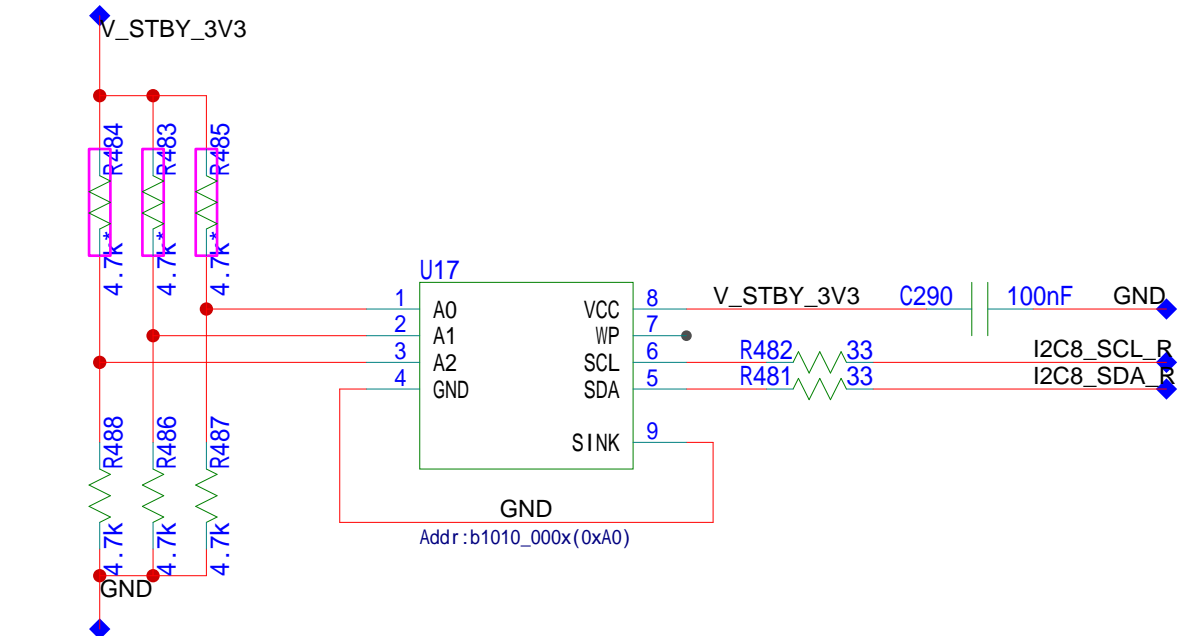


上电延时电路（预留电路，此电路已在模组上设计，不需要上件）

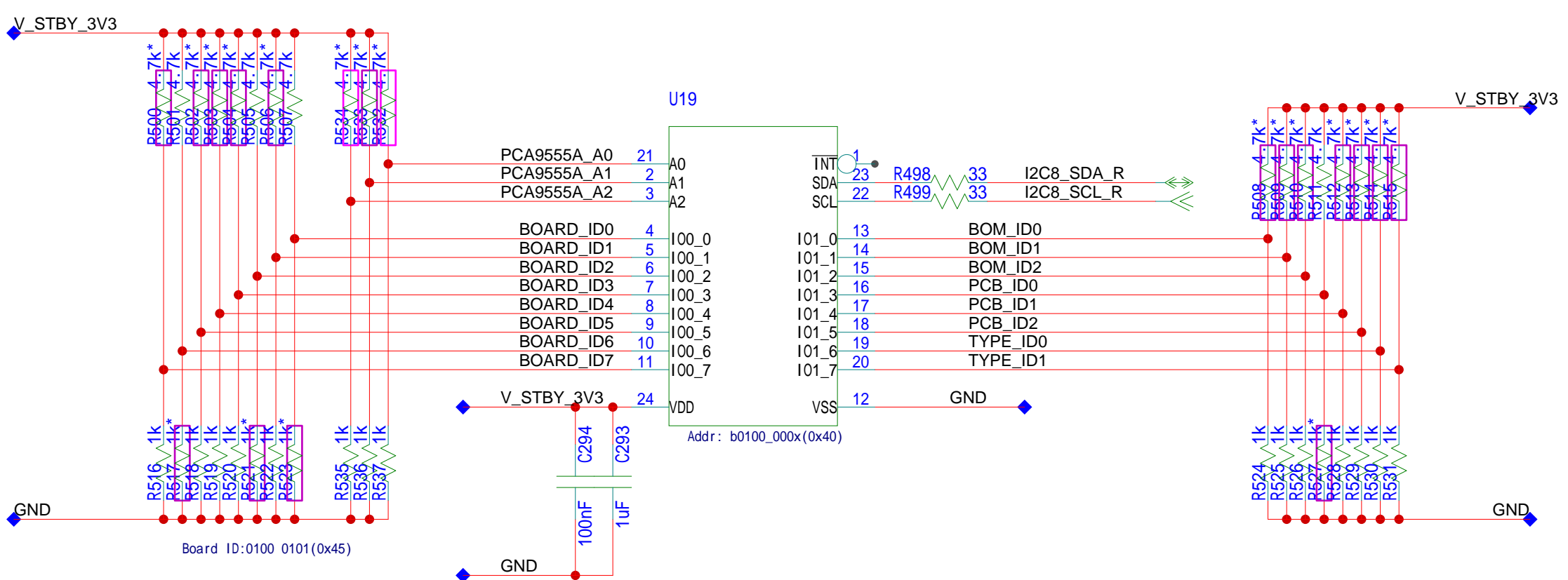


上电延时电路：T=2.71*33nF+0.275=89.705mS

EEPROM



Board ID

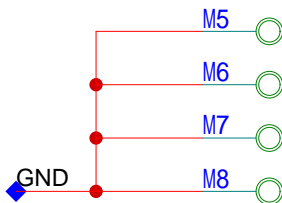


A

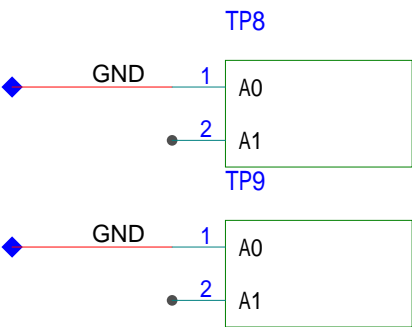


ICT HOLE

FOR BOARD



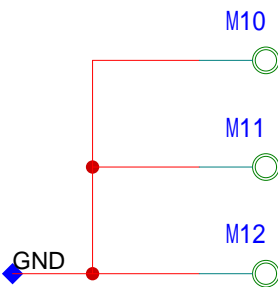
层偏检测



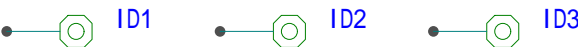
MXM连接器



FOR KEY-E KEY-M



PCB MARK POINT



ICT

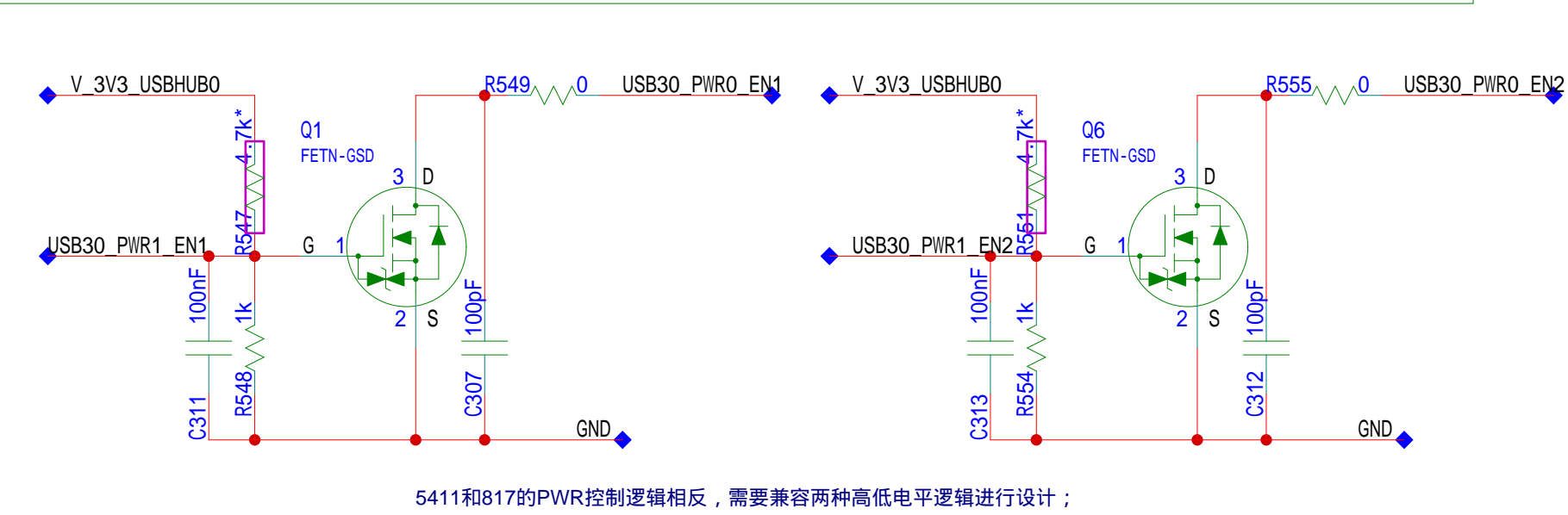
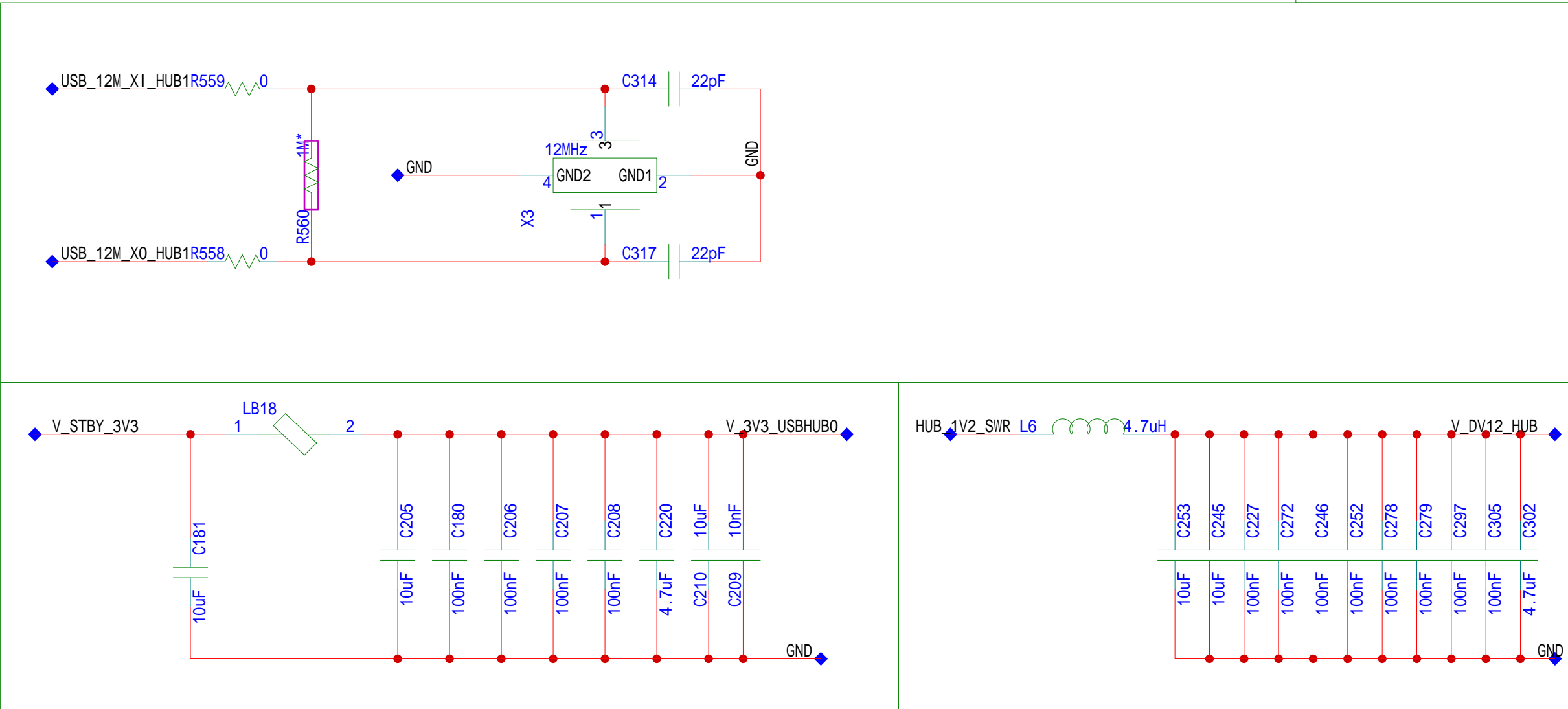
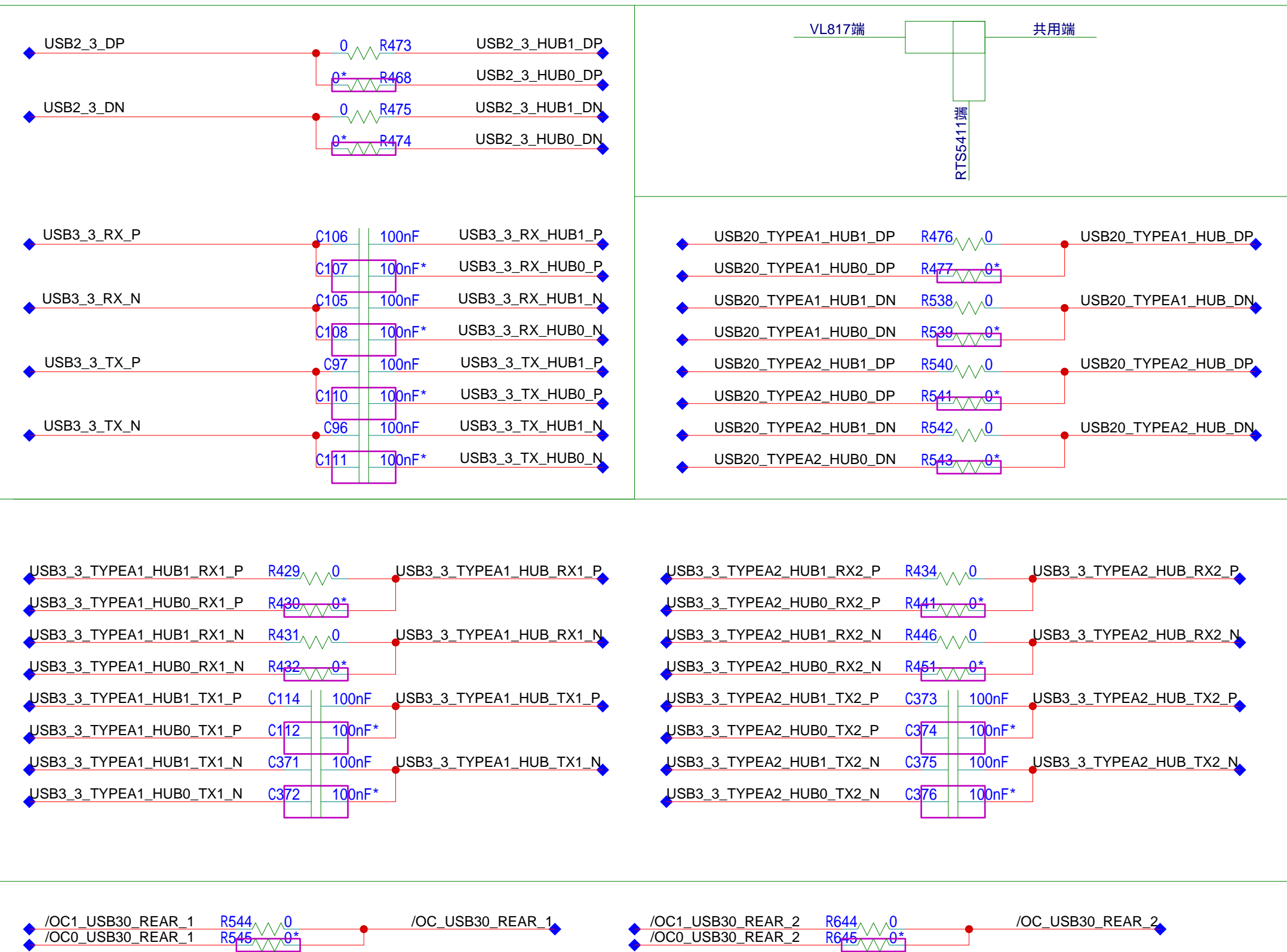
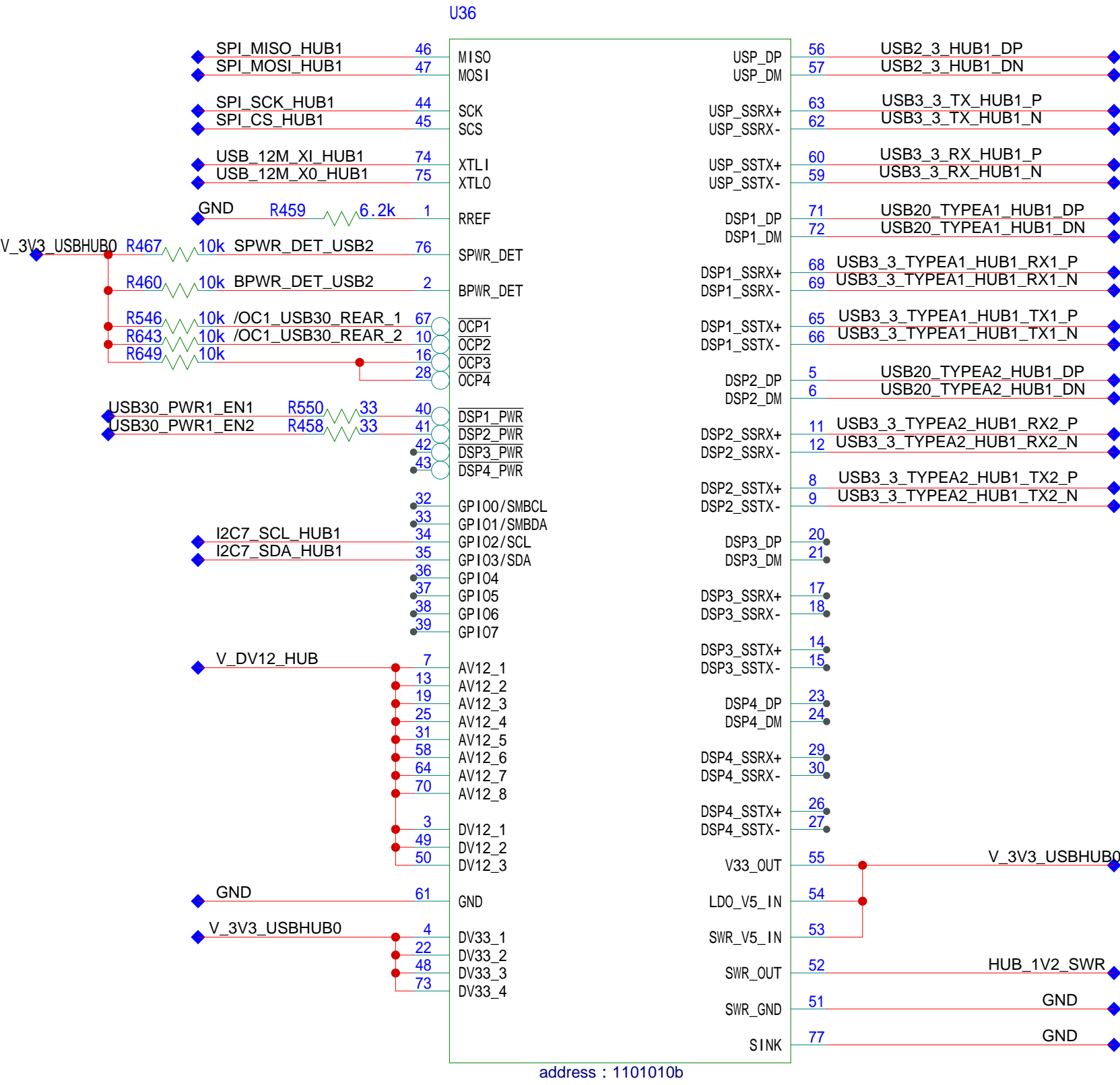


FOR MINI BOARD



USB3.0 & USB2.0 HUB CHOSE

USB HUB方案兼容，做分叉叠焊盘设计



A

