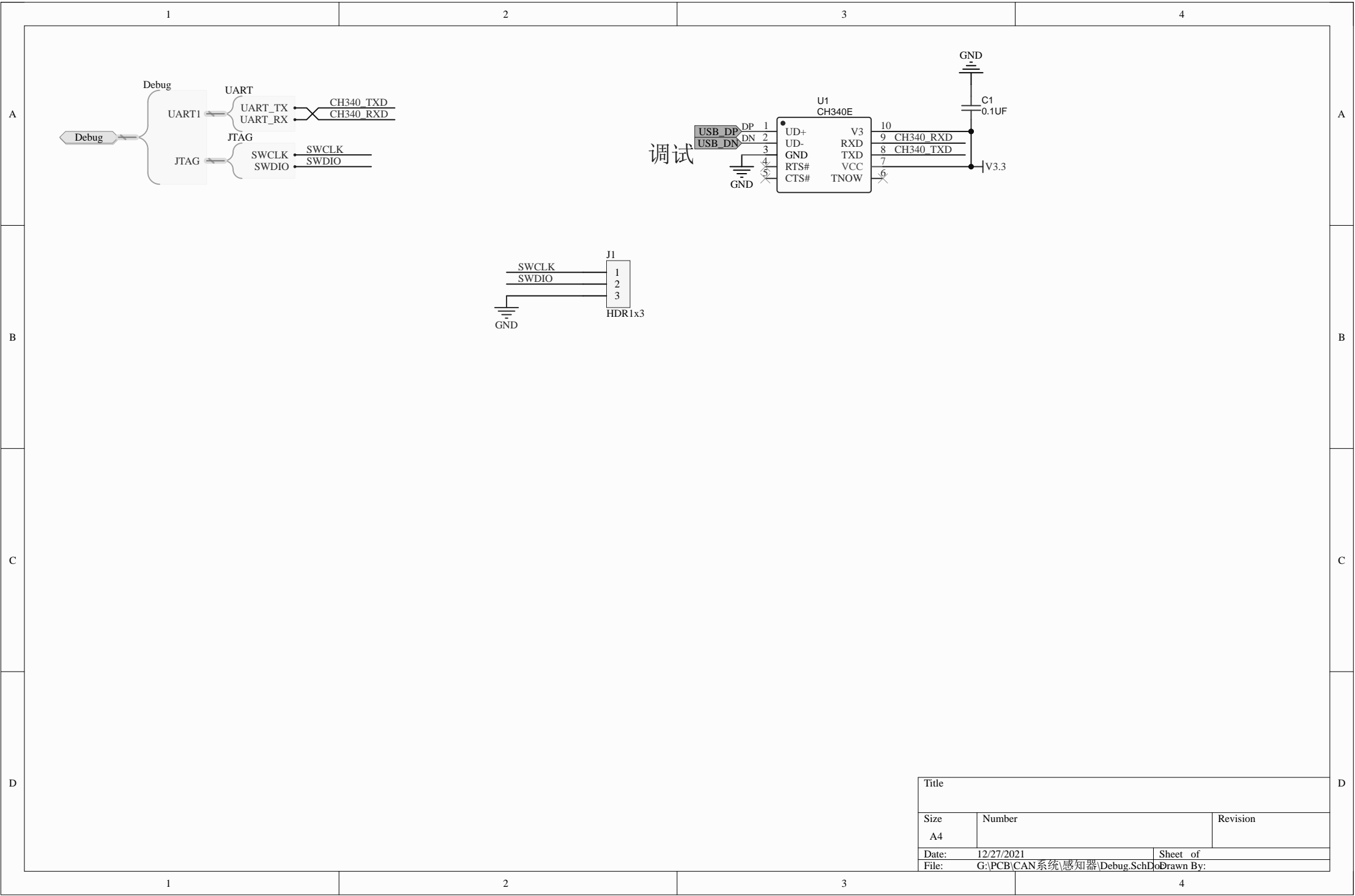
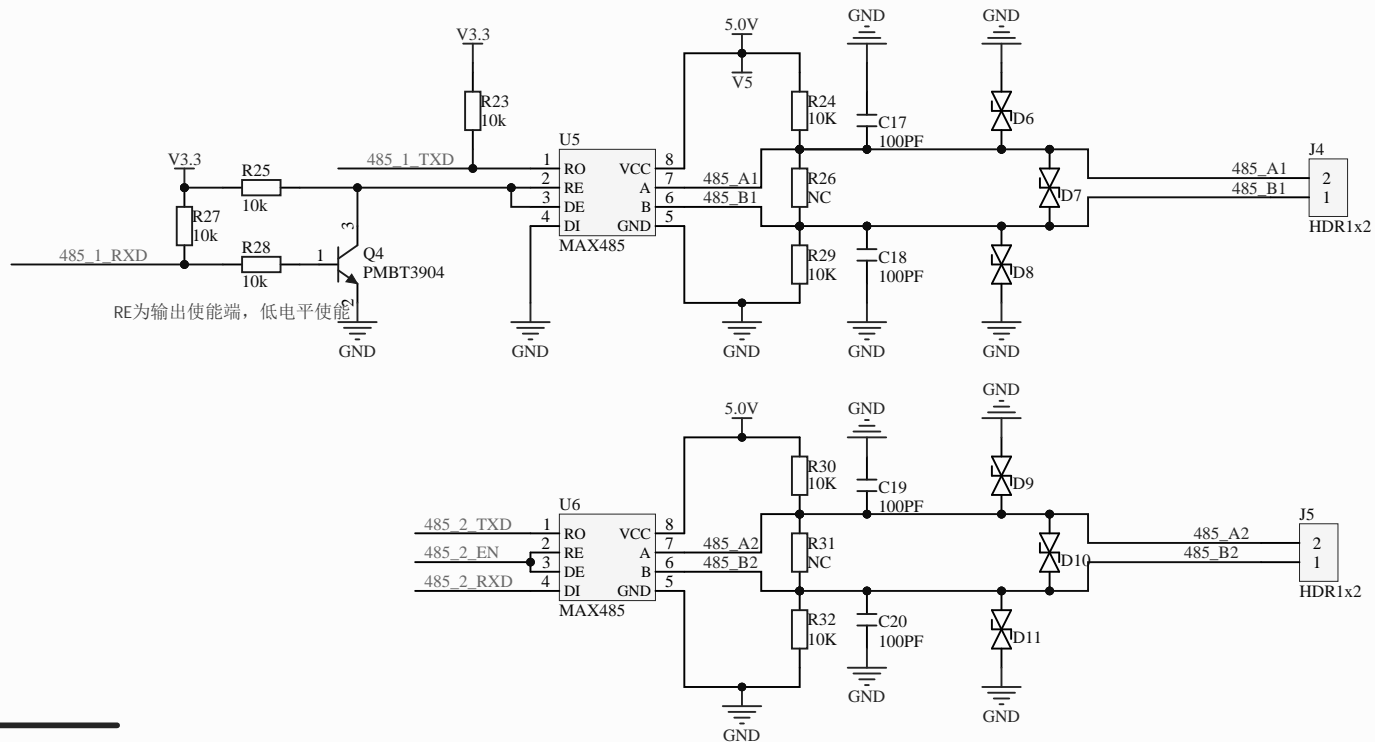
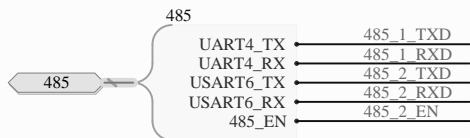


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修订说明:

2021/7/8 创建电路

2021/08/17 添加TVS防护

添加总线上的滤波电容，容值范围22pf~1uf

此收发器最多挂载32个485节点

此电路未使用光耦进行电气隔离

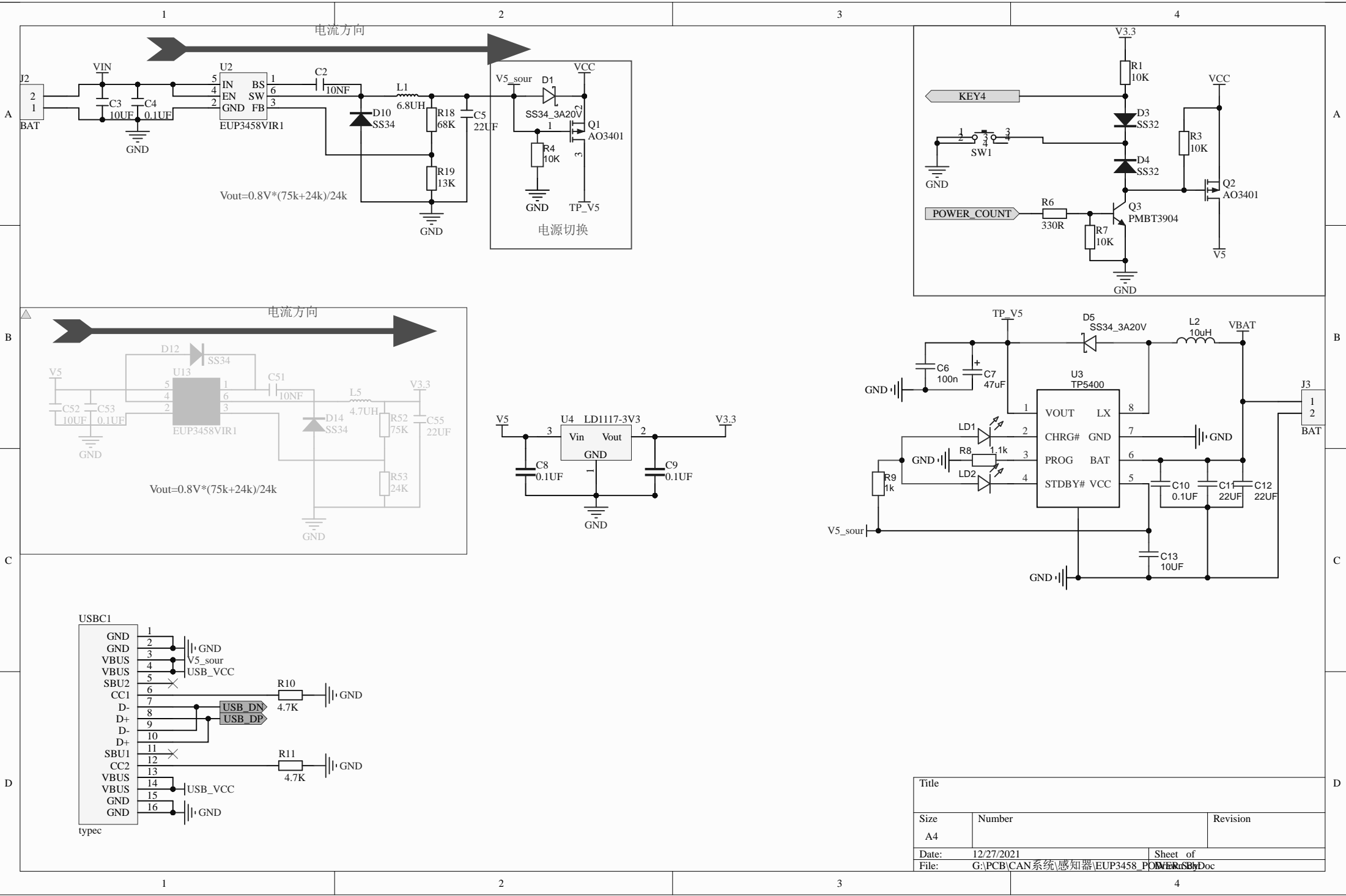
此电路未使用共模电感提高抗共模干扰的能力

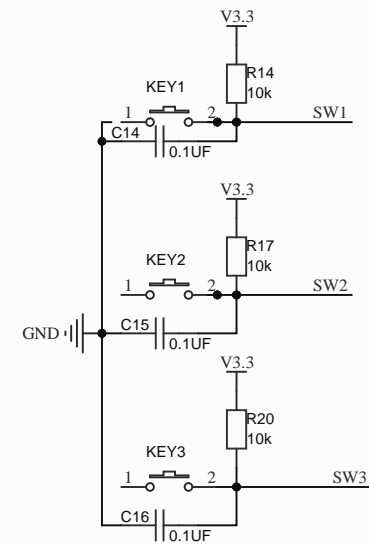
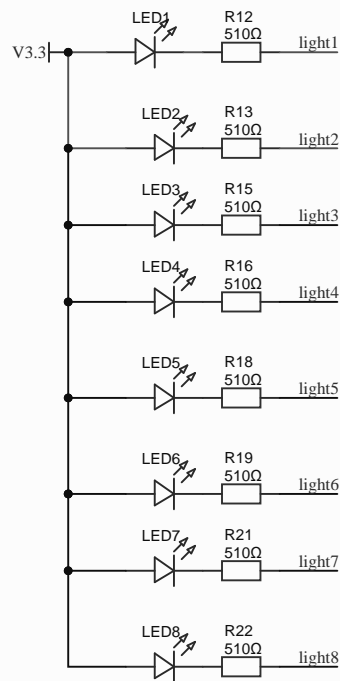
此电路未使用GDT进行防雷击防护

进行防雷击防护时须在总线上串接热敏电阻，典型取值为10Ω/2w

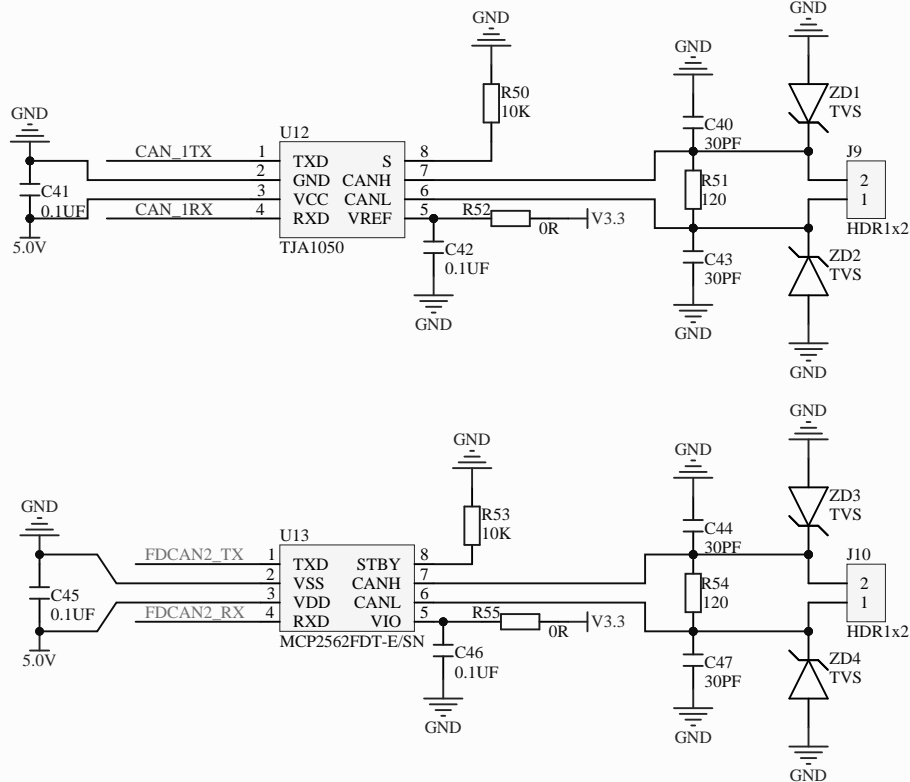
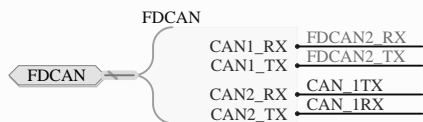
电阻R52
R57为终端匹配电阻，所以在此处不应该焊接，而应该做成开关或外挂。
R250 R58
做的上下拉电路则是保证总线在空闲状态下的稳定

Title		
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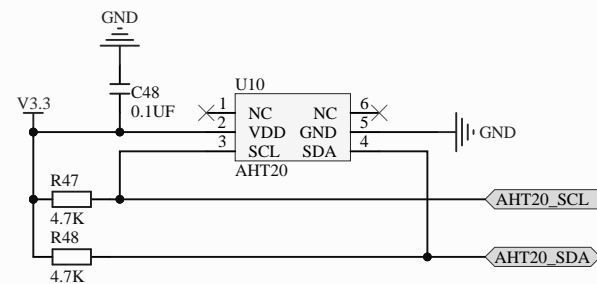
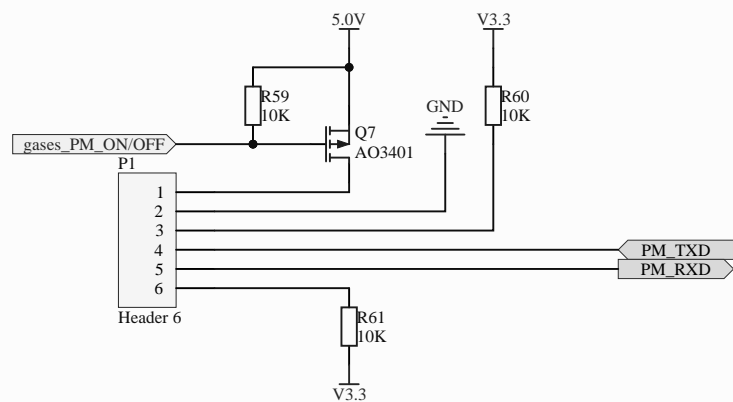
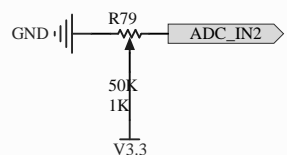
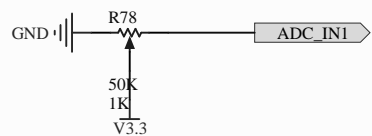


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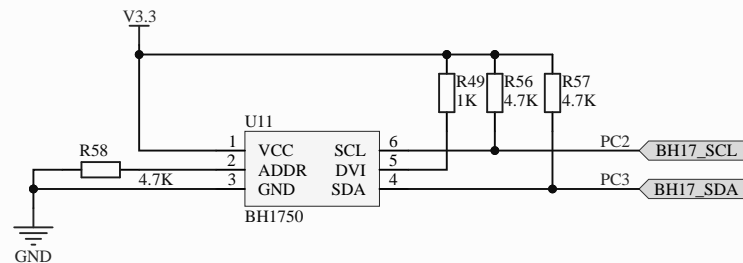


△ 电容是为了滤除高频干扰
TVS二极管是为了提升抗干扰能力所加
收发器的第8脚可以控制收发器的工作模式
，当第八脚为高电平时收发器处于静音模式
，仅能监听，当处于低电平时则可以进行
收发操作

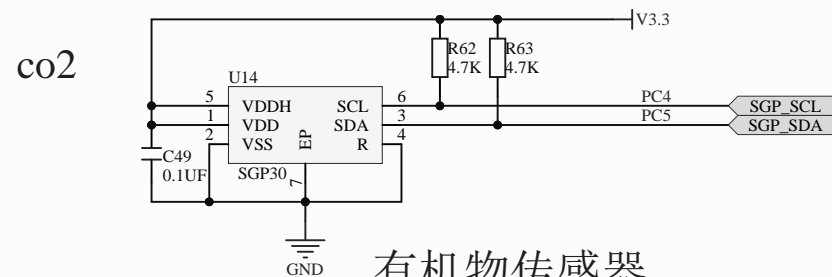
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Date:	12/27/2021	Sheet of
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温湿度传感器

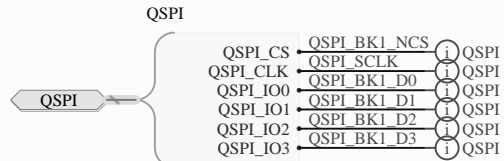


光照传感器

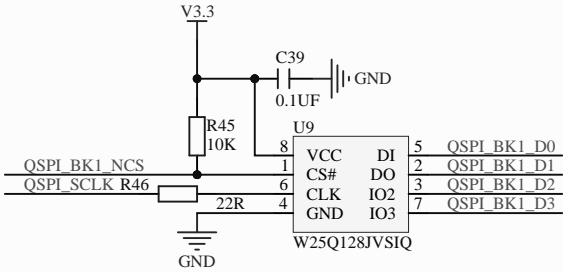


有机物传感器

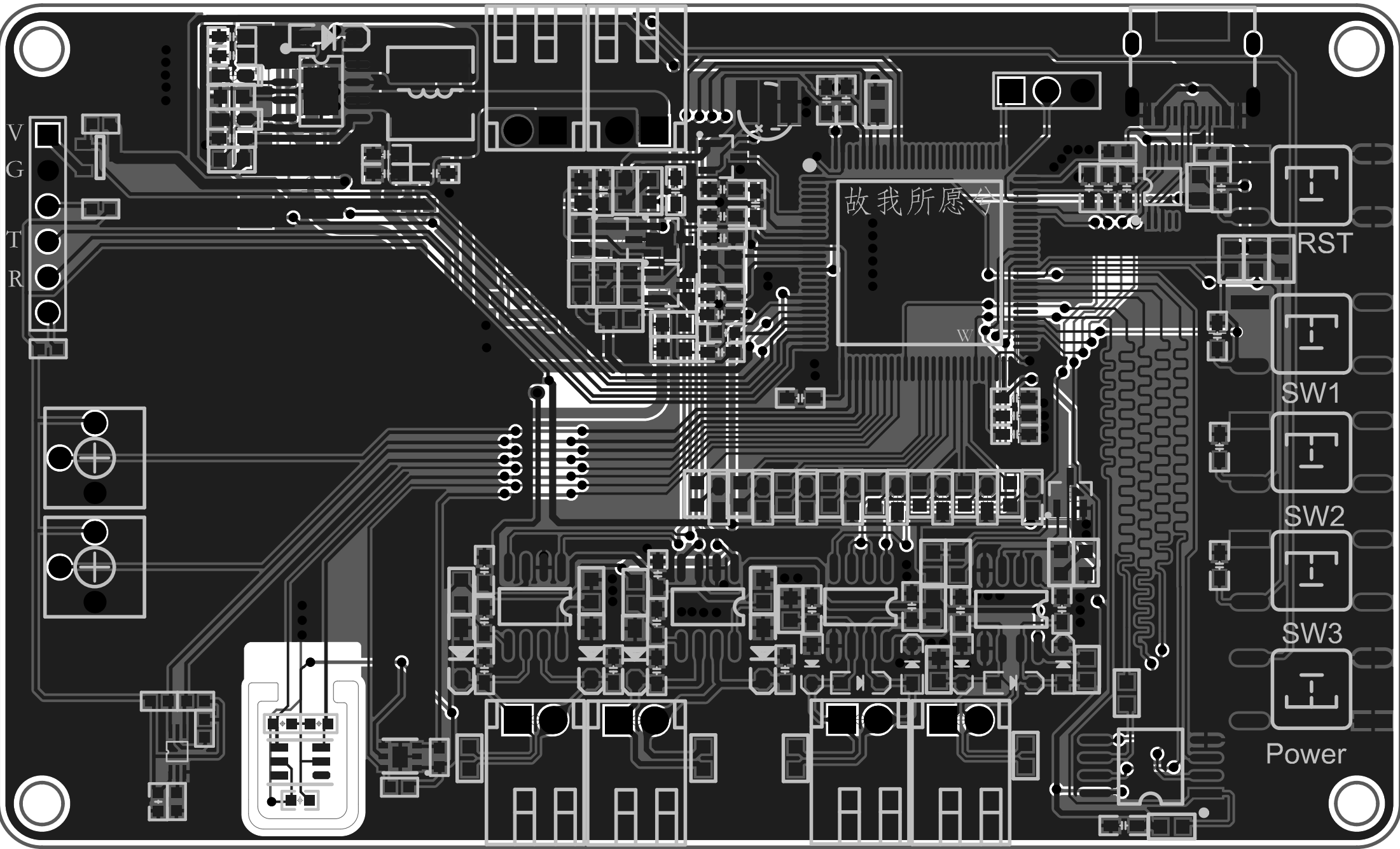
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走线时线路等长 误差不允许超出100mil



Title		
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Date:	12/27/2021	Sheet of
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V
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R

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W

RST

SW1

SW2

SW3

Power

Comment	Description	Designator	Footprint	LibRef	Quantity
0.1UF	[NoValue] 贴片电容, Capacitor, 法拉电容	C1, C4, C8, C9, C10, C14, C15, C16, C24, C25, C28, C29, C34, C35, C36, C37, C38, C39, C41, C42, C45, C46	C 0603_M	0.1uf, C, CAP, 100n, 22pf	22
10NF	贴片电容	C2	C 0603_M	C	1
10UF	贴片电容, [NoValue]	C3, C13	C 0603_M	C, 10u	2
22UF	贴片电容	C5	C 0805_M	C	1
100n		C6	C 0603_M	100n	1
47uF		C7	C 0603_M	47uF	1
22UF		C11, C12	C 0603_M	22u	2
100PF	贴片电容	C17, C18, C19, C20	C 0603_M	C	4
15PF	贴片电容	C21, C22	C 0603_M	C	2
8PF	贴片电容	C23, C26	C 0603_M	C	2
1F	法拉电容	C27	BAT-SMD_SM3R3333-T01	C	1
2.2UF	贴片电容	C30, C31, C32, C33	C 0603_M	C	4
30PF	贴片电容	C40, C43, C44, C47	C 0603_M	C	4
0.1UF	贴片电容	C48, C49	C 0603_L	C	2
SS34_3A20V		D1	SOD-123	SS34_3A20V	1
SS32	Diode	D3, D4	SMB	ES2x	2
SS34_3A20V		D5	SOD-123F	SS34_3A20V	1
1vs_bothway		D6, D7, D8, D9, D10, D11	SOD-323	1vs_bothway	6
SS34	Diode	D10	SMB	ES2x	1
BAT54C		D12	SOT23-3N	BAT54C	1
HDR1x3	Connector	J1	HDR2.54-L1-3P	HDR1x3	1
BAT	Connector	J2, J3	KF2EDGK-2.54-WI-2P	HDR1x2	2
HDR1x2	Connector	J4, J5, J9, J10	KF2EDGK-2.54-WI-2P	HDR1x2	4
K2-3.6x6.1_SMD		KEY1, KEY2, KEY3	TSW SMD-6*6*5	K2-3.6x6.1_SMD	3
6.8UH		L1	CD43	L	1
10uH		L2	CD54	10uH	1
10UH		L3	C 0603_L	L	1
LED-0603_G		LD1, LED1, LED2, LED3, LED4, LED5, LED6, LED7, LED8	LED 0603R	LED-0603_G	9
LED-0603_G		LD2	LED 0603G	LED-0603_G	1
Header 6	Header, 6-Pin	P1	HDR1X6	Header 6	1
AO3401	P-Channel MOSFET, [NoValue], MOSFET	Q1, Q2, Q5	SOT23-3N	MOSFET-P, AO3415A	3
PMBT3904	NPN Bipolar Transistor	Q3, Q4	SOT23-3N	MMBT2222A	2
8050	NPN Bipolar Transistor	Q6	SOT23-3N	BC54x	1
AO3401		Q7	SOT-23	MOSFET-P	1
10K	贴片电阻, [NoValue], Resistor	R1, R3, R4, R7, R14, R17, R20, R23, R24, R25, R27, R28, R29, R30, R32, R38, R40, R41, R43, R45, R50, R53	0603	R, 1.1k, 10k, RES, Res2	22
330R	贴片电阻	R6, R42	0603	R	2
1.1k		R8	0603	1.1k	1
1k	[NoValue] 磁珠	R9, R33	0603	1k, R	2
4.7K	贴片电阻, Resistor	R10, R11, R47, R48, R56, R57, R58, R62, R63	R 0603_L	R, RES	9
510Q		R12, R13, R15, R16, R18, R19, R21, R22	0603	510Q	8
68K	1%精密电阻	R18	0603	R	1
13K	1%精密电阻	R19	0603	R	1
NC	Resistor	R26, R31	0603	Res2	2
0R	磁珠, 贴片电阻	R34, R37, R44, R52, R55	0603	R	5
6K	磁珠	R35	0603	R	1
60K	磁珠	R36	0603	R	1
10R	贴片电阻	R39	0603	R	1
22R	贴片电阻	R46	0603	R	1
1K	贴片电阻	R49	R 0603_L	R	1
120	120欧姆高精度电阻	R51, R54	0603	RES	2
10K	Resistor	R59, R60, R61	R 0603_L	RES	3
50K	电位器	R78, R79	3362P	RPot	2
SW	4脚按键	SW1	TSW SMD-6*6*4.3	KEY-4P	1
KEY-4P	RST	SW2	TSW SMD-6*6*4.3	KEY-4P	1
CH340E		U1	MSOP10_L	CH340E	1
EUP3458VIR1		U2	SOT23-6L	EUP3458VIR1	1
TP5400		U3	ESOP8_N	TP5400	1
LD1117-3V3	三端稳压芯片	U4	SOT-223	LD1117	1
MAX485		U5, U6	SOP-8	MAX485	2
RS431	基准电压源	U7	SOT23-3N	RS431	1
STM32H750VBT6		U8	LOFP100-14*14	STM32H750VBT6	1
W25Q128JVSIO		U9	SOP8W_N	W25Q128JVSIO	1
AHT20	温湿度传感器	U10	AHT20	AHT20	1
8H1750	光照传感器	U11	8H1750FVI	8H1750FVI	1
TJA1050		U12	SOP-8	TJA1050	1
MCP2562FDT-E/SN	FD CAN收发器	U13	SOP-8	MCP2562FDT-E/SN	1
SGP30		U14	sgp30	SGP30	1
typec	仅usb2.0	USBC1	MY-USB-TYPEC_16PIN	typec座子	1
32MHZ		X1	OSC 2025-4P	XTAL	1
32.768KHZ		X2	C 0603_M	8MHz	1
TVS		ZD1, ZD2, ZD3, ZD4	SOD-123F	TVS	4