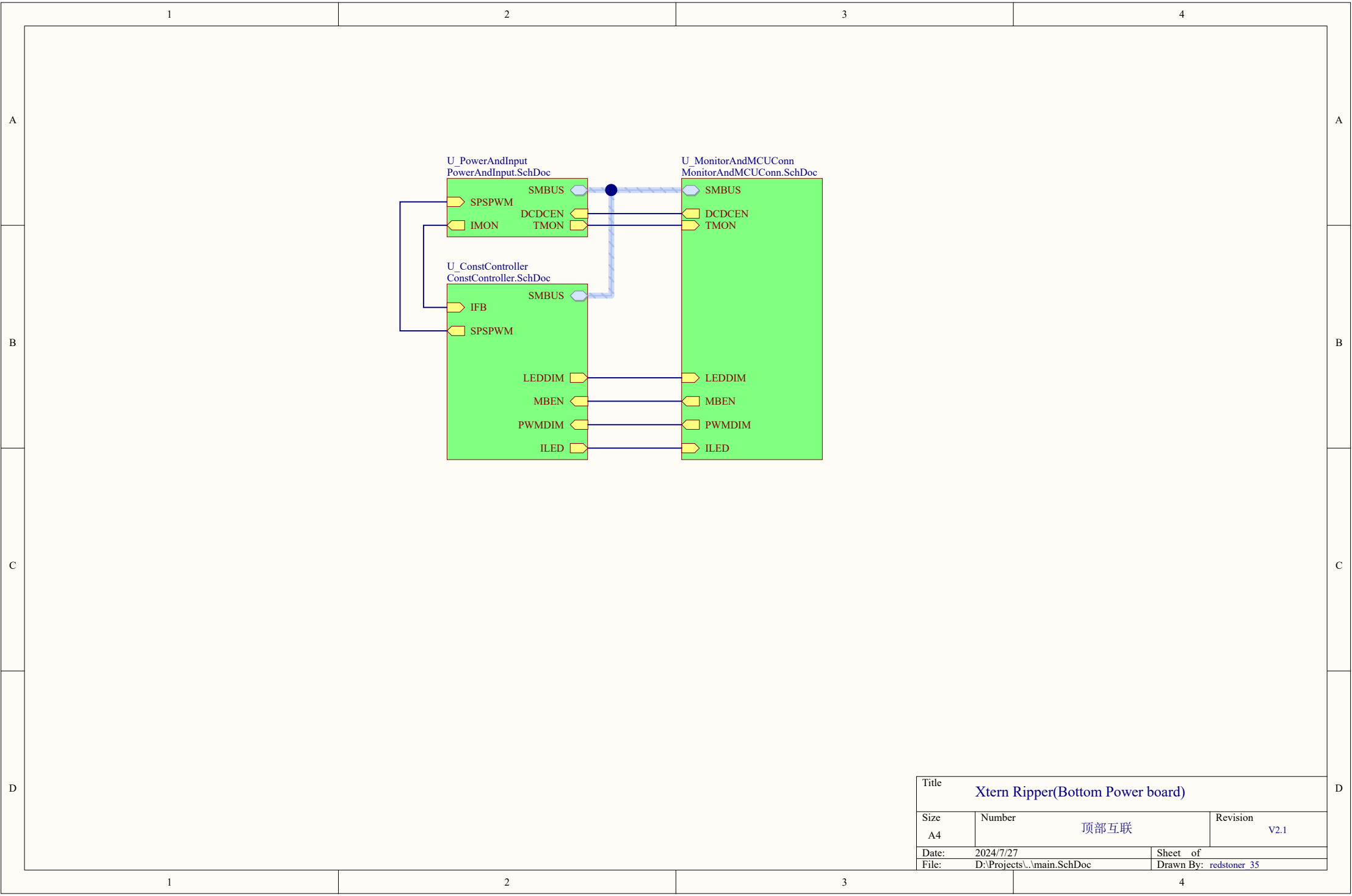
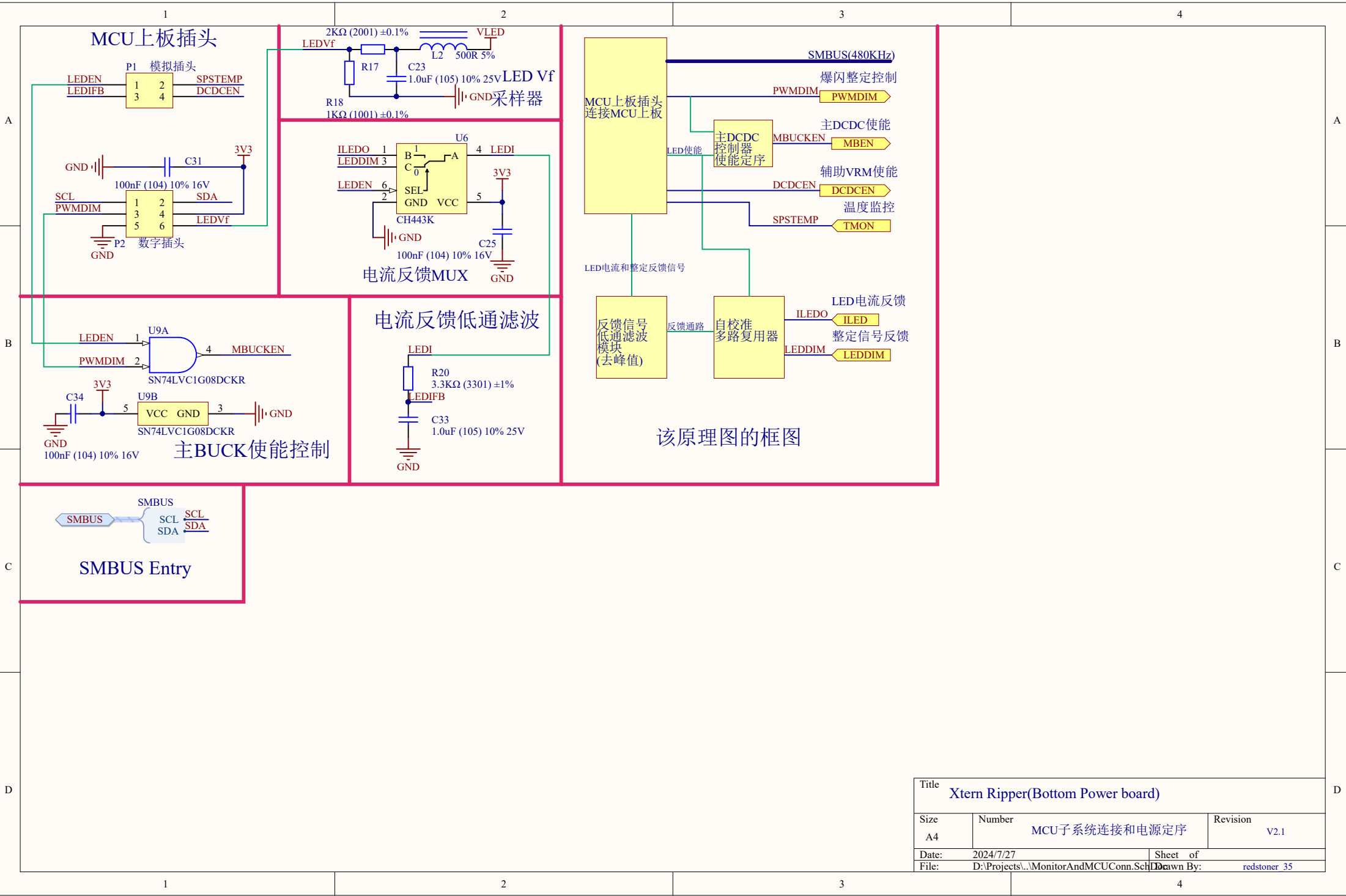


补偿电阻R2数值
 $R_s @ 1mR \ 1MHz \ Fsw$
 31.6K for 6V LED
 XHP70.3 11A 每灯珠约6.8V(每颗晶体3.4V)
 30.1K for High Vf 6V LED
 CREE-XFL10K 32A 每灯珠约7.2V
 60.4K for 3V LED
 SBT90.2 33A 约3.62V
 78.7K for RED or IR LED
 SBT90-R 30A 约2.45V

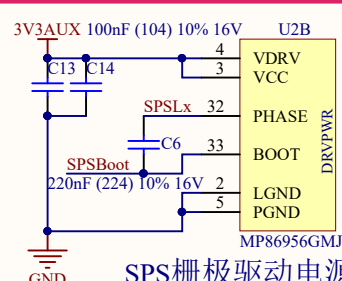
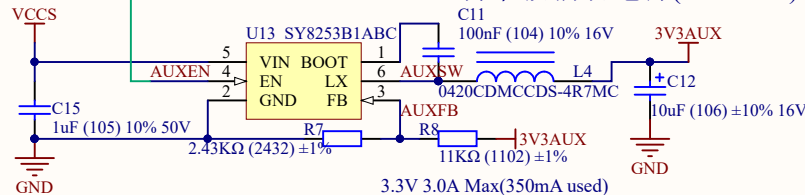
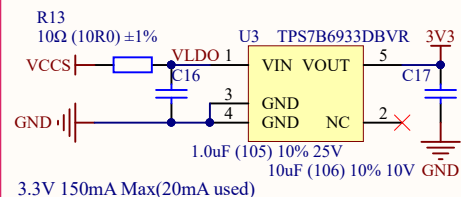
注意：R2必须用25ppm 0.1%的
 精密低温飘电阻！

Title Xtern Ripper(Bottom Power board)		
Size A4	Number 主恒流控制器和电流监控系统	Revision V2.1
Date: 2024/7/27	Sheet of	
File: D:\Projects\...\ConstController.SchDoc	Drawn By: redstoner_35	





Title Xtern Ripper(Bottom Power board)			
Size A4	Number MCU子系统连接和电源定序	Revision V2.1	
Date:	2024/7/27	Sheet of	
File:	D:\Projects\...\MonitorAndMCUConn.Sch	Drawn By:	redstoner 35



Title Xtern Ripper(Bottom Power board)		
Size A4	Number 输入监控和降压DCDC功率级	Revision V2.1
Date: 2024/7/27	File: D:\Projects\...\PowerAndInput.SchDoc	Sheet of Drawn By: redstoner 35

Comment	Description	Designator	Footprint	LibRef	Quantity
1.0uF (105) 10% 25V	贴片电容	C1, C16, C23, C33	0402_C	0402 1.0uF (105) 10% 25V	4
CC1210KKX5R8B476	1210 MLCC X5R 16V 10%	C2, C3	1210C	Cap	2
TCJU157M035	35V 150uF Conductive Polymer Solid Capacitor 100mR ESR. 7362 Size	C4, C5	CAPMP7362X41N	TCJU157M035R0100 E	2
220nF (224) 10% 16V	贴片电容	C6, C32	0402_C	0402 220nF (224) 10% 16V	2
330nF (334) 10% 25V	贴片电容	C7	0603_C	0603 330nF (334) 10% 25V	1
10uF (106) 20% 10V	贴片电容	C8	0402_C	0402 4.7uF (475) 20% 10V	1
4.7uF (475) 20% 10V	贴片电容	C9	0402_C	0402 4.7uF (475) 20% 10V	1
2.2nF (222) 5% 50V CDG	贴片电容	C10	0402_C	0402 2.2nF (222) 10% 50V	1
100nF (104) 10% 16V	贴片电容	C11, C13, C14, C21, C24, C25, C26, C27, C29, C30, C31, C34	0402_C	0402 100nF (104) 10% 16V	12
10uF (106) ±10% 16V	铝电容	C12	CASE-A_3216	3216 10uF (106) 10% 16V	1
1uF (105) 10% 50V	贴片电容	C15	0603_C	0603 1uF (105) 10% 50V	1
10uF (106) 10% 10V	贴片电容	C17	0603_C	0603 10uF (106) 10% 10V	1
1nF (102) 10% 50V	贴片电容	C18	0402_C	0402 1nF (102) 10% 50V	1
0805 X5R	Capacitor	C19, C20	0805C	Cap	2
10nF (103) 10% 50V	贴片电容	C22	0402_C	0402 10nF (103) 10% 50V	1
CL32A107MPWNNNE	1210 MLCC X5R 16V 10%	C28	1210C	Cap	1
1N5819WS	二极管	D1	SOD-323	SOD-323 1N4148WS T4	1
1N4148WS T4	二极管	D2	SOD-323	SOD-323 1N4148WS T4	1
XAL1010-221MEB	Coilcraft Inductor XAL1010 Series	L1	XAL1010-XXXME	Inductor Iron	1
500R 5%	贴片电阻	L2	0402_L	0402 27nH 5%	1
0420CDMCCDS-4R7MC	Magnetic-Core Inductor	L4	0420CDMCCDS-***MC	Inductor Iron	1
模拟插头	Header, 2-Pin, Dual row	P1	MHDR2X2	MHDR2X2	1
数字插头	Header, 3-Pin, Dual row	P2	MHDR2X3	MHDR2X3	1
BSS138PS	Dual N-Channel MOSFET 50V320mA SOT-363	Q1	SC70-6	2N7002DW	1
40.2KΩ (4022) ±1%	贴片电阻	R1	0402_R	0402 49.9KΩ (4992) 1%	1
31.6KΩ (3163) ±0.1%	贴片电阻	R2	0402_R	0402 49.9KΩ (4992) 1%	1
10KΩ (1002) ±1%	贴片电阻	R3, R19	0402_R	0402 10KΩ (1002) 1%	2
RLP25FEGR001	2512 1mΩ合金检流电阻 3W	R4	2512-Virtual4Wire	shunt	1
18KΩ (1802) ±1%	贴片电阻	R5	0402_R	0402 18KΩ (1802) 1%	1
3.3KΩ (3301) ±1%	贴片电阻	R6, R15, R20	0402_R	0402 3.3KΩ (3301) 1%	3
2.43KΩ (2432) ±1%	贴片电阻	R7	0402_R	0402 0Ω (0R0) 1%	1
11KΩ (1102) ±1%	贴片电阻	R8	0402_R	0402 0Ω (0R0) 1%	1
200Ω (2000) ±0.5%	贴片电阻	R9	0402_R	0402 200Ω (2000) 1%	1
510Ω (5100) ±1%	贴片电阻	R10, R11	0402_R	0402 510Ω (5100) 1%	2
560Ω (5600) ±1%	贴片电阻	R12	0402_R	0402 22KΩ (2202) 1%	1
10Ω (10R0) ±1%	贴片电阻	R13	0402_R	0402 10Ω (10R0) 1%	1
470Ω (4700) ±1%	贴片电阻	R14	0402_R	0402 470Ω (4700) 1%	1
200Ω (2000) ±1%	贴片电阻	R16	0402_R	0402 200Ω (2000) 1%	1
2KΩ (2001) ±0.1%	贴片电阻	R17	0402_R	0402 2KΩ (2001) 1%	1
1KΩ (1001) ±0.1%	贴片电阻	R18	0402_R	0402 1KΩ (1001) 1%	1
0Ω (0R0) ±1%	贴片电阻	R21	0402_R	0402 0Ω (0R0) 1%	1
LT3741EUF	Constant Voltage/Current Sync Buck controller(external switch)	U1	UF-05-08-1710A	LT3741EUF	1
MP8695GMJ	MPS 70A INTELLI-PHASE SPS in 5x6mm QFN41 150mA 40V max input Ultra low Iq LDO, fixed 3.3V output	U2	TDA21490	MP86957	1
TPS7B6933DBVR	16bit I2C Nano DAC with 2.5V internal Ref in 2x2mm SON	U3	SOT95P245X110-5N	TPS7B6933DBVR	1
AD5693RACPZ-RL7	26V Dual Direction 12bit I2C Power Gauge SOT23-8	U4	LFCSF-8-10	AD5693RACPZ-RL7	1
INA219AIDCNR	Low-Voltage Analog Switch SPDT, 1.8-5V Power	U5, U8	SOT23-8	INA219AIDCNR	1
CH443K	50Khz 50V/V 26V Max High Side Current Op Amp.	U6, U7	SC70-6	NC75B3157P6X	2
INA199A1DCKR	Single 2-Input Positive-AND Gate, DCK0005A, LARGE T&R	U9	SC70-6	INA199A2DCKR	1
SN74LVC1G08B0DCKR	3A 23V Input 500KHz	U13	DCK0005A_N	SN74LVC1G08B0DCKR	1
SY8253B1ABC			SOT95P245X110-6N	SY8120	1