版本号	变更内容
V01	创建文件
V02	

01.Version

Size: A4	Number: 1/14	Revision: V01
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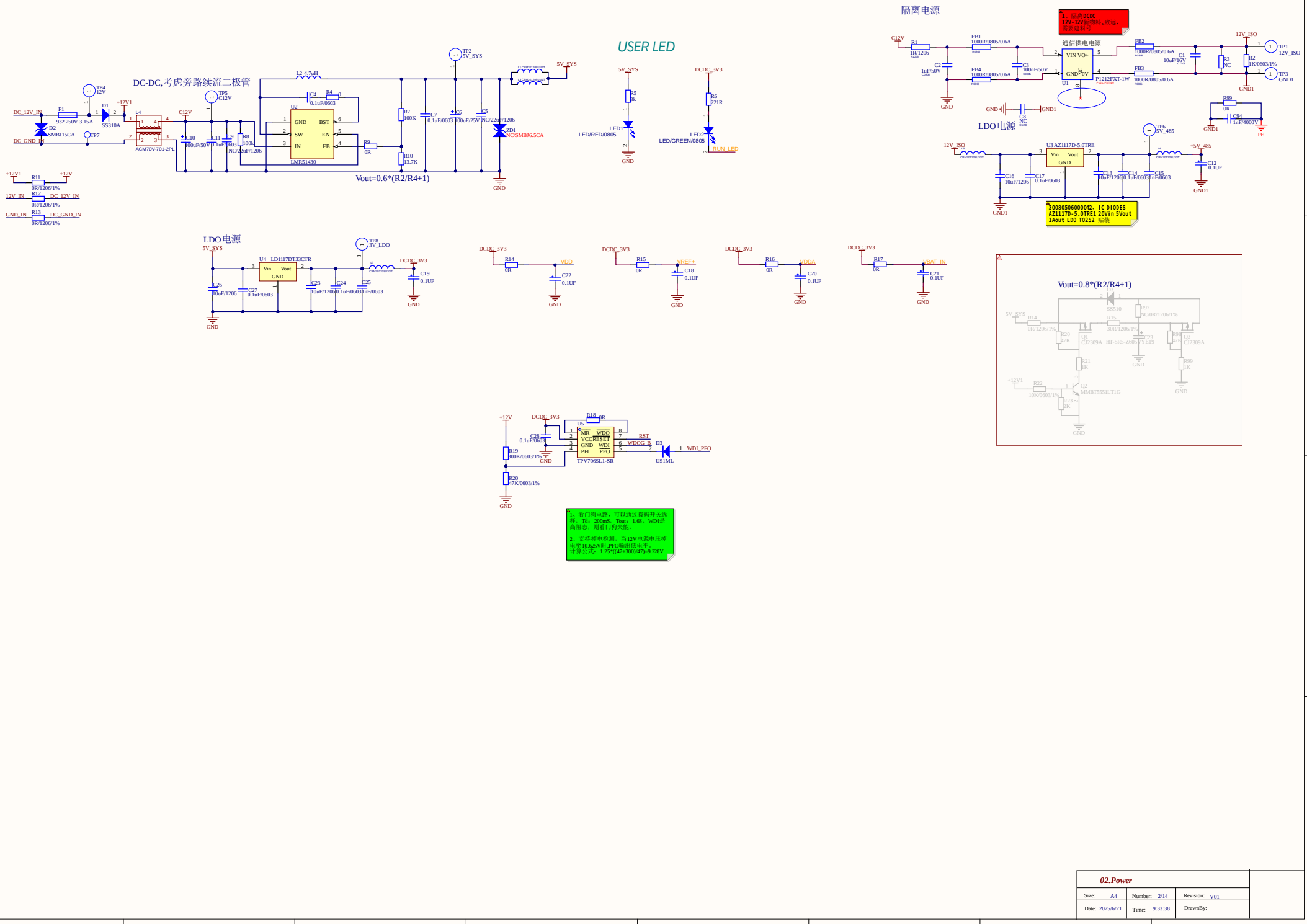
DC-DC,考虑旁路续流二极管
USER LED
隔离电源
通信供电电源
LDO电源
LDO电源
Vout=0.6*(R2/R4+1)
Vout=0.8*(R2/R4+1)
1、隔离DCDC
12V-12V新物料，欧远，
需要建料号
12V_ISO
5V_SYS
DCDC_3V3
GND
LMR51430
TPV706SL1-SR
U3 AZ1117D-5.0TRE
U4 LD1117DT33CTR
300805060000042, IC DIODES AZ1117D-5.0TRE1 20Vin 5Vout 1Aout LDO TO252 贴装
1、看门狗电路，可以通过拨码开关选择，Td：200mS，Tout：1.6S，WDI是高阻态，则看门狗失能。
2、支持掉电检测，当12V电源电压掉电至10.625V时,PFO输出低电平。
计算公式：1.25*((47+300)/47)=9.28V
02.Power
Size: A4
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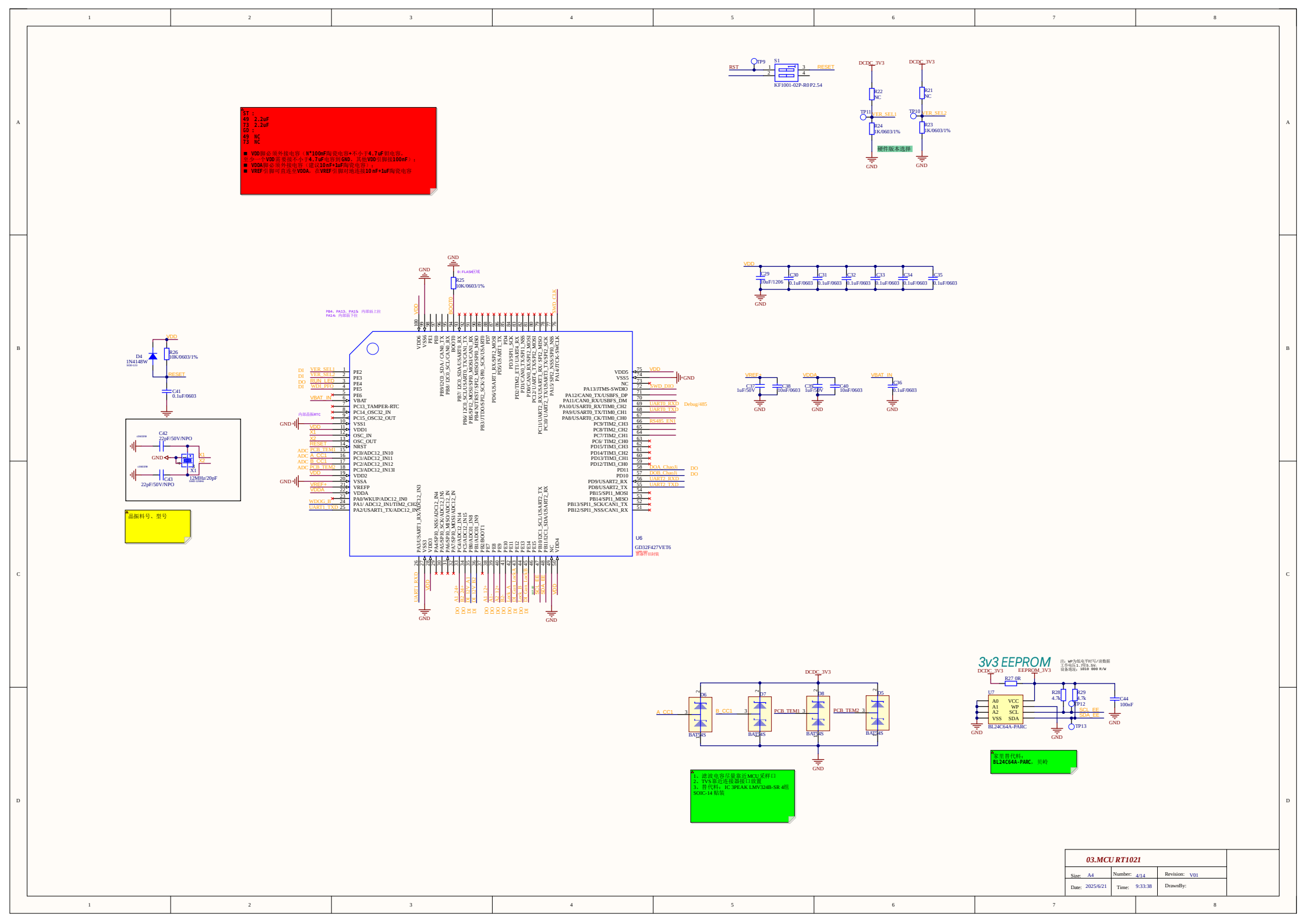
DrawnBy:


ST：
49 2.2uF
73 2.2uF
60 .
49 NC
73 NC
■ VDD脚必须外接电容（N*100nF陶瓷电容+不小于4.7uF钽电容；
至少一个VDD需要接不小于4.7uF电容到GND，其他VDD引脚接100nF）；
■ VDDA脚必须外接电容（建议10nF+1uF陶瓷电容）；
■ VREF引脚可直连至VDDA，在VREF引脚对地连接10nF+1uF陶瓷电容
TP9
S1
RST
RESET
KF1001-02P-R0P2.54
DCDC_3V3
R22
NC
R21
NC
TP11
VER_SEL1
TP10
VER_SEL2
R24
10K/0603/1%
R23
10K/0603/1%
硬件版本选择
GND
D4
1N4148W
R26
10K/0603/1%
C41
0.1uF/0603
C42
22pF/50V/NPO
C43
22pF/50V/NPO
X1
12MHz/20pF
晶振料号、型号
R25
10K/0603/1%
0:FLASH区域
BOOT0
SWD_CLK
SWD_DIO
VDD
VDD5
VSS5
NC
PA13/JTMS-SWDIO
PA12/CAN0_TX/USBFS_DP
PA11/CAN0_RX/USBFS_DM
PA10/USART0_RX/TIM0_CH2
PA9/USART0_TX/TIM0_CH1
PA8/USART0_CK/TIM0_CH0
PC9/TIM2_CH3
PC8/TIM2_CH2
PC7/TIM2_CH1
PC6/ TIM2_CH0
PD15/TIM3_CH3
PD14/TIM3_CH2
PD13/TIM3_CH1
PD12/TIM3_CH0
PD11
PD10
PD9/USART2_RX
PD8/USART2_TX
PB15/SPI1_MOSI
PB14/SPI1_MISO
PB13/SPI1_SCK/CAN1_TX
PB12/SPI1_NSS/CAN1_RX
Debug/485
UART0_RXD
UART0_TXD
RS485_EN1
DOA_Chan1
DOB_Chan1
UART2_RXD
UART2_TXD
DO
U6
GD32F427VET6
紧靠芯片封装
C29
10uF/1206
C30
0.1uF/0603
C31
0.1uF/0603
C32
0.1uF/0603
C33
0.1uF/0603
C34
0.1uF/0603
C35
0.1uF/0603
VREF+
VDDA
VBAT_IN
C37
1uF/50V
C38
10nF/0603
C39
1uF/50V
C40
10nF/0603
C36
0.1uF/0603
D6
D7
D8
D5
BAT54S
A_CC1
B_CC1
PCB_TEM1
PCB_TEM2
3v3 EEPROM
DCDC_3V3
EEPROM_3V3
R27 0R
U7
BL24C64A-PARC
R28
4.7k
R29
4.7k
C44
100nF
TP12
TP13
SCL_EE
SDA_EE
常用替代料：
BL24C64A-PARC. 贝岭
1、滤波电容尽量靠近MCU采样口
2、TVS器近连接器接口放置
3、替代料：IC 3PEAK LMV324B-SR 4组
SOIC-14 贴装
03.MCU RT1021
Size: A4
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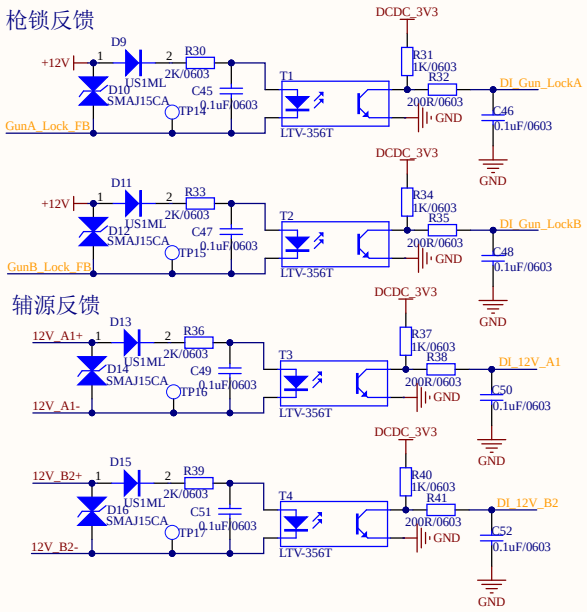
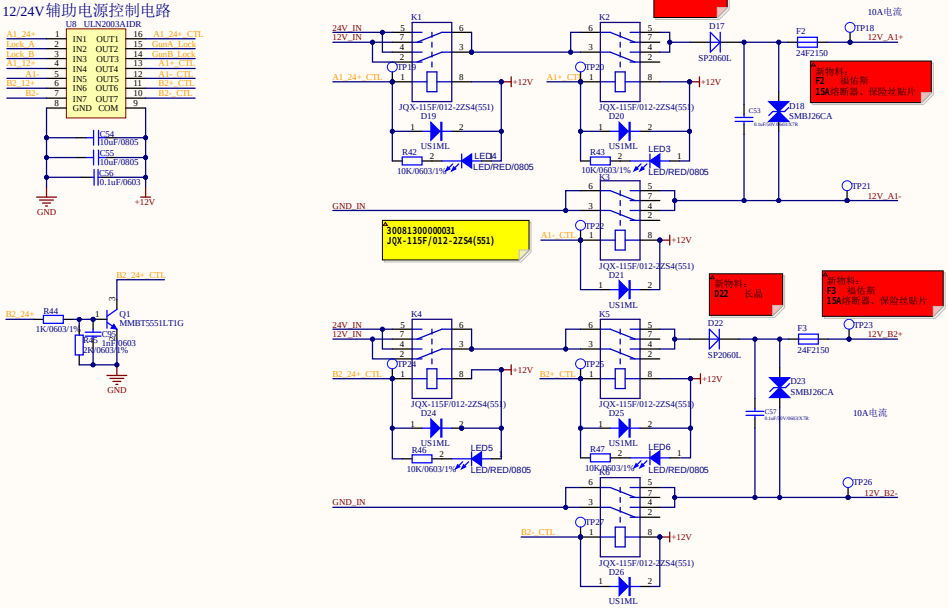
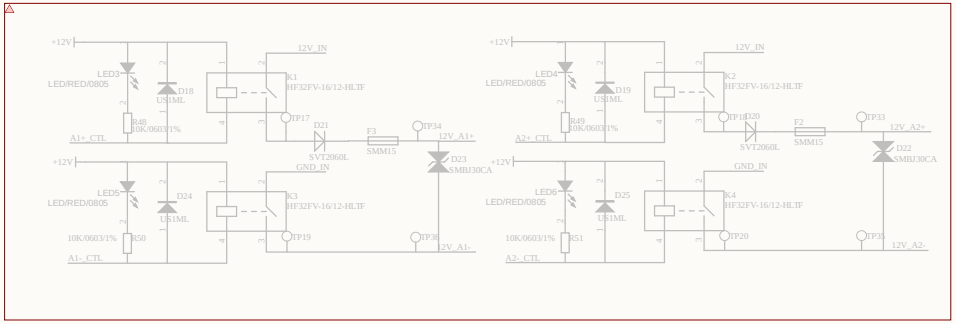


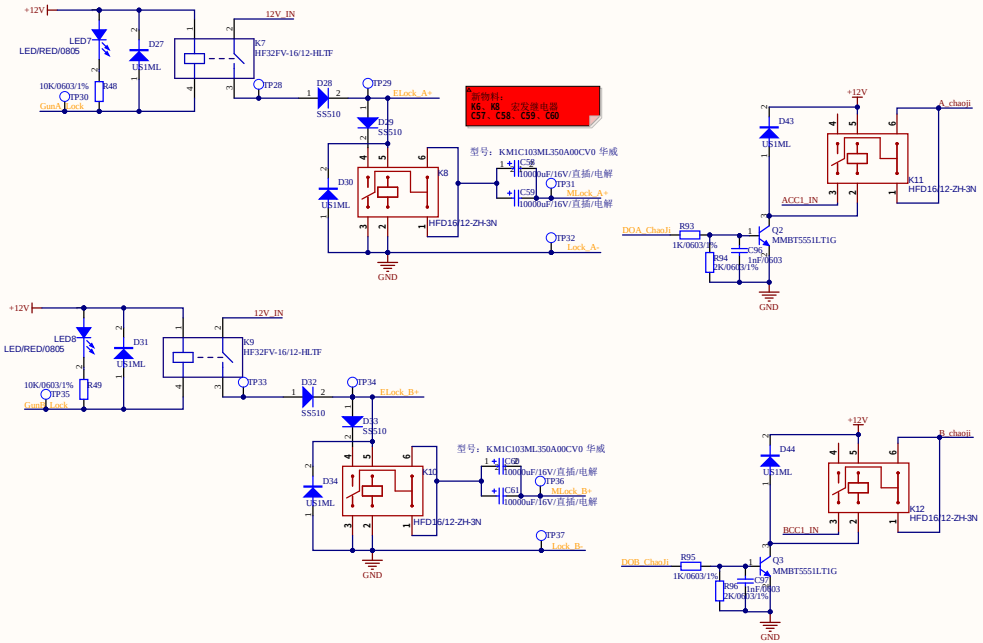
03.DI			
Size: A4	Number: 2/14	Revision: V01	
Date: 2025/6/21	Time: 9:33:38	DrawnBy:	

12/24V辅助电源控制电路





电机、电磁锁兼容设计电路



04.DO			
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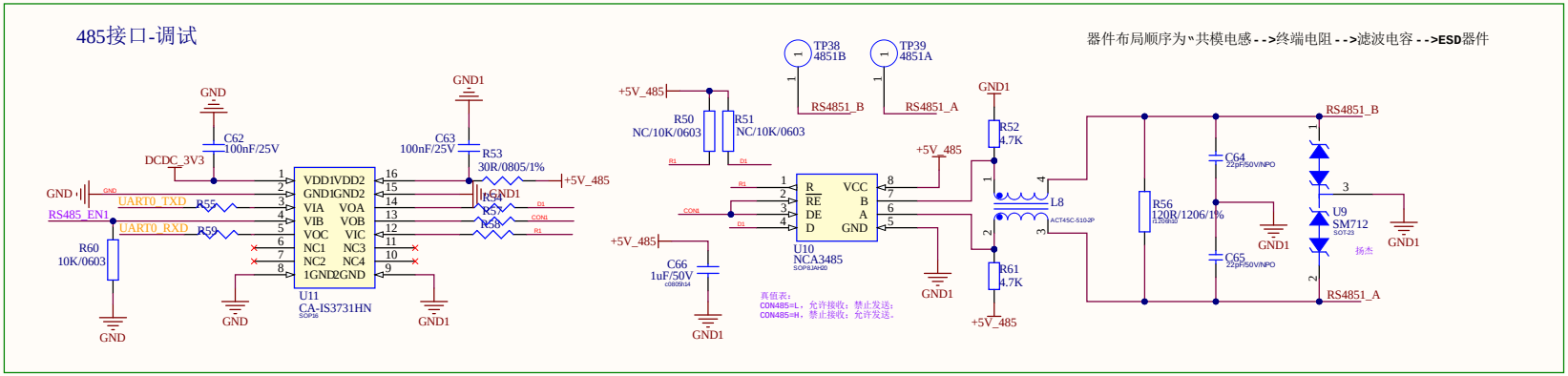
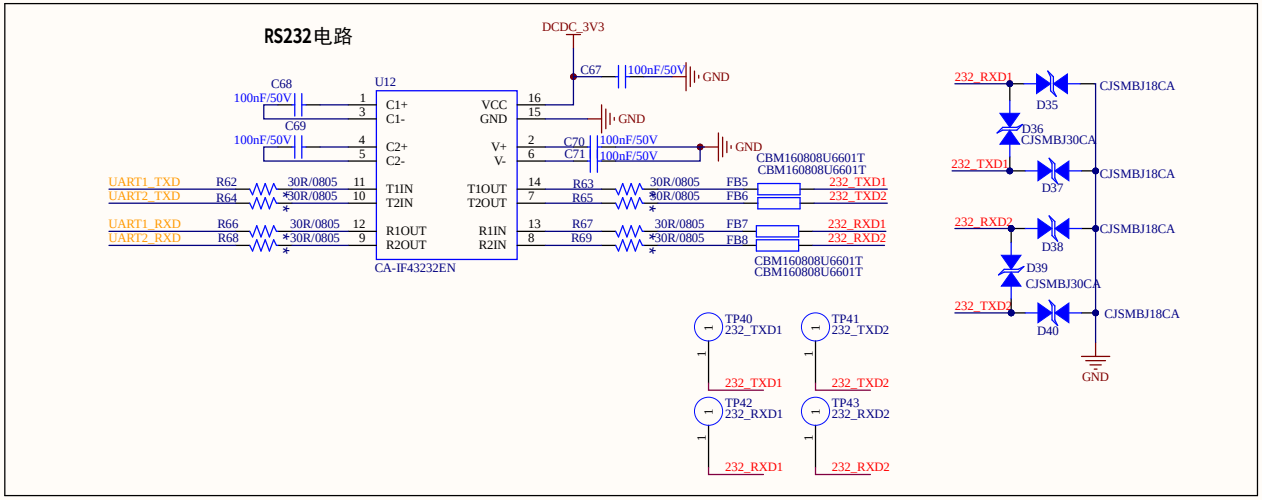
485接口-调试



RS232电路



06 RS232			
Size: A4	Number: 11/14	Revision: V01	
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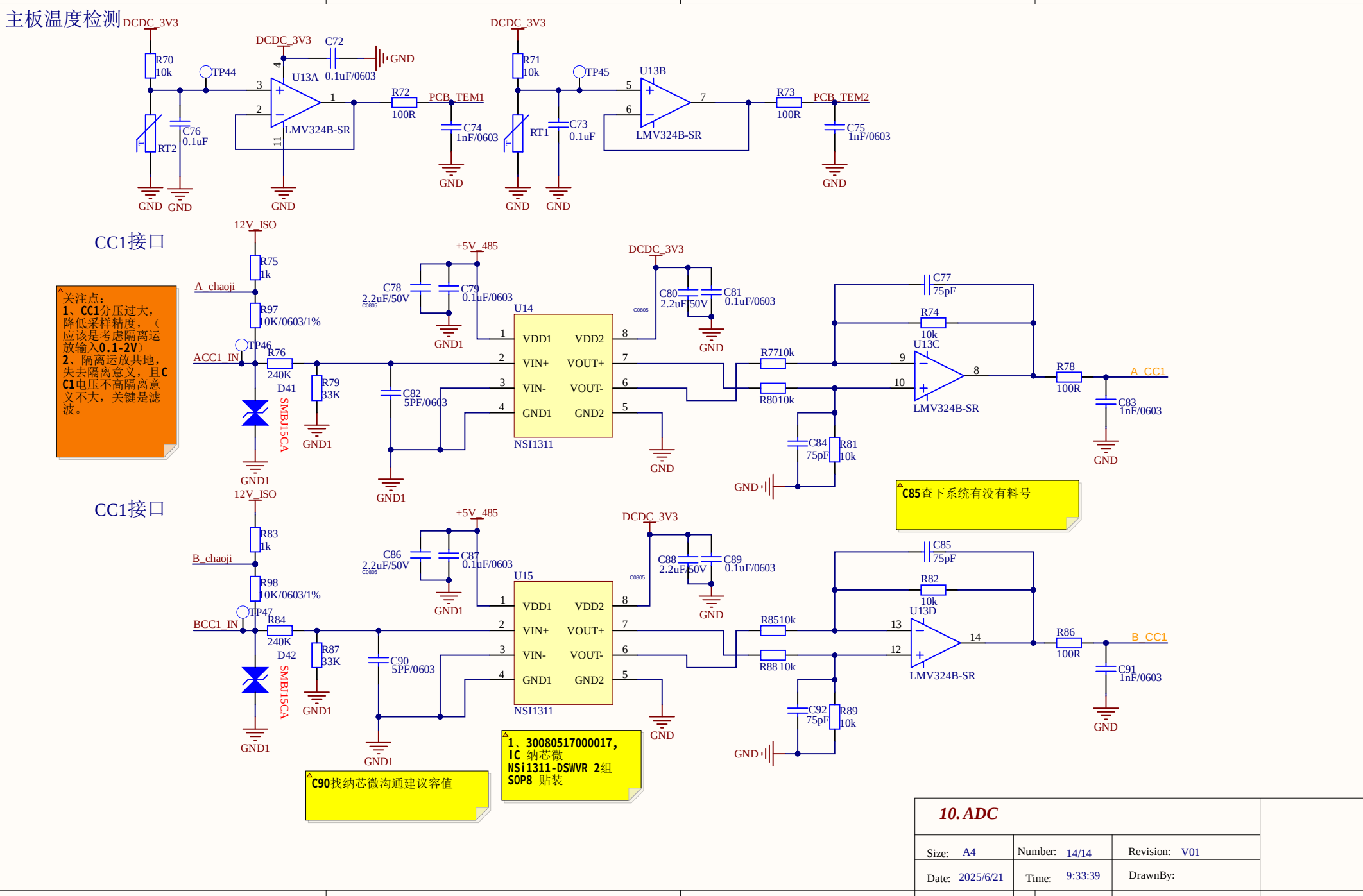
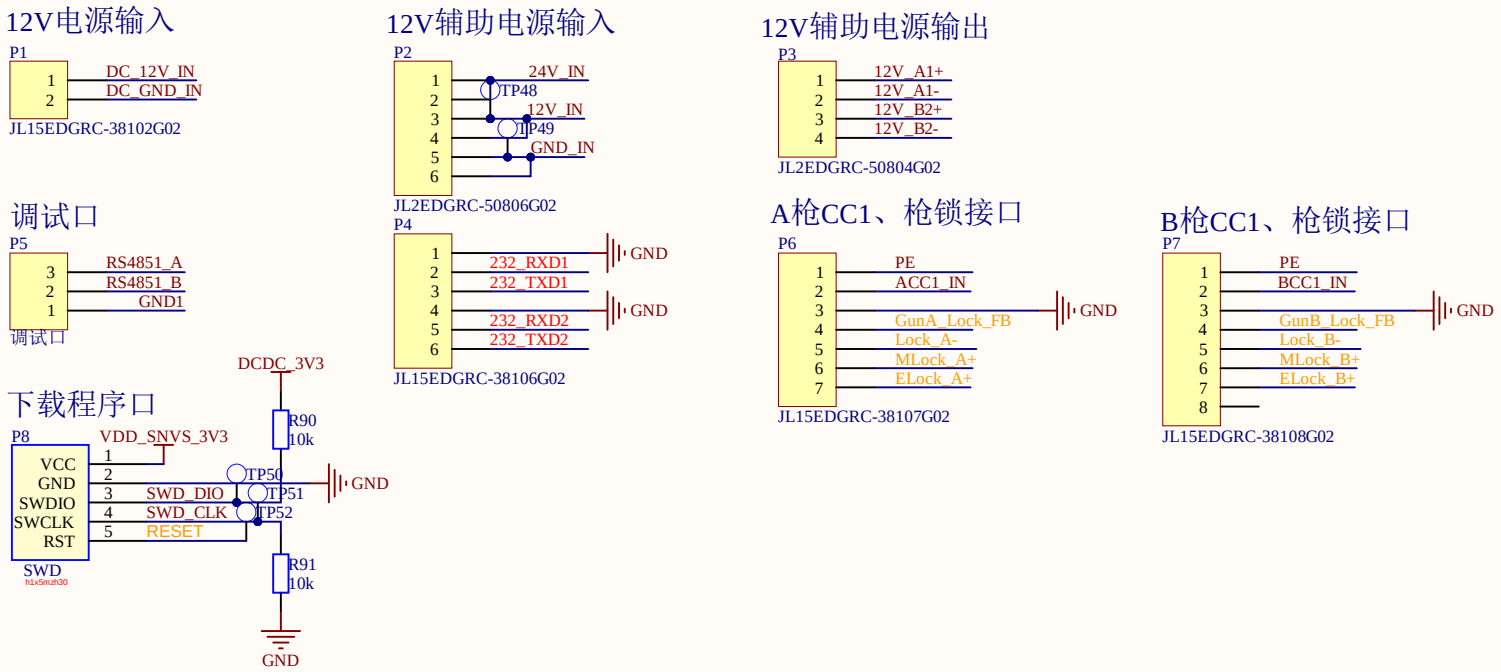

主板温度检测
DCDC_3V3
R70
10k
TP44
U13A
LMV324B-SR
C72
0.1uF/0603
GND
R72
100R
PCB_TEM1
C74
1nF/0603
C76
0.1uF
RT2
U13B
R71
TP45
C73
RT1
R73
PCB_TEM2
C75
CC1接口
12V_ISO
R75
1k
A_chaoji
R97
10K/0603/1%
TP46
ACC1_IN
R76
240K
D41
SMBJ15CA
R79
33K
GND1
+5V_485
C78
2.2uF/50V
C79
0.1uF/0603
U14
VDD1
VIN+
VIN-
GND1
VDD2
VOUT+
VOUT-
GND2
NSI1311
C80
C81
C82
5PF/0603
R7710k
R8010k
C77
75pF
R74
U13C
C84
R81
C83
1nF/0603
R78
A_CC1
关注点：
1、CC1分压过大，降低采样精度，（应该是考虑隔离运放输入0.1-2V）
2、隔离运放共地，失去隔离意义，且CC1电压不高隔离意义不大，关键是滤波。
CC1接口
B_chaoji
R83
R98
10K/0603/1%
TP47
BCC1_IN
R84
240K
D42
R87
33K
C86
C87
U15
C88
C89
C90
5PF/0603
R8510k
R8810k
C85
75pF
R82
U13D
C92
R89
C91
1nF/0603
R86
B_CC1
C85查下系统有没有料号
C90找纳芯微沟通建议容值
1、30080517000017，IC 纳芯微 NSi1311-DSWVR 2组 SOP8 贴装
10. ADC
Size: A4
Number: 14/14
Revision: V01
Date: 2025/6/21
Time: 9:33:39
DrawnBy:



11 Connect			
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LOGO1

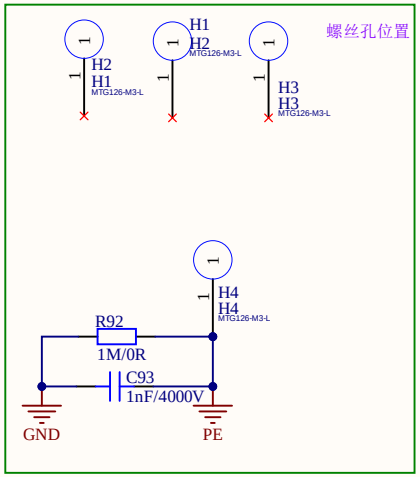
LOGO_TRASH

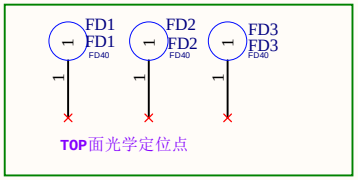
LOGO2

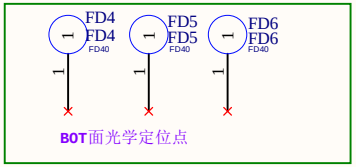
LOGO_ROHS

LOGO3

LGOG_ESD







MARK1 MARK2 MARK3

PCB1

DH-DC-A7FloorBoard--V1.0-PCB

LOGO4
Cannot open file
E:\dhwork\2-功率分配模块\图片资料\
条形码.png. File does not exist.

BarCode

LOGO5
Cannot open file
E:\dhwork\2-功率分配模块\图片资料\
条形码.png. File does not exist.

BarCode

12 Logo			
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