

A

A

B

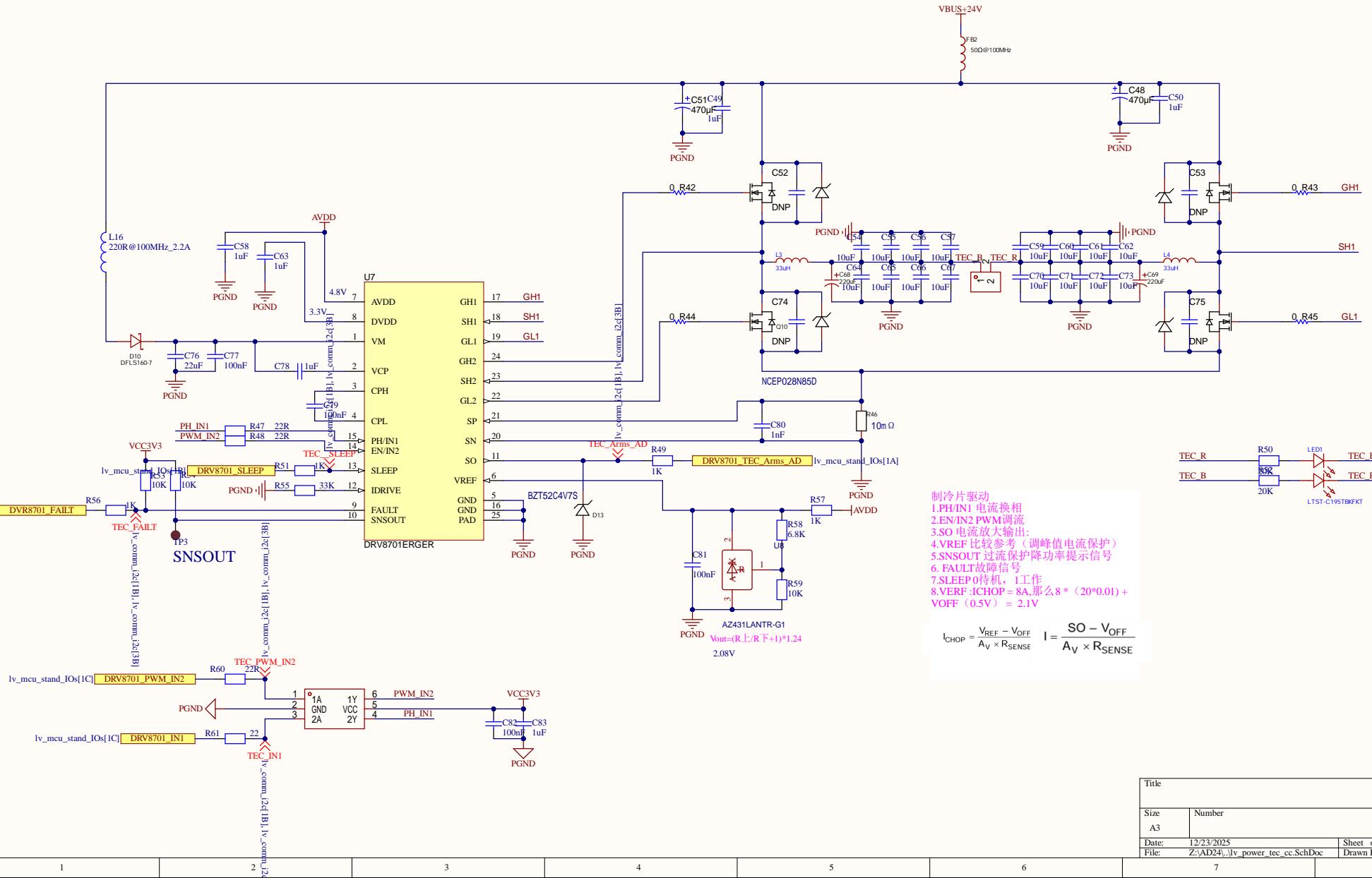
B

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C

D

D



STANDALONE MODE RMS RUN CURRENT CALCULATION:

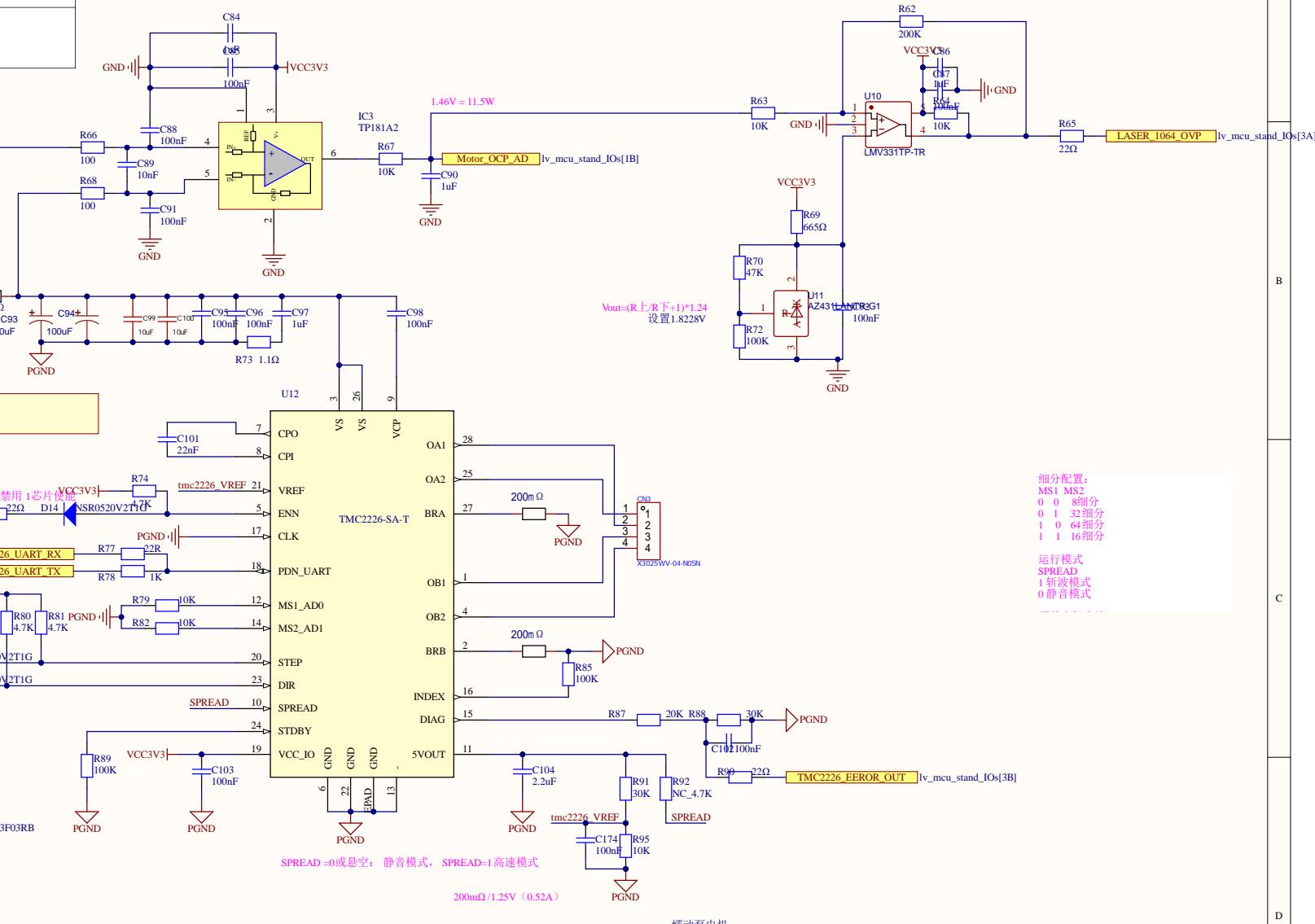
$$I_{RMS} = \frac{325mV}{R_{SENSE} + 20m\Omega} * \frac{1}{\sqrt{2}} * \frac{V_{VREF}}{2.5V}$$

IRUN and IHOLD allow for scaling of the actual current scale (CS) from 1/32 to 32/32 when using UART interface, or via automatic standstill current reduction:

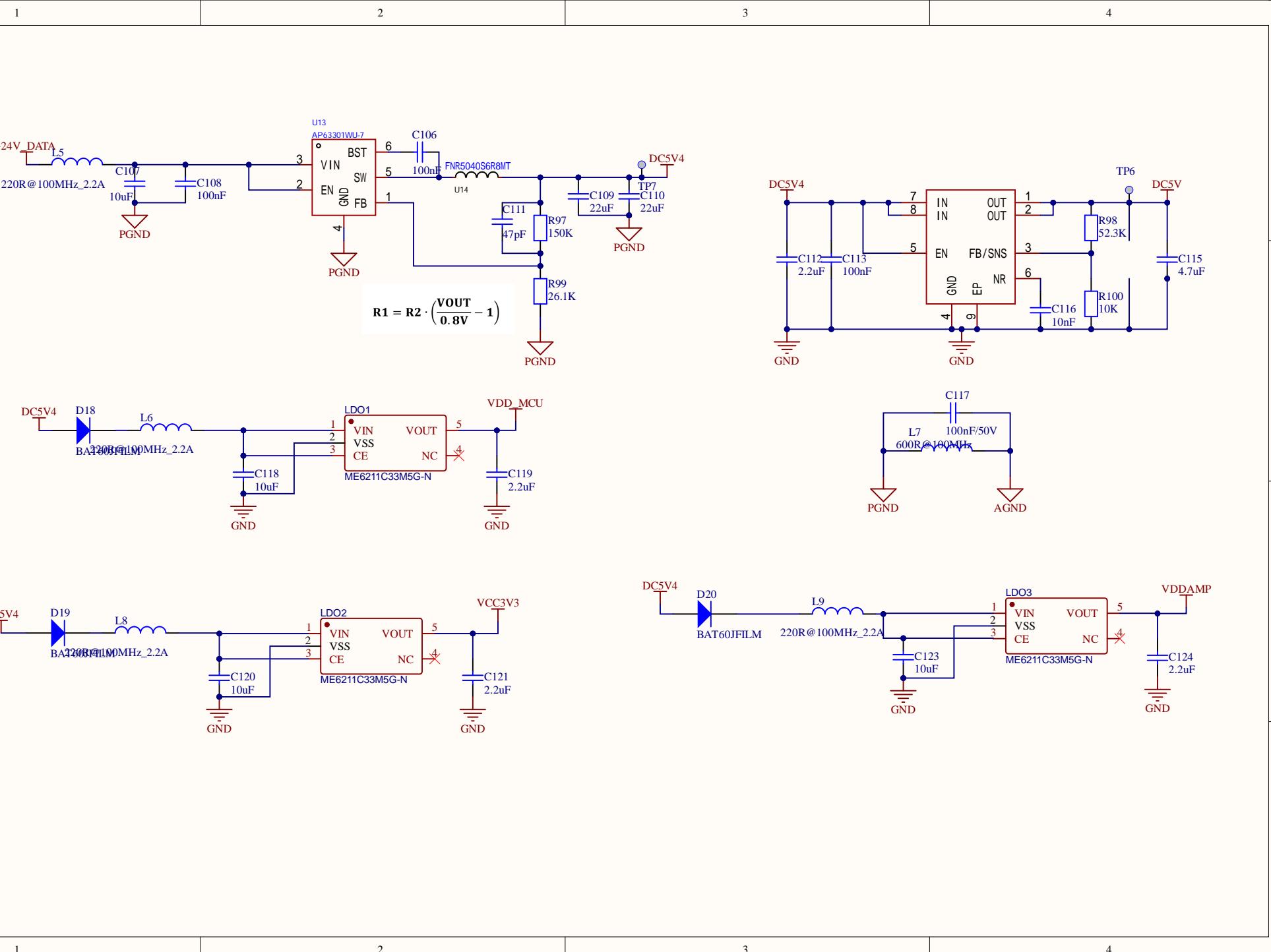
RMS CURRENT CALCULATION WITH UART CONTROL OPTIONS OR HOLD CURRENT SETTING:

$$I_{RMS} = \frac{CS + 1}{32} * \frac{V_{FS}}{R_{SENSE} + 20m\Omega} * \frac{1}{\sqrt{2}}$$

	使用串口	不使用串口
设置运行电流	0x10寄存器的IRUN参数	VREF输入电压
设置待机电流	0x10寄存器的IHOLD参数	串口引脚下拉，待机时自动电流减半
细分	1、0x0C的MRES参数，最大256细分，有9种选择。 2、或者MS1、MS2引脚，最大64细分，有4种选择。同时也会更改通信地址。	MS1、MS2引脚，最大64细分，有4种选择。
斩波模式	1、用SPREAD引脚切换。 2、用0x00寄存器的bit2切换，默认stealthchop（静音模式）	用SPREAD引脚切换
转速、方向	1、如果0x22寄存器为0，使用STEP、DIR引脚输入信号。 2、0x22寄存器也可设置电机转速，用内部脉冲发生器，不过只能设置转速和方向，不能设置加速度和目标位置。受限较大，很少用这功能。	STEP、DIR引脚输入信号



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A

1. $R_{sense} = V_{ref} / I_{led}$
 $= 0.1V / 0.05mA$
 $= 2$
2. 上电顺序: 上电 -> pwm
3. PWM控制信号:
 <1V 关机
 1V~2.07V PWM调光模式
 >2.07V 模拟调光模式
4. PWM频率>10KHZ,低频率纹波大

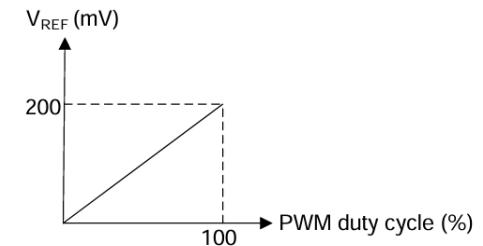
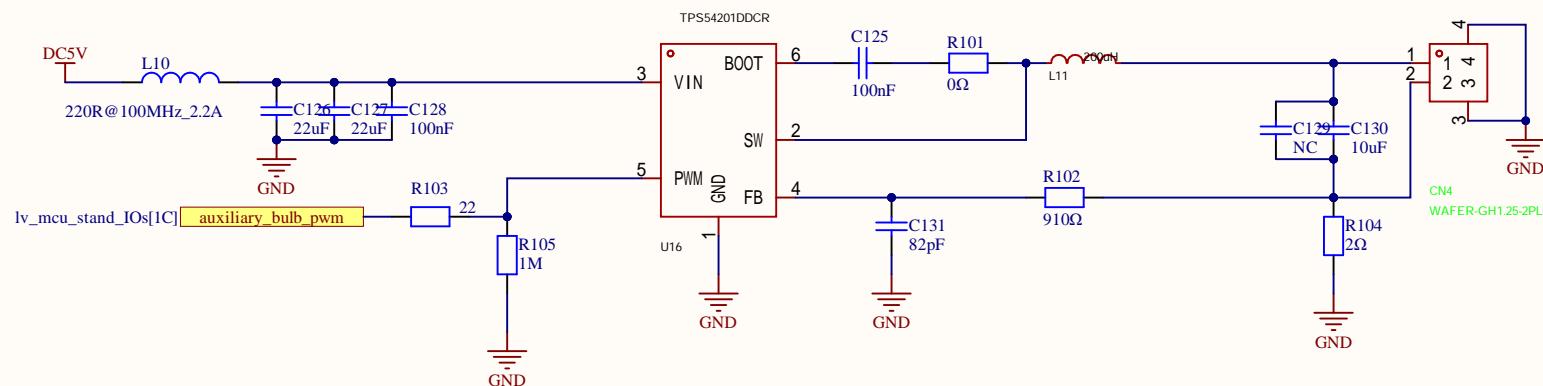


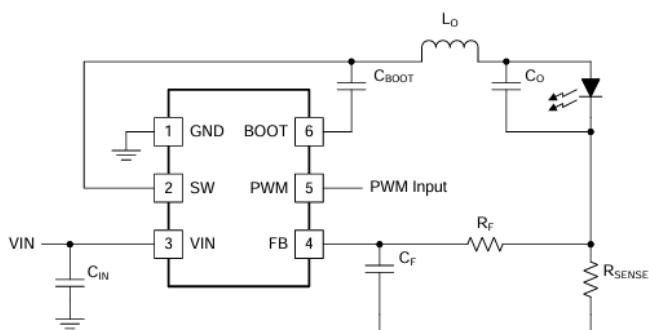
图 16. V_{REF} vs PWM Duty Cycle in Analog Dimming Mode

B



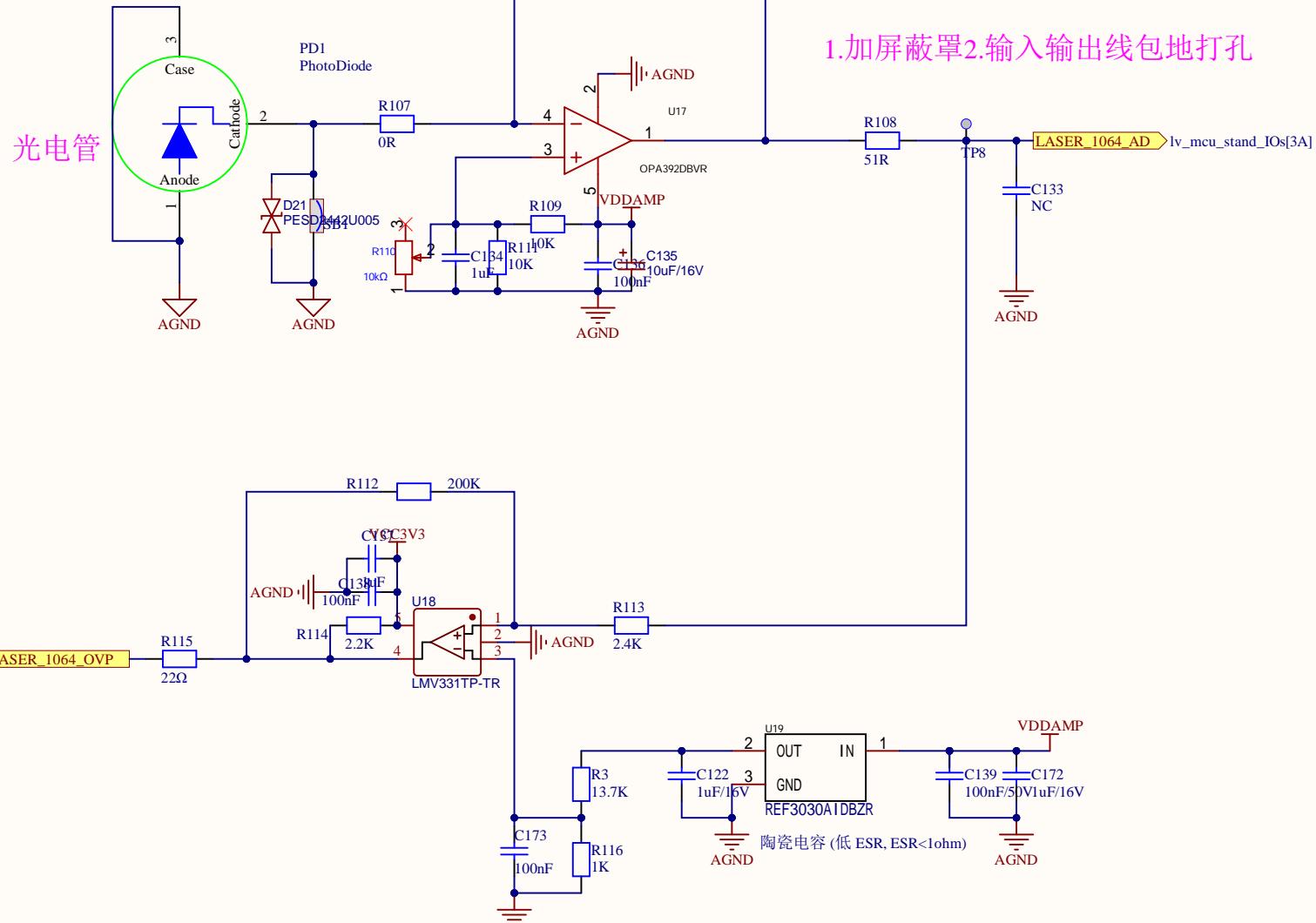
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简化电路原理图

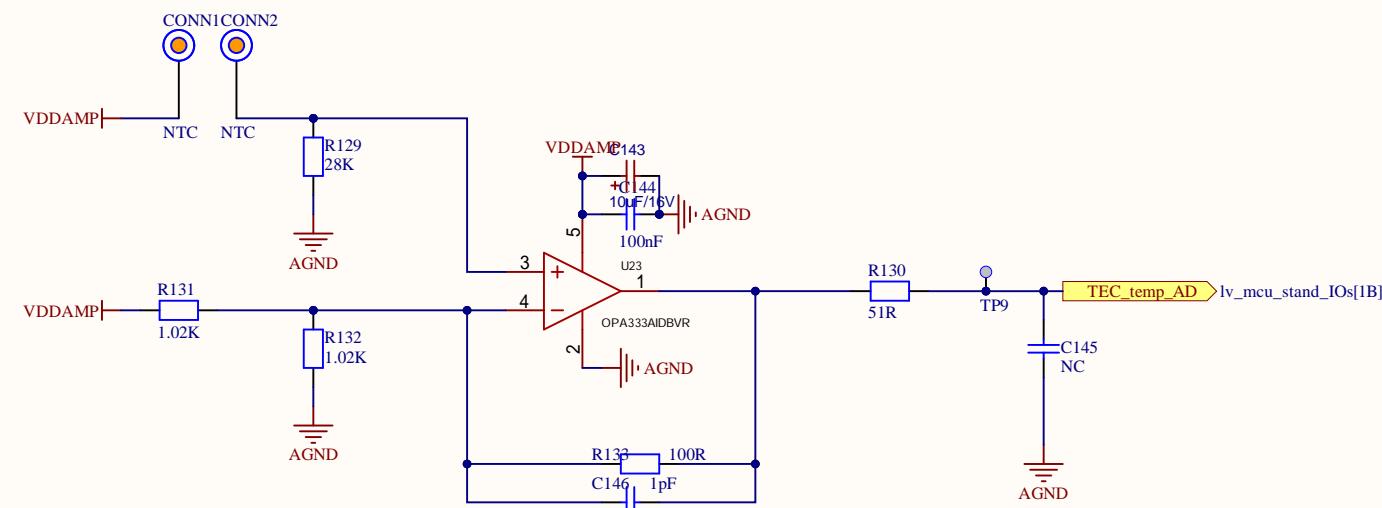


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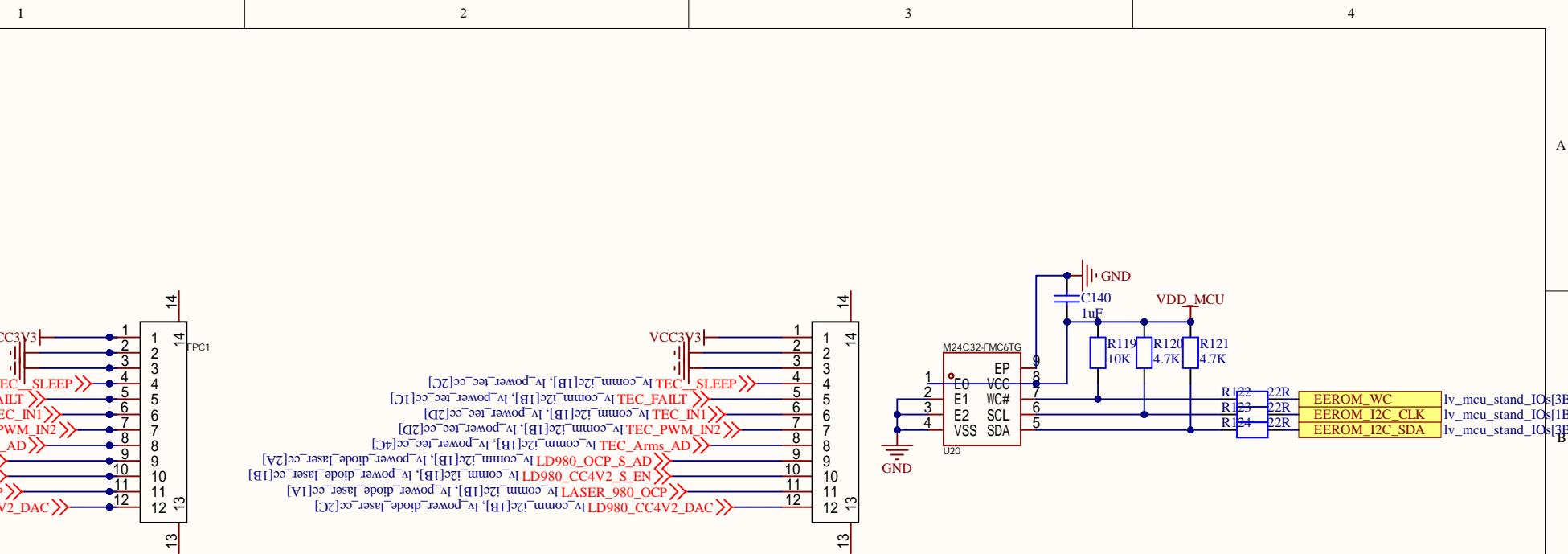
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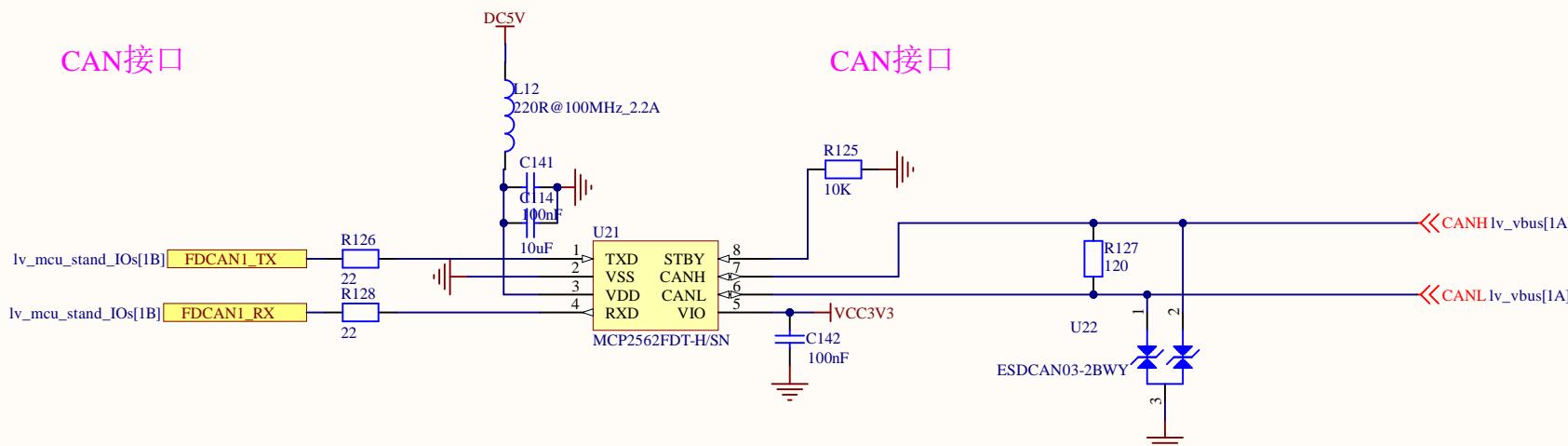
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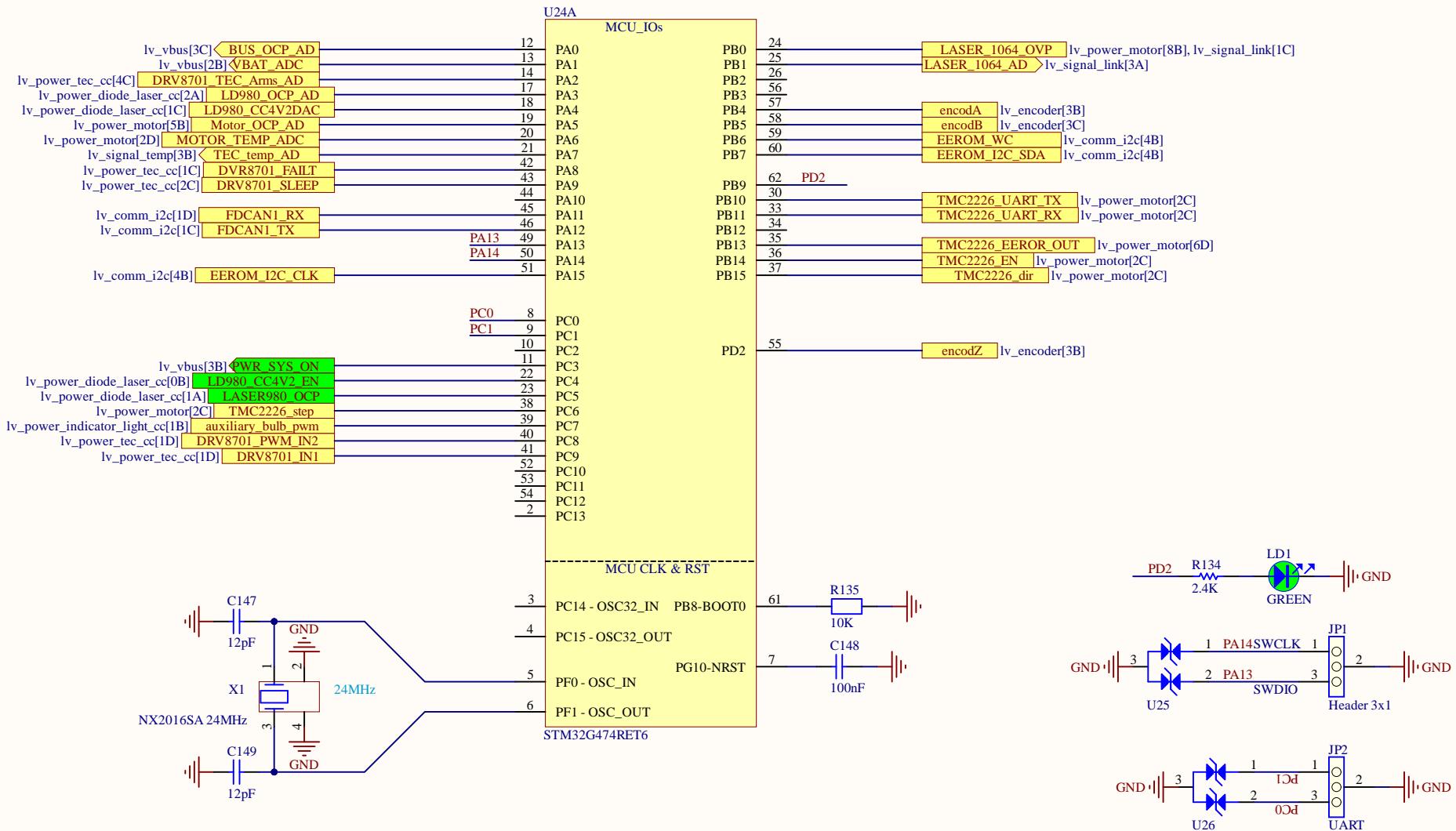
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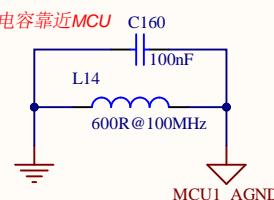
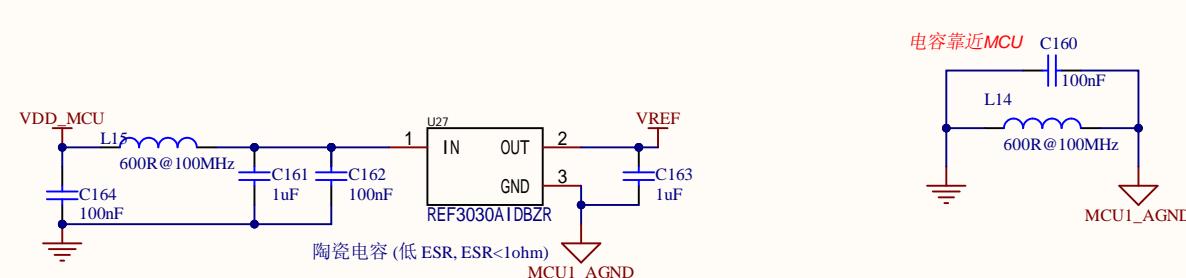
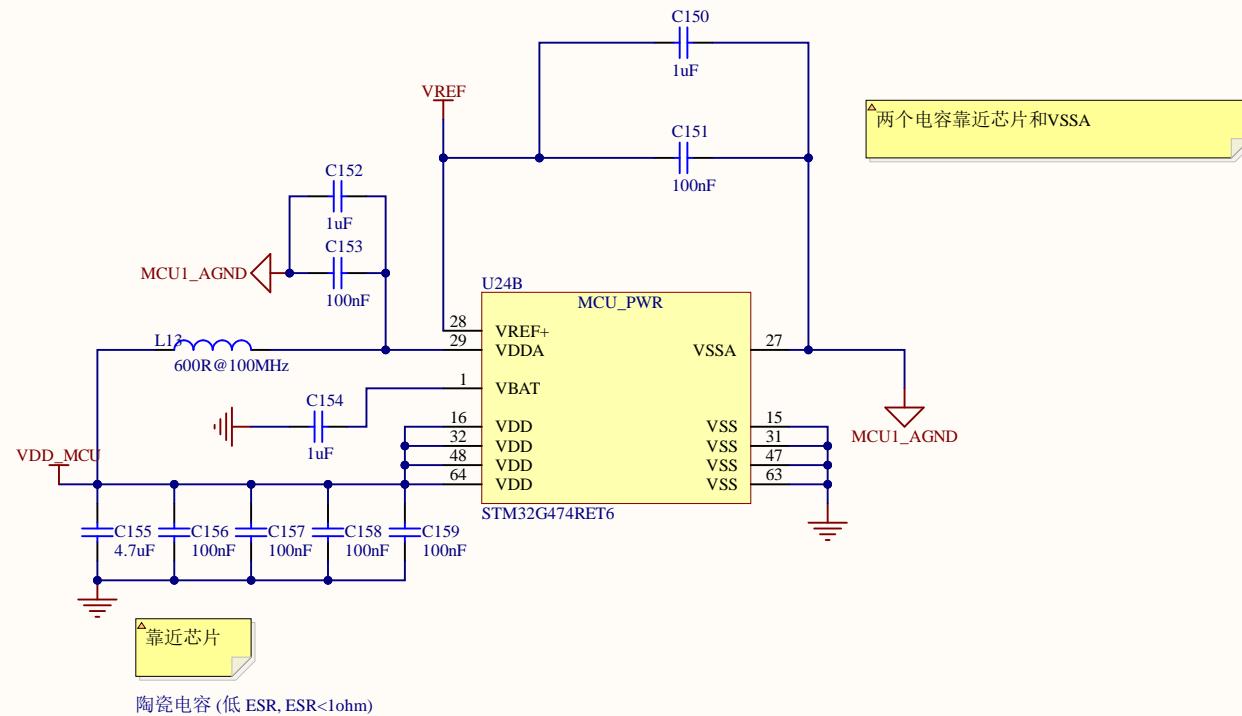


CAN接口



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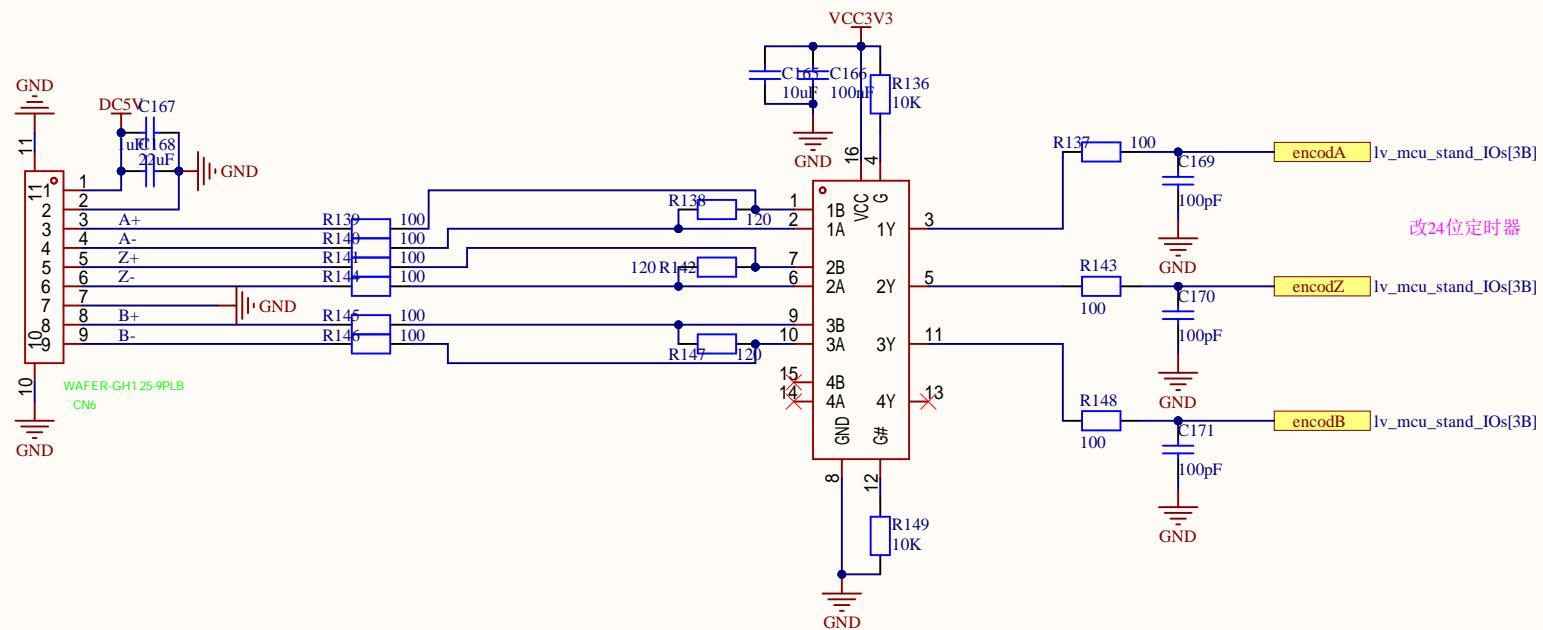
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