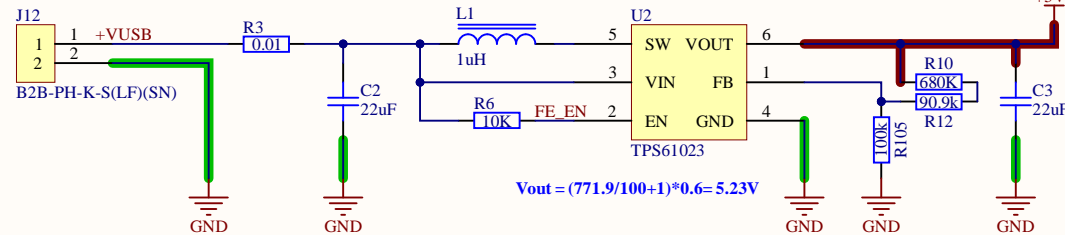
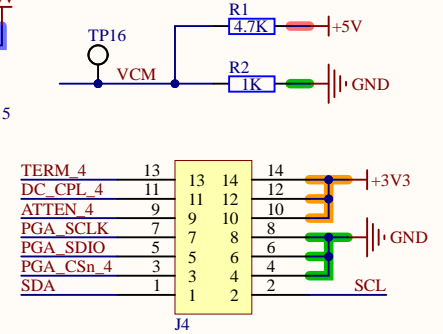
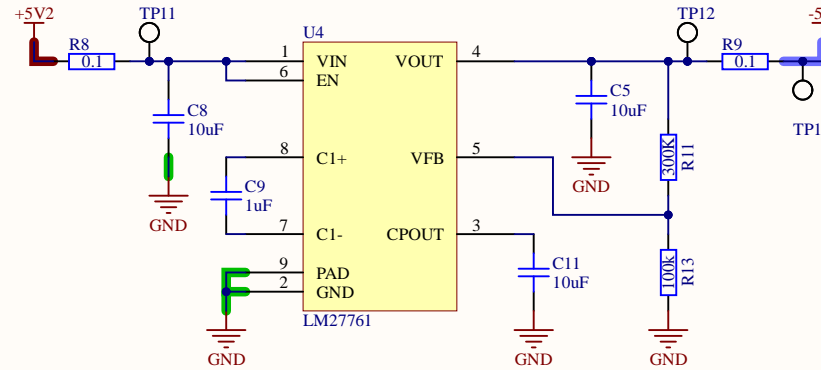
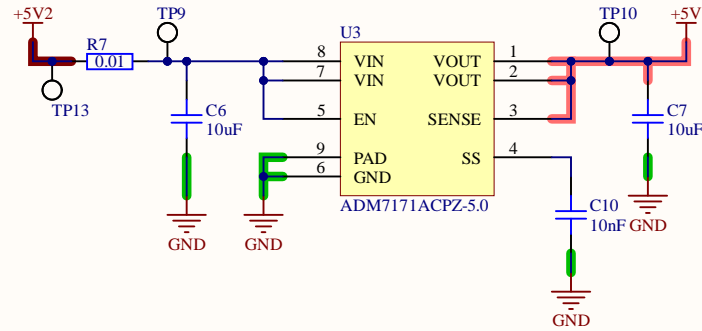


1

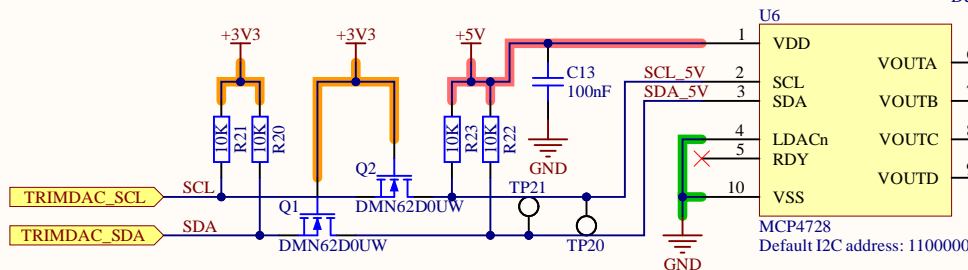
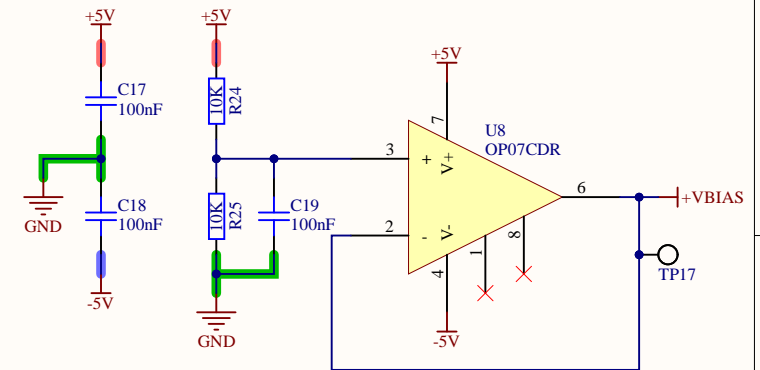
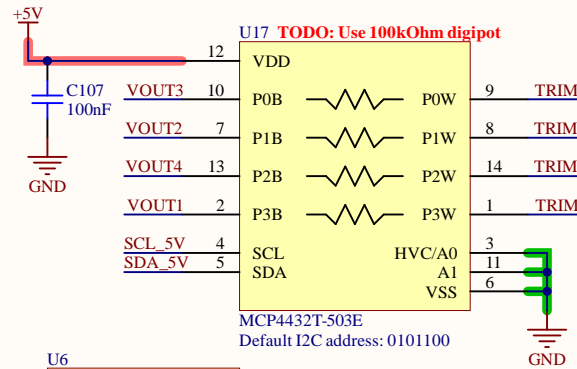
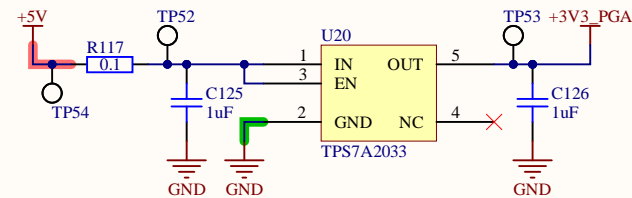
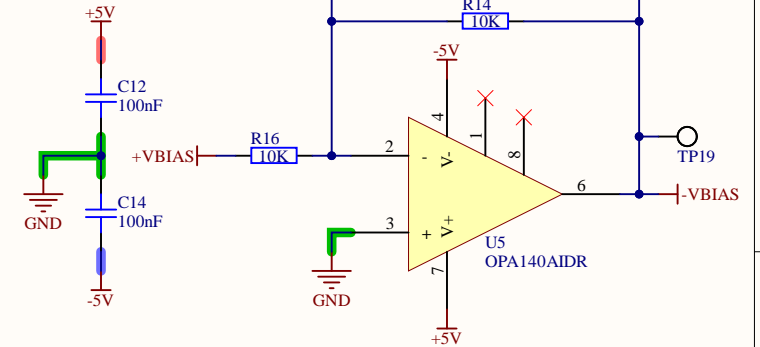
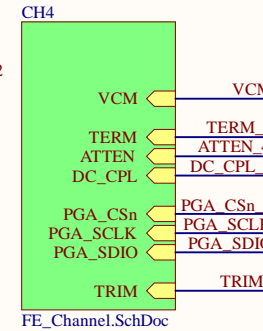
2

3

4



$$V_{out} = (771.9/100 + 1) * 0.6 = 5.23V$$



Resistor stuffing option as fallback from MCP4432

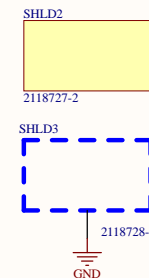
Use 2.5V VREF (REF35?) Instead of U8 opamp, change remaining opamps to opa140  
 -REF35 can only source 10mA  
 -Max resistance is  $(575/4 // 10k) = 141.7 \text{ Ohm}$   
 -Worst case current is 17.64mA  
 -Use REF2025, has max current of 20mA  
 -Change U5 divider to matched resistor network  
 -ACASN1002S1002PIAT

1

2

3

4



Use 3V relay instead of 4.5V (unit 9 ch3 atten relay could not switch) but add a resistor in line with the coil to reduce current draw.

