

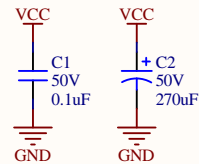
MCU IO current limit resistors  
 -  $R = (V_{io} - V_{cc}) / I_{rmax} = (3.3V - 12V) / (-25mA) = 348 \text{ Ohm}$  as a minimum  
 - Use 1kOhm for safety and BOM optimization

Current Sense output RC filter  
 - values from the chip application note

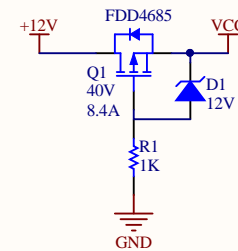
Current Sense output voltage resistor  
 - current range  
 + Saturation condition: 0~4.6mA  
 + Fault condition: 7~30mA (not configured yet)  
 -  $R = 5V / 4.6mA = 1087 \text{ Ohm}$   
 - Use 1kOhm so that max voltage = 4.6V

Reverse polarity protection  
 - From data sheet

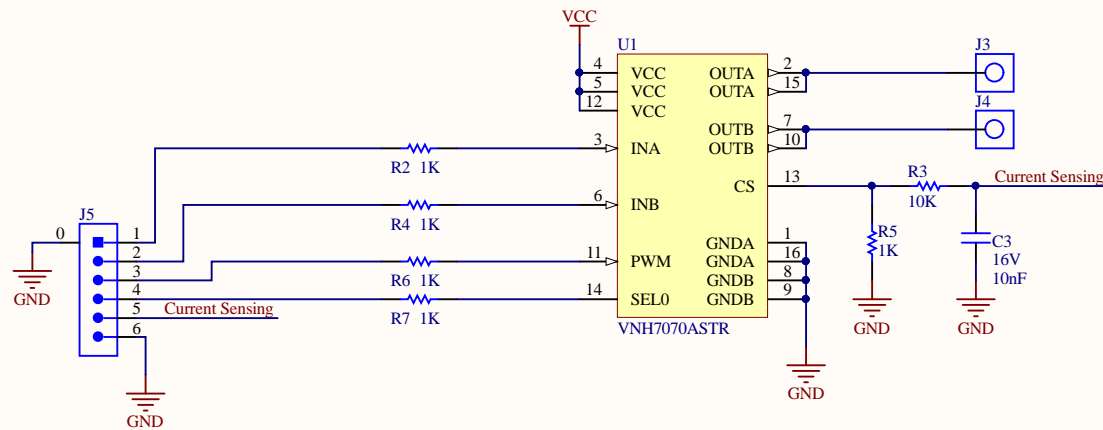
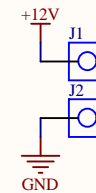
## Bypass Capacitors



## Reverse Polarity Protection



## Power Supply



Title Brushed Motor Controller

Size: Letter Drawn By: Kyle Hong

Date: 4/6/2020

Sheet 1 of 1

File: C:\Users\kyleh\Desktop\Works\UWRT\MarsRover2020-PCB\Projects\Brushed\_Motorcontrol1er\Rev1\Schematic1.sch

