

PCB Planning

Monday, March 28, 2022

6:45 PM

power supply: 12V

max motor amperage (rounded): 2A

Traces: Red/Black = 2A

max power ratings: $P = I \times V = \underline{24 \text{ watts}}$

Component Ratings (connected to 12V power)

Barrel Jack: 30V @ 2.5A

H-bridge: 50V, DC operation for Input = 2A

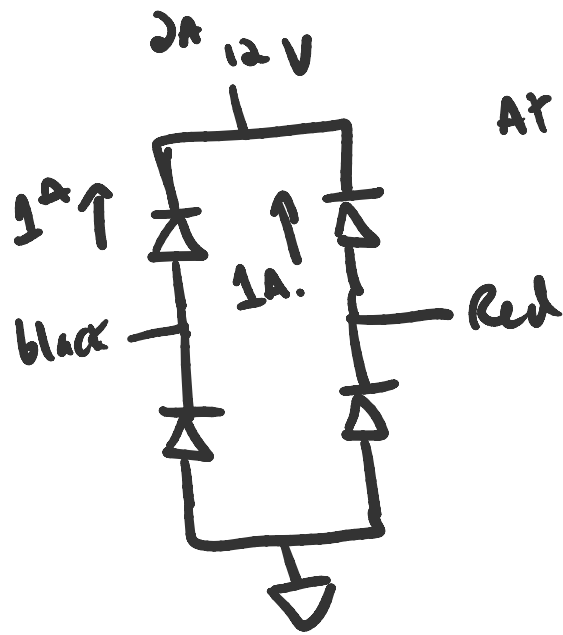
Ceramic Caps: 50VDC

Electrolytic Cap: 50V

Resistors not connected to 12V, only 5V + 3.3V

Current sense resistor: 3.5A

Diodes: 1.5A 1 forward, 50V V_{RRM} = repetitive reverse voltage.



At 2A max input,
1A max through diodes.

Components can handle upgraded 12V!

Adjustments:

trace width to red & black
from 12V = increased

Check diode trace widths.

Change motor connection

- 2 prong barrel jack easiest.
- Just needs power.

motor connection: it's slow, but we can worry about

motor concerns: it's slow, but we can worry about speed later.