

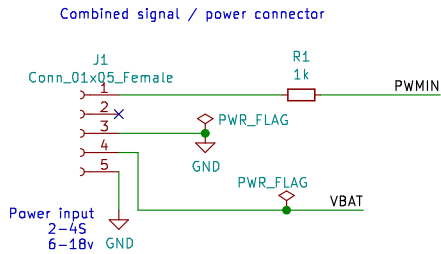
Beetleweight motor back ESC



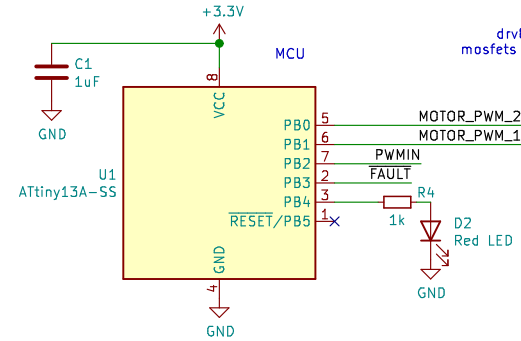
CHECKLIST:

1. Make sure enough space for attiny13 soic8 test-clip – for ISP
1. Check that hi-current paths are wide enough / as possible
1. drv8701 gate drive settings – VGS is inside the correct range (YES it is)

drv8701 provides nominally about +9.5v VGS gate drive, mosfets datasheet shows absolute maximum +20v so it's ok.

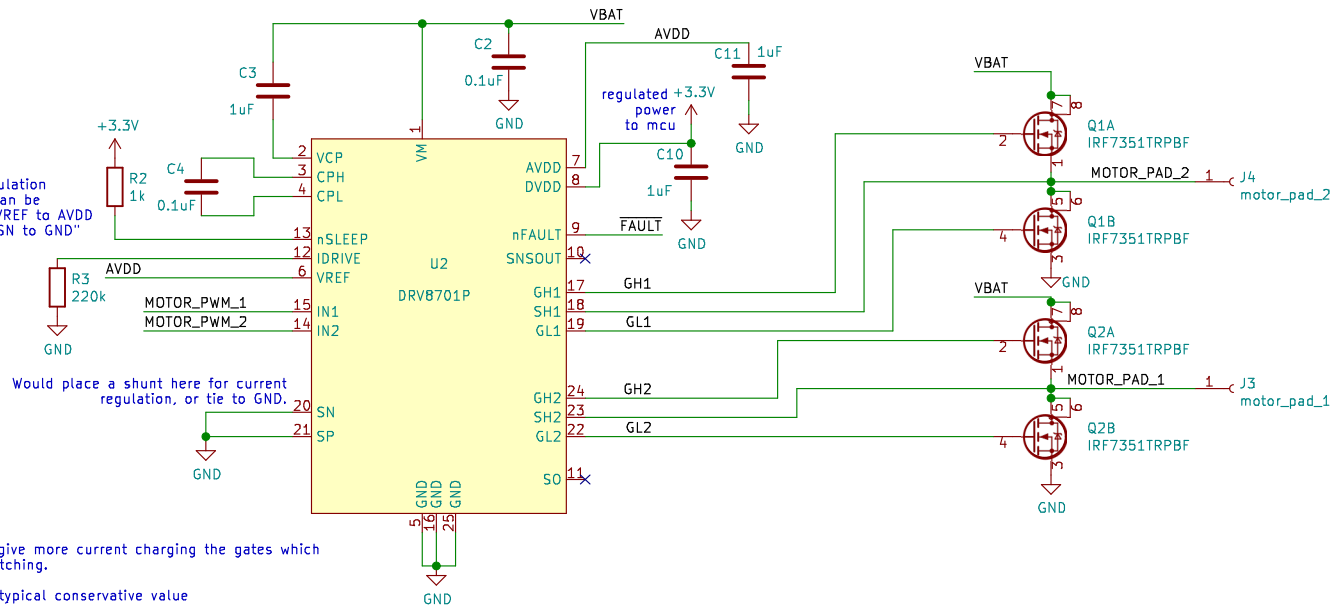


NB: this should not cause damage if fitted the opposite way.



Regulation
3.3v logic is driven from the DVDD pin of drv8701

VREF:
"If the current regulation is not needed, it can be disabled by tying VREF to AVDD and tying SP and SN to GND"



Would place a shunt here for current regulation, or tie to GND.

IDRIVE:

higher resistors give more current charging the gates which makes faster switching.

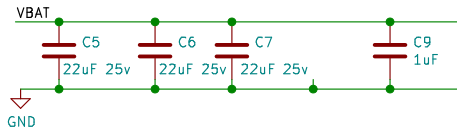
I think 33k is a typical conservative value

Gate-to-drain charge Q(gd)
Nominal 7.2 nC

33kohm = 25mA gate drive current
200kohm = 50mA
(see drv8701 electrical characteristics)

50mA gate drive current gives approx 1us worst-case.

VBAT decoupling



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