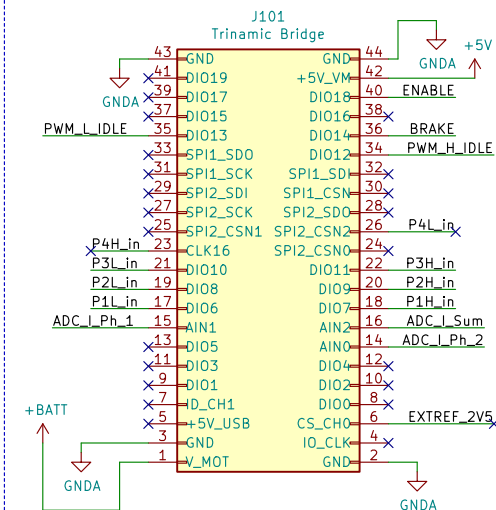
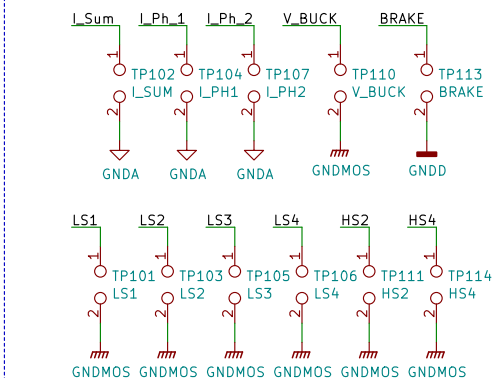


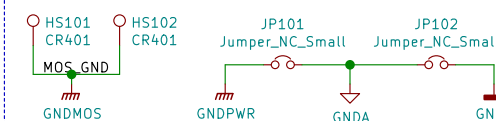
Signals and power to/from PWM generation board (TMC4671)



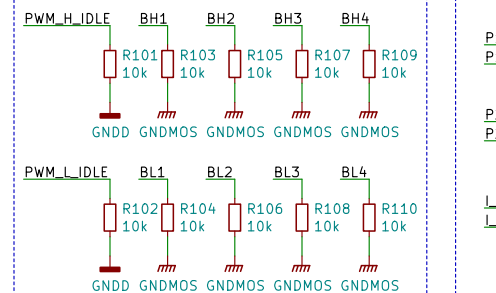
Test points



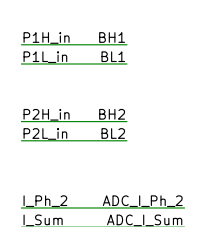
Ground connections



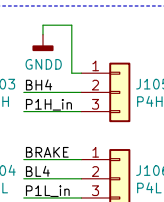
Idle state for digital signals



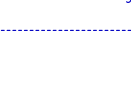
Gate driver input selection



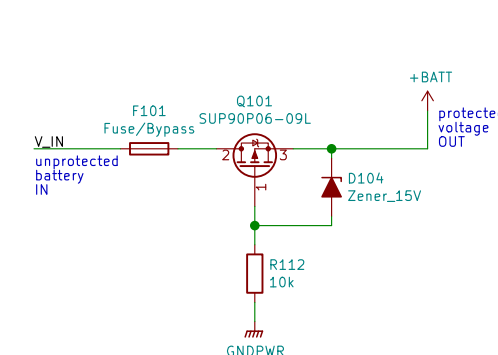
BLDC/BRAKE Setting



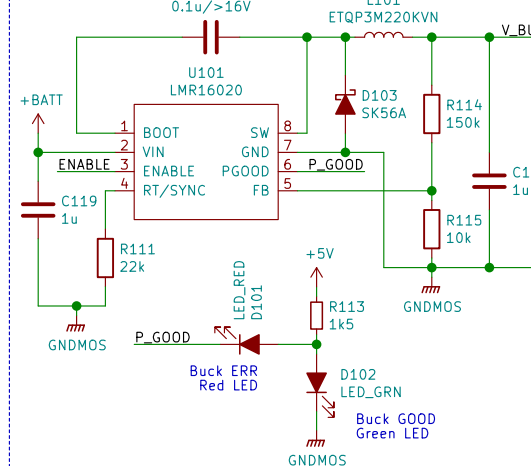
DC MOTOR Setting



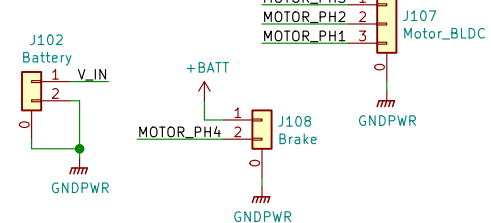
Reverse Polarity Protection



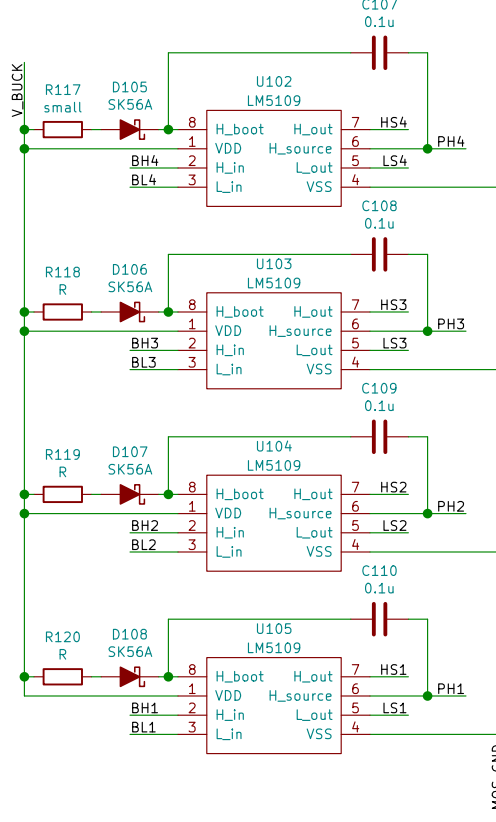
12V Buck Converter



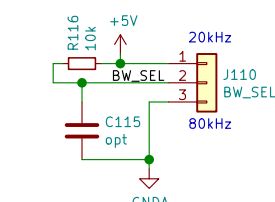
Power connections



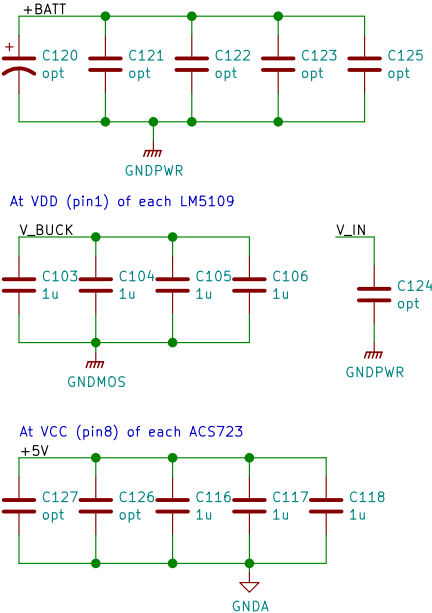
MOSFET predriver circuits



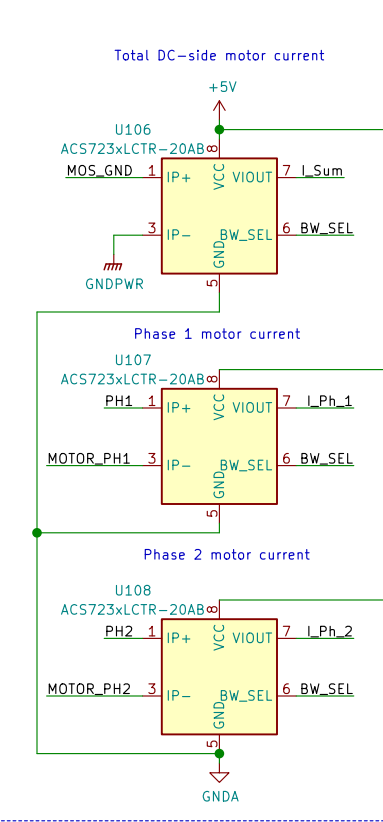
Current sensor bandwidth selection



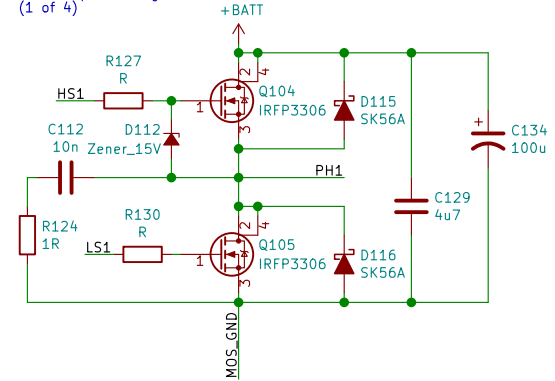
Decoupling capacitors



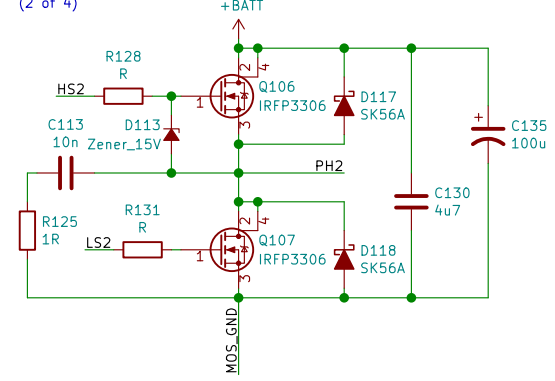
Current measurement



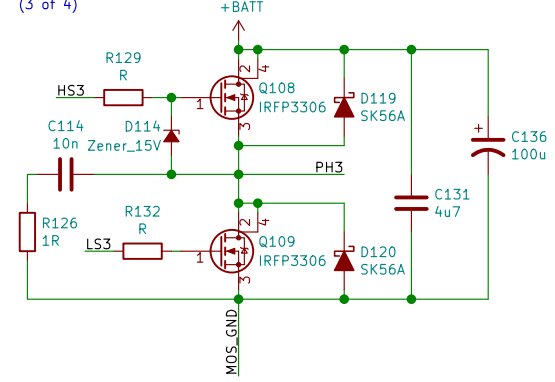
MOSFET power stage (1 of 4)



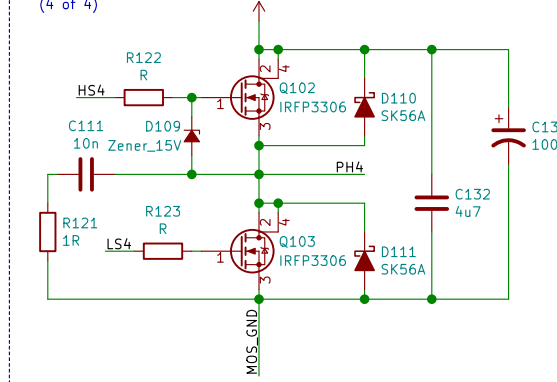
MOSFET power stage (2 of 4)



MOSFET power stage (3 of 4)



MOSFET power stage (4 of 4)



Sil-Pad 900S between each MOSFET and heatsink for electrical insulation

Isaac Jones
Senior Design 2018–2019
Supermileage Motor Controller
Cedarville University

Sheet: /
File: MotorControllerPowerBoard.sch

Title: Power Board Schematic

Size: USLedger Date: 2019–03–06

KiCad E.D.A. kicad (5.0.0)

Rev:

Id: 1/1