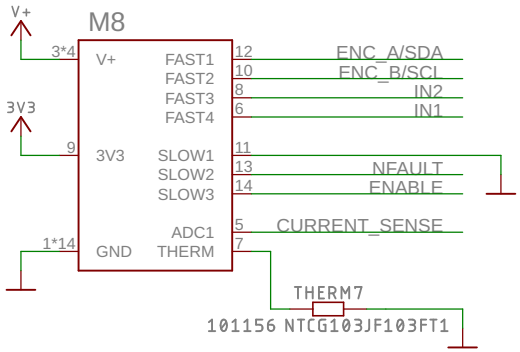
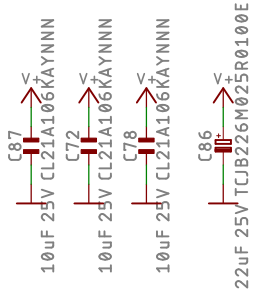
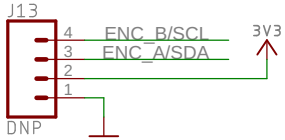
Big Motor + Encoder Module for Yukon (PIM691)

Host connector

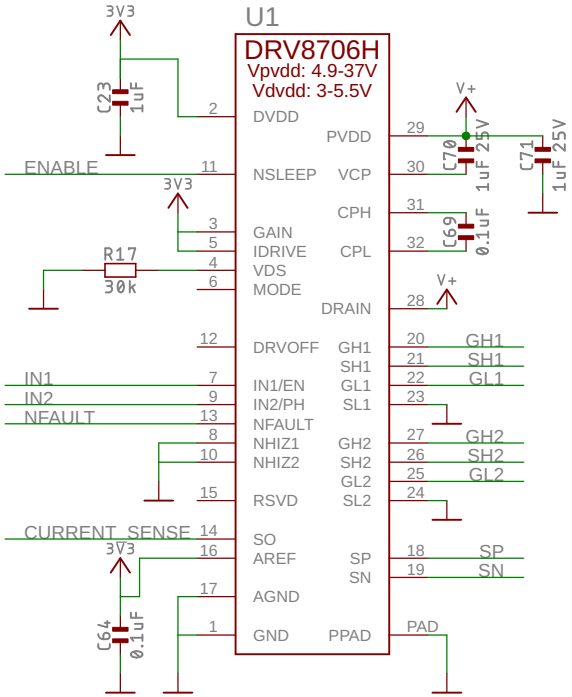




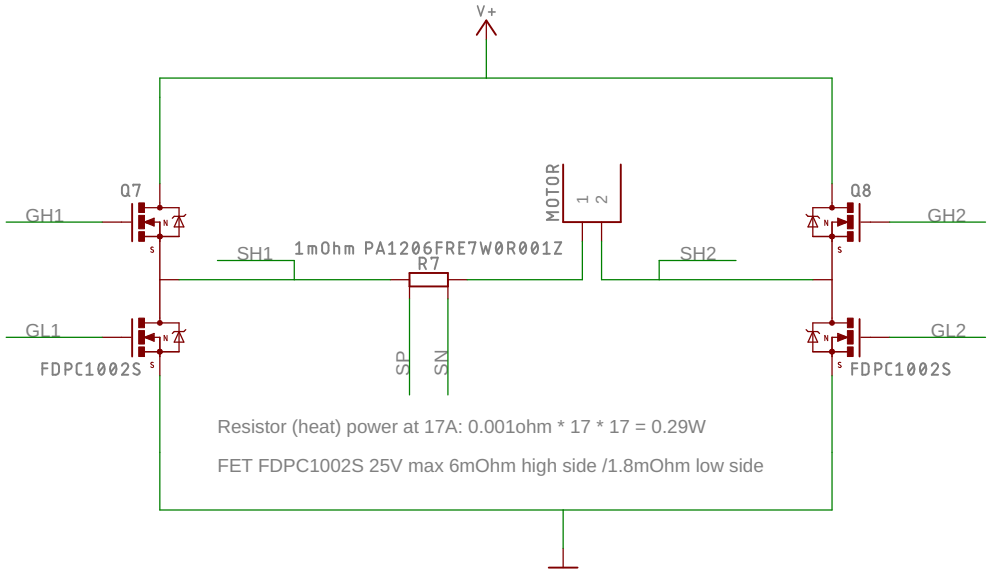
Encoder header



Motor driver



H-Bridge and output terminals



Fixed settings:
GAIN: ADC amp gain: 80V/V gain scales 17A to 17*0.001*80 = 1.36V ADC output. Level 4 = wire GAIN to Vdd. SO output range is 3.3/2-0.25 = 1.4V
VDS: Vds overcurrent protection: 0.1V = level 2 = 30k ohm to GND
IDRIVE: gate driver output current Idrive: max 62mA drive level = level 6 = wire to Vdd
MODE: hardwire PWM = level 3 = leave floating

Vds voltage levels on level 2: min 0.08V, typ 0.10V, max 0.12V. FDPC1002S mosfet high-side resistance is typ 4.6mOhm, and low side typ 1.2mOhm. These map to following overcurrent levels:
High side: min 0.08 / 0.0046 = 17.4A, typ 21.7A, max 26.1A
Low side: min 67A, typ 83A, max 100A