

Leviathan Thruster PDB PCB

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Category: Electrical

Relevant Links:

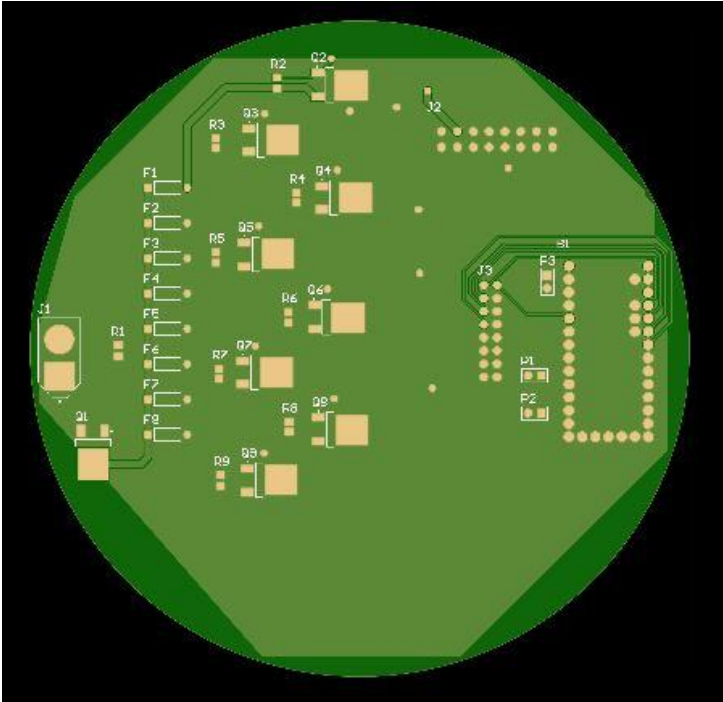
General Overview: The thruster PDB(Power Distribution Board) will get input via UART from the task board, consisting of control signals. This board will also relay analog voltage to the task board, to be read as. This Board is operated using a 14 V lipo battery.

Components:

- 1 Schottky Diode
- 9 P-channel MOSFET
- 9x LED's
- 10k resistors
- 10x 13 Amps fuses

Technical Overview: The Thruster Board uses P-channel MOSFET's control the voltage output to the Thruster. These MOSFETs must be rated at least 15A. The thrusters we are using draw a nominal 11A however when stalled they will output 13A. We use 13Amp fuses to ensure that there is protection for short circuiting and so that there is no possibility of over current going into a MOSFET. For Feedback we have led's wired with the mosfet's, as well as 10K resistors to complete the circuit. The Voltage input has a short-circuit protection that consists of a Diode and a P-channel Mosfet. This Board is controlled By a teensy 3.2 MCU

Front of the PCB



Back of the PCB

