Design Review for Lab 5

Reviewer: Yuhan Dai

Parts and Documentation:

1. On the motor design, the capacitor which connected the battery power supply should use the correct polarized capacitor symbol.
2. Referring to Lab5 write up on the course website “For consistency, you should use the name '3V' for your power supply instead of '3.3V'.”
3. C10, C14 compactors are not connected to anything?
4. RX1 and TX1 were not connected to the right place, RX1 should connect to TXO in the second FTDI Jumper
5. Wires that connected from battery should go to BAT\_GND
6. Missing 10 pins jumper (details will be given later? Says Steve)
7. There are some issues with the IMU, not sure what exactly, but we had the same issue, and the team who reviewed us suggested us to read the design for the IMU (lsm9ds0) breakout boards.
8. Prefix of the devices are not yet to be set for the parts designed in Lab4

Other ERC Warnings (details refer to ERC):

1. Only one pin for A0-A7, PD, PE, PG, …
2. Part J4, Y2 does not have value

Suggestions:

1. You may need a reset switch (you could probably find it in StartingPoint.sch)
2. Probably need to use the MOSFET we built from lab4

Our questions:

1. How many capacitors should we use to control the micro-controller voltage?
2. How to decide when to put the resistor at places such as TST on micro-controller?
3. Should the Value attribute in tDocu or tValue?

Pads and Silkscreen:

1. Maybe make the pad wider
2. Should use tDocu wiring the outline and tPlate for marking position? (check the prebuild ones for reference)
3. Should the Value attribute in tDocu or tValue?
4. The Value and Name seems really big

LEDs:

1. Could not find the led\_notes.txt
2. Resistor values for LEDs seems too large, may cause the LED light to be weak (refer to: <http://www.ohmslawcalculator.com/led-resistor-calculator> )