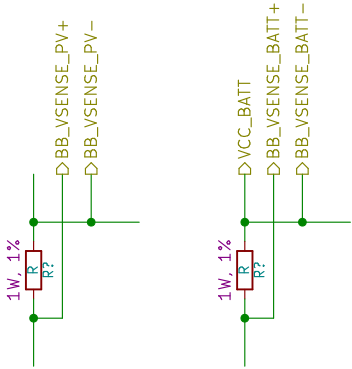
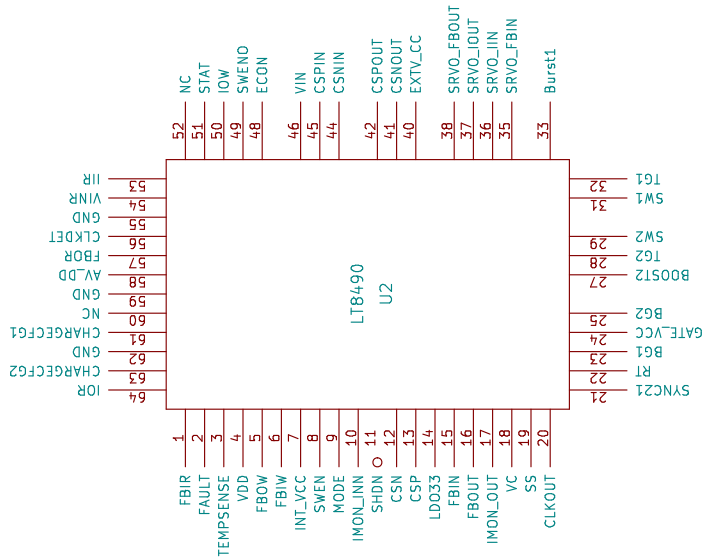


TODO:
1) Do we need a common ground pin on each sub-sheet?



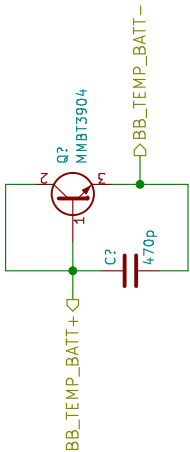
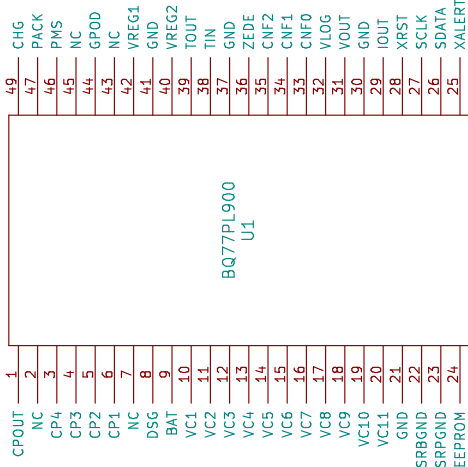
$$R_{\text{sense}} = 1/\text{Imax}^{**2}$$

$1 \text{ A} = 1 \text{ ohm}$

$3\text{ A} = 0.1\text{ ohm}$

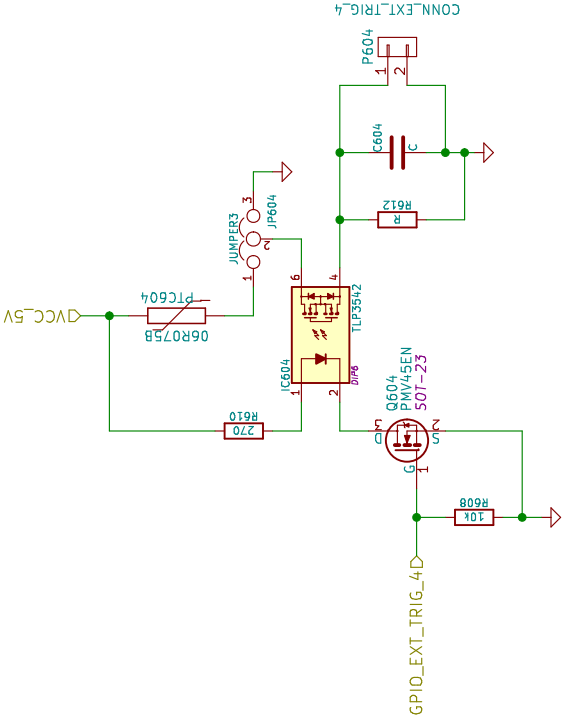
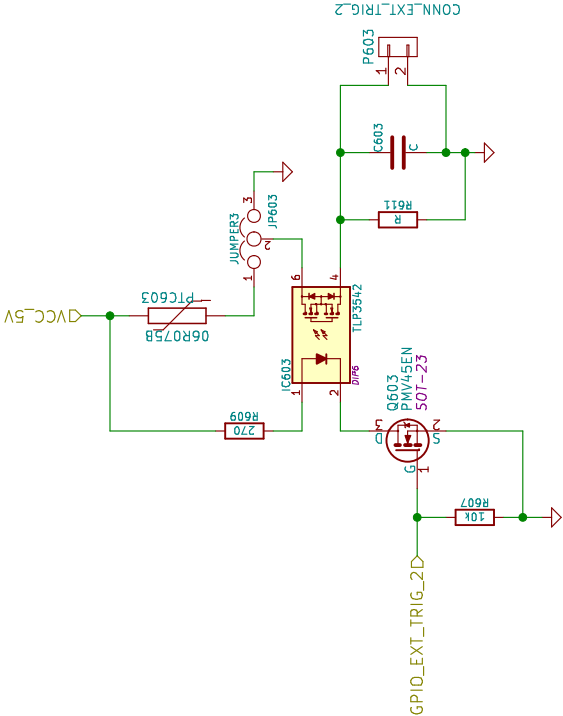
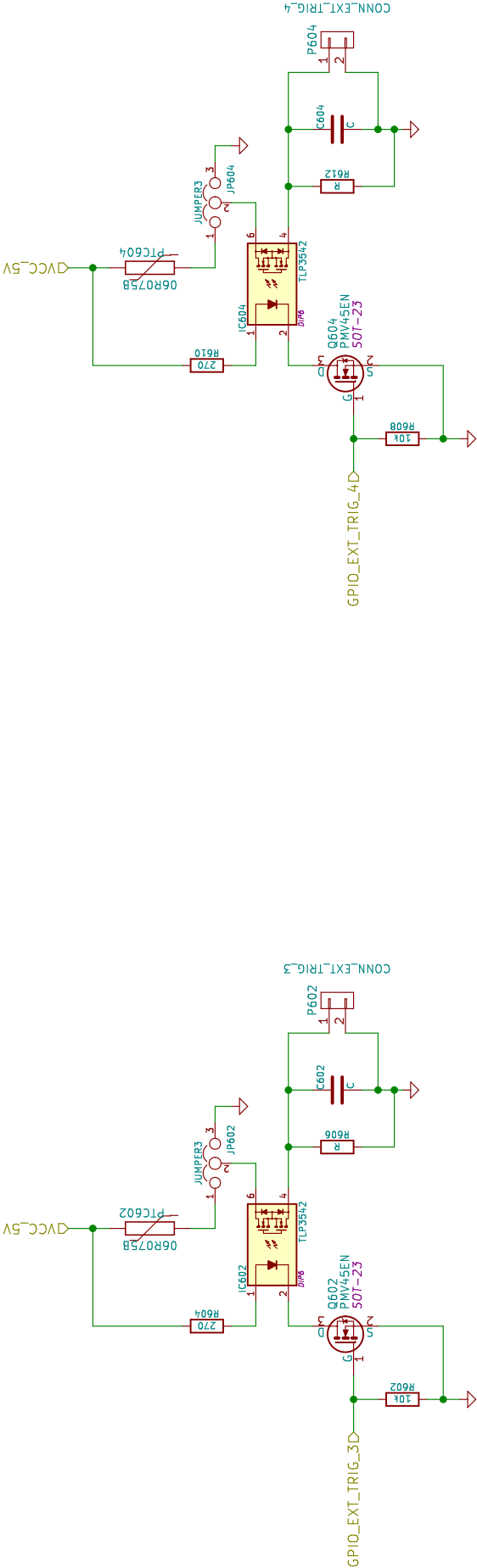
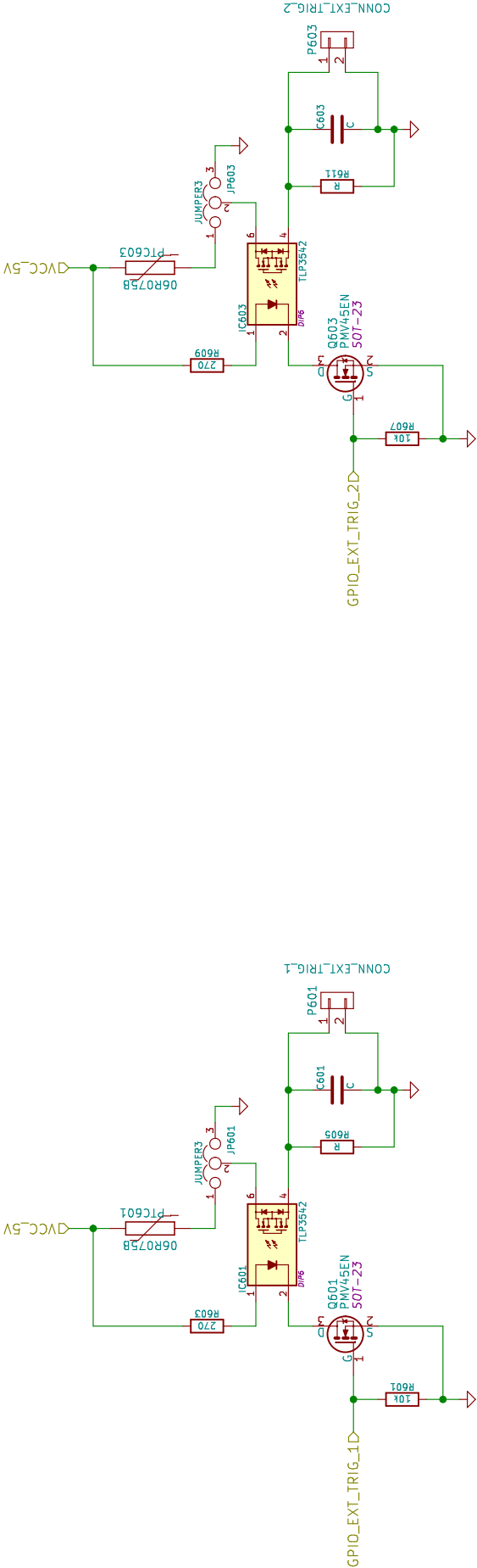
$5 \text{ A} = 0.04 \text{ ohms}$

$10 \text{ A} = 0.01 \text{ ohms}$

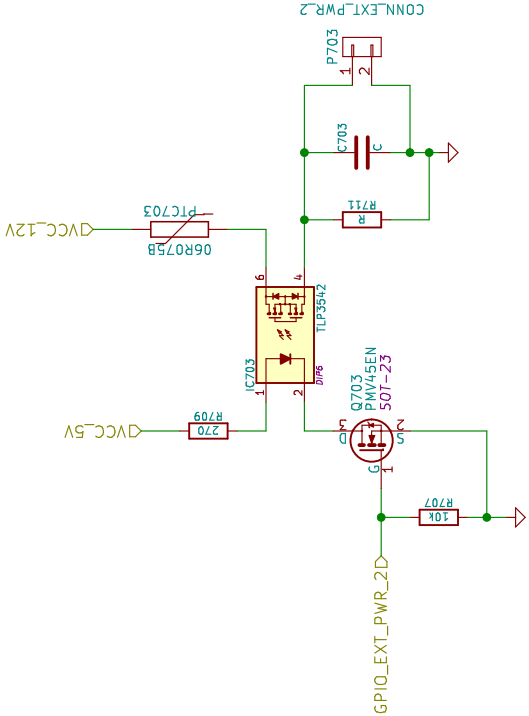
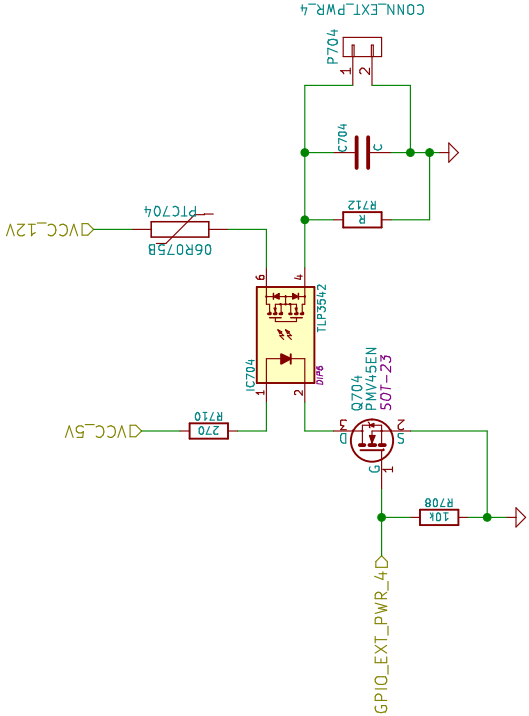
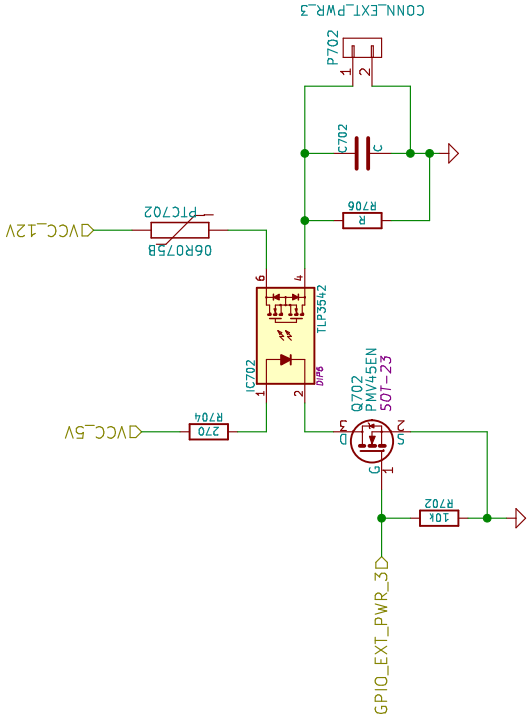


Temperature Sensor, Main Battery

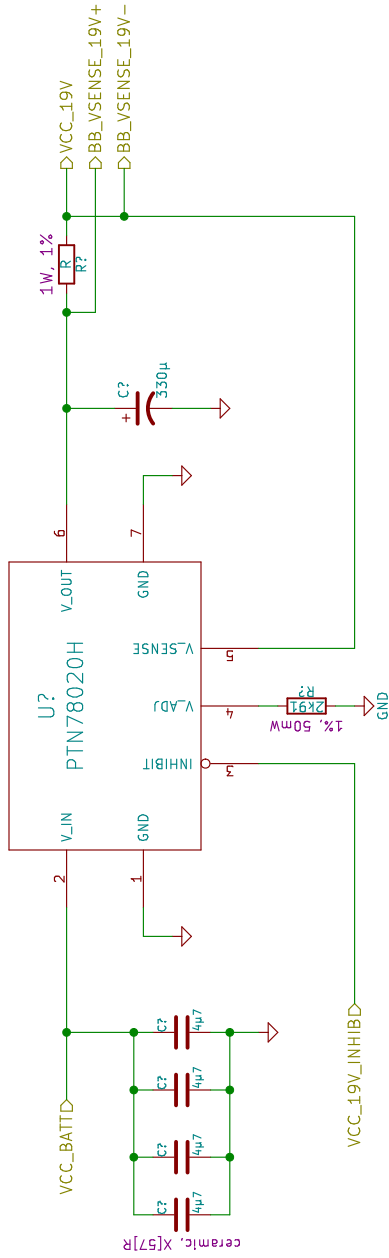
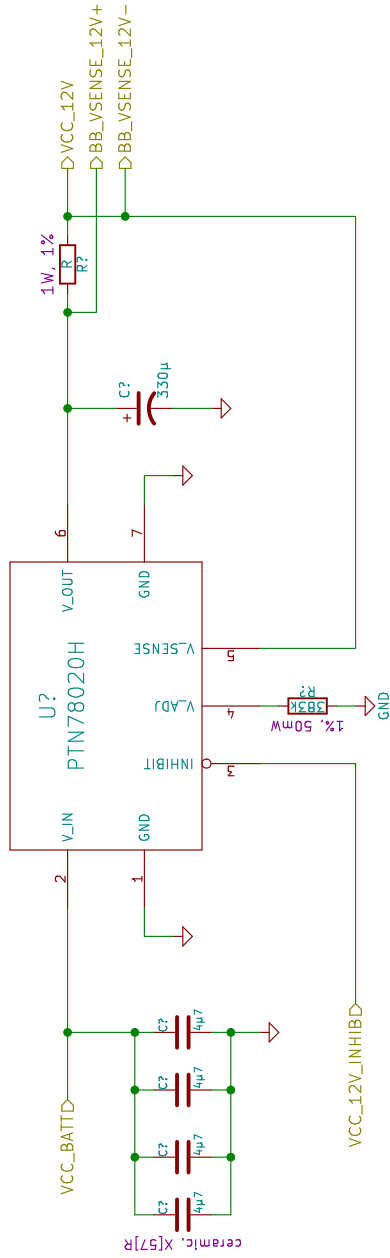
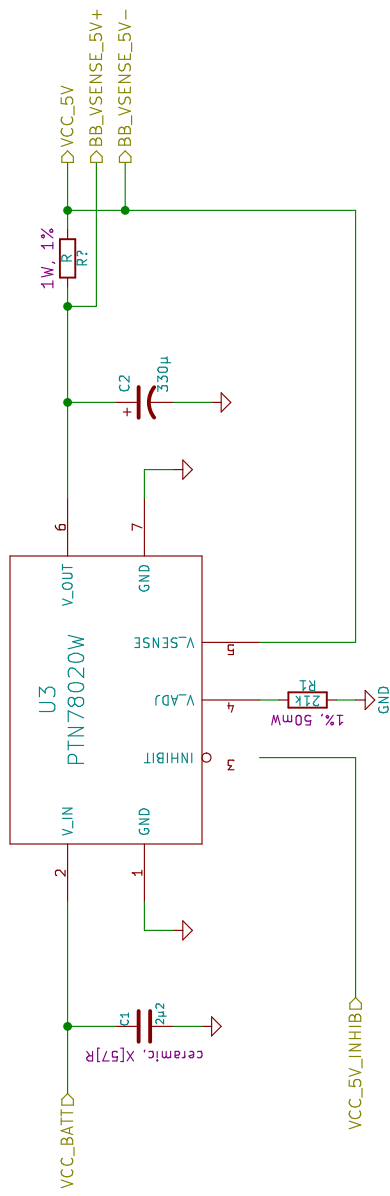
TODO: Determine values for bleeder resistor and filter capacitor on each output connector.



TODO: Determine values for bleeder resistor and filter capacitor on each output connector.



		1		2		3		4		5		6		7		8	
A																	
B																	
C																	
D																	
E																	

 \ddot{B}_Z

1. V_{sense} should connect as close as possible to the largest load on the given power rail.
2. Place Rset resistors as close to package pins as possible.
3. Ceramic (Cin) capacitors should be located within 0.5 in of the input pins.
4. We may need heat sinks on the converters. The datasheet indicates a range of 2W to 5W of power dissipation given our specs.
5. Pay attention to the datasheet's recommendations regarding capacitor selection.

TODO:

- * Should shunt resistors should be 4-terminal devices?
- * Capacitor values are minimums. Consider increasing these. Consult datasheet for more info.

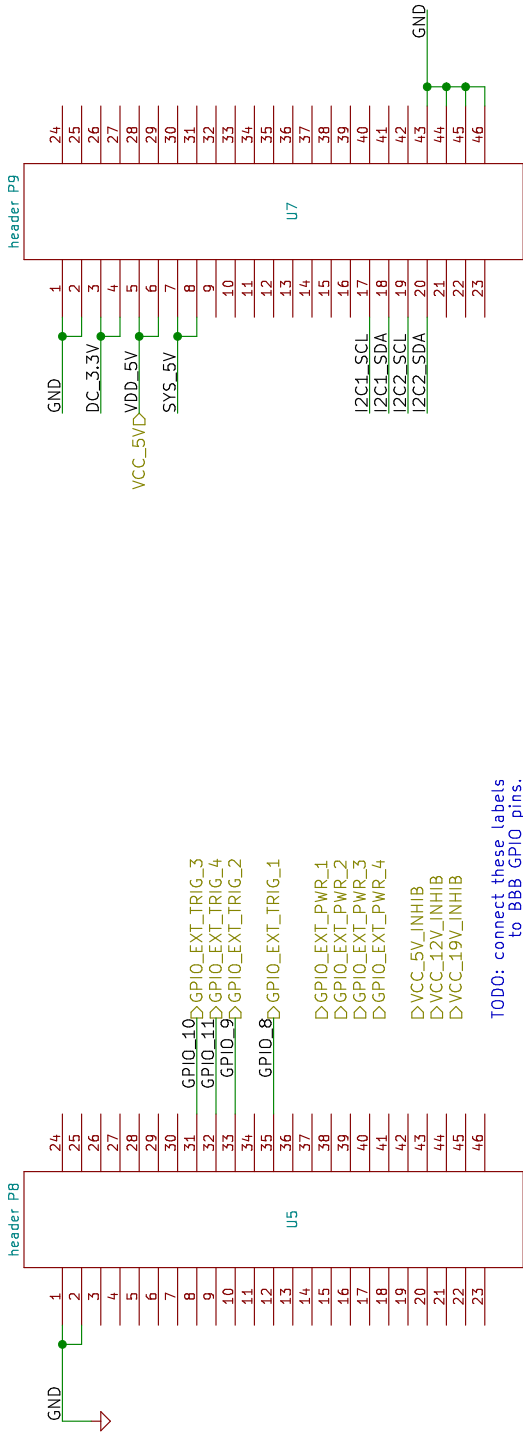
$$R_{\text{sense}} = 1/I_{\text{max}}^2$$

$1 \text{ A} = 1 \text{ ohm}$

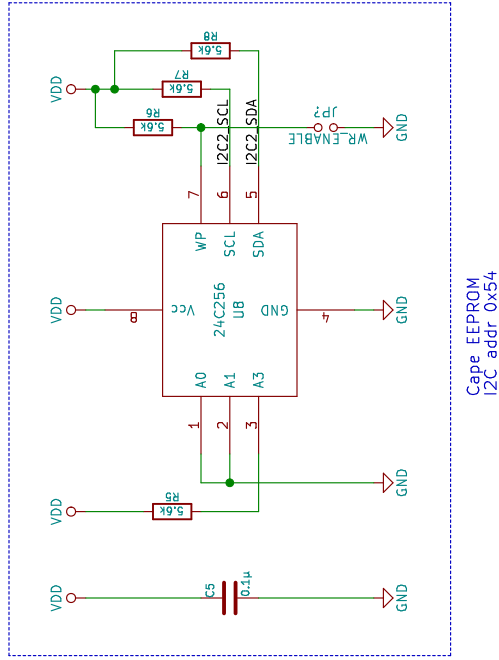
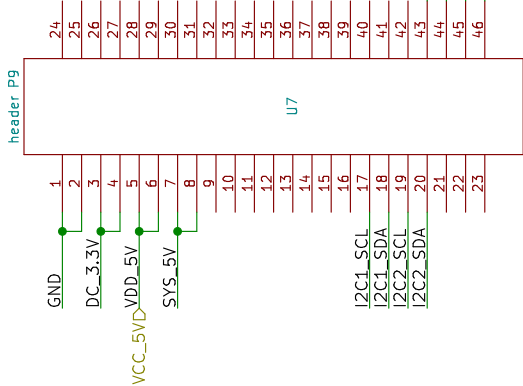
$3\text{ A} = 0.1\text{ ohm}$

$5 \text{ A} = 0.04 \text{ ohms}$

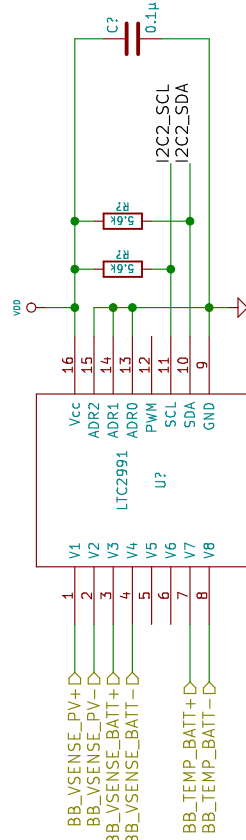
$10 \text{ A} = 0.01 \text{ ohms}$



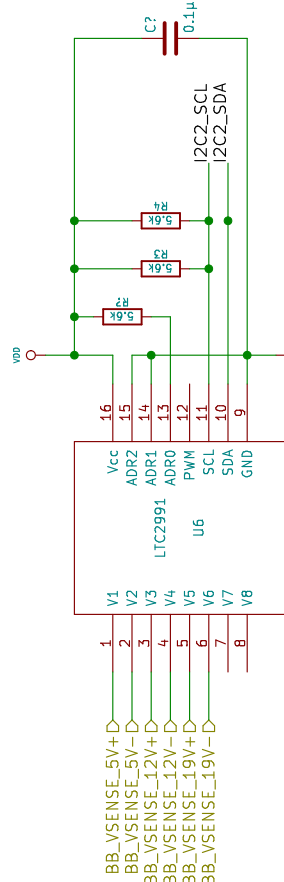
TODO: connect these labels to BBB GPIO pins.



Cape EEPROM
I2C addr 0x54



Voltage, Current & Temp Sensors, Sources
I2C addr 0x90



Voltage, Current & Temp Sensor, Sinks
I2C addr 0x91

TODO:

- * Rocket-ready status
- * Umbilical connection state
- * Ignition fuse state

Portland State Aerospace Society <<http://psas.pdx.edu/>>

Sheet: /BeagleBone Black Cape/

File: beaglebone_cape.sch

Title: LTC3 BeagleBone Black Cape Interface

Size: B	Date: 2015-08-01
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KiCad E.D.A. kicad no-vcs-found-product