Battery Management System (BMS)

V1 Notes:
Circuitry created

- Add voltage divider with buffer with analog voltage of battery that can be read by computer
- Add space for battery buzzer to be hooked up
- might be nice to add comparator with an LED to visably show when the voltage per cell or overall voltage is below a certain threshold

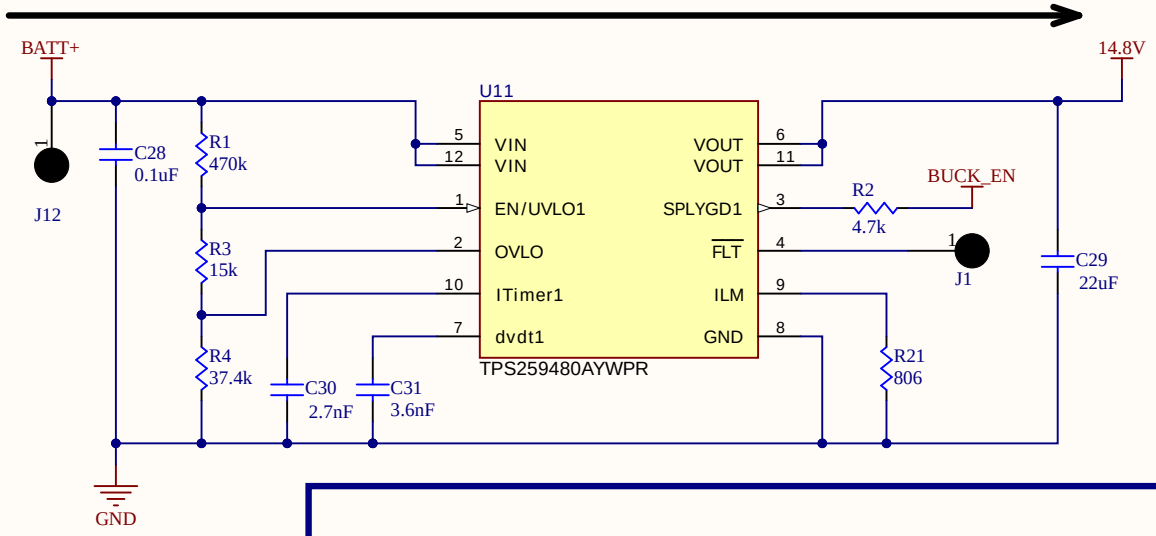
Description: The BQ7720700DSSR monitors all of the Lipo cell ICs. Detect various faults OVP, UVP, OW, and OT.

TPS259480AYWPR protects supply with bidirectional current control and provides logic output to enable downstream system. Also detects same faults as BPQ7720.

V2 Notes:

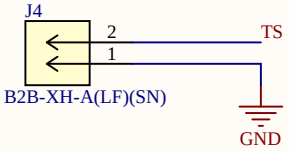
- Changed back-to-back FETs for bidirectional current protection to eFuse system with TPS25498
-Uses logic output for buck converter enable
-Fault pin can be read as logic input by computer

Flow of Power

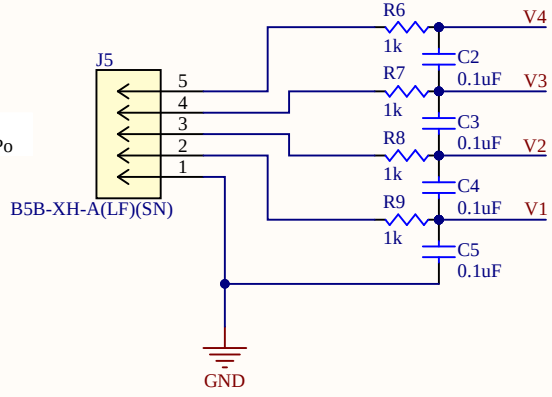


Battery Balance Connectors

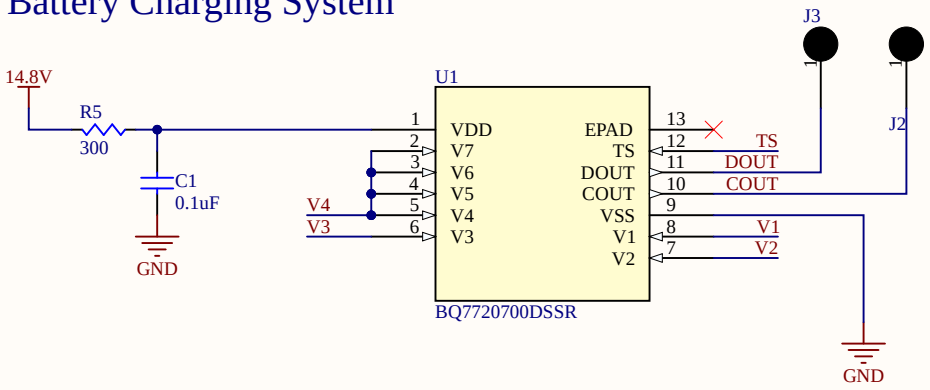
B2B-XH-A(LF)(SN):
Connector for built in temperature sensor (thermistor) for Lipo Battery



B5B-XH-A(LF)(SN):
Balance Lead for 4s LiPo



Battery Charging System



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Date: 11/07/2023	Sheet of	
File: C:\Users\..\Battery Management System.SchDoc	Drawn By: Ethan Reussow	