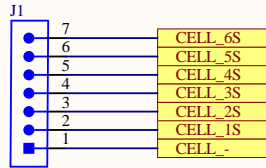
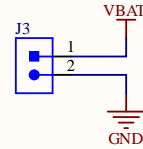


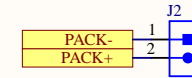
Battery Balancing



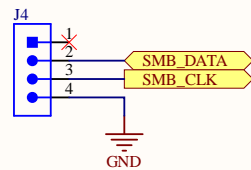
Battery In



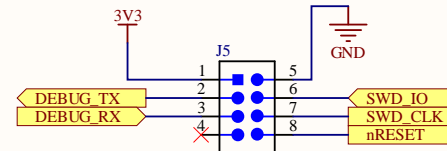
Pack Out




EV2400

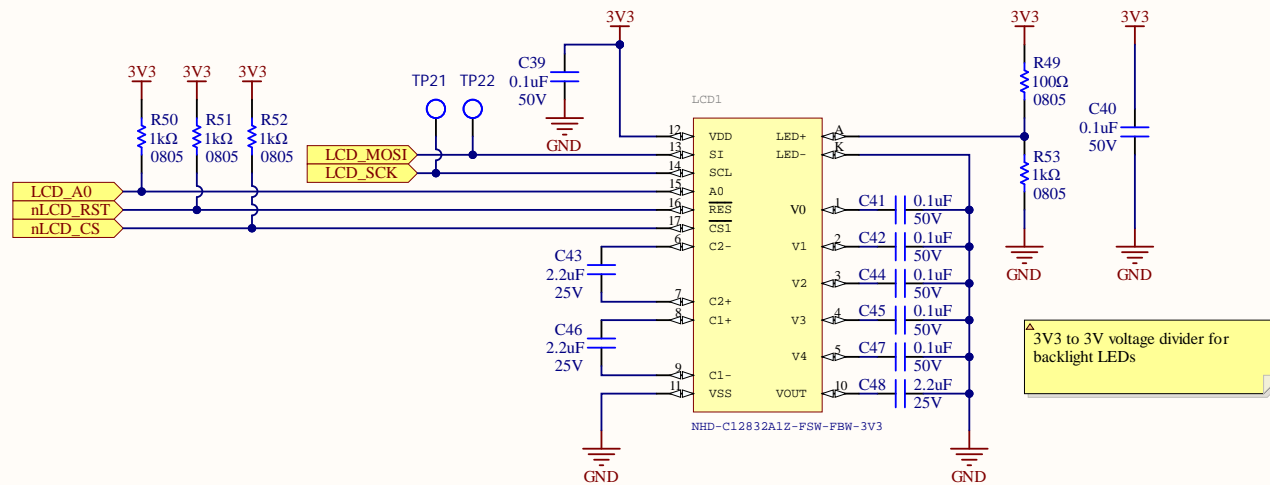


Debug/Programing

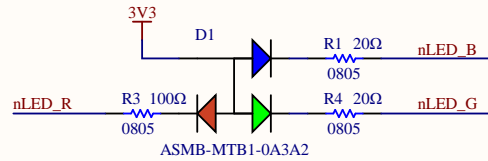


Title Connectors			UW Robotics 200 University Avenue Waterloo Ontario Canada N2L 3G6	
Size: Letter	Drawn By: Ayesha Ebrahim			
Date: 2020-05-23	Sheet of			
File: C:\Users\ayesh\Documents\GitHub\MarsRover2020-PCB\Projects\BMS\Rev1\Connectors.SchDoc				

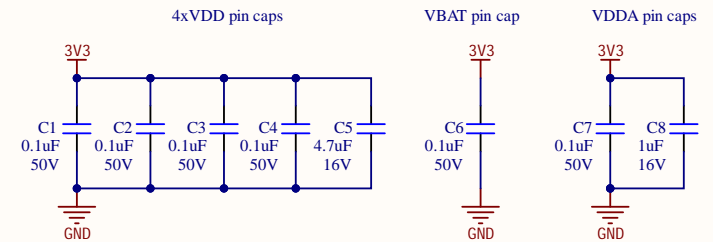
LCD



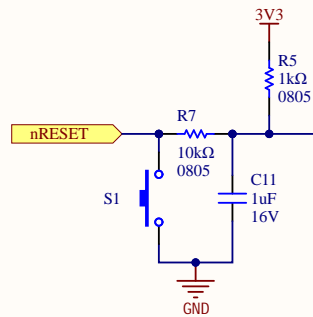
Test LEDs



Decoupling Caps



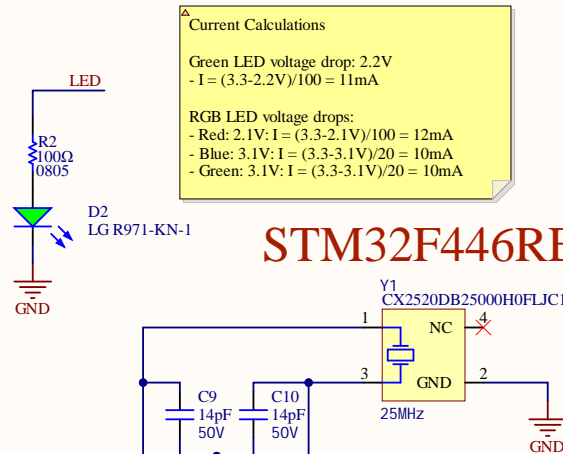
Reset Button



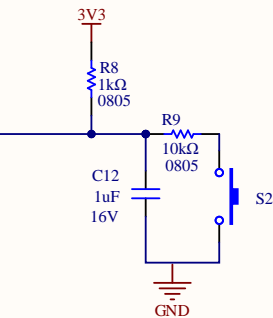
For Debounce Circuit:

$$T = RC \rightarrow C = T/R$$
$$C = 10\text{ms}/10\text{k}\Omega = 1\mu\text{F}$$

STM32F446RET6

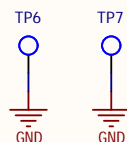



Test Button



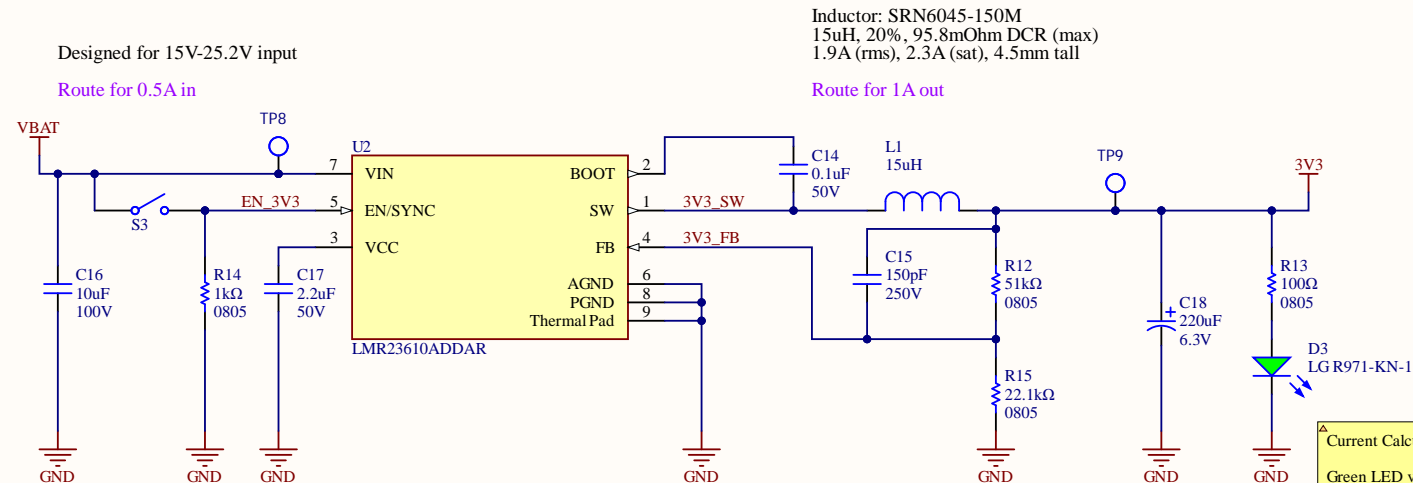
For Debounce Circuit:
 $T = RC \rightarrow C = T/R$
 $C = 10\text{ms}/10\text{k}\Omega = 1\mu\text{F}$

GND Test Points



Title MCU		
Size: Letter	Drawn By: Ayesha Ebrahim	
Date: 2020-05-23	Sheet 1 of 1	
File: C:\Users\ayesh\Documents\GitHub\MarsRover2020-PCB\Projects\BMS\Rev1\MCU_SchDoc		

Battery Voltage to 3V3 Buck @ 1A Max



Current Calculations

Green LED voltage drop: 2.2V
 $I = (3.3 - 2.2V) / 100 = 11mA$

Max expected power on output = 1.65W
 Max current = 0.5A
 Expected Efficiency at 1A > 87.7%

SD Card Connector

