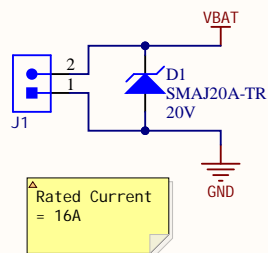
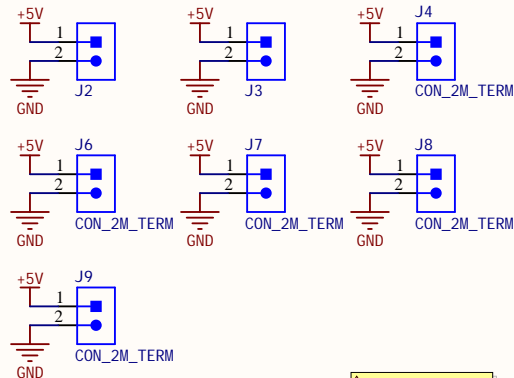


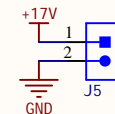
## 24V Input



## 5V Output



## 17V Output



Mates with  
0039012020  
0039013022  
0039012025

22-24 AWG

Associated crimps:  
0039000038 (18-24 AWG)  
0039000038 (22-28 AWG)  
0039000077 (16 AWG)

Title Connectors

Size: Letter Drawn By: Adrianna Ascalon

Date: 6/3/2020

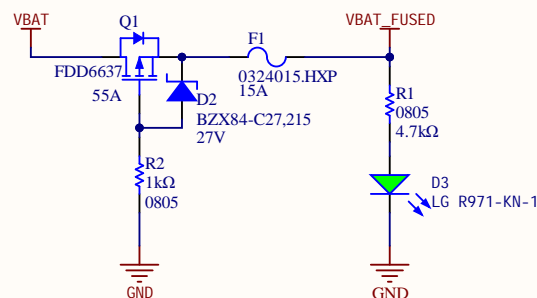
Sheet 1 of 3

File: C:\Users\lance.bantoto\MarsRover2021-hardware\Projects\Power Distribution Board\Rev1\SH1 - CONNECTORS

UW Robotics  
200 University Avenue  
Waterloo  
Ontario  
Canada N2L 3G6

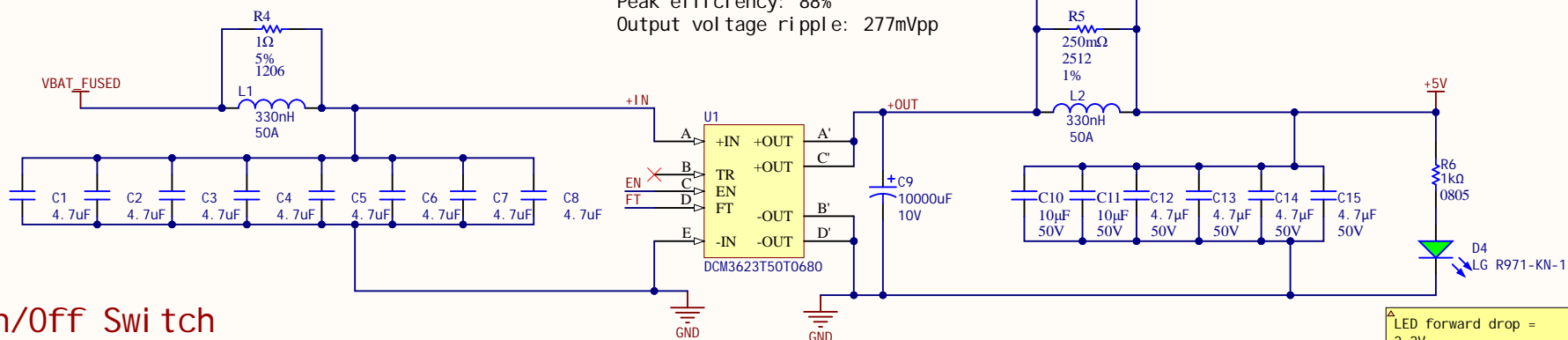


# Reverse Polarity Protection

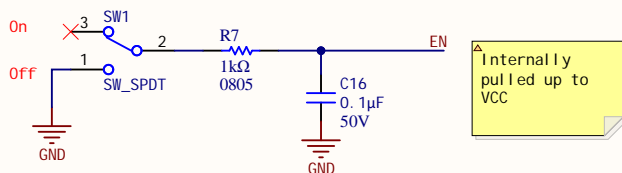


LED forward drop = 2.0V  
 Max VBAT = 24V  
 Min VBAT = 18V  
 Max LED current =  $(24-2)/4700$   
 = 4.7mA  
 Min LED current =  $(18-2)/4700$   
 = 3.4mA

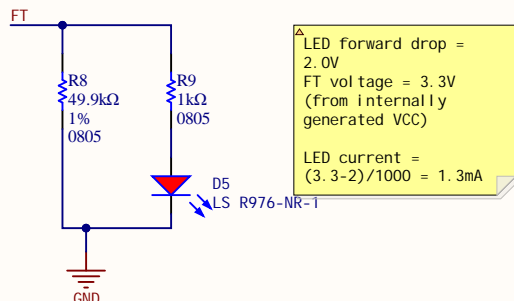
Buck Converter ratings:  
 Input voltage range: 9-50V  
 Output voltage: 5.0V  
 Max output current: 16A  
 Peak efficiency: 88%  
 Output voltage ripple: 277mVpp



## On/Off Switch

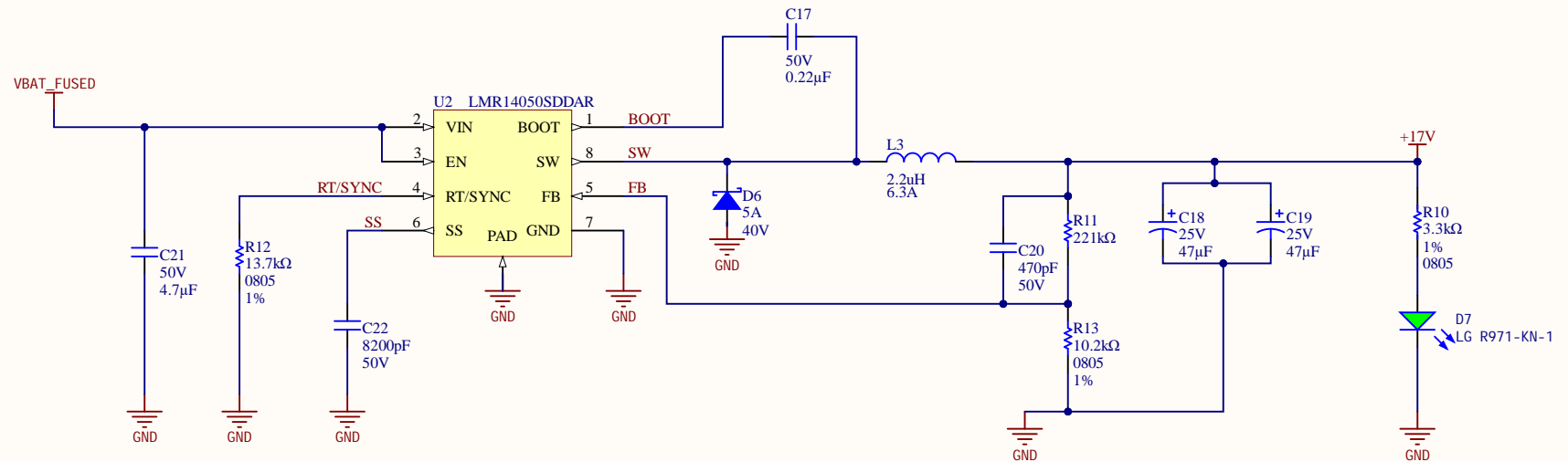


## Fault Indicator



LED forward drop = 2.0V  
 FT voltage = 3.3V  
 (from internally generated VCC)  
 LED current =  $(3.3-2)/1000$  = 1.3mA

Buck Converter ratings:  
 Input voltage range: 18-24V  
 Output voltage: 17V  
 Max output current: 4A  
 Peak efficiency: 94.8%  
 Output voltage ripple: 19.45mVpp



LED forward drop = 2.2V  
 LED current =  $(17 - 2.2) / 3300 = 4.5\text{mA}$