

Waterloo Rocketry

Sheet: /
File: payload2020_base_board.sch

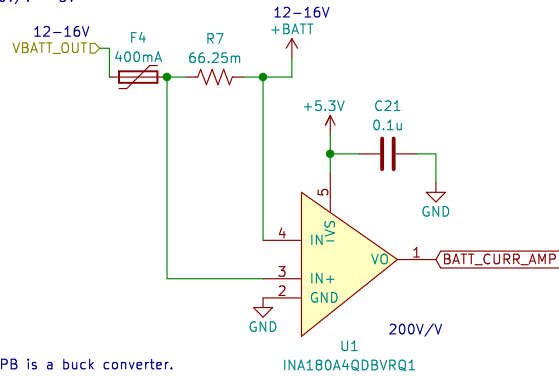
Title: Papa Board

Size: A4 Date:
KiCad E.D.A. eeschema (5.1.9)-1

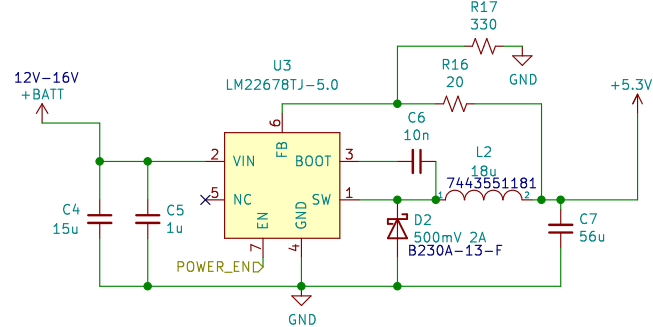
Rev:
Id: 1/4

Main Power Supplies

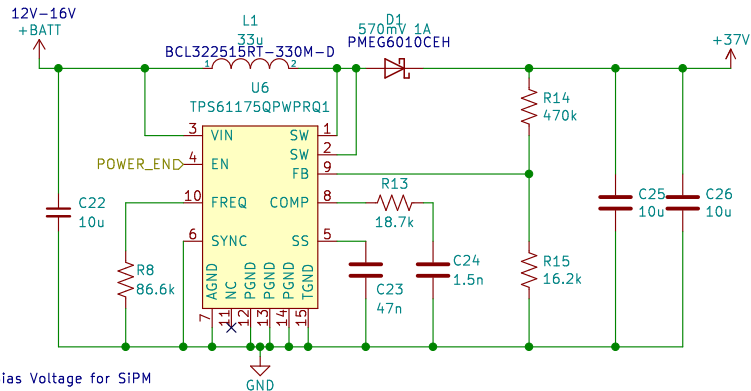
$66.25\text{mR} \cdot I \cdot 200\text{V/V} = 5\text{V}$
 $I_{\text{max}} = 400\text{mA}$



LM22678TJ-5.0/NOPB is a buck converter.
 $I_{\text{out}}: 1.5\text{A}$
 Values are taken from WEBENCH power designer
<https://webench.ti.com/appinfo/webench/scripts/SDP.cgi?ID=68E5BFACDBC533EB>
 PDF version:
<https://drive.google.com/file/d/13pYM-p7NzZnNQYZXknj9P6BV4uZ4R9wv/view?usp=sharing>



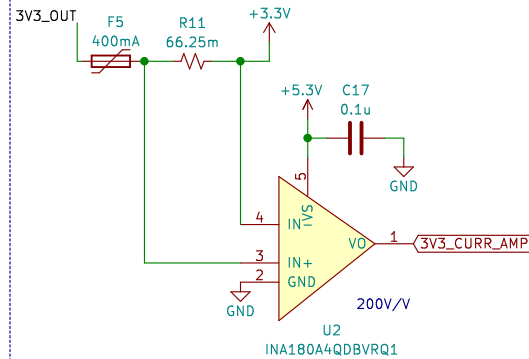
TPS61175 is a boost converter.
 Max I_{out} rating: 3A
 Values are taken from WEBENCH power designer
<https://webench.ti.com/appinfo/webench/scripts/SDP.cgi?ID=72ECE7EF0AA4EE07>
 PDF version:
<https://drive.google.com/file/d/1ktwurg3Bjmdxpc3J00zTu8lIix18m34/view?usp=sharing>



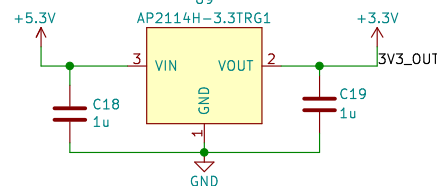
Bias Voltage for SIPM

Logger Board Power Supplies

$66.25\text{mR} \cdot I \cdot 200\text{V/V} = 5.3\text{V}$
 $I_{\text{max}} = 400\text{mA}$

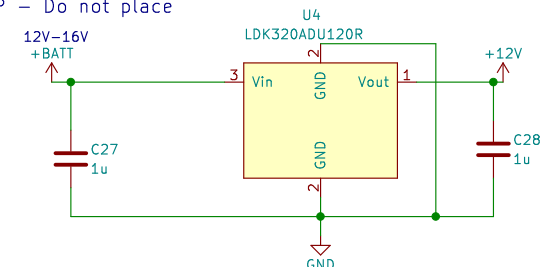


AP2114H-3.3TRG1 is a 3.3V LDO
 $I_{\text{out}} = 600\text{mA}$



1uF capacitors as per datasheet directly (no calculations)
 LDK320ADU120R is a 12V fixed-voltage regulator.
 Max I_{out} rating: 0.2A

DNP – Do not place



Sheet: /battery_management/
 File: battery_management.sch

Title:

Size: A4

Date:

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Rev:

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