

Waterloo Rocketry

Sheet: /
File: payload2020_papa_board.sch

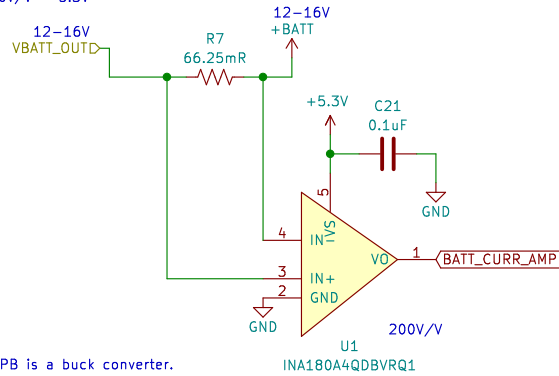
Title: Papa Board

Size: A4
KiCad E.D.A. kicad (5.1.6)-1

Date:
Rev:
Id: 1/4

Main Power Supplies

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



LM22678TJ-5.0/NOPB is a buck converter.

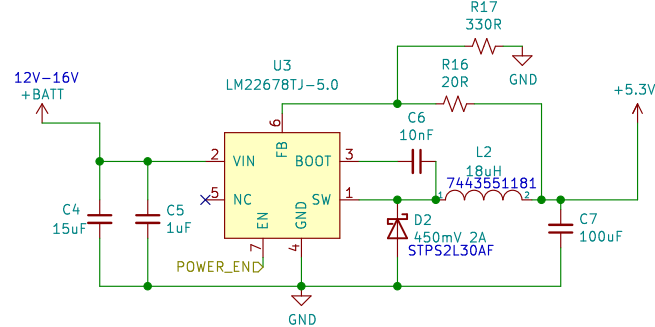
I_{out}: 1.5A

Values are taken from WEBENCH power designer

<https://webench.ti.com/appinfo/webench/scripts/SDP.cgi?ID=2053C05C03E5ECAE>

PDF version:

<https://drive.google.com/file/d/13pYM-p7NzZnNQYZXknj9P6BV4uZ4R9wv/view?usp=sharing>



TPS61175 is a boost converter.

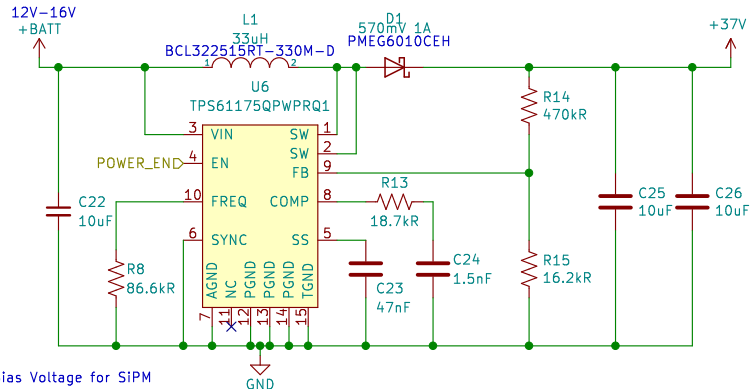
Max I_{out} rating: 3A

Values are taken from WEBENCH power designer

<https://webench.ti.com/appinfo/webench/scripts/SDP.cgi?ID=944A159EFA65DE89>

PDF version:

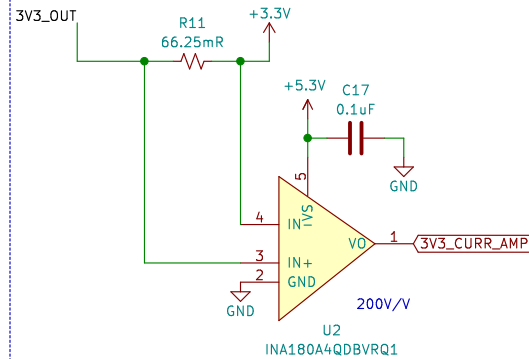
<https://drive.google.com/file/d/1ktwgrh3Bjmdxpc3J00zTu8lIix18m34/view?usp=sharing>



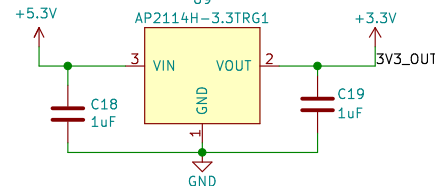
Bias Voltage for SIPM

Logger Board Power Supplies

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

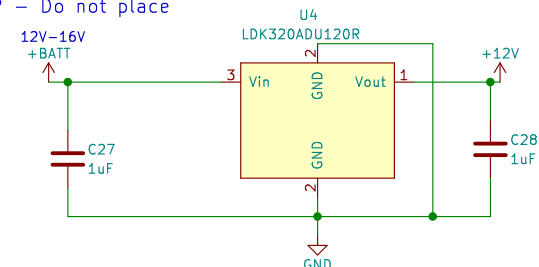


AP2114H-3.3TRG1 is a 3.3V LDO
I_{out} = 600mA



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:

Id: 2/4

