

Project Name:

Projeto de Circuitos Eletrônicos para IoT V1.0.0

Released 09/10/2024

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Design Notes

Example of informational notes.

Example of cautionary design notes.

Example of critical design notes.



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PROJECT
DemetrioGurgel - PCEIoT.PrjPcb

VERSION
V1.0.0

TITLE
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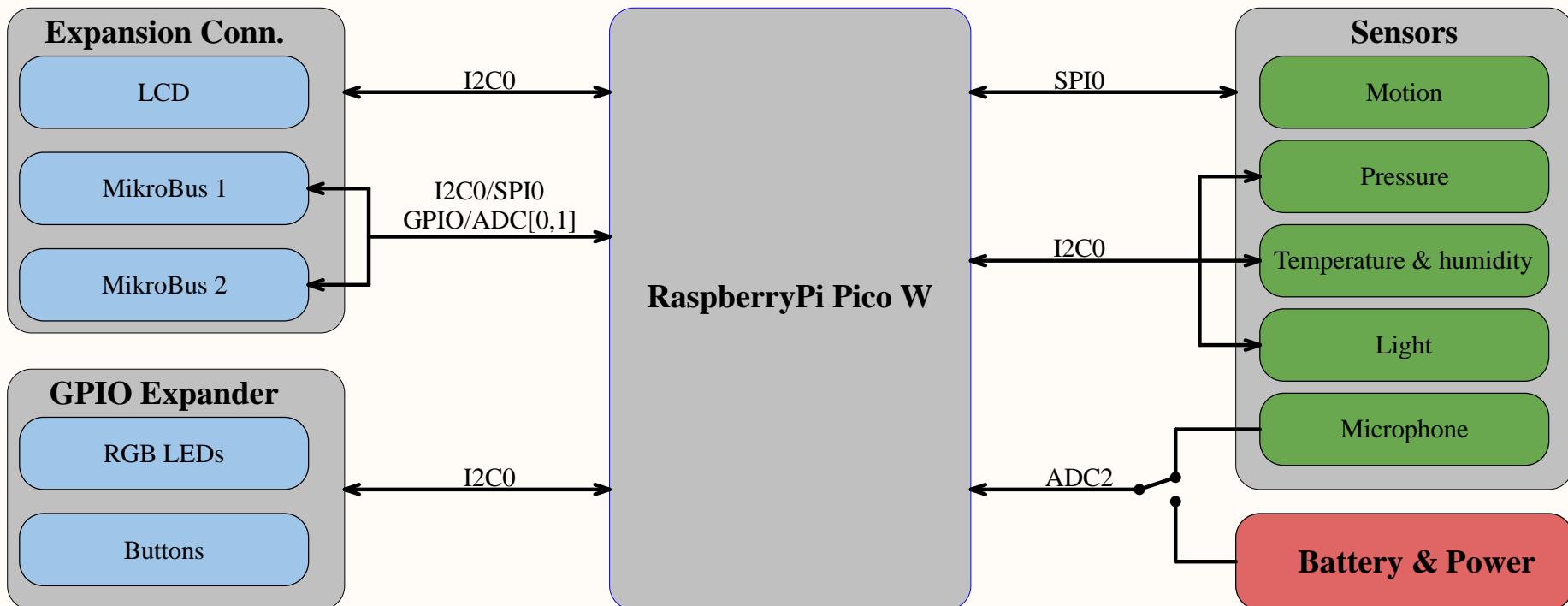
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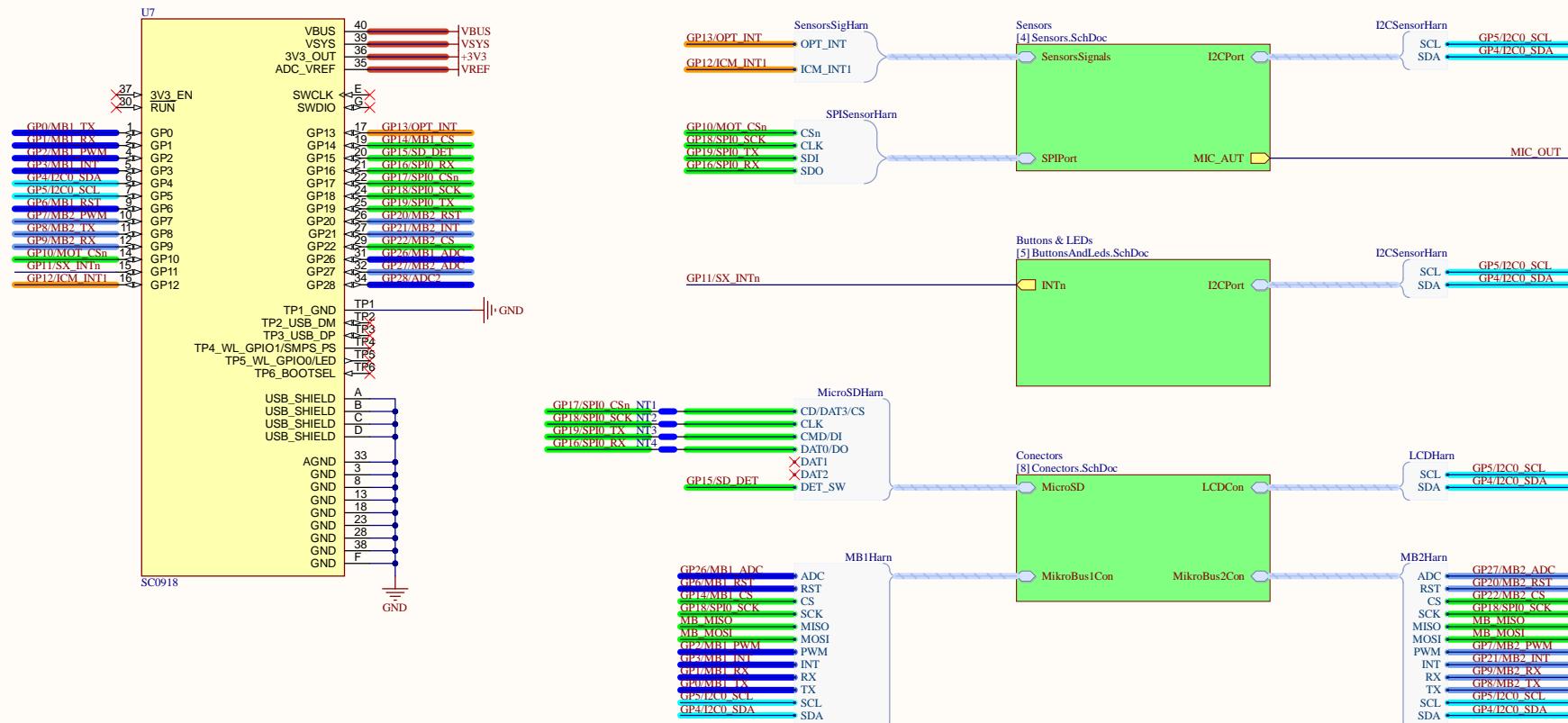
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TableOfContents

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BlockDiagram

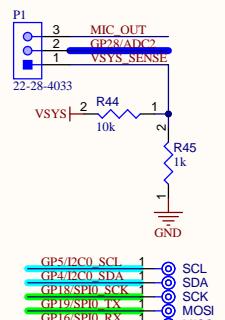
[2] BlockDiagram.SchDoc

PowerManagement

[7] PowerManagement.SchDoc

Mechanical

[9] Mechanical.SchDoc



Do not place R5 and R6 simultaneously.
Do not place R7 and R8 simultaneously.



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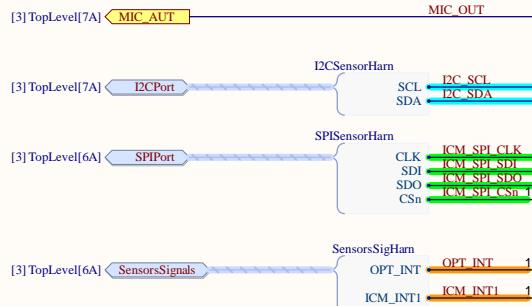
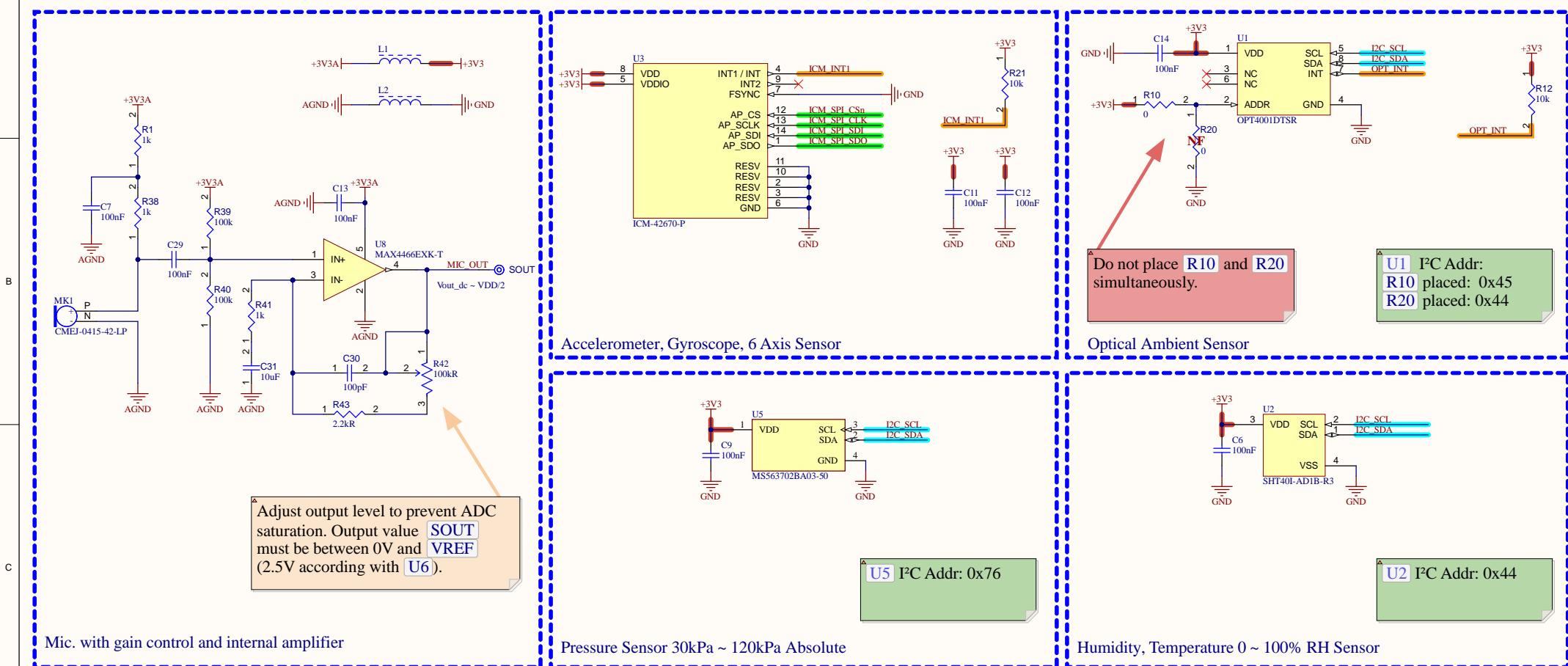
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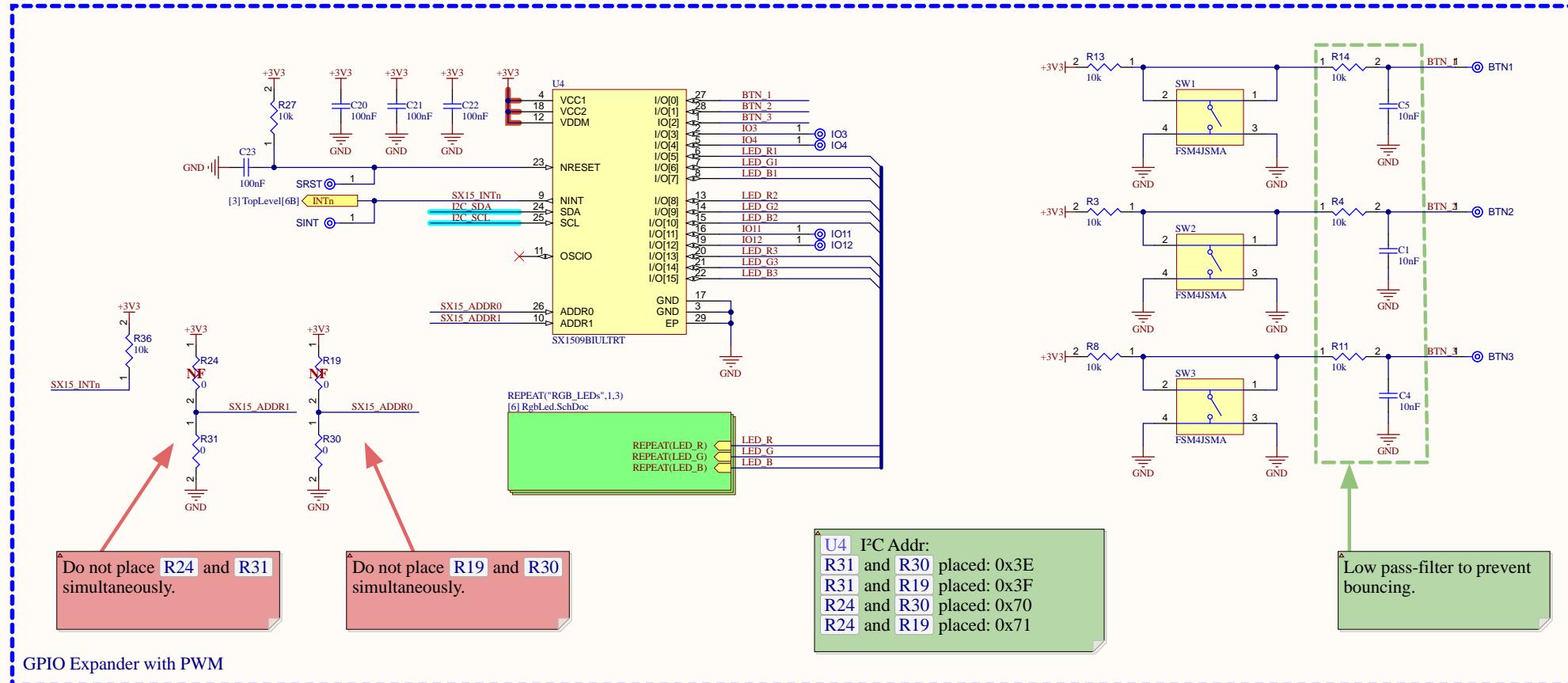
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A



[3] TopLevel[7B] I²CSensorHarn { SCL I²C SCL SDA I²C SDA }

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[5] ButtonsAndLeds.SchDoc		
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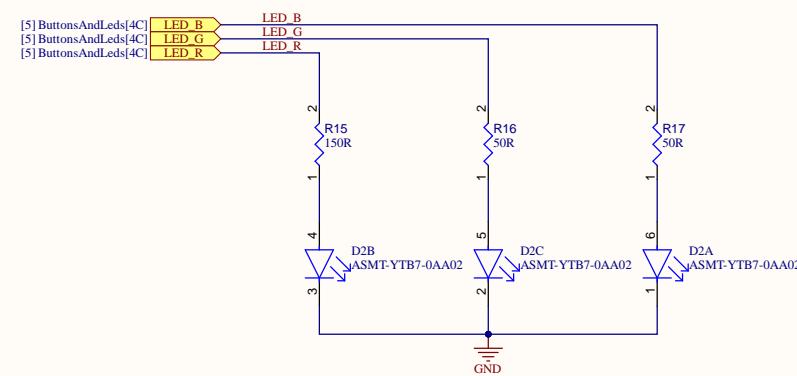
B

C

C

D

D



[5] ButtonsAndLeds[4C] LED B
 [5] ButtonsAndLeds[4C] LED G
 [5] ButtonsAndLeds[4C] LED R

R15 150R
 R16 50R
 R17 50R

D2B ASMT-YTB7-0AA02
 D2C ASMT-YTB7-0AA02
 D2A ASMT-YTB7-0AA02

GND

A [R15], [R16] and [R17] calculated based on voltage drops for each LED for a same current amount of 10mA.

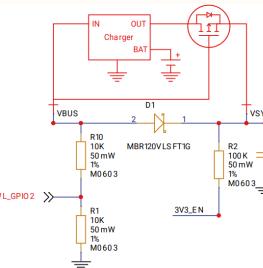


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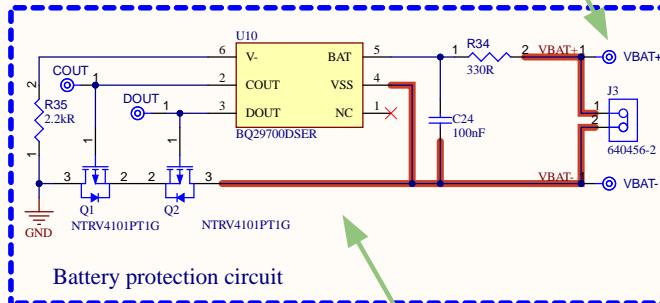
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RPI Pico W Battery suggestion usage



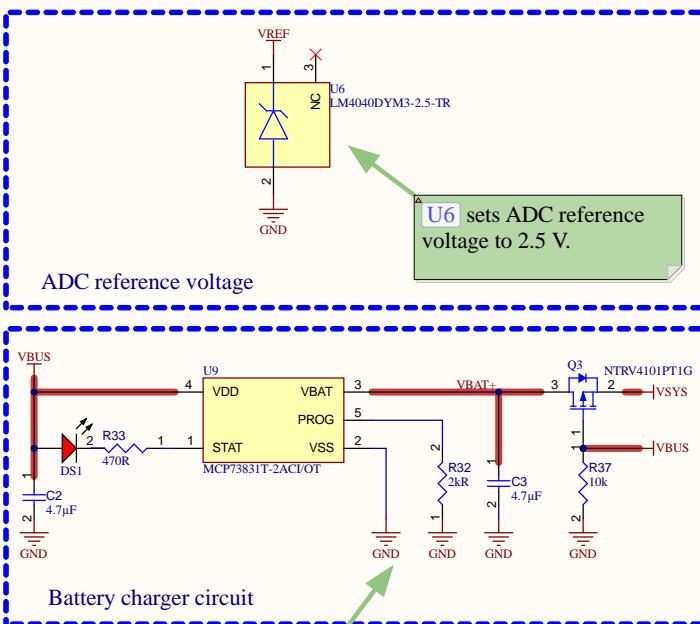
VBUS
+3V3
VSYS
VSYS
VREF

J3 is designed to connect a single cell li-ion battery.



Battery protection circuit

U10 cutoff protection values:
OVP: 4.275V
UVP: 2.8V



ADC reference voltage

U6 sets ADC reference voltage to 2.5 V.

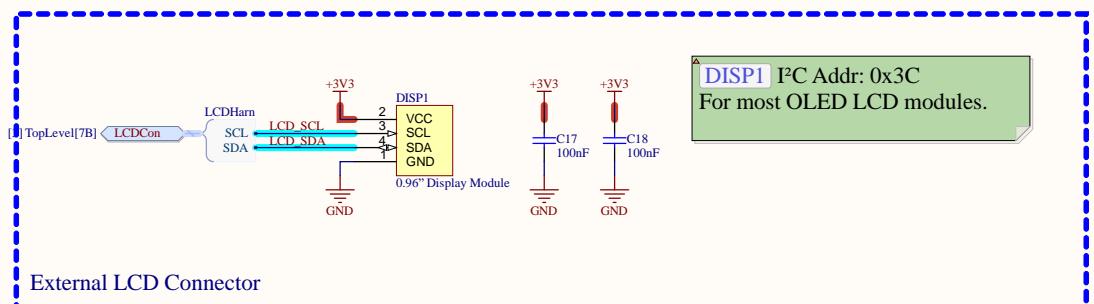
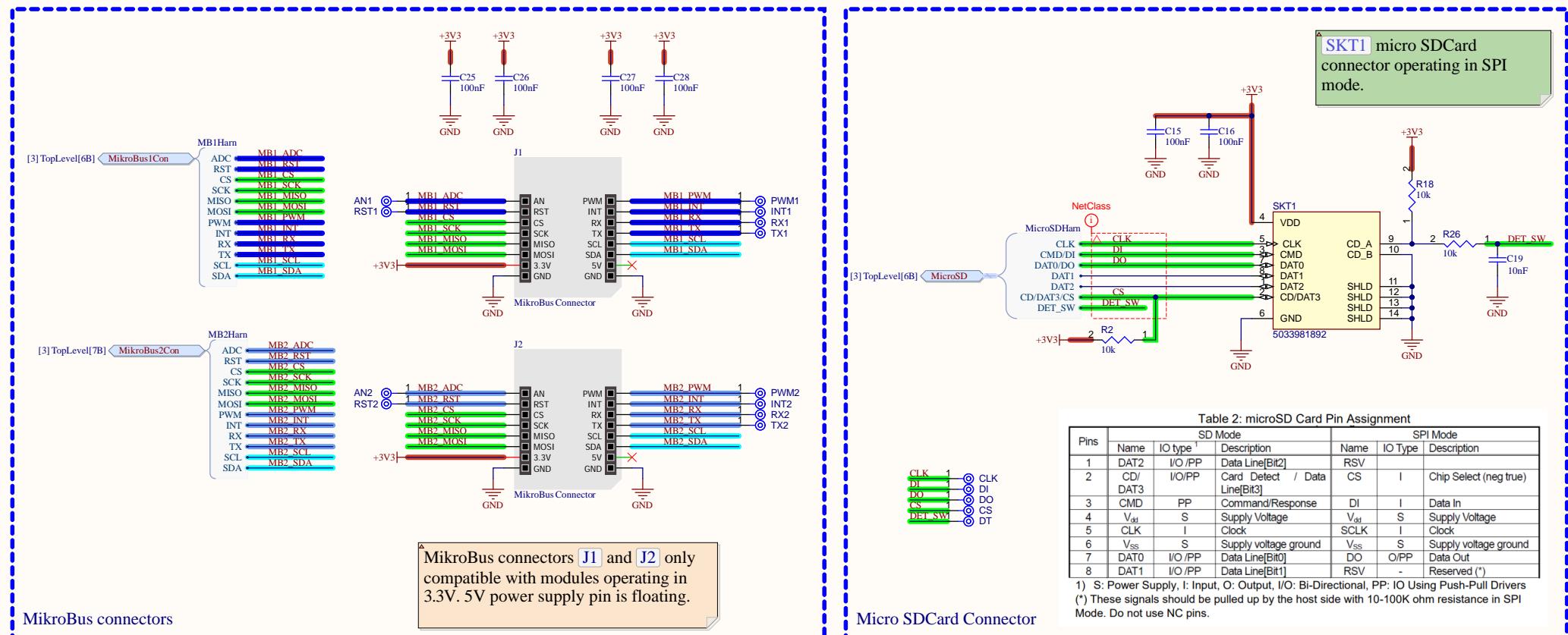
Battery charger circuit

R32 sets fast charge current to 500mA.



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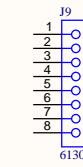
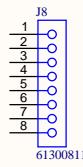
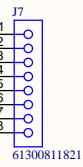
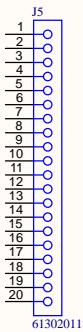
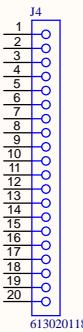
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