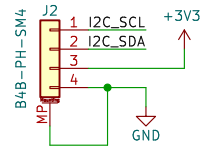


Libre Solar BMS for 3–16 cells

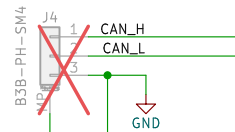
Based on TI bq76952 and ESP32-C3

Development funded by
EnAccess Foundation.
<https://enaccess.org>

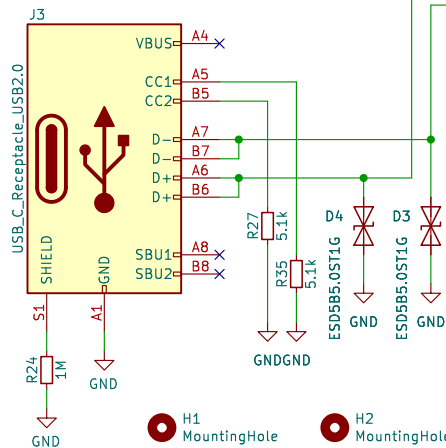
Internal I2C



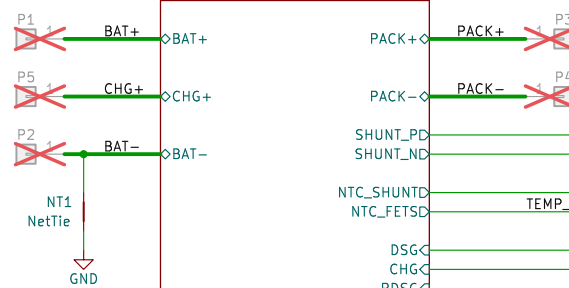
CAN / RS-485



USB

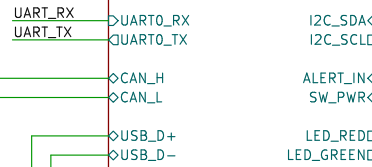


Power Part



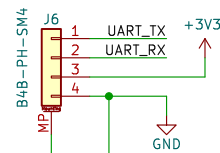
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ESP32-C3 MCU

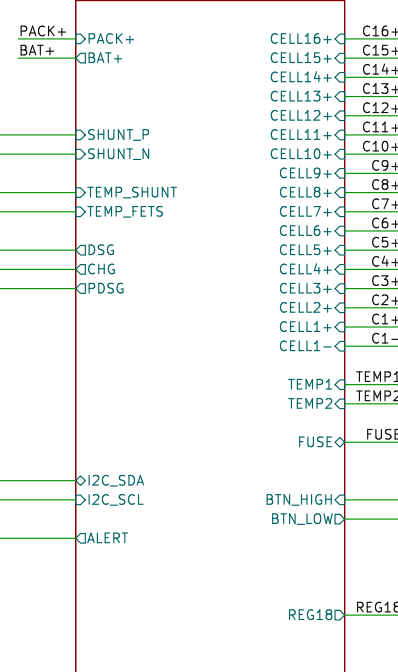


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Serial

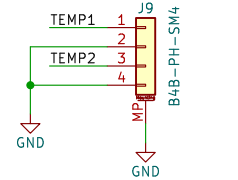
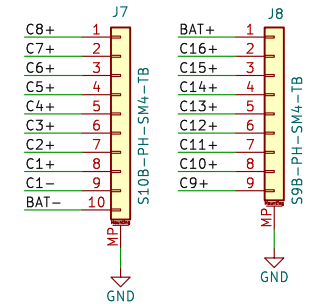


BQ76952

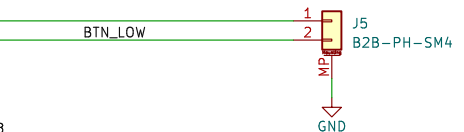


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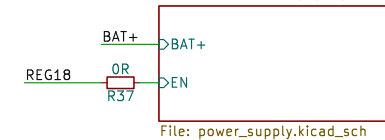
Cell Connectors



On/Off button



Power Supply



File: power_supply.kicad_sch

- H1 MountingHole
- H2 MountingHole
- H3 MountingHole
- H4 MountingHole
- H5 MountingHole
- H6 MountingHole



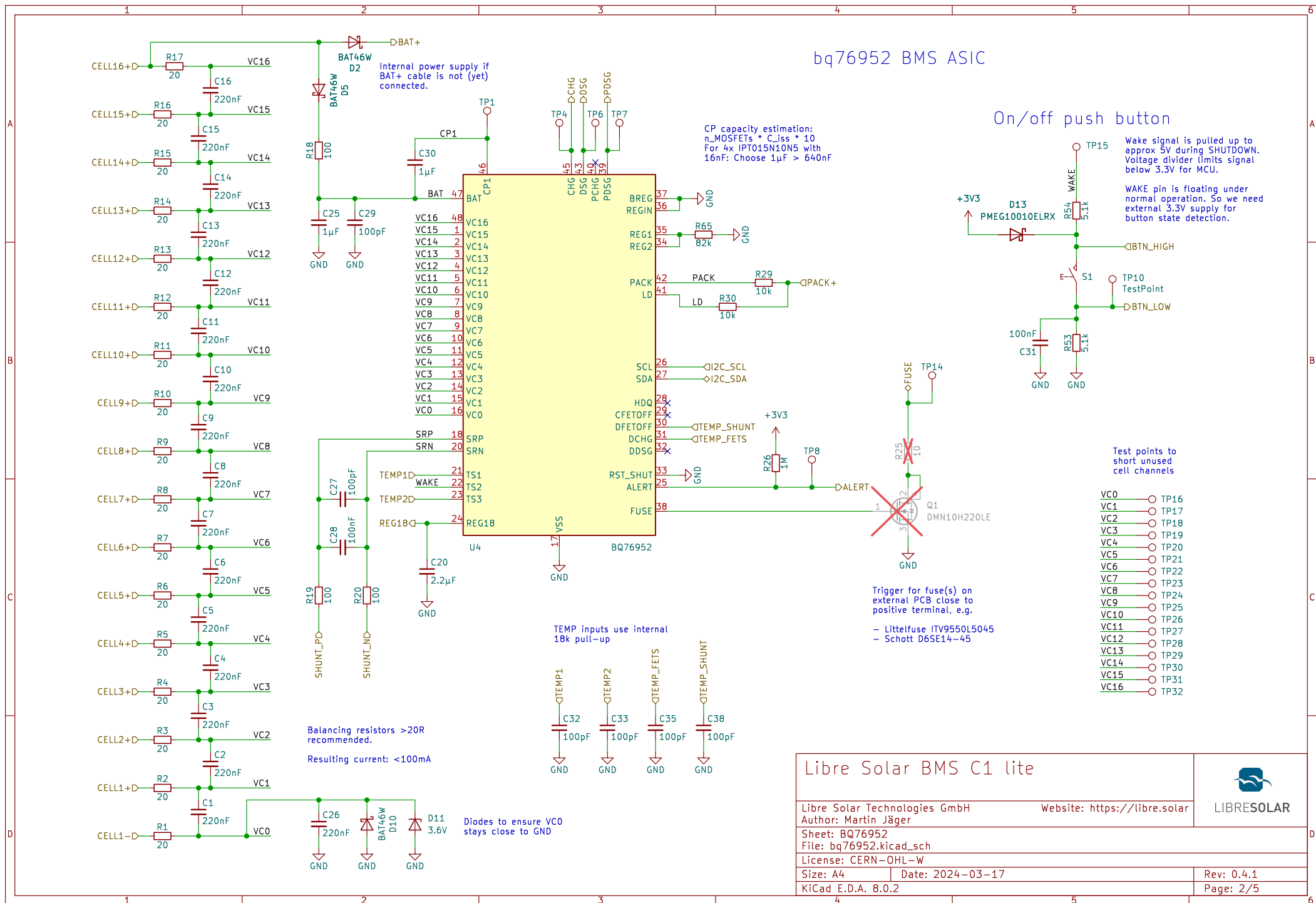
Libre Solar BMS C1 lite

Libre Solar Technologies GmbH
Author: Martin Jäger
Sheet: Root
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License: CERN-OHL-W
Size: A4
Date: 2024-06-25
KiCad E.D.A. 8.0.2



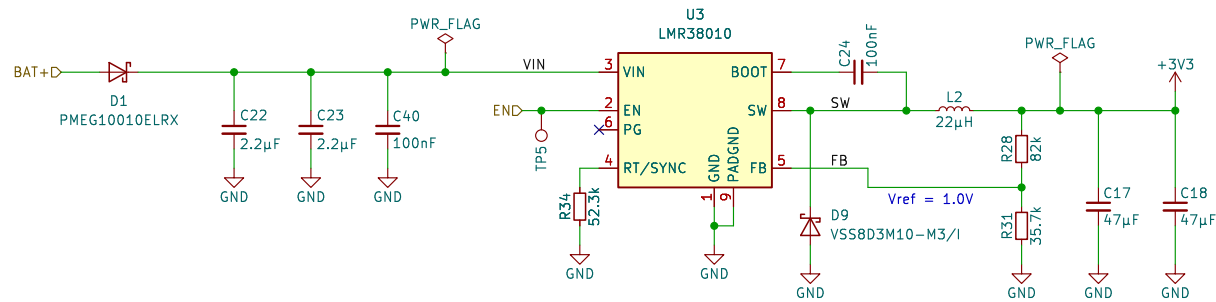
LIBRESOLAR

Rev: 0.4.1
Page: 1/5



Battery to 3.3V (SMPS)

ESP32-C3 requires power supply with at least 500 mA



Layout for 500 kHz, 1A output

Libre Solar BMS C1 lite

Libre Solar Technologies GmbH
Author: Martin Jäger

Website: <https://libre.solar>



Sheet: Power Supply
File: power_supply.kicad_sch

License: CERN-OHL-W

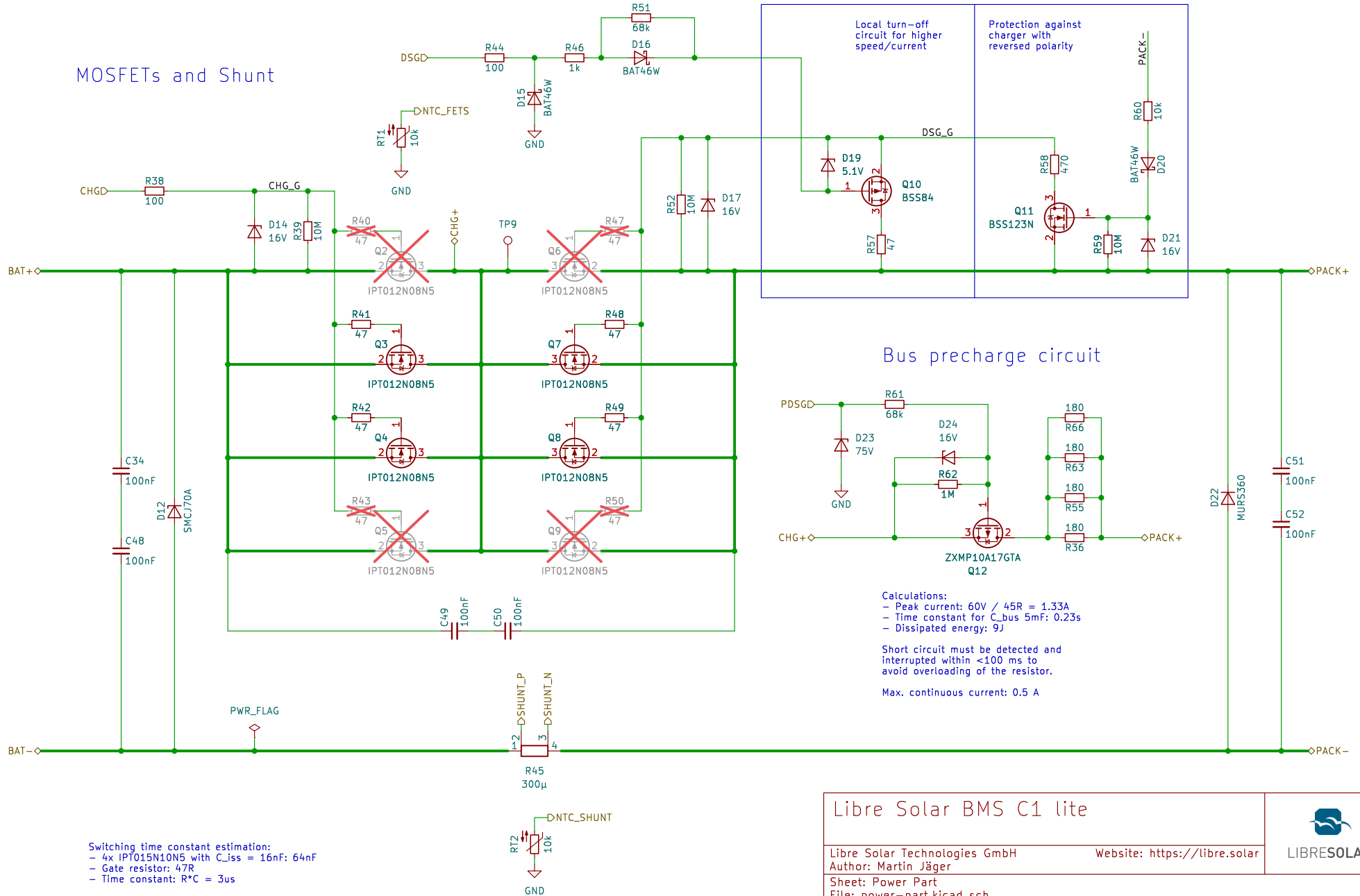
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KiCad E.D.A. 8.0.2

Rev: 0.4.1

Page: 3/5

MOSFETs and Shunt



Libre Solar BMS C1 lite

Libre Solar Technologies GmbH
Author: Martin Jäger

Website: <https://libre.solar>



Sheet: Power Part
File: power-part.kicad_sch

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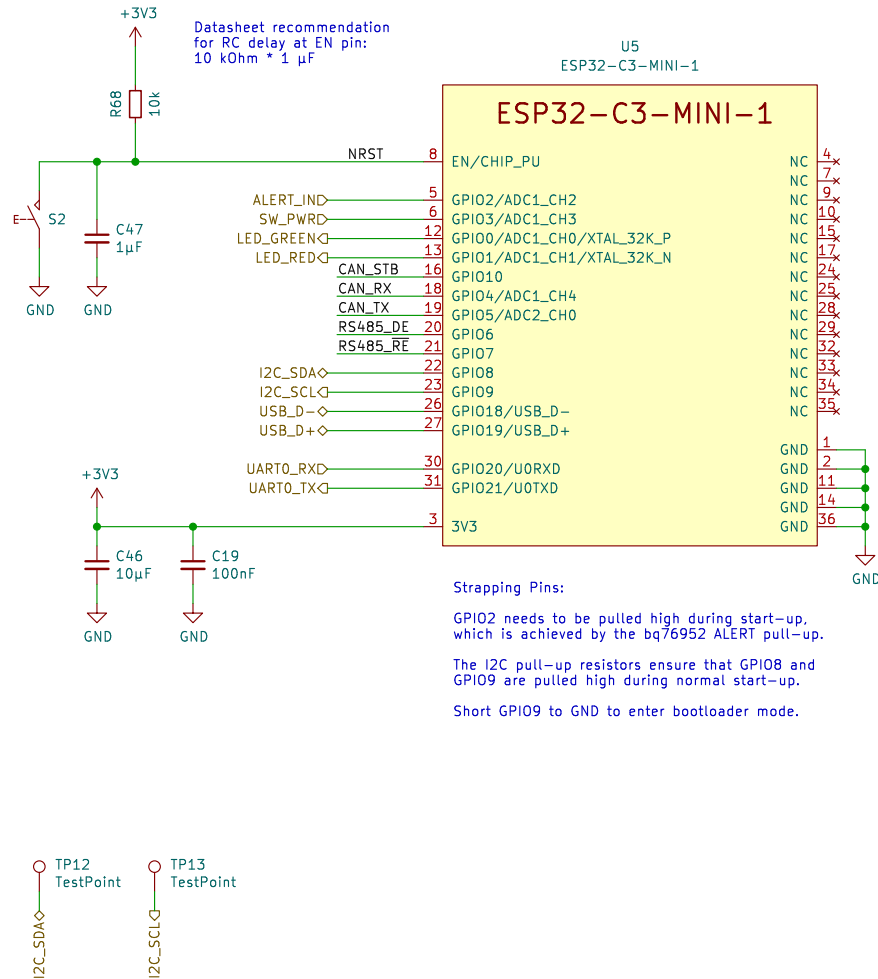
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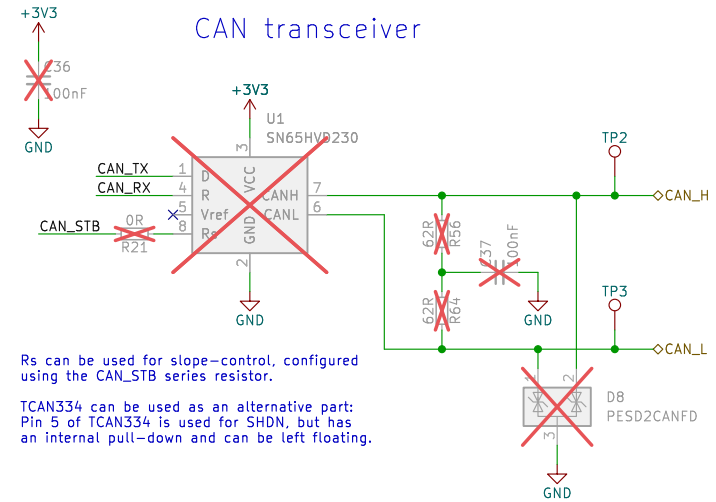
Rev: 0.4.1

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ESP32-C3 module

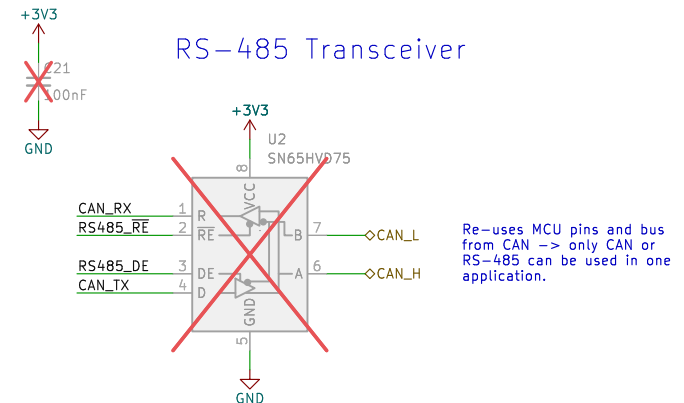


CAN transceiver



PESD2CAN or NUP2105L also suitable, but FD versions are more common nowadays.

RS-485 Transceiver



Libre Solar BMS C1 lite

Libre Solar Technologies GmbH		Website: https://libre.solar	
Author: Martin Jäger			
Sheet: ESP32-C3 MCU			
File: esp32-c3.kicad_sch			
License: CERN-OHL-W			
Size: A4		Date: 2024-03-17	
KiCad E.D.A. 8.0.2			



Rev: 0.4.1
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