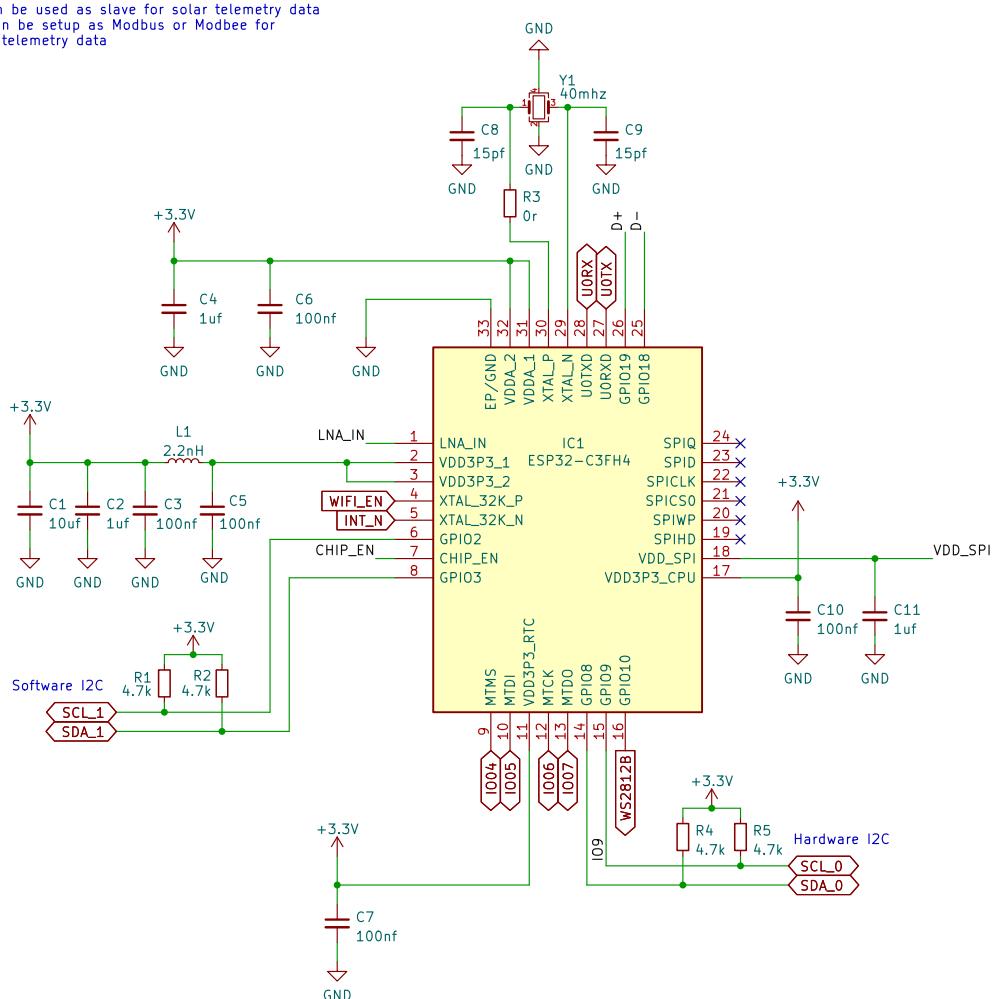


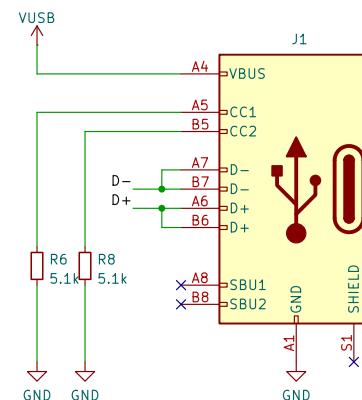
ESP32-C3

Notes:
 Schematic design from reference hardware guide line.
 Design based from model with internal flash and psram
 Model: ESP32-C3FH4
 See ESP-32-C3 Datasheet for pin details

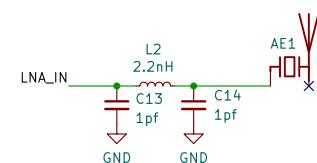
ESP32-C3 is a host to control the BQ25798 Power/MPPT
 I2C_1 is software based to control the BQ25798
 I2C_0 can be used as slave for solar telemetry data
 RS485 can be setup as Modbus or Modbee for
 for solar telemetry data



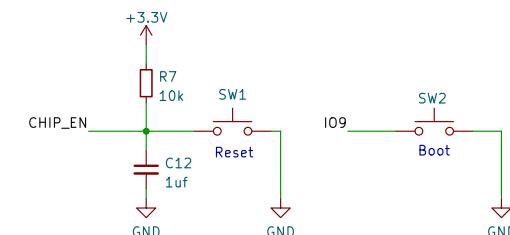
USB-C



Antenna Chip



Reset/Boot



Sheet: /
 File: Modbee-MPPT-TI-C3.kicad_sch

Title: Modbee MPPT TI C3

Size: A4 Date: 2025-05-16

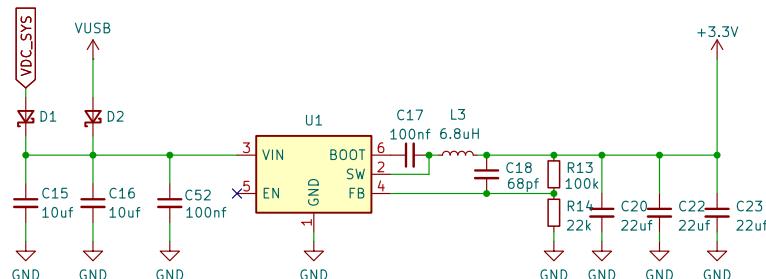
KiCad E.D.A. 9.0.1

Rev: 0.01

Id: 1/3

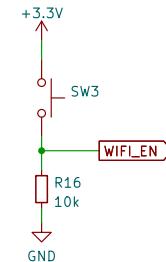
1 2 3 4 5 6

Synchronous Buck



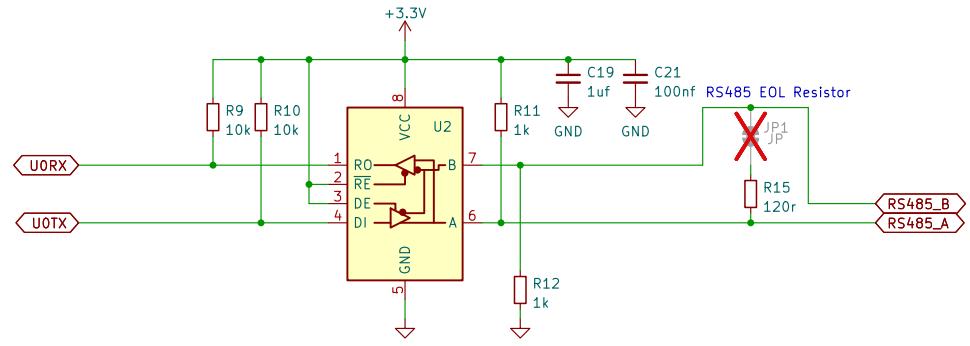
WIFI/RESET

Short Press Enable WIFI
for set time
Long Press Reset EEPROM
Press > 30sec

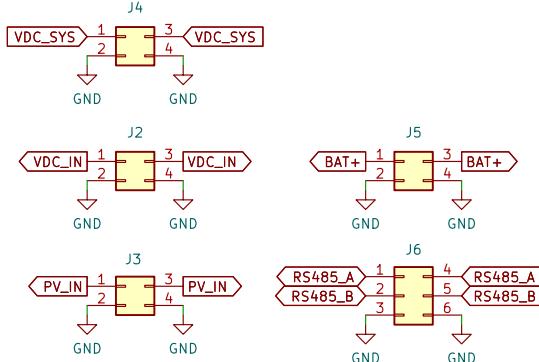


RS485 Transceiver

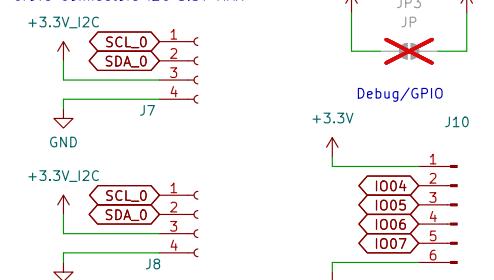
Cut Bridge to disable 120ohm EOL termination resistor



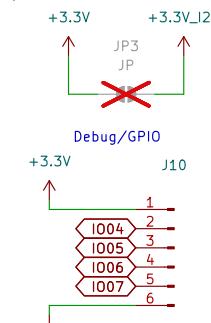
Plug In Terminals/Connectors



Grove Connectors I2C 3.3V MAX



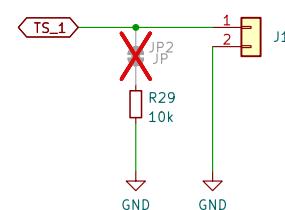
Jumper to connect 3.3V to I2C 3.3V
Only use this if connecting sensor only
Do not connect this
if Grove I2C is
powered from another board



H1
H2
H3
H4

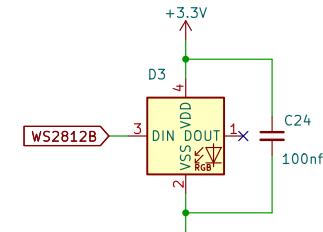
BATT TEMP

Negative temperature
coefficient thermistor
10k



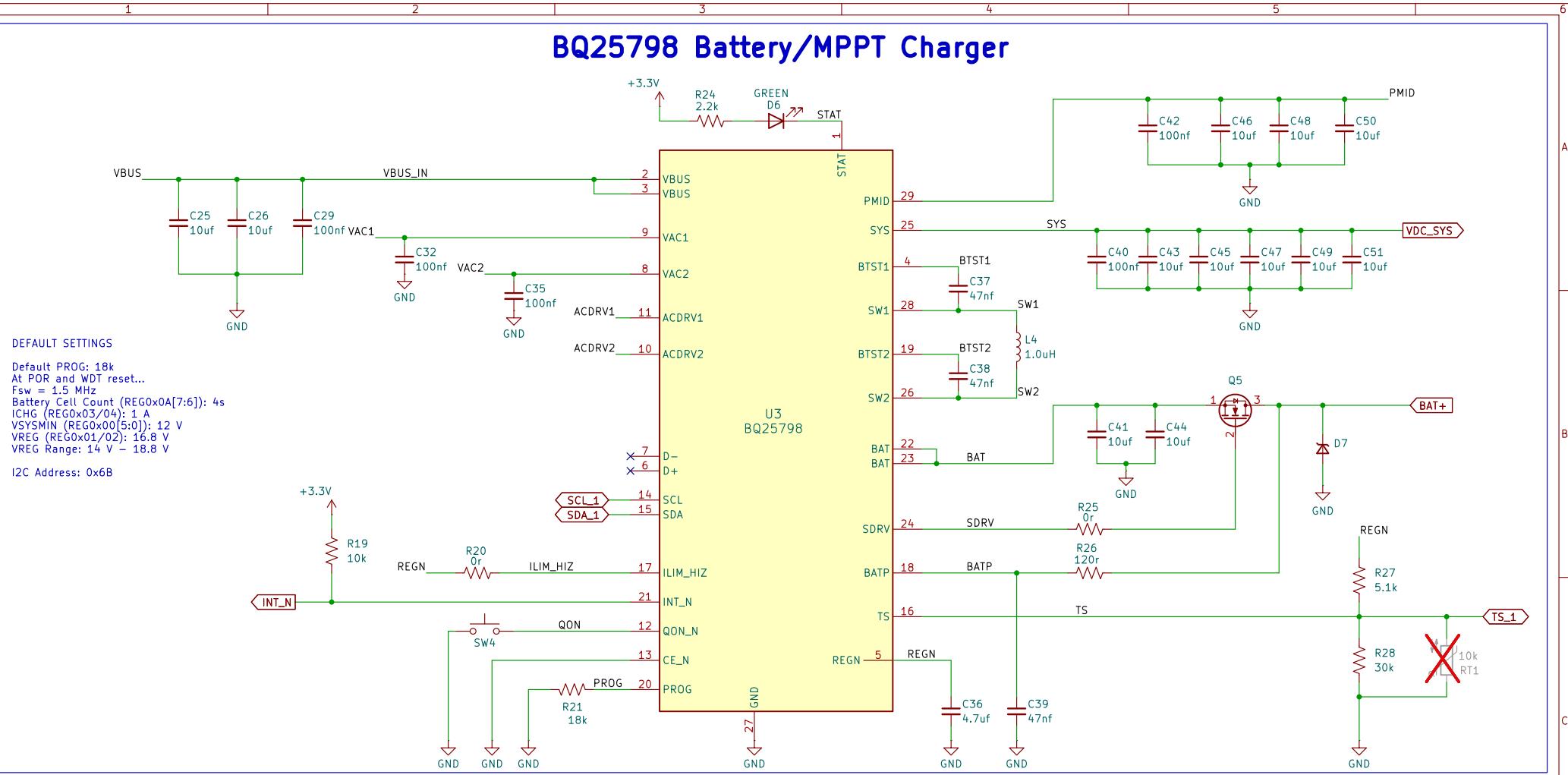
Status LED

Green = MCU OK
Red = Fault
Blue = Status



Sheet: /base/
File: base.kicad_sch
Title: ModBee MPPT TI C3
Size: A4 Date: 2025-05-16
KiCad E.D.A. 9.0.1 Rev: 0.01
Id: 2/3

BQ25798 Battery/MPPT Charger



Sheet: /mppt-charger/
File: mppt-charger.kicad_sch

Title: ModBee MPPT TI C3

Size: A4 Date: 2025-05-16

KiCad E.D.A. 9.0.1

Rev: 0.01

Id: 3/3