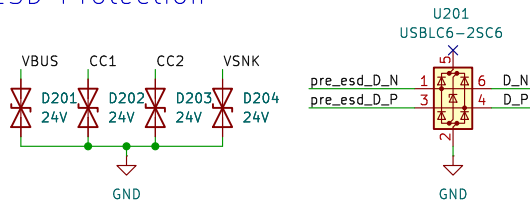
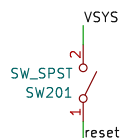


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Sheet: /		
File: power_supply.kicad_sch		
Title: Power Supply		
Size: A4	Date: 2024-10-27	Rev: 0.1.0
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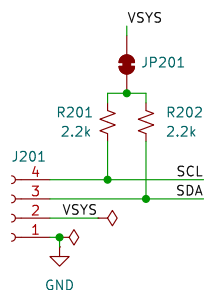
## ESD Protection



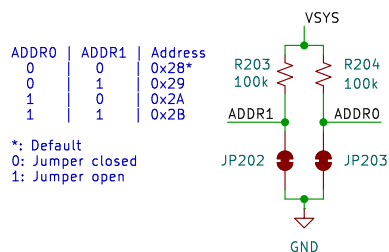
## Reset Switch



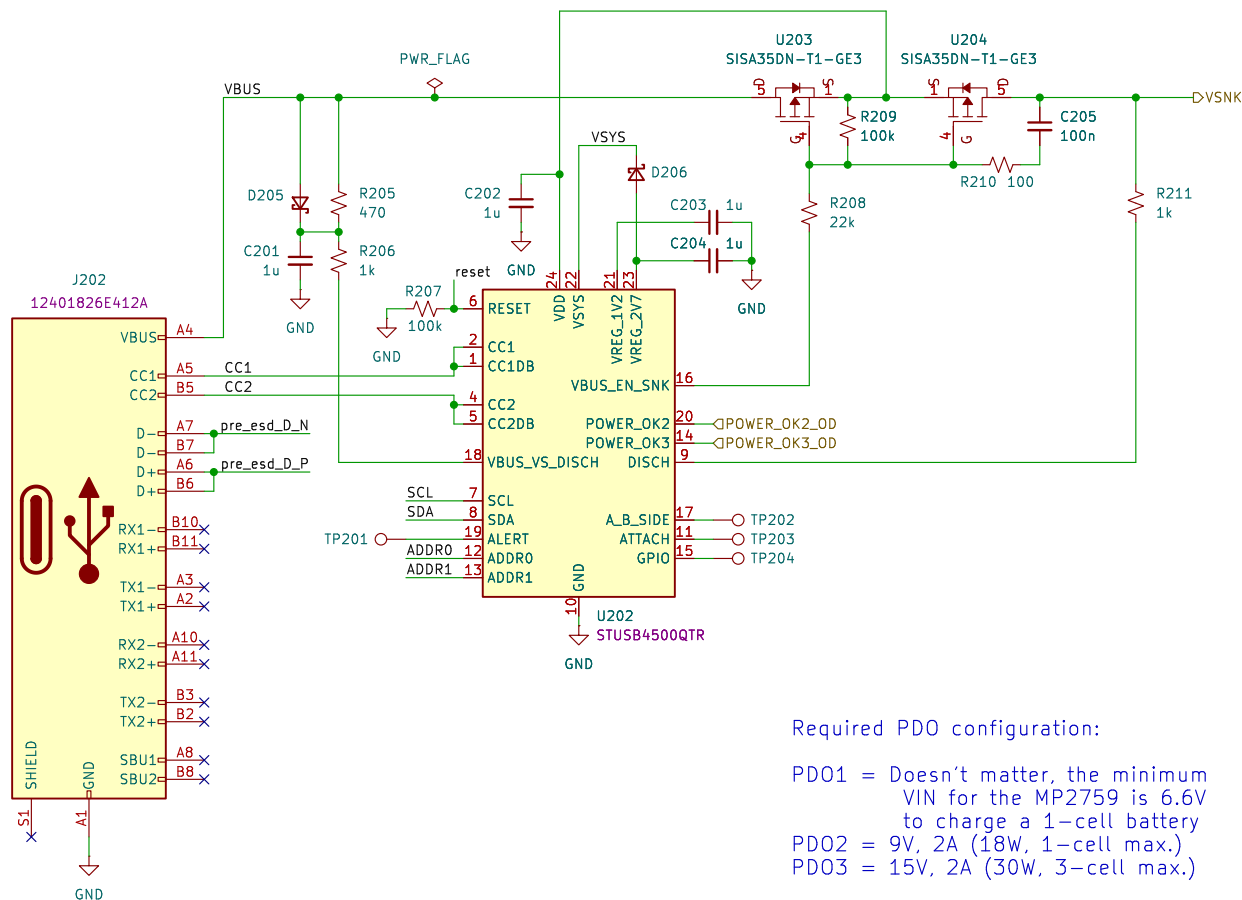
## I2C Connector and Pull-ups



## I2C Address Selection



## USB-C PD Controller

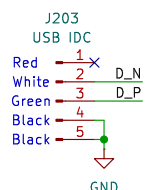


Required PDO configuration:

PDO1 = Doesn't matter, the minimum VIN for the MP2759 is 6.6V to charge a 1-cell battery  
 PDO2 = 9V, 2A (18W, 1-cell max.)  
 PDO3 = 15V, 2A (30W, 3-cell max.)

\*\*Make sure to set the charger ILIM to the lowest current of PDO2 and PDO3\*\*

## USB Header



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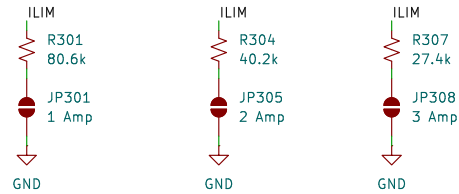
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 File: usb\_c\_pd.kicad\_sch

Title:

Size: A4 Date: 2024-10-27  
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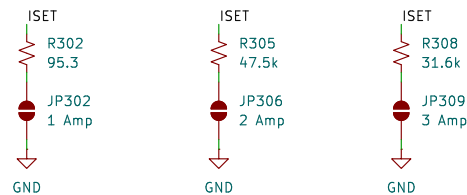
Rev: 0.1.0  
 Id: 2/7

## Input Current Limit Setting



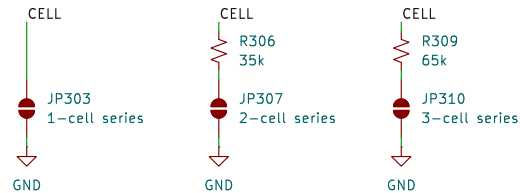
Note: Bridge only the desired current limit's jumper

## Charging Current Setting



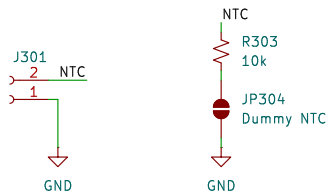
Note: Bridge only the desired current limit's jumper

## Cell Count Setting



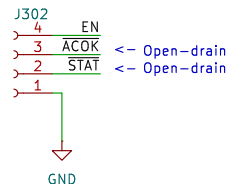
Note: Bridge only the desired cell count's jumper

## Thermister Setting and Connector

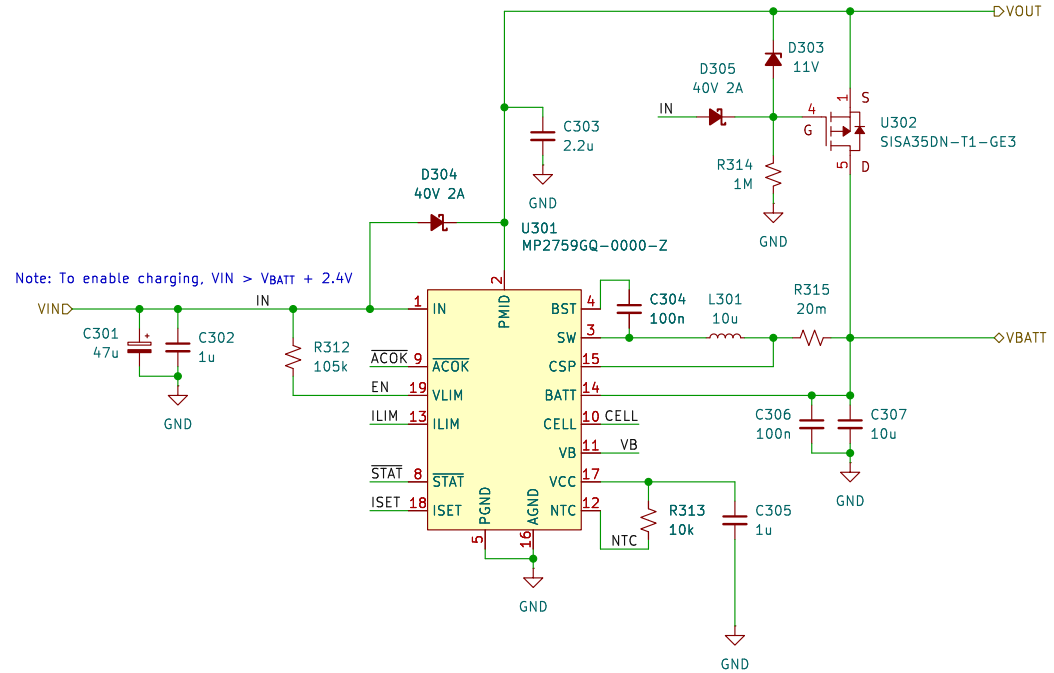


Note: Bridge 'Dummy NTC' when not using a thermistor

## IO Connector

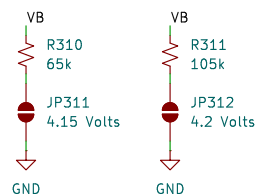


## Charger



Note: To enable charging,  $V_{IN} > V_{BATT} + 2.4V$

## Charge Voltage Setting



Note: Bridge only the desired charge voltage's jumper

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Sheet: /Charger/  
File: charger.kicad\_sch

### Title:

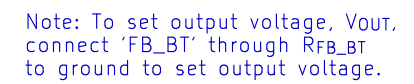
Size: A4

Date: 2024-10-27

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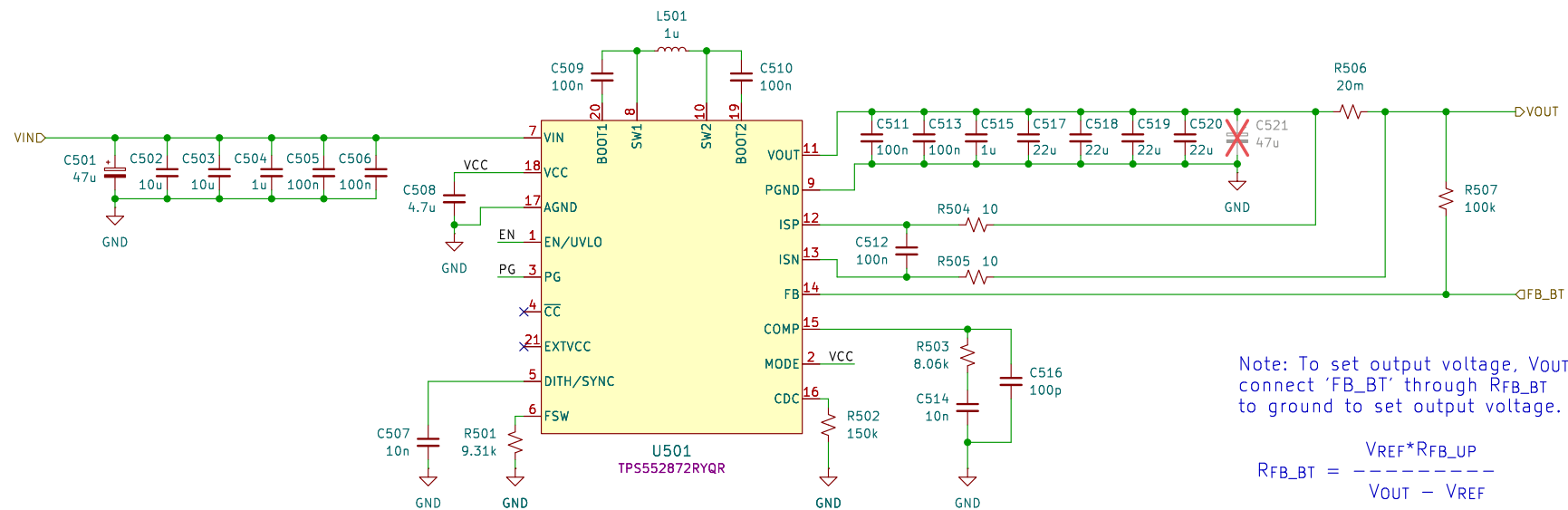
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$$R_{FB\_BT} = \frac{1.2 \cdot 100k}{V_{OUT} - 1.2}$$

ex.  $V_{OUT} = 12V$ ,  $R_{FB\_BT} = 11.1k$



Note: To set output voltage, Vout, connect 'FB\_BT' through RFB\_BT to ground to set output voltage.

$$R_{FB\_BT} = \frac{V_{REF} \cdot R_{FB\_UP}}{V_{OUT} - V_{REF}}$$

$$R_{FB\_BT} = \frac{1.2 \cdot 100k}{V_{OUT} - 1.2}$$

ex. Vout = 12V, RFB\_BT = 11.1k

Sheet: /Buck-Boost1/  
File: buck\_boost.kicad\_sch

**Title:**

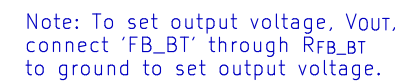
Size: A4

Date:

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**Rev:**

Id: 5/7



$$R_{FB\_BT} = \frac{1.2 \cdot 100k}{V_{OUT} - 1.2}$$

ex.  $V_{OUT} = 12V$ ,  $R_{FB\_BT} = 11.1k$

123456

A

A

B

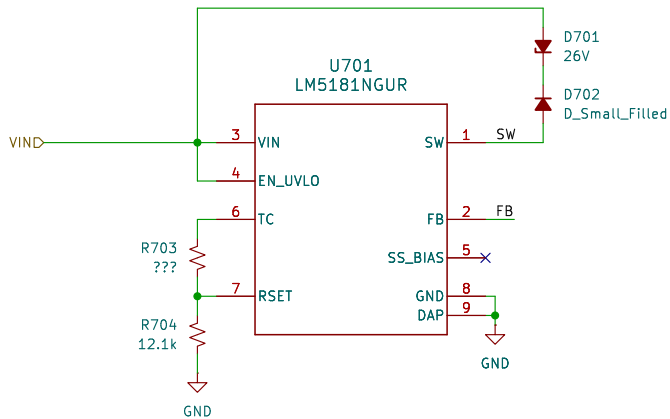
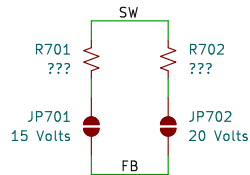
B

C

C

D

D



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Sheet: /Isolated Flyback/  
File: isolated\_flyback.kicad\_sch

**Title: Power Supply**

Size: A4 Date: 2024–10–27

KiCad E.D.A. 8.0.6

**Rev: 0.1.0**

Id: 7/7

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