

Rubén G.S.

**Making Devices**

Sheet: /Dpad/

File: Dpad.kicad\_sch

**Title: Dpad with debouncing filter**

Size: A4

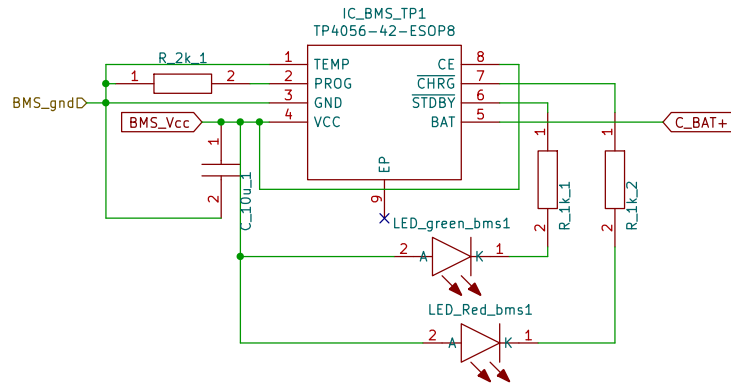
Date: 2023-07-03

**Rev: V1.0**

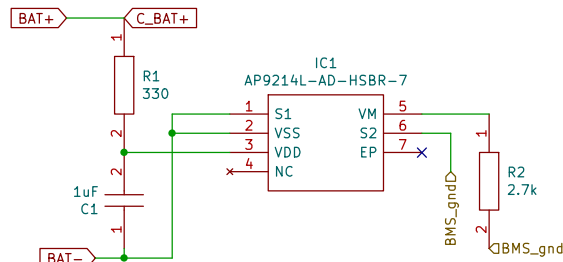
KiCad E.D.A. 8.0.2

Id: 1/4

### Charging Circuit



### BAT Protection IC



### BMS CIRCUIT:

#### Charging:

- TP4056 as a well-known charging IC, up to 500mA with a 2.1K PROG resistor.
- We do not use NTC for the battery in order to save costs.

#### Protection IC:

- AP9214L-AD-HSBR-7 as main chip. It disconnects the ground of the battery from the rest of the circuit.
- 4.325V max voltage to 2.9V min voltage (protections).
- Auto-release.

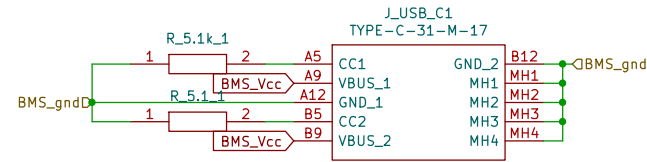
#### Boost Converter:

- TPS61085TDGKR as main chip.
- Toggle Switch.
- 5V fix output voltage. 0.6A maximum output current

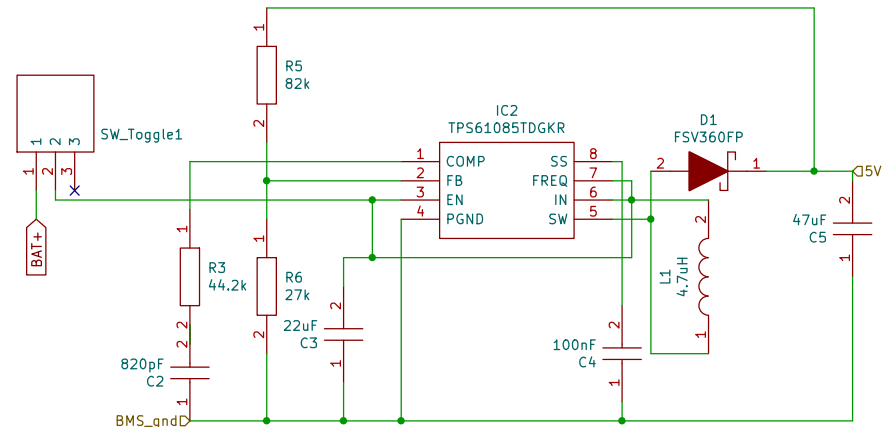
#### USB type C

- Type C connector.
- Only for charging

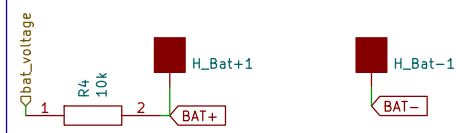
### USB Connector



### Boost converter



### BAT Terminals



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### Making Devices

Sheet: /BMS/

File: BatteryCharger.kicad\_sch

### Title: BMS

Size: A4

Date: 2024-01-03

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Rev: V1.2

Id: 1/4