

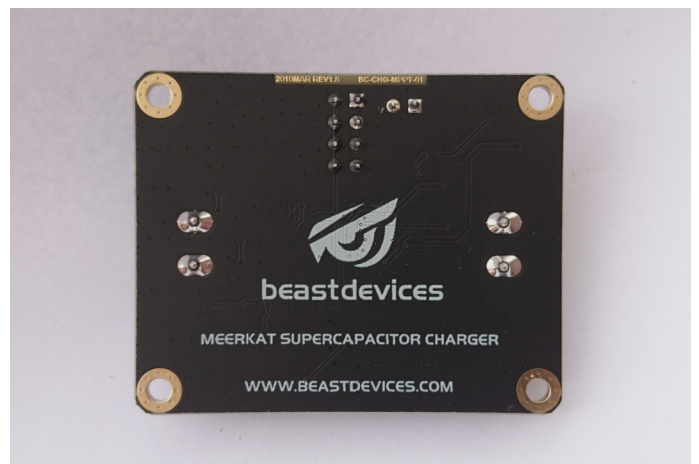
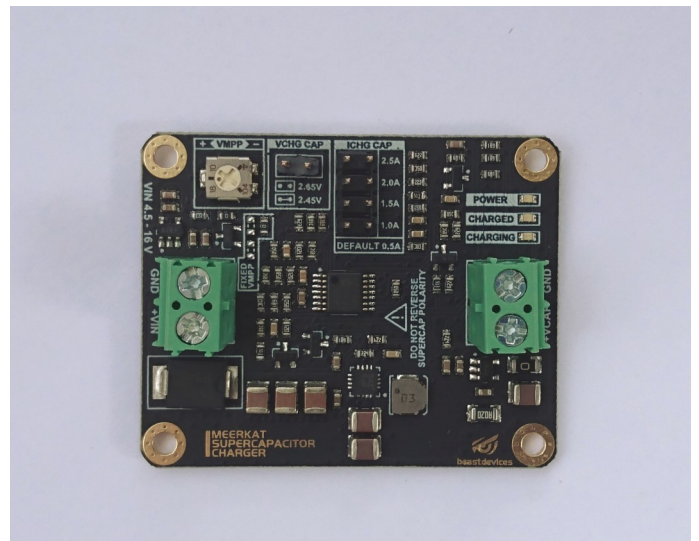
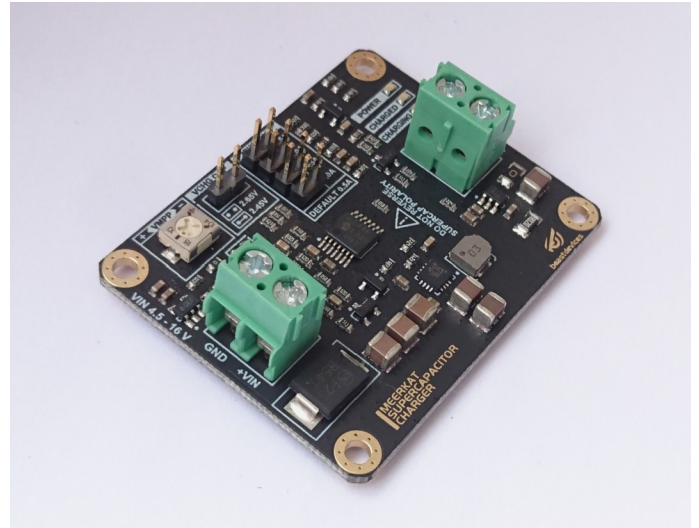
Meerkat Supercapacitor Charger

Description

Meerkat Supercapacitor Charger is a compact and versatile, designed to support common 2.5V and 2.7V EDLC supercapacitors. Wide input voltage range 4.5V to 16V and adjustable Maximum Power Point provides the possibility to use various power supplies, including solar panels. The charging current and end-of-charge voltage can be easily adjusted with a jumper.

Features

- ✓ Adjustable charging current: 0.5A, 1.0A, 1.5A, 2.0A or 2.5A
- ✓ Adjustable end-of-charge voltage: 2.45V or 2.65V
- ✓ Adjustable Maximum Power Point Tracking (MPPT)
- ✓ Wide input voltage range: 4.5V to 16V
- ✓ Constant Current (CC) / Constant Voltage (CV) charging profile
- ✓ Input reverse voltage protection
- ✓ Status indication with LEDs



Specifications

Recommended operating conditions

| Parameter | Min | Max | Unit |
|-----------------------|-----|-----|------|
| Operating temperature | -40 | 50 | °C |

Absolute maximum ratings

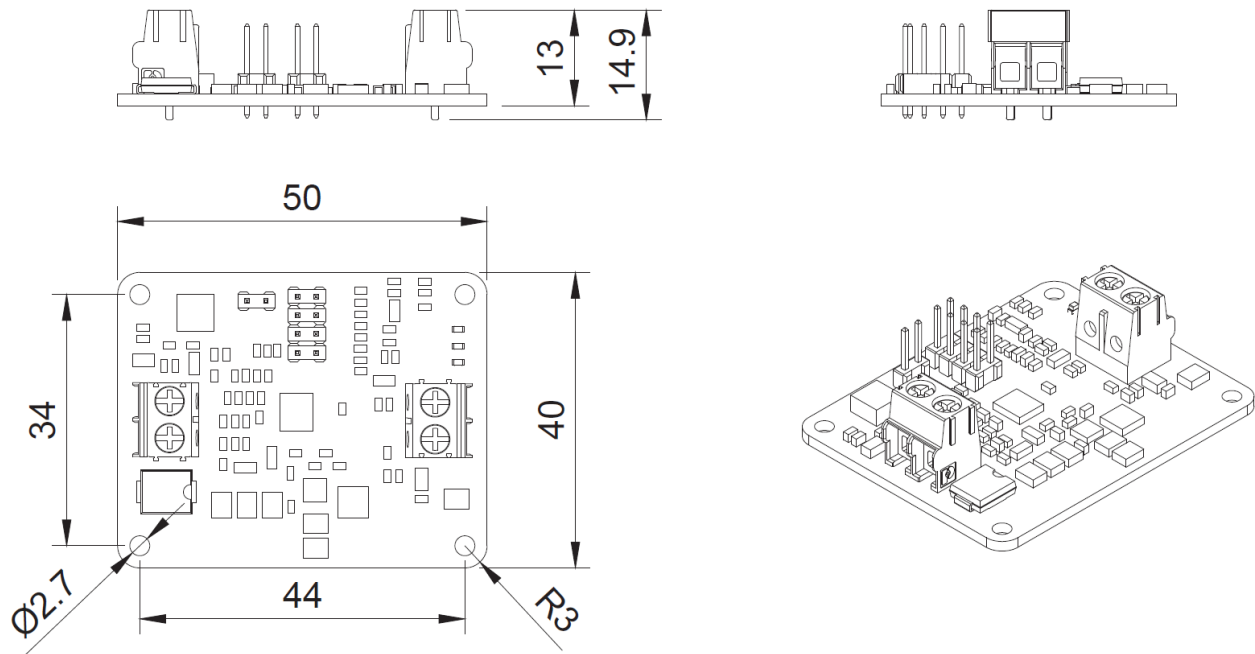
| Parameter | Min | Max | Unit |
|---------------------------|------|----------|------|
| Input voltage, V_{IN} | -40 | 20 | V |
| Output voltage, V_{OUT} | -0.3 | V_{IN} | V |

Electrical characteristics

| Parameter | Min | Typ | Max | Unit | |
|---|--|------|------|------|----|
| Input voltage, V_{IN} | 4.5 | | 16 | V | |
| Maximum Power Point voltage, V_{MPP} | 4.5 | | 16 | V | |
| Input current in Charged state, I_{STB} | | 5 | | mA | |
| Charging voltage limit, V_{CHG} | $V_{CHG} = 2.45V$ | 2.40 | 2.45 | 2.50 | V |
| | $V_{CHG} = 2.65V$ | 2.60 | 2.65 | 2.70 | V |
| Charging current limit, I_{CHG} | $I_{CHG} = 0.5A$ | 450 | 500 | 550 | mA |
| | $I_{CHG} = 1.0A$ | 900 | 1000 | 1100 | mA |
| | $I_{CHG} = 1.5A$ | 1350 | 1500 | 1650 | mA |
| | $I_{CHG} = 2.0A$ | 1800 | 2000 | 2200 | mA |
| | $I_{CHG} = 2.5A$ | 2250 | 2500 | 2750 | mA |
| Efficiency | $V_{IN} = 5V, I_{CHG} = 0.5A, V_{OUT} = 2.0V$ | | 81 | | % |
| | $V_{IN} = 5V, I_{CHG} = 2.5A, V_{OUT} = 2.0V$ | | 72 | | % |
| | $V_{IN} = 9V, I_{CHG} = 0.5A, V_{OUT} = 2.0V$ | | 78 | | % |
| | $V_{IN} = 9V, I_{CHG} = 2.5A, V_{OUT} = 2.0V$ | | 75 | | % |
| | $V_{IN} = 12V, I_{CHG} = 0.5A, V_{OUT} = 2.0V$ | | 75 | | % |
| | $V_{IN} = 12V, I_{CHG} = 2.5A, V_{OUT} = 2.0V$ | | 75 | | % |
| | $V_{IN} = 16V, I_{CHG} = 0.5A, V_{OUT} = 2.0V$ | | 70 | | % |
| | $V_{IN} = 16V, I_{CHG} = 2.5A, V_{OUT} = 2.0V$ | | 74 | | % |

Mechanical dimensions

Screw terminals support wire gauge ranging from 26 to 14 AWG.



All dimensions are in mm.