

A current controlling module based on temperature sensing of the system.

Features

- Based on USB-C Charging with Input Under-voltage and Over-voltage protection
- LED Indication for Charging
- Output current of up-to 2.1A
- Compact size of 30mm x 20mm
- Onboard NTC for Temperature Sensing
- Automatic current adjustments
- Charging timeout protection
- Onboard Input and Output Filter

POWER PUNCH V2 is designed for single-cell Li-Ion battery based systems and devices. It can be further used as a power supply module for projects that require up-to 2A of current and voltage up-to 4.35V

The **POWER PUNCH V2** input voltage is 5V, and the input can intelligently adjust the charging Current, preventing pulling on the adapter. For large load, the buck charge management is responsible for temperature management on the IC.

The **POWER PUNCH V2** works on a full CC/CV charging mode, and regularly tests the battery voltage or system voltage near to 4.2V

The Operational Behaviour of **POWER PUNCH V2**. (Tested for a Li-Ion Battery)

Load	Charging Current	Temperature State	Time Taken
3V	1.4A	Slightly Warm	20 seconds
3V	1A	~50°C	3 Minutes
3V	0.95A	~50°C - 55°C	6:45 Minutes

USER GUIDE

1. To charge a Li-Ion Cell, plug in the USB-C Power Supply. The RED LED Should Glow and the other LED will be OFF. Now, connect the Cell to the module and let the Thermistor be in contact with the Cell.
2. To Check if the cell is charged or not, Connect the Cell to the module, Plug in the USB-C Power Supply. You will see that both the LEDs glow with a Beating effect, That indicates that the charging is Paused and the Cell is charged.
3. To use the module for device applications, Simply connect the system to the Battery connector side with respective polarity and plug in the USB-C Power Supply. You should now be able to provide the demands of the system (Up-to 2.1A and 4.35V) with the **POWER PUNCH V2**.
4. If the system is heat sensitive then place the NTC Thermistor near to the heat sensitive area, the **POWER PUNCH V2** will now adjust the Output current to reduce the Heating of the system due to High Current.

PRECAUTIONS & SAFETY

1. The **POWER PUNCH V2** is supported with ESD protection of up-to 4KV (as per the SoC)
2. The **POWER PUNCH V2** incorporates over-charge or under-charge protection on the input side only.
3. Do not change the Polarity of the Battery or System connection, this may lead to the damage of the SoC. There is no reverse polarity protection on the Output of the **POWER PUNCH V2**.
4. The **POWER PUNCH V2** has been designed with the aspect of low noise and ripple generation.
5. During charging, If the cell gets up heated abnormally then it is highly advised to stop the charging procedure and let the cell cool down in an open environment.
6. As there is a provision to regulate the Output Charging current and NTC Temperature sensing, it is recommended to make the replacements under a professional, to avoid any damage to the module or the system.

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