

TP4056

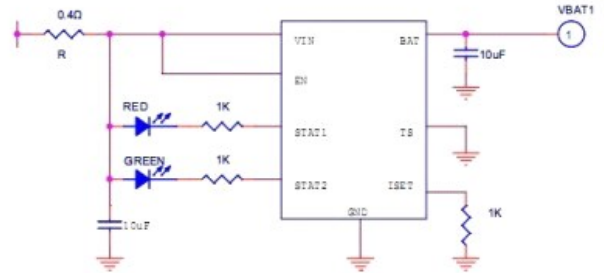
1A USB-Compliant Li-Ion/Polymer Charger IC for Portable Applications

General Description

The TP4056 is a complete constant-current/constant-voltage linear charger for single cell lithium-ion batteries. Its SOP8 package and low external component count make the TP4056 ideally suited for portable applications. Furthermore, the TP4056 is specifically designed to work within USB power and wall Adapter.

No external sense resistor is needed, and no blocking diode is required due to the internal MOSFET architecture. Thermal feedback regulates the charge current to limit the die temperature during high power operation or high ambient temperature. The charge voltage is fixed at 4.2V, and the charge current can be programmed externally with a single resistor. The TP4056 automatically terminates the charge cycle when the charge current drops to 1/10th the programmed value after the final float voltage is reached.

When the input supply (wall adapter or USB supply) is removed, the TP4056 automatically enters a low current state, dropping the battery drain current to less than 2µA. The TP4056 can be put into shutdown mode, reducing the supply current to 55µA. Other features include charge current monitor, undervoltage lockout, automatic recharge and a status pin to indicate charge termination and the presence of an input voltage.



Features

- Programmable Charge Current Up to 1000mA
- No MOSFET, Sense Resistor or Blocking Diode Required
- Complete Linear Charger in SOP8
- Package for Single Cell Lithium-ion Batteries Constant-Current/Constant-Voltage Operation with Thermal Regulation to Maximize Charge
- Rate Without Risk of Overheating
- Charges Single Cell Li-Ion Batteries Directly from USB Port
- Preset 4.2V Charge Voltage with ± 1% Accuracy
- Two Charge Status Output Pin
- Automatic Recharge
- Soft-Start Limits Inrush Current
- Available Radiator in 8-Lead SOP8
- Package, the radiator need connect GND or impending
- 2.9V Trickle Charge Threshold
- C/10 Charge Termination
- 2.9V Trickle Charge Threshold

Applications

- Portable Media Players/MP3 players
- Cellular Telephones, GPS, PDAs
- Digital Still Cameras, Portable Devices
- Bluetooth Applications