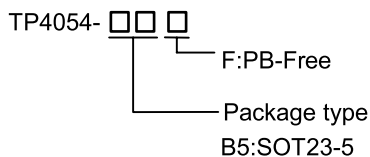


600mA Standalone Linear Li-Ion Battery Charger with Thermal Regulation in ThinSOT

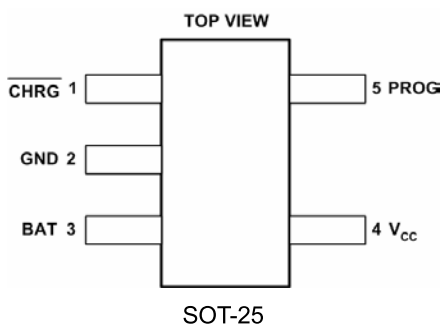
General Description

The TP4054 is a complete constant-current/constant-voltage linear charger for single cell lithium-ion batteries. Its ThinSOT package and low external component count make the TP4054 ideally suited for portable applications. Furthermore, the TP4054 is specifically designed to work within USB power specifications. 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 TP4054 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 TP4054 automatically enters a low current state, dropping the battery drain current to less than 2µA. The TP4054 can be put into shutdown mode, reducing the supply current to 25µA. 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.

Ordering Information



Pin Configurations



Features

- Programmable Charge Current Up to 800mA
- No MOSFET, Sense Resistor or Blocking Diode Required
- Complete Linear Charger in ThinSOT 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
- Charge Current Monitor Output for Gas Gauging
- Automatic Recharge
- Soft-Start Limits Inrush Current
- Available in 5-Lead, SOT-23 Package
- 2.9V Trickle Charge Threshold
- C/10 Charge Termination
- 25mA Supply Current in Shutdown
- 2.9V Trickle Charge Threshold

Applications

- Portable Media Players/MP3 players
- Cellular and Smart mobile phone
- Charging Docks and Cradles
- Bluetooth Applications

Marking Information

For marking information, contact our sales representative directly or through a TPmicro distributor located in your area.