TP4056  1A Standalone Linear Li-Ion Battery Charger with Thermal
Regulation in SOP-8

DESCRIPTION
The TP4056 is a complete constant-current/constant-voltage linear charger for single cell
lithium-ion batteries. Its SOP package and low external component count make the TP4056
ideally suited for portable applications. Furthermore, the TP4056 can work within USB and wall
adapter.

No blocking diode is required due to the internal PMOSFET architecture and have prevent to
negative Charge Current Circuit. 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.

TP4056 Other features include current monitor, under voltage lockout, automatic recharge and
two 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 SOP-8 Package for Single Cell Lithium-Ion
  Batteries
- Constant-Current/Constant-Voltage
- Charges Single Cell Li-Ion Batteries Directly from USB Port
- Preset 4.2V Charge Voltage with 1.5% Accuracy
- Automatic Recharge
- two Charge Status Output Pins
- C/10 Charge Termination
- 2.9V Trickle Charge Threshold (TP4056)
- Soft-Start Limits Inrush Current
- Available Radiator in 8-Lead SOP Package, the Radiator need connect GND or
  impending

ABSOLUTE MAXIMUM RATINGS
- Input Supply Voltage(VCC): -0.3V~8V
- TEMP: -0.3V~10V
- CE: -0.3V~10V
- BAT Short-Circuit Duration: Continuous
- BAT Pin Current: 1200mA
- PROG Pin Current: 1200uA
- Maximum Junction Temperature: 145℃
- Operating Ambient Temperature Range: -40℃~85℃
- Lead Temp.(Soldering, 10sec): 260℃

APPLICATIONS
- Cellular Telephones, PDAs, GPS
- Charging Docks and Cradles
- Digital Still Cameras, Portable Devices
- USB Bus-Powered Chargers,Chargers

Complete Charge Cycle (1000mAh Battery)