



## **USB-Compatible 950mA Standalone Li-Ion Polymer Battery Charger with Thermistor Input in 2mm x 2mm DFN Package**

MILPITAS, CA – March 1, 2007 – Linear Technology Corporation introduces the LTC4095, a tiny, fully integrated, standalone linear battery charger for charging single-cell Li-Ion/Polymer batteries at up to 950mA without overheating the device or its surrounding components. This fully featured USB-compatible IC offers digital High Power Select (charge current set to 100% or 20% of programmed value) and Suspend Mode Input pins in addition to an NTC thermistor input, trickle charge, timer termination with C/10 detection and automatic recharge. Standalone operation eliminates the need for a microprocessor to terminate charging. A complete charger solution with the LTC4095 requires only two discrete components (input capacitor and a charge current program resistor), and fits into a compact form factor with its low profile (0.75mm) 8-lead 2mm x 2mm DFN package. Applications include digital still cameras, portable point-of-sale and diagnostic equipment, cell phones, wireless headsets, media players and USB-equipped handheld devices.

The LTC4095 requires no external MOSFET, sense resistor or blocking diode. A patented thermal regulation scheme prevents the junction temperature of the IC from exceeding 105°C by reducing charge current during high power or high ambient temperature operation. The NTC thermistor input may be used for temperature-qualified charging. Charge current is adjustable with a standard off-the-shelf resistor. The device is designed to work with supplies up to 5.5V, including those within USB specifications and from 5V wall adapters. During suspend mode, the supply current is only 11uA and battery drain current is less included 2uA. LTC4095 also features four charge indication states including blinking, bad battery detection, a charge current monitor output for gas gauging, a 4.2V 0.6% accurate float voltage, and 5% charge accuracy.

The LTC4095 is rated for operation from -40°C to 85°C. Pricing starts at \$1.15 each in 1,000-piece quantities.

**Photo Caption:** 950mA Li-Ion/Polymer Charger with Thermistor Input in 4mm<sup>2</sup> Package

### Summary of Features: LTC4095

- Complete/Standalone Linear Charger in 2mm x 2mm DFN Package
- Charge Current Programmable 100mA to 950mA with 5% Accuracy
- HPWR and SUSP Inputs Target USB Charging Applications
- Safety Timer Termination with C/10 Charge Current Detection Output
- No External MOSFET, Sense Resistor or Blocking Diode Required
- Thermal Feedback to Maximize Charging Rate Without Risk of Overheating
- NTC Thermistor Input for Temperature-Qualified Charging
- Preset 4.2V Charge Voltage with 0.6% Accuracy
- Charge Current Monitor Output for Gas Gauging
- Battery Drain Current in Suspend Mode is Less than 2uA
- <11uA Supply Current in Suspend Mode
- Bad Battery Detection
- Low Profile (0.75mm) 8-Lead (2mm x 2mm) DFN Package

### About Linear Technology

Linear Technology Corporation, a manufacturer of high performance linear integrated circuits, was founded in 1981, became a public company in 1986 and joined the S&P 500 index of major public companies in 2000. Linear Technology products include high performance amplifiers, comparators, voltage references, monolithic filters, linear regulators, DC-DC converters, battery chargers, data converters, communications interface circuits, RF signal conditioning circuits, and many other analog functions. Applications for Linear Technology's high performance circuits include telecommunications, cellular telephones, networking products such as optical switches, notebook and desktop computers, computer peripherals, video/multimedia, industrial instrumentation, security monitoring devices, high-end consumer products such as digital cameras and MP3 players, complex medical devices, automotive electronics, factory automation, process control, and military and space systems. For more information, visit [www.linear.com](http://www.linear.com)

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