



Dual Input 1.2A Lithium Battery Charger with Automatic USB & Wall Adapter Power Selection

MILPITAS, CA – March 5, 2007 – Linear Technology Corporation introduces the LTC4097 standalone dual-input linear battery charger. This device charges single-cell Li-Ion/Polymer batteries from wall adapter or USB power sources. The LTC4097 uses a constant-current/constant-voltage algorithm for charging, with programmable charge current up to 1.2A from a wall adapter supply, or up to 1A from a USB supply while automatically detecting the presence of voltage at each input. USB current limiting is also provided. Applications include PDAs, MP3 players, digital cameras, lightweight portable medical and test equipment and large color display cell phones.

The LTC4097 features a final float voltage accuracy of $\pm 0.6\%$ and is equipped with a patented thermal regulation scheme that maximizes the charging rate without the risk of overheating. The device is extremely flexible with the following features programmable via a single resistor: wall adapter supply charge current, USB supply charge current and charge termination current. As a standalone charger, it does not require an external microcontroller to terminate charge, simplifying design. Key features include automatic input source selection, a combined Input Power Present Output and NTC bias (VNTC) pin with 120mA drive capability, an NTC Thermistor Input (NTC) pin for temperature-qualified charging, and a USB charge current level select (HPWR) pin for obtaining 20% or 100% of the current programmed via the IUSB pin. Other features include trickle charge for battery pre-conditioning, undervoltage lockout, automatic recharge, and charge status indication.

The LTC4097 is offered in a low profile (0.75mm) 12-lead 2mm x 3mm DFN package. The total solution footprint is very compact since no external MOSFET, sense resistor or blocking diode is required. To extend battery run time, the LTC4097 draws <50uA in standby and <20uA in shutdown mode.

The LTC4097 is rated for operation from -40°C to 85°C. 1,000-piece pricing begins at \$1.56 each.


Photo Caption: 1.2A Linear Li-Ion/Polymer Battery Charger with NTC

Summary of Features: LTC4097

- Charges Single Cell Li-Ion Batteries from Wall Adapter & USB Inputs
- Standalone Operation: No External uController Required to Terminate Charge
- Automatic Input Power Detection and Selection
- Programmable Charge Current up to 1.2A from Wall Adapter Input via Resistor
- Programmable USB Charge Current up to 1A via Resistor
- 100% or 20% USB Charge Current Setting
- Input Power Present Output and NTC bias (VNTC) Pin with 120mA Drive Capability
- NTC Thermistor Input (NTC) Pin for Temperature Qualified Charging
- Preset Battery Float Voltage with $\pm 0.6\%$ Accuracy
- Thermal Regulation Maximizes Charge Rate without Risk of Overheating
- No MOSFET, Sense Resistor or Blocking Diode Required
- Low-Profile (0.75mm) 2mm x 3mm DFN-12 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

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