

***LTC News for Immediate Release***

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**Standalone Li-Ion Battery Charger with  
Dual Adjustable Output Synchronous Buck Converter**

MILPITAS, CA – April 25, 2006 – Linear Technology Corporation announces the LTC3552, an efficient, compact power management solution for handheld applications. The LTC3552 includes a standalone Li-Ion/Li-Polymer battery charger and a high efficiency dual synchronous buck regulator offered in a low-profile 3mm x 5mm DFN package. The linear battery charger can deliver up to 950mA charge current from a wall adapter supply, or up to 500mA charge current from a USB supply. Standalone operation simplifies design, eliminating the need for an external microprocessor for charge termination. The final float voltage is accurate to  $\pm 1\%$ . The LTC3552's battery charger is equipped with a patented thermal regulation scheme that maximizes the charge rate without the risk of overheating. To preserve battery energy, it draws  $<2.5\mu\text{A}$  from the battery terminal in standby and  $<1\mu\text{A}$  in shutdown mode. The charger is compatible with inputs up to 8V (10V abs max).

The LTC3552's integrated dual synchronous buck regulators generate adjustable output voltages from 5V to as low as 0.6V, at output currents up to 800mA and 400mA. The internal switches feature a low  $R_{\text{DS(ON)}}$  range to deliver efficiencies as high as 92%, maximizing battery run time. In addition, Burst Mode<sup>®</sup> operation optimizes efficiency at light loads with quiescent current of only 40 $\mu\text{A}$  ( $<1\mu\text{A}$  in shutdown). Using a constant frequency current mode architecture, the buck regulator operates from an input voltage range of 2.5V to 5.5V, making it ideal for single-cell Li-Ion/Li-Polymer applications. Its high 2.25MHz switching frequency allows the utilization of tiny low cost capacitors and inductors less than 1mm in height. Furthermore, the regulator is stable with ceramic output capacitors, achieving very low output voltage ripple.

The LTC3552 is available from stock in a compact low-profile (0.75mm) 5mm x 3mm DFN-16 package. Pricing starts at \$2.30 each for 1,000-piece quantities.

## Summary of Features: LTC3552

- Complete Linear Charger and Dual DC/DC Regulator
- Charge Current Programmable up to 950mA from Wall Adapter Input
- High Efficiency Dual Synchronous DC/DC Buck Converter
- Buck Converter Adjustable Output Voltage: 0.6V to 5V
- Buck Converter Output Currents: 800mA and 400mA
- No External MOSFET, Sense Resistor or Blocking Diodes Needed
- Thermal Regulation Maximizes Charging Rate without Overheating
- Charges Directly from a USB Port
- Preset Charge Voltage with  $\pm 1\%$  Accuracy
- Standalone Operation: Programmable Charge Current Termination
- 2.25MHz Constant Frequency Operation (Buck Converter)
- Charge Status Output
- Automatic Recharge
- Thermally-Enhanced, Low Profile (0.75mm) 16-Lead 5mm x 3mm DFN Package

## Company Background

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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