

LTC News for Immediate Release

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

MILPITAS, CA – March 14, 2006 – Linear Technology Corporation announces the LTC3552-1, an efficient, compact power management solution for handheld applications. The LTC3552-1 includes a standalone Li-Ion battery charger and a high efficiency dual synchronous buck regulator housed 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 accuracy is $\pm 1\%$. The LTC3552-1's battery charger is equipped with a patented thermal regulation scheme which maximizes the charging 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 LTC3552-1's two integrated synchronous buck regulators deliver up to 800mA continuous output current at 1.8V, and up to 400mA at 1.575V, respectively. The internal switches feature an $R_{\text{DS(ON)}}$ range of 0.3 Ohm to 0.35 Ohm to deliver efficiencies as high as 92%, maximizing battery run time. In addition, automatic Burst Mode[®] operation optimizes efficiency at light loads with quiescent current of only 40uA ($< 1\mu\text{A}$ 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, multi-cell alkaline or NiMH input 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 capacitors, achieving very low output voltage ripple.

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

Photo Caption: Battery Charger & Dual Synchronous Buck

Summary of Features: LTC3552-1

- 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 Converters
- Buck Converter Outputs: 1.8V @800mA and 1.575V @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 3mm x 5mm 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

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<http://www.linear.com>

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