

LTC News for Immediate Release

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500mA, Synchronous Buck-Boost DC/DC Converter Offers Extended Battery Run-Time to Handheld Applications

MILPITAS, CA – April 3, 2006 – Linear Technology Corporation announces the LTC3532, a synchronous buck-boost converter that can deliver up to 500mA of output current to a regulated output with inputs above, below or equal to the output. The topology incorporated in the LTC3532 provides a continuous transfer through all operating modes making it ideal for single cell Li-Ion or multi-cell alkaline/NiCad/NiMH applications which must maintain a constant output voltage even as the battery voltage declines below the output. In many cases this can add up to 20% or more battery run-time. The LTC3532's constant switching frequency offers low noise and is programmable up to 2MHz, minimizing the size of external components. The combination of tiny externals and a 3mm x 3mm DFN or MSOP-10 package provide a tiny solution footprint, typically required in handheld applications.

The LTC3532 includes two N-Channel MOSFETs and two P-Channel MOSFETs (0.33Ohm and 0.42Ohm respectively) to deliver efficiencies of up to 93%. Automatic BurstMode® operation allows the user to program the load current at which BurstMode initiates. BurstMode operation requires only 35uA of quiescent current while shutdown current is less than 1uA to further extend battery run-time. If the application is noise sensitive, the MODE pin can also be configured to provide forced continuous operation to reduce noise and any RF interference. Other features include soft-start, current limiting, thermal shutdown and output disconnect.

LTC3532EDD is available from stock in a 10-lead DFN package, whereas the LTC3532EMS is available in a 10-lead MSOP-10 package. Pricing for both versions starts at \$2.35 ea for 1,000-piece quantities.

Photo Caption: 500mA Synchronous Buck Boost Offers Longer Battery Life

Summary of Features: LTC3532

- Single Inductor
- Regulated Output with Input Voltages Above, Below or Equal to the Output
- Wide V_{IN} Range: 2.4V to 5.5V
- V_{OUT} Range: 2.4V to 5.25V
- Up to 500mA Peak Output Current
- Synchronous Rectification: Up to 95% Efficiency
- Manual or Programmable Automatic Burst Mode Operation
- $I_Q < 35\mu A$, $I_{SD} < 1\mu A$
- Output Disconnect in Shutdown
- Programmable Oscillator: 300kHz to 2MHz
- Pin Compatible with LTC3440
- Small Thermally Enhanced 10-Lead (3mm x 3mm) DFN and 10-Lead MSOP Packages

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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