

LTC News for Immediate Release

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500mA, 1.25MHz Synchronous Boost Regulator Features Output Disconnect and Soft-Start in a 2mm x 2mm DFN Package

MILPITAS, CA – January 5, 2006 – Linear Technology announces the LTC3427, a 1.25MHz, current mode, synchronous boost DC/DC converter with true output disconnect, inrush current limiting and integrated soft-start capability packaged in a 2mm x 2mm DFN-6. Its internal switches provide a 500mA current limit (min) and deliver output voltages as high as 5.25V from an input voltage range of 1.8V to 5V, making the device compatible with both Li-Ion and dual cell alkaline/NiMH applications. The LTC3427 delivers up to 200mA of continuous output current (at 3.3V) from dual alkaline cells. Its synchronous rectification enables efficiencies of up to 94%. Also, its 1.25MHz constant switching frequency minimizes switching noise and enables the use of a tiny low cost inductor and capacitors. The combination of a 2mm x 2mm DFN and tiny externals provides a very compact, low profile solution footprint required in battery powered handheld applications.

The LTC3427 uses internal switches with an $R_{DS(ON)}$ of only 0.52 Ohm (N-Channel) and 0.57 Ohm (P-Channel) to deliver efficiencies as high as 94%. The device's true output disconnect feature allows the output to be completely disconnected in shutdown. It also limits the inrush of current during start-up, minimizing surge currents seen by the input supply. Additional features include anti-ringing control, short-circuit protection, programmable soft-start, and thermal protection. The LTC3427 is ideal for boost applications requiring up to 200mA of output current, and where a small solution size and maximum battery run-time are defining factors.

LTC3427EDC is available from stock in a 6-lead DFN package. 1,000-piece pricing starts at \$1.75 each.

(more...)

Summary of Features: LTC3427EDC

- High Efficiency: Up to 94%
- 3.3V at 200mA from Two Alkaline Cells
- 5V at 200mA from a Single Li-Ion Cell
- Inrush Current Limiting and Soft-Start
- Output Disconnect in Shutdown
- 1.8V to 5V V_{IN} Range
- 1.8V to 5.25V V_{OUT} Range
- 1.25MHz Fixed Frequency, Low Noise PWM
- Internal Synchronous Rectifier
- Logic Controlled Shutdown (<1uA)
- Anti-Ringing Control Minimizes EMI
- Tiny External Components
- Short-Circuit Protection
- Low Profile (0.75mm x 2mm x 2mm) DFN Package

About Linear Technology Corporation

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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