

LTC News for Immediate Release

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60V Boost Controller with No R_{SENSE}[™] Architecture

MILPITAS, CA – July 10, 2006 – Linear Technology Corporation introduces the LTC3872, a current mode step-up DC/DC controller with 550kHz operating frequency. The LTC3872 does not require a sense resistor, saving board space and improving efficiency. This is a highly compact solution for converting a 2.5V to 9.8V input voltage up to a high output voltage. V_{OUT} as high as 60V is achievable without a sense resistor, and when a sense resistor is used, the output voltage is limited only by external components. The LTC3872 can easily attain very high peak currents, depending on the selection of the external MOSFET. The IC's high operating frequency reduces the value and size of the inductor and capacitors. Its small footprint, combined with operating efficiency as high as 90%, make it possible to pack a high current boost converter design in a very compact area. Applications include telecom power supplies, 42V automotive systems, 24V industrial control systems, IP phone power supplies and lithium battery-powered equipment.

The LTC3872 drives an external N-channel MOSFET to deliver the load current with high efficiency. Also, its current mode architecture allows cycle-by-cycle current limiting, lower output ripple voltage, low noise and excellent line and load transient response. With pulse skipping operation at light loads, high efficiency is preserved, while the low operating current of 250uA and shutdown current of 8uA extend battery life. The LTC3872 provides excellent AC and DC load and line regulation with $\pm 1.5\%$ output voltage accuracy. Additional system and IC protection features include an internal soft start which may be increased with an external capacitor, and precision under-voltage lockout.

The LTC3872 is offered in a thermally enhanced low-profile (0.75mm) 8-lead 2mm x 3mm DFN package, as well as the ThinSOT[™] package. The device is rated for -40°C to 125°C junction temperature operation. 1,000-piece pricing starts at \$1.80 each.

Photo Caption: 60V Boost Controller with No R_{SENSE} Architecture**Summary of Features: LTC3872**

- No Current Sense Resistor Required
- V_{OUT} up to 60V without Sense Resistor
- Constant Frequency 550kHz Operation
- Internal Soft-Start & Optional External Soft-Start
- Adjustable Current Limit
- Pulse Skipping at Light Load
- V_{IN} Range: 2.75V to 9.8V
- ±1.5% Voltage Reference Accuracy
- Current Mode Operation for Excellent Line & Load Transient Response
- Thermally Enhanced, Low Profile (0.75mm) 2mm x 3mm DFN-8 Package
- Low Profile (1mm) ThinSOT-23 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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