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50V, 20mA Synchronous Buck Converter Delivers 93% Efficiency & Requires Only 12uA Quiescent Current

MILPITAS, CA – May 19, 2009 – Linear Technology announces the LTC3632, a 50V input-capable synchronous buck converter that delivers up to 20mA of continuous output current from a 3mm x 3mm (or MSOP8-E) package. It operates from an input voltage range of 4.5V to 50V with protection up to 60V, making it ideal for automotive and industrial 4mA to 20mA control loop applications. The LTC3632 utilizes internal synchronous rectification and a programmable peak current mode design to optimize efficiency in lower current applications. It delivers efficiencies as high as 93% and requires only 12uA of quiescent current. The combination of its 3mm x 3mm DFN package (or MSOP-8E) and only three tiny externals provides compact solution footprint for a wide array of applications.

The LTC3632 utilizes internal high side and synchronous power switches which draw only 12uA at no load while maintaining output voltage regulation, making it well suited for always-on battery-powered applications. Due to the inherent stability of the converter, no external compensation is required, thereby minimizing the solution footprint. It is available with an adjustable output voltage (down to 0.8V).

Pricing for the LTC3632EDD and LTC3632EMS8E start at \$2.45 each, respectively, for 1,000-piece quantities. The LTC3632IDD and LTC3632IMS8E are tested and guaranteed to operate from a -40°C to 125°C operating junction temperature. They are priced at \$2.82 each, respectively in 1,000-piece quantities. All versions are available from stock. For more information, visit www.linear.com.


Photo Caption: 50V, 20mA Synchronous Buck Converter with Only 12uA of Quiescent Current

Summary of Features: LTC3632

- Wide Input Voltage Range: 4.5V to 50V, Tolerant of 60V Inputs
- Internal High Side & Low Side Power Switches
- No Compensation Required
- 20mA Output Current
- High Efficiency: Up to 93 %
- Low Quiescent Current: 12uA
- 0.8V Feedback Voltage Reference
- Adjustable Peak Current Limit
- Internal or Programmable Soft-Start
- Precise RUN Pin Threshold with Adjustable Hysteresis
- Only Three External Components Required for Fixed Output Versions
- Low Profile (0.75mm) 3mm x 3mm DFN & Thermally Enhanced MS8E Packages

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, uModule[®] products, 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.

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