

LTC News for Immediate Release

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**Low Voltage Synchronous Step-Down DC/DC Converter
Delivers Up to 600mA from Inputs as Low as 1.6V**

MILPITAS, CA – March 14, 2005 – Linear Technology Corporation announces the LTC3409: a low voltage, high efficiency, 1.7/2.6MHz synchronous buck regulator, which delivers up to 600mA of continuous output current from input voltages as low as 1.6V. Using a constant frequency and current mode architecture, the LTC3409 operates from an input voltage range of 1.6V to 5.5V, making it ideal for single cell Li-Ion, multi-cell alkaline or NiMH applications. It is particularly adept at stepping-down 2-Cell AA alkaline inputs throughout the entire battery's lifetime input range. It can generate output voltages as low as 0.61V, enabling it to power the latest generation of low voltage DSP (Digital Signal Processor) and microcontrollers. The user can set its switching frequency to either 1.7MHz or 2.6MHz, allowing the utilization of tiny, low cost ceramic capacitors and inductors less than 1.2 mm in height. The minimum input voltage capability of 1.6V makes the LTC3409 unique in the power industry for low voltage applications, extending battery life in 2-cell AA alkaline applications.

The LTC3409 uses internal switches with an $R_{DS(ON)}$ of only 0.35Ohm to deliver efficiencies as high as 95%. It also utilizes low dropout 100% duty cycle operation to allow output voltages approaching V_{IN} , further extending battery run-time. The LTC3409 utilizes Automatic Burst Mode™ operation to reduce gate charge losses when the load current drops below the level required for continuous operation, providing optimum efficiency at light loads. No load quiescent current is only 60uA and <1uA in shutdown, ensuring maximum battery life. If the application is noise sensitive, the user can inhibit Burst Mode, replacing it with a lower noise pulse-skipping mode. Furthermore, the LTC3409 is stable with ceramic capacitors, achieving very low output voltage ripple. The LTC3409 is the ideal solution for handheld applications requiring inputs below 2.5V and outputs up to 600mA, high efficiency, and very small solution footprint.

(more...)

The LTC3409EDD is available from stock in a 3mm x 3mm DFN-8 package. Pricing starts at \$2.15 for the LTC3409 in 1,000-piece quantities.

Summary of Features: LTC3409

- 1.6V to 5.5V Input Voltage Range
- High Efficiency: Up to 95%
- Very Low Quiescent Current: Only 60uA
- 600mA Output Current
- Internal Soft Start
- Selectable 1.7MHz or 2.6MHz Constant Frequency Operation
- Low Dropout Operation: 100% Duty Cycle
- 0.613V Reference Voltage
- Stable with Ceramic Capacitors
- Shutdown Mode Draws <1uA Supply Current
- Available in a Low Profile (0.75mm) 8-Lead (3mm x 3mm) DFN Package

COMPANY BACKGROUND: Linear Technology Corporation was founded in 1981 as a manufacturer of high performance linear integrated circuits. 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.

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READER SERVICE: Call toll-free 1-800-4-LINEAR (for literature only), or go to the company's web site: **<http://www.linear.com>**

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