

LTC News for Immediate Release

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**Dual 2.25MHz Synchronous Step-Down DC/DC Converter in
3mm x 3mm DFN Delivers 400mA and 800mA Independently**

MILPITAS, CA – April 25, 2005 – Linear Technology Corporation announces the LTC3548, a dual output, high efficiency, 2.25 MHz, synchronous buck regulator which delivers up to 800mA of continuous output current from one channel and up to 400mA from the other. Using a constant frequency and current mode architecture, the LTC3548 operates from an input voltage range of 2.5V to 5.5V, making it ideal for single cell Li-Ion, multi-cell alkaline or NiMH applications. It can generate two independent output voltages as low as 0.6V, enabling it to power the latest generation of low voltage DSPs and microcontrollers. Its 2.25 MHz switching frequency allows the use of tiny, low cost ceramic capacitors and inductors less than 1 mm in height. The combination of dual architecture, tiny externals and a low profile (0.75) exposed pad 3mm x 3mm DFN package make the LTC3548 the most compact synchronous step-down solution available for dual output voltage rails. A leaded MSOP-10E package is also available.

The LTC3548 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 up to V_{IN} , further extending battery run-time. No load quiescent current is only 40uA (both channels), and <1uA in shutdown ensuring optimum battery life. The LTC3548 utilizes automatic Burst Mode[®] operation, reducing gate charge losses when the load current drops below the level required for continuous operation and providing optimum efficiency at light loads. If the application is noise sensitive, the user can disable Burst Mode, replacing it with a lower noise pulse-skipping mode. Other features include short-circuit protection, power-on reset output, and optional external synchronization capability. Furthermore, the LTC3548 is stable with ceramic capacitors, achieving very low output voltage ripple. The LTC3548 is ideal for handheld applications requiring dual outputs up to 400mA and 800mA, high efficiency, and very small solution footprint.

(more...)

The LTC3548EDD is available in a DFN-10 package and the LTC3548EMSE is in a thermally enhanced MSOP package. Both devices are available from stock, with pricing for both starting at \$2.60 each for 1,000-piece quantities.

Summary of Features: LTC3548

- High Efficiency: Up to 95%
- Very Low Quiescent Current: Only 40uA
- 2.25MHz Constant Frequency Operation
- Low Ripple Burst Mode Operation
- High Switch Current: 0.7A and 1.2A
- Low $R_{DS(ON)}$ Internal Switches: 0.35Ohm
- Current Mode Operation for Excellent Line and Load Transient Response
- Short-Circuit Protected
- Low Dropout Operation: 100% Duty Cycle
- Output Voltages from 5V down to 0.6V
- Power-On Reset Output
- Externally Synchronizable Oscillator

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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