Dual Synchronous Step-Down DC/DC Converter Delivers up to 300mA/Ch from a 3mm x 2mm DFN

MILPITAS, CA – September 12, 2006 – Linear Technology Corporation announces the LTC3547, a dual channel, high efficiency, 2.25 MHz, synchronous buck regulator that delivers up to 300mA of continuous output current per channel from a 3mm x 2mm DFN package. Using a constant frequency current mode architecture, the LTC3547 operates from an input voltage range of 2.5V to 5.5V, making it ideal for single cell Li-Ion/Polymer, or multicell alkaline/NiCad/NiMH applications. It can generate output voltages as low as 0.6V, enabling it to power the latest generation of low voltage DSPs and microcontrollers. Its 2.25MHz switching frequency enables the use of tiny, low cost ceramic capacitors and inductors less than 1mm in height, providing a very compact solution footprint for handheld applications.

The LTC3547 uses internal switches with an $R_{DS(ON)}$ of only 0.75 Ohm (N-Channel) and 0.80 Ohm (P-Channel) to deliver efficiencies as high as 96%. It also utilizes low dropout 100% duty cycle operation to allow output voltages up to V_{IN}, further extending battery run-time. The LTC3547 incorporates low ripple Burst Mode® operation, offering only 40uA no load quiescent current (both channels) with only $20mV_{P-P}$ of output ripple. Shutdown current is less than 1uA, further extending battery life. Each channel has independent internal soft-start, enabling design flexibility. Other features include short-circuit and over-temperature protection.

The LTC3547EDDB is available from stock in an 8-lead 3mm x 2mm DFN package. Pricing starts at $1.95 each in 1,000-piece quantities.

Photo Caption: Dual 300mA, 2.25MHz Synchronous Step-Down DC/DC Converter

Summary of Features: LTC3547

- High Efficiency Dual Step-Down Outputs: Up to 96%
- 300mA Output Current per Channel at V_{IN} = 3V
- Low Ripple (20mV_{P-P}) Burst Mode Operation: Only 40uA Quiescent Current During Operation (Both Channels)
- 2.25MHz Constant Frequency Operation
- 2.5V to 5.5V Input Voltage Range
- Low Dropout Operation: 100% Duty Cycle
- Internally Compensated for All Ceramic Capacitors
- Independent Internal Soft-Start for Each Channel
- Current Mode Operation for Excellent Line & Load Transient Response
- 0.6V Reference Allows Low Output Voltages
- Short-Circuit Protected
- Ultralow Shutdown Current: I_Q < 1uA
- Low Profile (0.75mm) 8-Lead 3mm x 2mm DFN 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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