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38V, 2A(I_{OUT}), 2.4MHz Step-Down DC/DC Converter Offers Quiescent Current of Only 70uA and 60V Transient Protection

MILPITAS, CA – February 27, 2007 – Linear Technology Corporation announces the LT3480, a 2A, 38V step-down switching regulator with input transient protection up to 60V. Its Burst Mode[®] operation keeps quiescent current under 70uA in no load standby conditions. The LT3480's 3.6V to 38V input voltage range and 60V transient protection make it ideal for load dump and cold-crank conditions found in automotive applications. Its 3A internal switch can deliver up to 2A of continuous output current to voltages as low as 0.79V. The LT3480's Burst Mode operation offers ultra-low quiescent current that is well suited for applications such as automotive or telecom systems, which demand always-on operation and optimum battery life. Switching frequency is user programmable from 200kHz to 2.4MHz, optimizing efficiency while avoiding critical noise-sensitive frequency bands. The combination of its 3mm x 3mm DFN-10 package (or thermally enhanced MSOP-10E) and high switching frequency keeps the external capacitors and inductor small, providing a very compact, thermally efficient footprint.

The LT3480 utilizes a high efficiency 3A, 0.25 Ohm switch, with the necessary boost diode, oscillator, control and logic circuitry integrated on-chip. Low ripple Burst Mode operation maintains high efficiency at low output currents while keeping output ripple below 15mV_{PK-PK}. Special design techniques and a new high voltage process enable high efficiency over a wide input voltage range while the LT3480's current mode topology enables fast transient response and excellent loop stability. Other features include external synchronization (from 250kHz to 2MHz), a power good flag and soft-start capability.

The LT3480EDD and LT3480EMSE are priced starting at \$3.45 each and \$3.55 each, respectively, for 1,000-piece quantities. The LT3480IDD and LT3480IMSE, tested and guaranteed to operate from a -40°C to 125°C operating junction temperature, are priced at \$4.14 and \$4.26 each, respectively in 1,000-piece quantities. All versions are available from stock.

Photo Caption: 38V, 2A (I_{OUT}) Step-Down DC/DC Converter with I_Q = 70uA and 60V Transient Protection

Summary of Features: LT3480

- Wide Input Range: 3.6V to 38V Operating, 60V Transient
- 2A Maximum Output Current
- Low Ripple Burst Mode® Operation: 70uA I_Q at 12V_{IN} to 3.3V_{OUT}
Output Ripple < 15mV
- Adjustable Switching Frequency: 200kHz to 2.4MHz
- Low Shutdown Current: I_Q < 1uA
- Integrated Boost Diode
- Synchronizable between 250kHz to 2MHz
- Power Good Flag
- Saturating Switch Design: 0.25 Ohm On-Resistance
- 0.790V Feedback Reference Voltage
- Output Voltage: 0.79V to 20V
- Soft-Start Capability
- Small 10-Pin Thermally Enhanced MSOP & (3mm x 3mm) DFN 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, 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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