LTC News for Immediate Release
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36V, 2A(I_{OUT}), 2.8MHz Step-Down DC/DC Converter

Offers Quiescent Current of Only 50uA

MILPITAS, CA – May 17, 2006 – Linear Technology Corporation announces the LT3481, a 2A, 36V step-down switching regulator with Burst Mode® operation to keep quiescent current under 50uA. The LT3481 operates within a V_{IN} range of 3.6V to 34V, making it ideal for load dump and cold-crank conditions found in automotive applications. Its 3.2A internal switch can deliver up to 2A of continuous output current to voltages as low as 1.26V. The LT3481's Burst Mode operation offers ultra-low quiescent current, 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 300kHz to 2.8MHz, enabling the designer to optimize 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 external inductors and capacitors small, providing a compact, thermally efficient footprint.

The LT3481 utilizes a high efficiency 3.2A, 0.18Ohm switch, with the necessary boost diode, oscillator, control and logic circuitry integrated into a single chip. Low ripple Burst Mode operation maintains high efficiency at low output currents while keeping output ripple below 15mV_{PK-PK}. Special design techniques enable high efficiency over a wide input voltage range and the devices's current mode topology enables fast transient response and excellent loop stability. Other features include external synchronization (from 275kHz to 475kHz), a power good flag and soft-start capability.

Pricing for the LT3481EDD and LT3481EMSE starts at $3.25 each, for 1,000-piece quantities. The LT3481IDD and LT3481IMSE are tested and guaranteed to operate from a -40°C to 125°C operating junction temperature, priced at $3.90each in 1,000-piece quantities. All versions are available from stock.

Photo Caption: 34V, 2A (I_{OUT}), 2.8MHz Step-Down Switching Regulator with I_Q<50uA in 3mm x 3mm DFN

Summary of Features: LT3481

- Wide Input Range: 3.6V to 36V Operating
- 2A Maximum Output Current
- Low Ripple Burst Mode Operation
  - 50uA at $12V_{IN}$ to $3.3V_{OUT}$
  - Output Ripple < 15mV
- Adjustable Switching Frequency: 300kHz to 2.8MHz
- Low Shutdown Current: I_Q < 1uA
- Integrated Boost Diode
- Power Good Flag
- Saturating Switch Design: 0.18Ohm On-Resistance
- 1.265V Feedback Reference Voltage
- Output Voltage: 1.265V to 20V
- Soft-Start Capability
- Synchronizable Between 275kHz to 475kHz
- Small 10-Pin Thermally Enhanced MSOP and (3mm x 3mm) DFN-10 Packages

Company Background

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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