



34V, 2A Output, 2.8MHz Step-Down DC/DC Converter

MILPITAS, CA – March 14, 2007 – Linear Technology Corporation announces the LT3684, a 2A, 34V step-down switching regulator packaged in a 3mm x 3mm DFN or MSOP-10E. The LT3684 operates within a V_{IN} range of 3.6V to 34V (36V_{MAX}), 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 at voltages as low as 1.265V. 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, which keeps external capacitors and inductor small, provides a very compact, thermally efficient footprint.

The LT3684 utilizes a high efficiency 3.2A, 0.18 Ohm switch, with the necessary boost diode, oscillator, control and logic circuitry integrated into a single die. Special design techniques enable high efficiency over a wide input voltage range while its current mode topology enables fast transient response and excellent loop stability. Other features include, a power good flag and soft-start capability.

The LT3684EDD and LT3684EMSE pricing starts at \$2.95 each for 1,000-piece quantities. The LT3684IDD and LT3684IMSE are tested and guaranteed to operate from a -40°C to 125°C operating junction temperature, are priced at \$3.54 each. All versions are available from stock.

Photo Caption: 34V, 2A Step-Down**Summary of Features: LT3684**

- Wide Input Range: 3.6V to 34V
- 2A Maximum Output Current
- Adjustable Switching Frequency: 300kHz to 2.8MHz
- Low Shutdown Current: $I_Q < 1\mu A$
- Integrated Boost Diode
- Power Good Flag
- Saturating Switch Design: 0.18 Ohm On-Resistance
- 1.265V Feedback Reference Voltage
- Output Voltage: 1.265V to 20V
- Soft-Start Capability
- Small 10-Pin Thermally Enhanced MSOP & (3mm x 3mm) DFN-10 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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