4% Accurate Programmable Average Input Current Limit Buck-Boost DC/DC Converter Delivers Maximum Current from Limited Power Sources for High Peak Power Applications

MILPITAS, CA – February 18, 2010 – Linear Technology announces the LTC3127, a 96% efficient, synchronous buck-boost converter that delivers up to 1A of output current to a regulated output voltage with inputs above, below or equal to the output. The LTC3127 features a +/- 4% accurate programmable average input current limit with a 200mA to 1000mA range, making it ideal for GSM modems or Supercapacitor chargers powered from sources with hard limits on output current. This enables system designers to maximize the current draw from a limited power source, significantly improving data rates or charging times. The LTC3127's input range of 1.8V to 5.5V and output range of 1.8V to 5.25V is compatible with all types of PC card slots, USB and single-cell Li-Ion or dual/triple-cell alkaline/NiCd/NiMH applications. The LTC3127's current mode Buck-Boost topology provides a continuous transfer mode through all operating modes a simplifying design, and ensuring excellent performance. The LTC3127's constant 1.35MHz switching frequency offers low noise operation while minimizing the size of the few required external components. The combination of tiny externals and a 3mm x 3mm DFN or MSOP-12 package provides a highly compact solution footprint for space-limited applications.

The LTC3127 includes two N-channel MOSFETs (140mOhm and 160mOhm, respectively) and two P-channel MOSFETs (160mOhm and 190mOhm, respectively) to deliver efficiencies of up to 96%. The device's selectable Burst Mode® operation requires only 35uA of

quiescent current and shutdown current is less than 1uA, further extending battery run time. For applications requiring the lowest possible noise, the LTC3127 can be configured to run in fixed frequency PWM mode, reducing noise and potential RF interference. Other features include thermal overload protection and output disconnect.

The LTC3127EDD is available from stock in a 10-lead DFN package and the LTC3127EMSE is available in a 12-lead thermally enhanced MSOP package. Pricing is $2.95 and $3.00 respectively, each, for 1,000-piece quantities. For more information, visit www.linear.com.

Photo Caption: 1A (I_{OUT}) Synchronous Buck-Boost Switching Regulator with Adjustable Input Current Limiting

Summary of Features: LTC3127

- Programmable (0.2A to 1A) +/- 4% Accurate Average Input Current Limit
- Regulated Output with Input Voltages Above, Below or Equal to Output
- 1.8V to 5.5V (Input) and 1.8V to 5.25V (Output) Voltage Range
- 0.6A Continuous Output Current: V_{IN} > 1.8V
- 1A Continuous Output Current: V_{IN} > 3V
- Single Inductor
- Synchronous Rectification: Up to 96% Efficiency
- Burst Mode® Operation: I_Q = 35uA (Pin Selectable)
- Output Disconnect in Shutdown
- <1uA Shutdown Current
- Small, Thermally Enhanced 10-Lead (3mm × 3mm × 0.75mm) DFN & 12-Lead MSOP 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, uModule® products, 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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