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1.2A, 1.6MHz Synchronous Boost Regulator Offers Output Disconnect & Programmable Input Current Limit

MILPITAS, CA – January 5, 2009 – Linear Technology Corporation announces the LTC3125, a 1.6MHz, current mode, synchronous boost DC/DC converter with an accurate and programmable average input current limit. Its internal 1.2A switches can deliver output voltages as high as 5.25V from an input voltage range of 1.8V to 5.5V, making it ideal for Li-Ion/Polymer, 3.3V PC card slot or multicell alkaline/NiMH applications. The LTC3125 can deliver up to 500mA of continuous output current (at 5V) from a 3.3V input.

The LTC3125's average input current limit can be programmed between 200mA and 1000mA with $\pm 5\%$ accuracy. The accurate adjustable current limit combined with an output reservoir capacitor makes the LTC3125 ideal for applications such as GSM and GPRS cards which demand 2A or higher current pulses from a power-limited input source. In addition, the LTC3125's accurate input current enables safe and fast charging of large Super or Ultra-capacitors in battery backup systems without overstressing the battery or auxiliary power source.

Synchronous rectification enables efficiencies up to 93% while Burst Mode[®] operation lowers quiescent current to only 15uA, providing extended battery run-time in handheld applications. The LTC3125 can also operate in Buck mode, providing a regulated output lower than the input. The combination of a 2mm x 3mm DFN-8 package and a constant switching frequency of 1.6MHz minimize both inductor and capacitor sizes, providing a tiny solution footprint and profile required in PC-card applications. Additional features include short-circuit protection, soft-start, and thermal protection.

LTC3125EDCB is available from stock in an 8-lead 2mm x 3mm DFN package. 1,000-piece pricing starts at \$2.25 each. For more information, visit www.linear.com.


Photo Caption: 1.2A, 1.6MHz Synchronous Step-Down DC/DC Converter with Programmable Average Input Current Limit

Summary of Features: LTC3125

- 1.2A, 1.6MHz Synchronous Boost Regulator Offers Output Disconnect
- Programmable Average Input Current Limit
- 200mA to 1000mA I_{IN} Program Range with 5% Accuracy
- Supports High Current GSM/GPRS Load Bursts
- V_{IN} : 1.8V to 5.5V, V_{OUT} : 2V to 5.25V
- $V_{IN} > V_{OUT}$ Operation
- 1.6MHz Fixed Frequency Operation
- Internal Current Sense Resistor
- 1.2A Peak Inductor Current Limit
- Up to 93% Efficiency
- Soft-Start
- Low Quiescent Current Burst Mode® Operation: $I_Q=15\mu A$
- Available in 2mm x 3mm x 0.75mm DFN-8 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, 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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