



Ultralow Power Boost Converters Only Require 8.5uA of Quiescent Current

MILPITAS, CA – November 5, 2008 – Linear Technology announces the LT8410/-1 low noise micropower boost converters with integrated power switches, Schottky and catch diodes and output disconnect circuitry packaged in a 2mm x 2mm DFN package. The LT8410/-1 use a unique design scheme, requiring only 8.5uA of quiescent, which is further reduced to 0uA in shutdown. Integrated high value (12.4M/0.4M) output feedback divider resistors enable the LT8410/-1 to regulate a 16V output with no load with less than 30uA of quiescent current. Very small switch current limits (25mA for the LT8410 and 8mA for the LT8410-1) enable these converters to operate very efficiently from high impedance sources, such as coin cell batteries without any inrush current limitations.

The LT8410/-1's wide 2.6V to 16V input voltage range enables them to operate from single cell Li-Ion batteries up to fixed 12V input rails, delivering outputs up to 40V. The output voltage can be adjusted dynamically by driving the FBP pin with an external voltage source. The LT8410 can deliver over 8mA of output current at 16V from a single Li-Ion cell making it ideal for applications such as precision sensor or biasing power. Both parts use a unique control technique that delivers efficiencies as high as 88% and low output ripple (<10mV_{PK-PK}) over a wide load current range. Other features include integrated soft-start and overvoltage protection. The combination of the LT8410/-1's 2mm x 2mm DFN package and tiny, low cost ceramic capacitors and inductors provides a very compact solution footprint.

The LT8410EDC and LT8410EDC-1 are both available from stock in an 8-lead 2mm x 2mm DFN package. Pricing starts at \$1.75 each for 1,000-piece quantities.


Photo Caption: Micropower Low Noise Boost Converters with Output Disconnect

Summary of Features: LT8410/-1

- Ultralow Quiescent Current: 8.5uA in Active Mode, 0uA in Shutdown Mode
- Comparator Built into SHDN pin
- Low Noise Control Scheme
- Adjustable FB Reference Voltage
- Wide Input Range: 2.6V to 16V
- Wide Output Range : Up to 40V
- Integrated Power NPN Switch
- 25mA Current Limit (LT8410)
- 8mA Current Limit (LT8410-1)
- Integrated Schottky Diode
- Integrated Output Disconnect
- High Value (12.4M/0.4M) Feedback Resistors Integrated
- Built in Soft-Start (Optional Capacitor from V_{REF} to GND)
- Overvoltage Protection for CAP and V_{OUT} PVS
- Tiny 8-Pin 2mm x 2mm DFN 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. For more information, visit www.linear.com.

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