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Ultralow Power 15mA Synchronous Low Noise Step-Down Switching Regulator

MILPITAS, CA – September 2, 2009 – Linear Technology announces the LTC3620, a high efficiency, synchronous buck regulator which can deliver up to 15mA from a very small footprint for single Li-Ion-powered applications. The internal synchronous switches deliver efficiencies as high as 95% while Burst Mode[®] operation requires only 18uA of quiescent current, maximizing battery run time. The LTC3620 can take a 2.9V-5.5V input, and is adjustable to outputs as low as the 0.6V, whereas the LTC3620-1 option is internally programmed to provide a 1.1V output, eliminating the need for external feedback resistors. The LTC3620's 2mm x 2mm DFN package with only four tiny externals, ensures a very compact solution footprint for a wide array of ultralow power applications.

The LTC3620 uses a unique variable frequency architecture to maximize efficiency while minimizing noise and keeping out of the audio range. Its switching frequency is proportional to the load current, and an internal frequency clamp keeps the minimum switching frequency at light loads above 50KHz making it ideal for applications such as Bluetooth headsets, hearing aids and other applications sensitive to audio interference. The frequency of this clamp is user adjustable by applying an external clock to the FMIN/MODE pin. Other features include soft-start, undervoltage lockout and low-battery detection.

Pricing for the LTC3620EDC and LTC3620EDC-1 start at \$1.95 each, for 1,000-piece quantities. Both versions are available from stock. For more information, visit www.linear.com.


Photo Caption: Ultralow Power, Low Noise 15mA Synchronous Step-Down Switching Regulator

Summary of Features: LTC3620

- High Efficiency: Up to 95%
- Maximum Current Output: 15mA
- Internal 50kHz Switching Frequency Clamp Minimizes Noise in the Audio Band
- 18uA I_Q Current
- Externally Programmable Frequency Clamp
- 2.9V to 5.5V Input Voltage Range
- Low-Battery Detection
- 2.8V Undervoltage Lockout
- 0.6V Reference Allows Low Output Voltages
- Shutdown Mode Draws <1uA Supply Current
- Unique Low Noise Control Architecture
- Internal Power MOSFETs
- No Schottky Diodes Required
- Soft-Start
- Tiny 2mm x 2mm 8-Lead 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.

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