

LTC News for Immediate Release

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**400mA Synchronous Buck-Boost DC/DC Converter Delivers
0.5V to 5V Outputs for 3G WCDMA Applications**

MILPITAS, CA – January 19, 2006 – Linear Technology announces the LTC3444, a synchronous buck-boost regulator, which has been optimized for use in 3G WCDMA handset applications. The LTC3444 can deliver up to 400mA of continuous output current to outputs between 0.5V and 5V from a single cell Li-Ion input. Its boost function is particularly important for the 3G WCDMA high speed data (HSDPA) mode in which the RF Power amplifier requires a nominal 4.2V from a Li-Ion input. The LTC3444's unique buck-boost design enables it to operate from input voltages above, below and equal to the output voltage. The topology incorporated in the IC provides a continuous high efficiency transfer function through all operating modes, making the device ideal for single cell Li-Ion 3G WCDMA applications where the output voltage can vary over a wide range. Its 1.5MHz switching frequency allows the utilization of tiny, low cost ceramic capacitors and inductors. Combined with a 3mm x 3mm DFN package, it offers a very compact solution footprint for cellular applications.

The LTC3444's buck-boost design yields efficiencies of up to 92%. High efficiency is also attained at very low output voltages while also eliminating external components. Its high speed error amplifier and current mode architecture provide the fast transient response required to slew the RF power amplifier from standby to transmit in less than 25us. Other features include output disconnect in shutdown, over-voltage protection, internal soft-start and thermal shutdown.

The LTC3444EDD is available from stock in a 3mm x 3mm DFN-8 package.
Pricing starts at \$2.40 each in 1,000-piece quantities.

(more...)

Summary of Features: LTC3444

- Optimized Features for WCDMA Handsets
- Regulated Output with Input Voltages Above, Below or Equal to the Output
- 0.5V to 5V Output Range
- Up to 400mA Continuous Output Current From a Single Lithium-Ion Cell
- Internal Loop Compensation for Fast Response <25us Full Scale Output Slewing; C_{OUT} 4.7uF
- 1.5MHz Fixed Frequency Operation
- Minimal External Components
- Output Disconnect in Shutdown
- 2.7V to 5.5V Input
- <1uA Shutdown Current
- Internal Soft-Start
- Output Overvoltage Protection
- Single Inductor, No Schottky Diodes Required
- Small, Thermally Enhanced 8-Lead (3mm x 3mm) DFN Package

About Linear Technology Corporation

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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