

LTC News for Immediate Release

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**7Amp, PolyPhase Synchronous Step-Down Regulator
Can Be Cascaded for up to 84Amps**

MILPITAS, CA – February 24, 2006 – Linear Technology Corporation announces the LTC3415, a high efficiency, monolithic synchronous buck regulator using a phase lockable, constant frequency, current mode architecture. A single LTC3415 can deliver up to 7A of output current at voltages as low as 0.6V. In addition, the LTC3415's PolyPhase[®] operation enables multiple (up to 12 in total) LTC3415s to be run with interleaved phases while using minimal input and output capacitance. When twelve LTC3415s are cascaded together, they can drive a single load with up to 84A of output current while current sharing equally between the units. Its input voltage range of 2.5V to 5.5V makes it ideal for single cell Li-Ion battery as well as point-of-load applications. Its default switching frequency is internally set at 1.5MHz, allowing the use of tiny surface mount inductors and capacitors. Combined with a 5mm x 7mm QFN package, it provides a very compact high-current power conversion solution.

The LTC3415 uses internal switches with an $R_{DS(ON)}$ of only 0.025 ohm (N-Channel) and 0.032 ohm (P-Channel) to deliver efficiencies as high as 96%. It also utilizes low dropout 100% duty cycle operation to allow output voltages equal to V_{IN} . Selectable Burst Mode[®] operation offers no load quiescent current of only 450uA, and less than 1uA in shutdown. If the application is noise sensitive, the LTC3415 can be configured to skip pulses, provide forced continuous operation or utilize spread spectrum frequency switching to reduce noise and potential RF interference. Additionally, the LTC3415 can be externally synchronized from 750kHz to 2.25MHz to further reduce noise. Other features include a Power Good voltage monitor, output tracking and margining capability plus thermal protection. For applications that require up to 84A of output current, and where a small solution size and low noise are the defining factors, the LTC3415 is the best solution currently in the marketplace.

The LTC3415 is available from stock in a 38-pin, 5mm x 7mm QFN package. Pricing starts at \$6.50 each in 1,000-piece quantities.

(more...)

Summary of Features: LTC3415

- High Efficiency: Up to 96%
- 7A Output Current
- Adjustable Frequency: 1.5MHz Nominal
- Poly-Phase Operation (Up to 12 Phases)
- Spread Spectrum Option
- Output Tracking and Margining
- 2.5V to 5.5V VIN Range
- Phase Lockable from 0.75MHz to 2.25MHz
- Selectable Burst Mode Operations
- Low Dropout Operation: 100% Duty Cycle
- Low Quiescent Current: 450uA
- Current Mode Operation for Excellent Line and Load Transient Response
- Shutdown Mode Draws Only 1uA Supply Current
- $\pm 1\%$ Reference Accuracy
- Available in 38-Pin (5mm x 7mm) QFN Package

Company Background

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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<http://www.linear.com>

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