



10V, 3MHz, Synchronous Step-Down Regulator Delivers 2.5A from a 4mm x 4mm QFN

MILPITAS, CA – March 12, 2008 – Linear Technology announces the LTC3602, a high efficiency, 3MHz synchronous buck regulator which uses a constant frequency, current mode architecture. It can deliver up to 2.5A of continuous output current at output voltages as low as 0.6V from a 4mm x 4mm QFN (or a thermally enhanced TSSOP-16) package. It operates from an input voltage of 4.5V to 10V, making it ideal for dual cell Li-Ion applications, as well as general purpose fixed rail systems. Its switching frequency is user programmable from 300kHz to 3 MHz, enabling the utilization of tiny low cost capacitors and inductors.

The LTC3602 uses internal switches with $R_{DS(ON)s}$ of only 65mOhm and 90mOhm to deliver efficiencies as high as 95%. It also utilizes low dropout 99% duty cycle operation to allow output voltages very close to V_{IN} . No load quiescent current is only 75uA and less than 1uA in shutdown, making it ideal for applications that demand maximum battery run-time. For applications that require the lowest noise possible, the LTC3602 can be configured to run in forced continuous operation reducing noise and potential RF interference. Additional features include a Power Good voltage monitor, external synchronization capability, and thermal protection.

The LTC3602EUF is available in a 4mm x 4mm QFN-20, and the LTC3602EFE is offered in a 16-lead, thermally enhanced TSSOP package. Pricing starts at \$4.00 and \$4.10 each, respectively, in 1,000-piece quantities. Industrial grade versions, the LTC3602IUF and LTC3602IFE are tested and guaranteed to operate from a -40°C to 125°C operating junction temperature and are priced at \$4.70 and \$4.80, respectively, in 1,000-piece quantities. All versions are available from stock.


Photo Caption: 2.5A, 10V Synchronous Step-Down DC/DC Converter in 4x4 QFN

Summary of Features: LTC3602

- Wide Input Voltage Range: 4.5V to 10V
- 2.5A Output Current
- Low $R_{DS(ON)}$ Internal Switches: 65mOhm and 90mOhm
- Programmable Frequency: 300kHz to 3MHz
- Low Quiescent Current: 75uA
- 0.6V $\pm 1\%$ Reference Allows Low Output Voltage
- 99% Maximum Duty Cycle
- Adjustable Burst Mode[®] Threshold
- Synchronizable to an External Clock
- Power Good Output Voltage Monitor
- Overtemperature Protection
- Available in 16-Lead Exposed TSSOP and 4mm x 4mm QFN-20 Packages

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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