



High Power, Constant Current/Constant Voltage, Synchronous

MILPITAS, CA – March 22, 2010 – Linear Technology announces the LT3741, a synchronous step-down DC/DC converter designed to accurately ($\pm 6\%$) regulate output currents up to 20A. Its 6V to 36V input voltage range, constant current and constant voltage operation makes it ideal for a wide variety of applications, ranging from battery and supercap chargers and laser drivers to high current LED lighting. The LT3741 uses two external switching MOSFETs and delivers up to 20A of continuous output current over a wide voltage range of 0V to 34V. Efficiencies as high as 95% eliminate the need for external heat sinking. The LT3741's frequency can be programmed and synchronized between 200kHz and 1MHz, allowing designers to optimize efficiency while minimizing external component size. Combined with a 4mm x 4mm QFN-20 or thermally enhanced TSSOP-20 package, the LT3741 provides a highly compact constant voltage and current solution.

The LT3741 uses an average current mode control scheme to maintain inductor current regulation over a wide output voltage range of 0V to $V_{IN}-2V$. The regulated current is set by an analog voltage on the CTRL pins and an external sense resistor. The LT3741's unique topology enables it to both source and sink current. The LT3741's regulated output voltage and overvoltage protection are set with an external voltage divider. Additional features include an accurate external voltage reference, a programmable undervoltage lockout (ULVO) pin and thermal shutdown.

The LT3741EUF is available in a 20-pin 4mm x 4mm QFN package and the LT3741EFE is available in a thermally enhanced TSSOP-20, priced starting at \$3.95 and \$4.10 each, respectively in 1,000-piece quantities. Extended temperature versions, or "I" Grades, the LT3741IUF and LT3741IFE, are also available. Pricing starts at \$4.65 and \$4.82 each, respectively in 1,000-piece quantities. All versions are available from stock. For more information, visit www.linear.com.


Photo Caption: High Power, Constant Current/Constant Voltage Synchronous Step-Down Converter

Summary of Features: LT3741

- Control Pin Provides Accurate Control of Regulated Output Current
- $\pm 1.5\%$ Voltage Regulation Accuracy
- $\pm 6\%$ Current Regulation Accuracy
- 6V to 36V Input Voltage Range
- Wide Output Voltage Range: 0V to ($V_{IN} - 2V$)
- Average Current Mode Control
- $< 1\mu A$ Shutdown Current
- Up to 95% Efficiency
- Additional Pin for Thermal Control of Load Current
- Thermally Enhanced 4mm \times 4mm QFN & 20-Pin FE 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, μ Module[®] 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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