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15A DC/DC uModule Regulator Delivers 50% More Power without Sacrificing Board Area

MILPITAS, CA – September 16, 2010 – Linear Technology Corporation introduces the [LTM4627](#), a 15A DC/DC uModule[®] regulator with onboard inductors, MOSFETs and supporting components in a 2.6g, 15mm x 15mm LGA (land grid array) package. Circuit design enhancements lower gate capacitance MOSFETs and stronger MOSFET drivers enable the LTM4627 to operate at approximately 7% higher efficiency or to deliver up to 15A load current in the same board area and junction temperature as the 10A DC/DC uModule regulator. (Comparison conditions: 12Vin, 1.2Vout, 10A compared to the LTM4600 10A uModule regulator. The LTM4600 is offered in 15mm x 15mm x 2.82mm and LTM4627 in 15mm x 15mm x 4.32mm LGA). The LTM4627 can convert input supplies ranging from 4.5V to 20V to output voltages from 0.6V to 5V, regulating the output with only +/-1.5% total DC output error maximum. Multiple LTM4627 devices can be paralleled for current sharing up to 60A. Applications include telecom servers, networking and industrial equipment, medical imaging systems as well as avionics equipment.

The LTM4627 has an onboard differential remote sense amplifier to precisely regulate very low voltage, high current loads such as 1.0V or sub-1V core voltages of FPGAs and ASICs. Remote sensing corrects voltage errors caused by the impedance of PCB traces when large current flows to the load. Output voltage tracking and soft-start features allow controlled power up and power down of a complex board with multiple power rails. The device's PLL (phase-locked loop) function permits users to synchronize the LTM4627 to a clock frequency from 250kHz to 780kHz, avoiding a specific frequency or frequency range that may interfere with sensitive components.

The LTM4627 is guaranteed for operation from -40°C to 125°C. 1,000-piece pricing starts at \$17.99 each. For more information, visit www.linear.com/4627.


Photo Caption: 15A DC/DC uModule Regulator

Summary of Features: LTM4627

- 15A, 15mm x 15mm x 4.32mm DC/DC uModule Regulator
- V_{IN} : 4.5V to 20V, V_{OUT} : 0.6V to 5V
- +/-1.5% Total DC Output Error
- Current Share up to 60A

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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