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Dual 8A or Single 16A Step Down DC/DC uModule Regulator in a 15mm x 15mm Surface Mount Package

MILPITAS, CA –May 21, 2008 – Linear Technology Corporation introduces the LTM4616, a complete dual DC/DC uModule™ regulator system in a tiny surface mount package. The LTM4616 can regulate either two voltages ranging from 0.6V to 5V at up to 8A each, or one output voltage at up to 16A by sharing current from each output in a multi-phase configuration. The LTM4616's versatility is extended by its ability to operate from either two different input supply rails ranging from 2.375V to 5.5V (6V max) or from one input supply by tying the input pins together. This complete DC/DC system solution includes all the support components needed for a dual point-of-load regulator: inductors, capacitors, DC/DC controller, compensation circuitry and power switches. All are encapsulated and protected within a plastic surface mount LGA (land grid array) package. The package dimensions are 15mm x 15mm with a height of only 2.8mm, providing a low profile point-of-load regulator that allows smooth air flow for cooling in densely populated circuit boards. It is also a simple solution for powering both core and I/O supplies for FPGAs and ASICs.

The LTM4616 is guaranteed to have only +/-1.75% total DC output error over the full operating temperature range, including the line and load regulation. As a current mode device with high switching frequency, the LTM4616 has a very fast transient response to line and load changes while operating with excellent stability with a variety of output capacitors, including all ceramic capacitors. The efficiency is up to 94%, depending, on the voltage and current conditions. The device supports frequency synchronization, multiphase operation, spread spectrum phase modulation, output voltage tracking and margining. Safety features include overvoltage and overcurrent protection as well as thermal shutdown.

The LTM4616 has an internal operating temperature range of -40°C to 125°C. The device is RoHS compliant with the ability to be soldered with Pb-free (lead-free) or Pb-based solder during board assembly. The LTM4616 is available in 1,000-pieces at \$19.45.


Photo Caption: Dual 8A or single 16A uModule

Summary of Features: LTM4616

- Complete Dual DC/DC System in a 15mm x 15mm x 2.8mm LGA Package
- 2.375V to 5.5V Input Operation
- Dual 8A or Single 16A Outputs; Scalable According to the Power Requirement
- Output Voltage Tracking & Margining
- Current Mode Operation with Fast Short Circuit Protection

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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