



12A Ultrathin μ Module Regulator Configurable as Quad, Triple, Dual or Single Output Can Be Placed on Backside of PCB

MILPITAS, CA – October 27, 2016 – Linear Technology Corporation introduces the [LTM4643](#) quad output step-down μ Module[®] (power module) regulator, configurable as a single output (12A), dual (6A & 6A or 9A & 3A), or quad (3A each) regulator in a 9mm x 15mm x 1.82mm ultrathin LGA package. This flexibility enables system designers to rely on one simple and compact μ Module regulator for a variety of voltage and load current requirements in FPGA, GPU, ASIC and processor-based applications. The 1.82mm height ultrathin package allows the LTM4643 to be mounted on the backside of the PCB, freeing space on the topside for components such as memory and connectors. The LTM4643 is suitable for systems with height restrictions, such as backside PCB assembly in PCIe applications and where the regulator must fit under a common heat sink or cold plate to cool high power FPGAs, GPUs, ASICs and processors in applications such as embedded computing, data storage, medical imaging and industrial systems.

Only eight external ceramic capacitors (1206 or smaller case sizes) and four feedback resistors (0603 case size) are required to regulate four independently adjustable outputs between 0.6V to 3.3V. Separate input pins enable powering of the four channels from different or a common supply rail(s) from 4V to 20V.

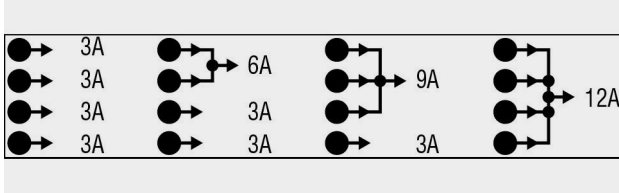
The four channels are switched 90° out-of-phase to minimize input ripple at the 1.2MHz default switching frequency or synchronized to an external clock between 850kHz and 1.5MHz. With the addition of an external bias supply above 4V, the LTM4643 can regulate from an input supply voltage as low as 2.375V. Output overvoltage, overcurrent and overtemperature fault protection are included in the regulator.

The LTM4643 is available with operation specified over the –40°C to 125°C internal temperature range. The μ Module regulator is available for immediate delivery from stock, priced starting at \$19.90 each for 1,000-piece quantities. For more information, visit www.linear.com/product/LTM4643.

Photo Caption: Quad 3A μ Module Regulator

Summary of Features: LTM4643

- Configurable Output Array




- 4V to 20V Input (2.375V to 20V with External Bias)
- 0.6V to 3.3V Output Voltage
- $\pm 1.5\%$ Total Output Voltage Regulation
- 9mm x 15mm x 1.82mm LGA Package

Pricing shown is for budgetary use only and may differ due to local duties, taxes, fees and exchange rates.

About Linear Technology

Linear Technology Corporation, a member of the S&P 500, has been designing, manufacturing and marketing a broad line of high performance analog integrated circuits for major companies worldwide for over three decades. The Company's products provide an essential bridge between our analog world and the digital electronics in communications, networking, industrial, automotive, computer, medical, instrumentation, consumer, and military and aerospace systems. Linear Technology produces power management, data conversion, signal conditioning, RF and interface ICs, μ Module[®] subsystems, and wireless sensor network products. For more information, visit www.linear.com

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