



Quicker System Boot Time & Power Analysis with 13A to 100A Digital Interface μ Module Regulator

MILPITAS, CA – June 30, 2015 – Linear Technology Corporation announces the [LTM4676A](#), a dual 13A or single 26A, current shareable up to 100A μ Module[®] (micromodule) step-down DC/DC regulator with PMBus serial digital interface. The digital interface enables system designers and remote operators to command and supervise a system's power condition and consumption.

The LTM4676A μ Module regulator has 70ms power-up time, 8ms ADC telemetry update rate and 400kHz PMBus-compliant I²C serial interface. These improvements allow quicker system boot time and faster data collection of power in applications with maximum power-up time requirements such as PCIe-based platforms. Examples of end products are optical transport systems, datacom and telecom switches and routers, industrial test equipment, robotics, and RAID and enterprise systems where the cost of electrical utilities, cooling and maintenance are critical and must be continuously and precisely measured.

The LTM4676A is comprised of EEPROM, power MOSFETs, inductors and supporting components. It has fast, dual analog control loops, precision mixed signal circuitry and is housed in a 16mm x 16mm x 5.01mm BGA (ball grid array) package.

In addition to delivering power to a point-of-load, the LTM4676A features configurability and telemetry monitoring of power and power management parameters over PMBus— an open standard I²C-based digital serial interface protocol. The LTM4676A operates from a 4.5V to 17V

input supply and steps down V_{IN} to two outputs ranging from 0.5V up to 5.4V. Two channels can current share to provide up to 26A (i.e., 13A + 13A as one output). As many as four LTM4676A devices can be multiphased to share current up to 100A output.

To evaluate the performance of the LTM4676A, the LTpowerPlay™ GUI (graphic user interface, free to download), USB-to-PMBus converter and demo kit (DC1811B-KIT) are available. With $\pm 0.5\%$ maximum DC output error over temperature, $\pm 2.5\%$ current read back accuracy, integrated 16-bit delta-sigma ADC and EEPROM, the LTM4676A combines best-in-class analog switching regulator performance with precision mixed signal data acquisition. At start-up, output voltages, switching frequency and channel phase angle assignments can be set by pin-strapping resistors.

The LTM4676A internal operating temperature range is from -40°C to 125°C . 1,000-piece price is \$33.95 each. For more information, visit www.linear.com/product/LTM4676A

Photo Caption: Dual 13A DPSM μ Module Regulator


Summary of Features: LTM4676A

- Dual 13A or Single 26A μ Module, Current Shareable up to 100A
- Regulator with Fast Analog Control Loops & Digital Interface for Remote Power System Management
- $\pm 2.5\%$ Current Read Back Accuracy; $\pm 0.5\%$ Maximum DC Output Voltage Error Over Temperature
- 70ms Power-Up & 8ms ADC Telemetry Update Rate
- 16mm x 16mm x 5.01mm BGA Package, Includes Inductors, Power MOSFETs, DC/DC Converter, Data Acquisition System & EEPROM

The USA list pricing shown is for budgetary use only. International prices 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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