



Triple Output 28V_{IN} Step-Down μ Module Regulator with Integrated Heatsink delivers 70W in 4.5cm²

MILPITAS, CA – August 26, 2014 – Linear Technology Corporation introduces the [LTM4634](#), a triple output step-down μ Module[®] (micromodule) regulator in a 15mm x 15mm x 5.01mm BGA package with integrated heat sink. The thermally efficient package enables the LTM4634 to deliver full current on all three outputs (5A, 5A, and 4A), more than 70W of output power at 65°C ambient with 200LFM airflow. Combined with only 13 ceramic capacitors and three resistors, the LTM4634 solution fits within 4.5cm² on a dual-sided PCB. The LTM4634 includes three DC/DC controllers, power switches, inductors and compensation in a single package. The regulated output voltage for channels 1 and 2 is adjustable between 0.8V to 5.5V, with the third channel from 0.8V to 13.5V, each with $\pm 1.5\%$ accuracy over line, load and temperature. The combination of wide output voltage range, a thermally efficient package, tight regulation accuracy and small solution size makes the LTM4634 well suited to regulate common intermediate power buses such as 12V, 5V and 3.3V in instrumentation, communications and industrial applications.

The LTM4634's three switchers operate from an input voltage from 4.75V to 28V. Separate input power pins for each switcher enables channel one and/or channel two to be supplied from a 12.5V, 50W intermediate bus generated from channel three. The three switchers, operating from the same internal or optional external clock signal, are internally phase shifted by 120° to minimize input ripple. For loads in excess of 5A, channels 1 and 2 can be paralleled to support up to 10A. Output overvoltage and overcurrent fault protection are included in the regulator. The LTM4634's internal temperature can be observed via two internal temperature diode monitors located next to the power stages.

The LTM4634 is available in the –40°C to +125°C internal operating temperature grade for immediate delivery from stock. Pricing starts at \$35.95 each for 1,000-piece quantities. For more information, visit www.linear.com/product/LTM4634

Photo Caption: Triple Output (5A, 5A, 4A) 28V_{IN} Step-Down μ Module[®] Regulator


Summary of Features: LTM4634

- Triple Output, 28V_{IN}, 70W Step-Down Solution in Less Than 4.5cm²
 - Only a Few Ceramic Capacitors & Resistors Required for a Complete Solution
- 15 x 15 x 5.01mm BGA with Integrated Heat Sink
- Full Output Current (5A, 5A, 4A) on All Channels at 65°C Ambient with 200LFM Airflow, no External Heatsink
- 4.75V to 28V Operating V_{IN} Range with Separate Inputs for each Channel
- $\pm 1.5\%$ Accurate User Adjustable V_{OUT} Between:
 - Channel 1: 0.8V to 5.5V
 - Channel 2: 0.8V to 5.5V
 - Channel 3: 0.8V to 13.5V
- Channel 1 & Channel 2 Can Be Paralleled to Deliver up to 10A

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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