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36V, 5A μ Module Regulator Protects Input Supplies from Overcurrent Conditions & Supports Asymmetric Power Sharing

MILPITAS, CA – March 15, 2012 Linear Technology announces the [LTM8026](#), a 36V input, 5A step-down μ Module[®] regulator with an adjustable and precise (+/-10%) accurate current limit. The current limit enables designers to set the maximum amount of power drawn from the supply, preventing input voltage droop caused by overcurrent conditions. When multiple LTM8026 are configured with the outputs tied together, each converter can be programmed with a unique maximum current limit to meet its specific input supply limitations for greater output power, a technique known as asymmetric power sharing. In contrast, common regulators must current share, a feature where each input supply contributes equally to the load, which is restricted by the least powerful input rail. Applications for the LTM8026 include point of load regulation in systems with 24V and 12V supplies such as VXi bus, for automotive, medical and industrial end-markets.

Like other Linear Technology μ Module regulators, the LTM8026 includes the DC/DC controller, power switches, power inductor, compensation and a modest amount of input and output capacitance in a surface mount package. The current limit is adjustable by applying a voltage or resistor divider and can be automatically decreased with rising junction or ambient temperature using a thermistor to prevent the LTM8026 or load from overheating.

The LTM8026 operates from an input voltage between 6V to 36V and regulates an output voltage between 1.2V to 24V set by a single resistor. In a 12V to 3.3V output application, the

LTM8026 achieves an operating efficiency of 89% at 2A. For noise-sensitive applications, the μ Module regulator can be synchronized to an external clock frequency in the range of 100kHz to 1MHz. Additional features include externally adjustable soft start, adjustable switching frequency and thermal shutdown.

The LTM8026 is packaged in a thermally efficient 11.25mm x 15mm x 2.82mm LGA package. Two temperature grades, E and I for the -40°C to +125°C temperature range, are available for immediate delivery from stock. Pricing starts at \$12.58 each for 1,000-piece quantities. For more information visit: www.linear.com/product/LTM8026


Photo Caption: 36V_{IN}, 5A Step-Down μ Module[®] Regulator with Adjustable Current Limit
Supports Asymmetric Power Sharing

Summary of Features: LTM8026

- $\pm 10\%$ Accurate Adjustable Output Current Limit
- Asymmetric Power Sharing (Customized Input Power Draw in Paralleled Output Configuration)
- 6V to 36V V_{IN} Range
- 1.2V to 24V V_{OUT} Range
- Up to 5A Output Current
- 89% Efficiency (12V_{IN} to 3.3V_{OUT})
- Synchronizable to an External Clock 100kHz – 1MHz
- Adjustable F_{SW} 100kHz – 1MHz
- Compact, Thermally Enhanced 11.25mm x 15mm x 2.82mm LGA Package

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 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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