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## **36V<sub>IN</sub>, ±5A Source/Sink Step-Down $\mu$ Module Regulator Features Adjustable Output Current Limit**

MILPITAS, CA – October 11, 2011 – Linear Technology introduces the [LTM8052](#), a 36V input constant frequency step-down  $\mu$ Module<sup>®</sup> regulator with an adjustable output current limit up to 5A. The adjustable current limit helps system designers set the maximum power delivered to a load, minimizing the output rating of the upstream AC/DC or DC/DC power supply.

Additionally, the LTM8052 is capable of sourcing or sinking current while regulating an adjustable output voltage. For simple noise filtering, the LTM8052 operates at a constant frequency throughout the entire output current range. The  $\mu$ Module regulator converts an input voltage between 6V and 36V to an adjustable output voltage between 1.2V to 24V. In a 12V input to 2.5V output application, the LTM8052 achieves a peak operating efficiency of 88% at 2A. Applications include industrial, medical imaging and communications point of load, charge balancing and Peltier thermoelectric module drivers.

The LTM8052's 10% accurate current limit is an improvement over traditional step-down regulators whose current limit can be 40%-50% greater than the actual output current. With the LTM8052, a lower power and less costly upstream power supply can be installed, which would otherwise require a greater output power rating to prevent a collapse of the voltage rail under an overcurrent or short-circuit condition. The current limit may also be compensated for temperature using a thermistor for improved thermal management. When sinking current, the  $\mu$ Module regulator recovers energy, transferring it to the input rail rather than dissipating it as heat in conventional methods. For noise-sensitive applications, the LTM8052 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 LTM8052 is packaged within a thermally efficient 11.25mm x 15mm x 2.82mm LGA package. The 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 \$13.17 each for 1,000-piece quantities. For more information visit, [www.linear.com/product/LTM8052](http://www.linear.com/product/LTM8052)


**Photo Caption:** 36V<sub>IN</sub>, ±5A Source/Sink Step-Down μModule<sup>®</sup> Regulator with Adjustable Current Limit

### Summary of Features: LTM8052

- ±10% Adjustable Current Limit Accuracy
- CCM operation at Light Load
- 6V to 36V Input Voltage Range
- 1.2V to 24V V<sub>OUT</sub> Range
- Source up to +5A / Sink up to -7A Output Current
- 88% Efficiency (12V<sub>IN</sub> to 2.5V<sub>OUT</sub>)
- Adjustable F<sub>SW</sub> 100kHz – 1MHz
- Synchronizable to an External Clock 100kHz to 1MHz
- Compact, Thermally Enhanced 11.25 × 15 × 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, and μModule<sup>®</sup> subsystems.

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