



## **40V, 3.5A $\mu$ Module Regulator is FMEA Compliant, Operates up to 150°C Junction Temperature**

MILPITAS, CA – June 30, 2016 – Linear Technology introduces the [LTM8003](#), a step-down DC/DC  $\mu$ Module<sup>®</sup> regulator with a 40V input voltage rating (42V abs max) and 3.5A of continuous (6A peak) output current. The LTM8003's pinout is FMEA (failure mode effects analysis) compliant, so the output voltage stays at or below the regulation voltage in the event of short-circuit to GND, short-circuit to a neighboring pin or if a pin is left floating. The maximum junction temperature of the H-grade version is 150°C, ideal for high temperature or high power automotive and industrial applications.

The LTM8003 operates from an input voltage range of 3.4V to 40V and has an adjustable output voltage range of 0.97V to 18V. The switching frequency is adjustable via an external resistor or can be synchronized to an external clock from 200kHz to 3MHz.

The LTM8003 has four operation modes: Burst Mode<sup>®</sup> operation, pulse skip mode, pulse skip mode with spread spectrum and external synch mode. The quiescent current in Burst Mode operation is 25 $\mu$ A (max), so the LTM8003 is well suited for battery operated systems, specifically “keep alive” systems.

The efficiency at 12V<sub>IN</sub> to 3.3V<sub>OUT</sub> is 90% and the LTM8003 delivers 3.5A of output current up to 100°C ambient without a heat sink or airflow.

The LTM8003 includes a switching regulator, inductor and other supporting components in a 6.25mm x 9mm x 3.32mm BGA package. Only the bulk input and output capacitors and a few resistors are required to complete the design.

The LTM8003 is operational from –40°C to 125°C or –40°C to 150°C. 1,000-piece pricing starts at \$11.30 each. For more information, visit [www.linear.com/product/LTM8003](http://www.linear.com/product/LTM8003).

**Photo Caption:** FMEA Compliant, 40V, 3.5A DC/DC  $\mu$ Module Regulator


**Summary of Features: LTM8003**

- Wide Input Voltage Range: 3.4V to 40V
- Wide Output Voltage Range: 0.97V to 18V
- 3.5A Continuous Output Current (6A Peak)
- FMEA Compliant Pinout
- 150°C Maximum Operating Temperature (H-Grade)
- Selectable Switching Frequency: 200kHz to 3MHz
- External Synchronization
- Low Quiescent Current = 25 $\mu$ A
- Programmable Soft-Start
- 6.25mm  $\times$  9mm  $\times$  3.32mm BGA 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,  $\mu$ Module<sup>®</sup> subsystems, and wireless sensor network products. For more information, visit [www.linear.com](http://www.linear.com)

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