



60V Input, Low Quiescent Current Step-Down Controller Operates from -55°C to 125°C

MILPITAS, CA – March 12, 2009 – Linear Technology Corporation announces a new high reliability (MP) grade version of the LTC3824, a 4V to 60V input range, low quiescent current, 100% duty step-down DC/DC controller in a small thermally enhanced MSOP-10 package. The MP grade device is specified over the -55°C to +125°C operating junction temperature range and is ideal for space-constrained automotive, industrial, telecom, datacom and battery-powered applications that demand an output voltage ranging from 0.8V to V_{IN} , at up to 5 amps. The 4V minimum input voltage supports automotive cold crank conditions and the 60V maximum input voltage survives inductive load dumps without the need for external clamping circuits.

The LTC3824MP can be configured for Burst Mode[®] operation, which reduces the controller's no load current draw to only 40uA and safely powers pre-biased loads. The shutdown current is a mere 7uA. With 100% duty cycle capability, the LTC3824MP has a very low dropout voltage, allowing V_{OUT} to approach V_{IN} , a feature that extends the run-time in battery-powered applications. In addition, the LTC3824MP can be programmed to a fixed frequency from 100kHz to 600kHz. For noise sensitive requirements, the device can be synchronized to an external clock over the same range. Its strong on board MOSFET gate driver powers an external P-channel MOSFET to produce up to 90% conversion efficiency. Furthermore, the LTC3824MP's current mode architecture provides fast line and load transient response as well as cycle-by-cycle over current protection. Additional features include programmable current limit and soft-start, along with overvoltage protection.

The LTC3824MP operates and is 100% production tested over an operating junction temperature range of -55°C to 125°C. 1,000-piece pricing starts at \$3.47 each. For more information, visit www.linear.com.

Photo Caption: High Input Voltage Step-Down Controller

Summary of Features: LTC3824MP

- High V_{IN} Range (4V to 60V)
- 100% Duty Cycle for Low Dropout Voltage and Extends Battery Run Times
- Wide V_{OUT} Range – 0.8V to V_{IN}
- Low 40 μ A Quiescent Current
- Selectable Continuous or Burst Mode Operation
- Current Mode Control
- On-Board MOSFET Gate Driver
- 100kHz to 600kHz Selectable Constant Frequency Operation
- Synchronizable up to 600kHz
- Programmable Soft Start and Current Limit
- Thermally Enhanced MSOP-10 Package

About Linear Technology

Linear Technology Corporation, a manufacturer of high performance linear integrated circuits, was founded in 1981, became a public company in 1986 and joined the S&P 500 index of major public companies in 2000. Linear Technology products include high performance amplifiers, comparators, voltage references, monolithic filters, linear regulators, DC-DC converters, battery chargers, data converters, communications interface circuits, RF signal conditioning circuits, uModule™ products, and many other analog functions. Applications for Linear Technology's high performance circuits include telecommunications, cellular telephones, networking products such as optical switches, notebook and desktop computers, computer peripherals, video/multimedia, industrial instrumentation, security monitoring devices, high-end consumer products such as digital cameras and MP3 players, complex medical devices, automotive electronics, factory automation, process control, and military and space systems.

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Press Contacts:

John Hamburger, Director Marketing Communications
jhamburger@linear.com
Tel: 408-432-1900 ext 2419

Doug Dickinson, Media Relations Manager
ddickinson@linear.com
Tel: 408-432-1900 ext 2233