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## **60V Input, Low Quiescent Current Step-Down Controller Features 150°C Maximum Junction Temperature**

MILPITAS, CA – April 22, 2009 – Linear Technology Corporation announces the H-grade version of the LTC3824, a 4V to 60V input range, low quiescent current step-down DC/DC controller in a small thermally enhanced MSOP-10 package. This H-grade device is guaranteed up to a 150°C operating junction temperature range and is ideal for automotive and industrial applications subjected to high ambient temperatures, demanding a small solution size for output voltages ranging from 0.8V to  $V_{IN}$  at up to 5 amps. The device's 4V minimum input voltage supports automotive cold crank and the 60V maximum input voltage survives inductive load dumps without the need for external clamping circuits.

The LTC3824H can be configured for Burst Mode<sup>®</sup> 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 LTC3824H 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 LTC3824H can be programmed to a fixed frequency from 100kHz to 600kHz. For noise-sensitive applications, the device can be synchronized to an external clock over the same range. Its strong onboard MOSFET gate driver powers an external P-channel MOSFET to produce greater than 90% conversion efficiency. Furthermore, the LTC3824H's current mode architecture provides fast line and load transient response as well as cycle-by-cycle overcurrent protection. Additional features include programmable current limit and soft-start, along with overvoltage protection.

The LTC3824H operates and is guaranteed over an operating junction temperature range of -40°C to 150°C. 1,000-piece pricing starts at \$2.55 each. For more information, visit [www.linear.com](http://www.linear.com).


## **Photo Caption:** High Input Voltage Step-Down Controller

### **Summary of Features: LTC3824H**

- High  $V_{IN}$  Range (4V to 60V)
- -40°C to +150°C Operating Junction Temperature Range
- 100% Duty Cycle Operation for Low Dropout Voltage
- Wide  $V_{OUT}$  Range: 0.8V to  $V_{IN}$
- Low 40uA 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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