



## **17V, 2.25MHz, Synchronous Step-Down Regulator Delivers 2A & Requires Only 3.5 $\mu$ A of Quiescent Current**

MILPITAS, CA – April 17, 2014 – The [LTC3624](#) is a high efficiency, 17V input capable synchronous buck regulator from Linear Technology that delivers up to 2A of continuous output current to outputs as low as 0.6V. Synchronous rectification delivers efficiencies as high as 95% while Burst Mode<sup>®</sup> operation requires only 3.5 $\mu$ A of no load quiescent current. The LTC3624 switches at a fixed 1MHz frequency, whereas the LTC3624-2 switches at 2.25MHz. Their constant frequency, current-mode architecture minimizes switching noise while offering very fast line and load transient response. The LTC3624/-2 operates from an input voltage range of 2.7V to 17V, making it ideal for single cell or multi- cell Li-Ion stack inputs as well as 12V intermediate bus-powered systems. The combination of its 3mm x 3mm DFN package, high switching frequency and tiny, low cost capacitors and inductors ensures a highly compact solution footprint.

The LTC3624/-2's 60ns minimum on-time enables it to step-down 16V inputs to 2.5V with a 2.25MHz switching frequency (LTC3624-2) without pulse skipping, minimizing the size of external components thus offering a very compact, high efficiency 2A step-down solution. It's 3.5 $\mu$ A quiescent current make it well suited for always-on applications demanding maximum battery run time. For applications requiring the lowest possible noise, the LTC3624/-2 can be configured to run in pulse-skipping or forced continuous mode, reducing noise and potential RF interference. Additional features include a power good voltage monitor, internal compensation and thermal protection.

The LTC3624EDD and LTC3624EDD-2 are available in a 3mm x 3mm DFN-8 package, priced at \$2.95 each in 1,000-piece quantities. Industrial grade versions, the LTC3624IDD and the LTC3624IDD-2 are guaranteed to operate over the -40°C to 125°C operating junction temperature range, priced at \$3.25 each in 1,000-piece quantities. All versions are available from stock. For more information, visit [www.linear.com/product/LTC3624](http://www.linear.com/product/LTC3624)

**Photo Caption:** 17V, 2A Synchronous Step-Down Regulator Requires Only 3.5 $\mu$ A of Quiescent Current

## Summary of Features: LTC3624/-2

- Wide  $V_{IN}$  Range: 2.7V to 17V
- Wide  $V_{OUT}$  Range: 0.6V to  $V_{IN}$
- 95% Max Efficiency
- Low  $I_Q < 3.5\mu A$ , Zero-Current Shutdown
- Constant Frequency Operation
  - 1MHz: LTC3624
  - 2.25MHz: LTC3624-2
- Low Dropout Operation with UltraLow  $I_Q$
- 2A Rated Output Current
- $\pm 1\%$  Output Voltage Accuracy
- Current-Mode Operation for Excellent Line & Load Transient Response
- Pulse-Skipping, Forced Continuous, Burst Mode® Operation
- Internal Compensation and Soft-Start
- Overtemperature Protection
- Compact 8-Lead 3mm × 3mm DFN 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 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, µModule® subsystems, and wireless sensor network products. For more information, visit [www.linear.com](http://www.linear.com)

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