



17V, 2.25MHz, Synchronous Step-Down Regulator Delivers 1A & Requires Only 3.5 μ A of Quiescent Current

MILPITAS, CA – April 9, 2013 – The [LTC3621](#) is a high efficiency, 17V input capable synchronous buck regulator from Linear Technology that delivers up to 1A of continuous output current to outputs as low as 0.6V. Synchronous rectification delivers efficiencies as high as 95% while Burst Mode[®] operation requires only 3.5 μ A of no load quiescent current. The LTC3621 switches at a fixed 1MHz frequency whereas the LTC3621-2 switches at 2.25MHz. Their constant frequency, current-mode architecture minimizes switching noise while offering very fast line and load transient response. The LTC3621/-2 operates from an input voltage range of 2.7V to 17V, making it ideal for single or dual cell Li-Ion applications as well as 12V intermediate bus and automotive systems. The combination of its 2mm x 3mm DFN or MSOP-8 package high switching frequency and tiny, low cost capacitors and inductors ensures a highly compact solution footprint.

The LTC3621/-2's 60ns minimum on-time enables it to step-down 16V inputs to 2.5V with a 2.25MHz switching frequency without pulse skipping, making it ideal for automotive applications that must keep switching noise above the AM radio band. Its 3.5 μ A quiescent current make it well suited for always-on applications demanding maximum battery run time. For applications that require the lowest possible noise, the LTC3621/-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 LTC3621EDCB and LTC3621EDCB-2 are available in a 2mm x 3mm DFN-6, the LTC3621EMS8E and LTC3621EMS8E-2 are offered in an 8-lead, thermally enhanced MSOP package. Pricing for both package and frequency options starts at \$2.55 each in 1,000-piece quantities. Industrial grade versions, the LTC3621IDCB, LTC3621IDC 2, **LTC3621IMS8E** and **LTC3621IMS8E-2**, are guaranteed to operate over the -40°C to 125°C operating junction temperature range and are priced at \$2.81 each in 1,000-piece quantities. All versions are available from stock. For more information, visit www.linear.com/product/LTC3621.

Photo Caption: 17V, 1A Synchronous Step-Down Regulator Requires Only 3.5µA of Quiescent Current

Summary of Features: LTC3621/-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:LTC3621
 - 2.25MHz-LTC3621-2
- Full Dropout Operation with Low I_Q
- 1A 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 6-Lead DFN 2mm × 3mm Package or 8-Lead MSOP Package with Power Good Output & Independent SGND Pin

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, µModule® subsystems, and wireless sensor network products. For more information, visit www.linear.com

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