



News Release | www.linear.com

60V Input DC/DC Synchronous Step-Down Controller with Adjustable Frequency Optimizes Size and Efficiency

MILPITAS, CA – January 18, 2007 – Linear Technology Corporation introduces the LT3845, a 4V to 60V input range, synchronous DC/DC step-down controller with adjustable 100kHz to 500kHz operating frequency. At higher frequencies users can implement a smaller inductor and capacitors, or at lower frequencies they can optimize the efficiency of the circuit. For noise-sensitive applications, the LT3845 can be synchronized to an external clock from 100kHz to 600kHz. The minimum 4V input maintains operation during automotive cold cranking and the 60V maximum input withstands inductive load dump peak voltages. In addition, the output voltage can be adjusted over a wide range from 1.23V to 36V at load currents up to 20A. Applications include 12V and 42V automotive, 48V telecom supplies, heavy equipment systems, avionics, industrial controls and distributed power systems.

The LT3845 is a current mode controller with an integrated biasing regulator that drives N-channel MOSFETs. Current mode operation provides fast line and load transient response, as well as cycle-by-cycle overcurrent protection. The integrated regulator provides IC power directly from the input supply without the need for a separate bias voltage. It maintains high efficiency at light loads with its Burst Mode[®] operation and 120uA quiescent current, a feature required in many automotive and battery-supplied input applications. Other features include short-circuit protection, adjustable soft-start, thermal shutdown and precision input undervoltage lockout. The LT3845 employs adaptive overlap control, which maintains a constant dead time, preventing shoot-through switch currents, independent of the type, size or operating conditions of the external MOSFET switches.

The LT3845 is offered in a 16-pin thermally enhanced TSSOP package and is rated for operation from -40°C to 125°C. The 1,000-piece price starts at \$3.56.


Photo Caption: 60V Current Step-Down Regulator

Summary of Features: LT3845

- Wide 4V to 60V Input Voltage Range
- Output Voltages from 1.23V to 36V
- Current Mode Control
- Adaptive Nonoverlap Circuitry Prevents Switch Shoot-Through
- Integrated On-Board Regulator for IC Bias Voltage
- 120uA No Load Quiescent Current
- Adjustable Constant Frequency from 100kHz to 500kHz
- Synchronizable up to 600kHz

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, 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. For more information, visit www.linear.com

LT, LTC, LTM and  are registered trademarks of Linear Technology Corp.

Press Contacts:

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

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