



News Release | www.linear.com

Configurable Dual Output Step-Down Converter Delivers Either 3A/1A or 2A/2A

MILPITAS, CA – February 11, 2009 – Linear Technology announces the LTC3546, a dual channel, synchronous buck regulator which can deliver either dual 2A outputs or 3A from one channel and 1A from the other, with up to 96% efficiency. Using a constant frequency, current mode architecture, the LTC3546 operates from an input voltage range of 2.25V to 5V, making it ideal for single cell Li-Ion/polymer, or multicell alkaline/NiCad/NiMH applications. Each output is adjustable from 0.6V to 5V and has turn-on supply tracking. Separate RUN and Power Good PINs enable independent control of each channel. The LTC3546's switching frequency can be set at 2.25MHz or is programmable from 750kHz to 4MHz enabling the designer to optimize efficiency while avoiding critical noise-sensitive frequency bands. The combination of its 4mm x 5mm QFN-28 package and high switching frequency keeps external inductors and capacitors small, providing a very compact, thermally efficient footprint.

The LTC3546's design consists of 2A and 1A primary synchronous switches and a 1A dependent synchronous output switch which can be externally connected to either of the primary outputs to produce either 3A and 1A outputs or dual 2A outputs. The 2A primary switch can be run either in phase with the additional switches or 180deg out-of-phase via an external phase pin.

The LTC3546's Burst Mode[®] operation minimizes quiescent current to only 160uA (both channels on) in no load conditions. The current threshold at which BurstMode operation begins can be independently programmed for each channel, optimizing overall efficiency. For applications demanding the lowest possible noise, the LTC3546 can also be run in pulse skipping or forced continuous modes to minimize output ripple. The LTC3546 offers a Power Good indicator and is synchronizable to an external clock. Other features include external synchronization capability, overtemperature and short-circuit protection.

The LTC3546EUFD is available in a 4mm x 5mm QFN-28 and is priced at \$3.75 each in 1,000-piece quantities. An industrial grade version, the LTC3546IUFD is tested and guaranteed to operate from a -40°C to 125°C operating junction temperature and is priced at \$4.41 in 1,000-piece quantities. All versions are available from stock. For more information, visit www.linear.com.


Photo Caption: Triple Output Synchronous DC/DC Converter

Summary of Features: LTC3546

- V_{IN} Range: 2.25V to 5.5V
- V_{OUT} Range: 0.6V to 5V
- 3A/1A or Dual 2A Output Current Capability
- Programmable Frequency Operation; 2.25MHz, or Adjustable Between 0.75MHz to 4MHz
- Low $R_{DS(ON)}$ Internal Switches
- High Efficiency: Up to 96%
- No Schottky Diodes Required
- Short-Circuit Protected
- Current Mode Operation for Excellent Line and Load Transient Response
- Low Ripple Burst Mode Operation ($<30mV_{P-P}$), $I_Q = 125\mu A$
- Ultralow Shutdown Current: $I_Q < 1\mu A$
- Low Dropout Operation: 100% Duty Cycle
- Power Good Output For Each Channel
- Externally or Internally Programmable Burst Level
- External or Internal Soft-Start or Supply Tracking
- Available in 28-Lead (4mm x 5mm) QFN 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.

LT, LTC, LTM, Burst Mode and  are registered trademarks and uModule is a trademark of Linear Technology Corp. All other trademarks are the property of their respective owners.

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