



News Release | www.linear.com

6A, 2.5MHz, 42V Boost/Inverting DC/DC Converter with Fault Protection

MILPITAS, CA – June 3, 2010 – Linear Technology Corporation announces the [LT3579](#), a current mode, fixed frequency step-up DC/DC converter with integrated fault protection features for output shorts, input/output overvoltages, and overtemperature conditions. The LT3579 incorporates two integrated 42V switches, a 3.4A master switch and a 2.6A slave switch, which can be tied together for a total current of 6A. The LT3579 operates from an input voltage range of 2.5V to 16V, with transient protection to 40V, making it suitable for applications with input sources ranging from a single-cell Li-Ion to automotive inputs. The LT3579 is ideal for many local power supply designs as it can be configured as either a boost, SEPIC or an inverting converter. The device's 4mm x 5mm QFN package (or TSSOP-20E) and tiny externals ensure a very compact footprint while minimizing solution cost.

The LT3579's low V_{CESAT} switches, 0.25V (tied together at 5.5A), deliver efficiencies up to 90%. With both switches combined from a 5V input, the LT3579 can deliver up to 1.7A at 12V or 1.2A at -12V. For high voltage outputs, the LT3579's slave switch enables high power charge pump topologies which are very efficient and require few external components. The LT3579's switching frequency can be programmed via a single resistor or synchronized to an external clock between 200kHz and 2.5MHz, minimizing external component sizes and avoiding "noise critical" frequency bands. Undervoltage lockout (UVLO) is user adjustable for optimal system performance. A single feedback resistor sets the output voltage, minimizing external

components. Other features include external synchronization capability and junction temperature monitoring.

For applications requiring higher output current, the LT3579-1 offers a CLKOUT pin signal that is 180°C out of phase with the internal oscillator, enabling the device to be used in multiphase applications.

The LT3579EUF and LT3579-1EUF are available in 4mm x 5mm QFN-20 packages, priced starting at \$3.30 each for 1,000 piece quantities. The LT3579EFE and LT3579-1EFE are also available in a thermally enhanced TSSOP-20 packages, priced starting at \$3.45 each for 1,000 piece quantities. Industrial temperature (-40°C to 125°C) versions, the LT3579IUFD, LT3579-1IUFD and the LT3579IFE, LT3579-1IFE are also available from stock. Pricing starts at \$3.67 and \$3.83 each, respectively for 1,000 piece quantities. For more information, visit <http://www.linear.com/pr/3579>.


Photo Caption: 6A, 42V Boost/Inverting DC/DC Converter with Integrated Fault Protection

Summary of Features: LT3579/-1

- 6A, 42V Combined Power Switch
- Output Short Circuit Protection
- Wide Input Range: 2.5V to 16V Operating, 40V Maximum Transient
- LT3579-1: Dual-Phase Capable
- Master/Slave (3.4A/2.6A) Switch Design
- User Configurable Undervoltage Lockout
- Easily Configurable as a Boost, SEPIC, Inverting or Flyback Converter
- Low V_{CESAT} Switch: 250mV at 5.5A (Typical)
- Can be Synchronized to External Clock
- Can Synchronize Other Switching Regulators
- High Gain SHDN Pin Accepts Slowly Varying Input Signals
- 20-Lead TSSOP & 20-Pin 4mm x 5mm QFN Packages

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, uModule and  are registered trademarks of Linear Technology Corp. All other trademarks are the property of their respective owners.

Press Contacts:

North America / Worldwide

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

UK & Nordic

Alan Timmins
alan@ezwire.com
Tel: +44-1-252-629937