



2.5MHz Boost/Inverter DC/DC Converter with 2A/42V Switch & Synchronization

MILPITAS, CA – October 4, 2007 – Linear Technology Corporation announces the LT3580, a current mode, fixed frequency step-up DC/DC converter with an internal 2A, 42V switch. It operates from an input voltage range of 2.5V to 32V, making it suitable for applications with input sources ranging from a single-cell Li-Ion to automotive inputs. The LT3580 can be configured as either a boost, SEPIC or an inverting converter. Its switching frequency can be programmed, via a single resistor or synchronized to an external clock, between 200kHz and 2.5MHz, enabling designers to minimize external component sizes and to avoid “noise critical” frequency bands. The combination of a 3mm x 3mm DFN package (or MSOP-8E) and tiny externals ensures a very compact footprint while minimizing solution cost.

The LT3580's low V_{CESAT} switch, 0.3V at 1.5A, delivers efficiencies of up to 89%. Under-voltage 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, internal soft-start and thermal shutdown protection.

The LT3580EDD is available in a 3mm x 3mm DFN-8 package. Pricing starts at \$2.00 each for 1,000 piece quantities. The LT3580MS8E is also available in a thermally enhanced MSOP-8 package. Pricing starts at \$2.10 each for 1,000 piece quantities. Industrial temperature (-40°C to 125°C) versions, the LT3580IDD and the LT3580IMS8E, are also available from stock. Pricing starts at \$2.40 and \$2.52 each, respectively, for 1,000 piece quantities.


Photo Caption: 2A, 42V Boost, Inverting or SEPIC DC/DC Converter

Summary of Features: LT3580

- 2A Internal Power Switch
- Adjustable Switching Frequency
- Single Feedback Resistor Sets V_{OUT}
- Synchronizable to External Clock from 200kHz to 2.5MHz
- High Gain SHDN Pin Accepts Slowly Varying Input Signals
- Wide Input Voltage Range: 2.5V to 32V
- Low V_{CESAT} Switch: 300mV at 1.5A (Typical)
- Integrated Soft-Start Function
- Easily Configurable as a Boost or Inverting Converter
- User Configurable Undervoltage Lockout (UVLO)
- Tiny 8-Lead 3mm × 3mm DFN and 8-Lead MSOP 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, 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

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