



2A, 42V Boost Converter Now Offered in High Temperature “H” & “MP” Grades

MILPITAS, CA – August 17, 2010 – Linear Technology announces the “H-grade” and “MP-grade” versions of the [LT3580](#), a current-mode, fixed frequency step-up DC/DC converter with internal 2A, 42V switch. The device 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 H-grade version operates with a junction temperature range of -40°C to 150°C, whereas the MP-grade operates with a junction temperature range of -55°C to 125°C. This compares to the E- and I-grade versions’ 125°C maximum junction temperature. All electrical specifications are identical for the E, I, H and MP. The H-grade parts are both tested and guaranteed to the junction temperature range of -40°C to 150°C and are ideal for automotive and industrial applications, which are subject to high ambient temperatures. Similarly, the MP-grade parts are tested and guaranteed to the junction temperature range of -55°C to 125°C and are well suited for military and avionics applications, which are subject to both low and high ambient temperatures.

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 highly compact footprint while minimizing solution cost.

The LT3580HMSE and the LT3580MPMSE are available from stock in thermally enhanced MSOP-8E packages. Pricing starts at \$2.77 and \$8.31 each, respectively, for 1,000-piece quantities. For more information, visit www.linear.com/3580.

Photo Caption: 42V Boost Converter with Wide Operating Temperature

Summary of Features: LT3580H & LT3580MP

- Maximum Junction Temperature Range of -40°C to 150°C (H-Grade)
- Maximum Junction Temperature Range of -55°C to 125°C (MP-Grade)
- 2A Internal Power Switch
- Adjustable Switching Frequency
- Single Feedback Resistor Sets V_{OUT}
- Synchronizable to External Clock
- 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 x 3mm DFN & 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, 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.

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