



Dual 3A, 2.5MHz, 42V Boost/Inverting DC/DC Converter with Fault Protection

MILPITAS, CA – January 25, 2012 – Linear Technology Corporation announces the [LT8582](#), a dual independent channel, step-up DC/DC converter with integrated fault protection features for output shorts, input/output overvoltages, and overtemperature conditions. Each channel of the LT8582 uses two integrated 42V switches: a 1.7A master switch and a 1.3A slave switch that can be tied together for a total current limit of 3A. The LT8582 operates from an input voltage range of 2.5V to 22V with transient protection to 40V, making it suitable for applications with input sources ranging from a single-cell Li-Ion to automotive inputs. The LT8582 is ideal for many local power supply designs as each channel can be independently configured as either a boost, SEPIC, inverting or flyback converter. The combination of a 4mm x 7mm DFN package and tiny externals ensures a very compact footprint while minimizing solution cost.

The LT8582's low V_{CESAT} switches, 0.27V (tied together at 2.75A) can deliver efficiencies up to 90%. A power good pin is offered for ease of use when event-based sequencing is required. For high voltage outputs, the LT8582's slave switch enables high power charge pump topologies which are very efficient and require few external components. The LT8582'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. Each channel requires a single feedback resistor to set the output voltage, minimizing external components. Other features include external synchronization capability, output short circuit protection and frequency foldback.

The LT8582EDKD is available in a 7mm x 4mm DFN-24 package and is priced at \$3.75 each for 1,000 piece quantities. An industrial temperature (-40°C to 125°C) version, the LT8582IDKD, is priced at \$4.13 each for 1,000 piece quantities. Both versions are available from stock. For more information, visit www.linear.com/product/LT8582

Photo Caption: Dual 3A, 42V Boost, Inverting or SEPIC DC/DC Converter

Summary of Features: LT8582

- Dual 42V, 3A Combined Power Switch
- Master/Slave (1.7A/1.3A) Switch Design
- Wide Input Range: 2.5V to 22V Operating, 40V Maximum Transient
- Power Good Pin for Event-Based Sequencing
- Switching Frequency Up to 2.5MHz
- Each Channel Easily Configurable as a Boost, SEPIC, Inverting or Flyback Converter
- Low V_{CESAT} Switch: 270mV at 2.75A (Typical)
- Can be Synchronized to an External Clock
- Output Short-Circuit Protection
- High Gain SHDN Pin Accepts Slowly Varying Input Signals
- 24-Pin 7mm x 4mm DFN Package
- Dual 3A, 42V Boost/Inverting DC/DC Converter with Integrated Fault Protection

About Linear Technology

Linear Technology Corporation, a member of the S&P 500, has been designing, manufacturing and marketing a broad line of high performance analog integrated circuits for major companies worldwide for three decades. The Company's products provide an essential bridge between our analog world and the digital electronics in communications, networking, industrial, automotive, computer, medical, instrumentation, consumer, and military and aerospace systems. Linear Technology produces power management, data conversion, signal conditioning, RF and interface ICs, μ Module[®] subsystems, and wireless sensor network products. For more information, visit www.linear.com

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