



1.5MHz, 25V Dual Step-Down DC/DC Converter Delivers 3A per Channel from a TSSOP-20E Package

MILPITAS, CA – December 7, 2006 – Linear Technology announces the LT3501, a dual current mode PWM step-down DC/DC converter with two internal 3.5A power switches packaged in a 20-lead TSSOP-20E package. Each channel is capable of delivering up to 3A of continuous output current at efficiencies up to 88%. Independent input voltage, feedback, soft-start and power good pins for each channel simplify complex power supply tracking and sequencing requirements. Its wide input range of 3.3V to 25V makes it ideal for regulating power from a wide variety of sources, including 5V and 12V rails, unregulated wall transformers, lead acid batteries and distributed power supplies. The LT3501's switching frequency is user programmable between 250kHz and 1.5MHz, allowing optimization between efficiency and external component size.

Both of the LT3501's converters are synchronized to an external clock input or an internal oscillator and maintain a 180 degree phase offset between channels to reduce voltage ripple and input capacitor size. An internal 0.80V reference enables sub 1V output voltages required to power the latest generation of low voltage DSPs and microcontrollers. Independent, sequential, ratiometric or absolute tracking is easily attained between the outputs. Low drop-out internal switches enable duty cycles to reach 95% while internal cycle-by-cycle current limit provides protection against shorted outputs. The low current (<10uA) shutdown offers extended run-time in battery-powered systems.

The LT3501EFE is available from stock in a thermally enhanced TSSOP-20 package. There is also an "I" Grade temperature version, the LT3501IFE. Pricing starts at \$3.50 and \$4.20 each, respectively, for 1,000-piece quantities.


Photo Caption: 25V, 1.5MHz, Dual 3A (I_{OUT}) Step-Down Switching Regulator in TSSOP-20E

Summary of Features: LT3501

- Wide Input Range: 3.3V to 25V
- Two Switching Regulators with 3A Output Capability
- Independent Supply to Each Regulator
- Adjustable/Synchronizable Fixed Frequency Operation from 250kHz to 1.5MHz
- Antiphase Switching
- Outputs Can Be Paralleled
- Independent, Sequential, Ratiometric or Absolute Tracking Between Outputs
- Independent Soft-Start and Power Good Pins
- Enhanced Short-Circuit Protection
- Low Dropout: 95% Maximum Duty Cycle
- Low Shutdown Current: <10uA
- 20-Lead TSSOP Package with Exposed Leadframe

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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