



2MHz, 1.2A (I_{OUT}) 36V Step-Down DC/DC Converter in 3mm x 3mm DFN Package

MILPITAS, CA – September 11, 2006 – Linear Technology Corporation announces the LT3505, a current mode PWM step-down DC/DC converter with an internal 1.75A power switch, packaged in a tiny 8-lead 3mm x 3mm DFN package. Its wide input range of 3.6V to 36V and capability to withstand 40V transients makes the LT3505 ideal for regulating power from a wide variety of sources, including unregulated wall transformers, 24V industrial supplies and automotive batteries. For automotive applications, the LT3505's minimum input voltage of 3.6V enables it to operate with sub-4V inputs, paramount for meeting automotive “cold crank” requirements. Similarly, its 40V input capability enables it to withstand transients found in load-dump conditions. Its 200kHz to 3MHz switching frequency is user programmable, enabling it to maximize efficiency while using tiny, low cost inductors and ceramic capacitors, resulting in low predictable output ripple.

The LT3505's low V_{CESAT} (350mV @1A) internal switch offers efficiencies of over 90%, maximizing battery run-time. Its internal reference enables output voltages as low as 0.78V. Internal cycle-by-cycle current limit provides protection against shorted outputs while soft-start eliminates input current surge during start-up. The low current (<2uA) shutdown provides easy power management in battery-powered systems.

The LT3505EDD is available from stock in a thermally enhanced 3mm x 3mm DFN-8 package. A higher temperature grade “I” version, the LT3505IDD, is also available from stock. Pricing starts at \$2.40 each and \$2.88 each respectively for 1,000-piece quantities.


Photo Caption: 2MHz Step-Down Switching Regulator in 3mm x 3mm DFN

Summary of Features: LT3505

- Wide Input Range: 3.6V to 36V Operating, 40V Maximum
- 1.2A Output Current
- Resistor-Programmable Fixed-Frequency Operation from 200kHz to 3MHz
- Output Adjustable Down to 780mV
- Short-Circuit Robust
- Uses Tiny Capacitors & Inductors
- Soft-Start
- Low Shutdown Current: <2uA
- Low V_{CESAT} Switch: 350mV at 1A
- Thermally Enhanced, Low Profile 3mm x 3mm DFN-8 Package

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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