

LTC News for Immediate Release

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**Synchronous Isolated Flyback Controller for
9V-36V Inputs Needs No Optoisolator**

MILPITAS, CA – May 15, 2006 – Linear Technology Corporation introduces the LT3837, a synchronous flyback DC/DC controller with precision regulation and high efficiency for 10W to 60W isolated power supplies. The controller IC has 9V to 36V input voltage operation and is ideal for industrial and instrumentation applications. The LT3837 is a current mode controller that regulates the output voltage based on sensing secondary voltage via transformer winding. This allows for tight output voltage regulation without the use of an optoisolator, improving dynamic response and system reliability. Synchronous rectification increases conversion efficiency and improves output cross regulation in multiple output power supplies. For example, the LT3837 is used to convert an input supply of 9V to 36V to an isolated output of 3.3V at 12A with up to 90% efficiency and with precise $\pm 1\%$ regulation.

The LT3837 has a unique feedback amplifier that eliminates the need for an optoisolator by sampling a transformer winding voltage during flyback period and using this voltage to precisely regulate the output voltage. This alleviates design time for trimming the power supply. Furthermore, the elimination of the optoisolator improves the output transient response. An adjustable primary gate delay eliminates multiple discrete components from the circuit and optimizes MOSFET switching time and transformer selection. To further simplify the design, the LT3837 allows its switching frequency to be adjusted from 50kHz to 250kHz with a capacitor. The IC can also be synchronized to an external oscillator.

The LT3837 is rated for operation from -40°C to 125°C and is offered in a thermally enhanced 16-lead TSSOP package. 1,000-piece pricing is set at \$3.10 each.

Photo Caption: 9V-18V to 3.3V at 10A Isolated converter

Summary of Features: LT3837

- No Optoisolator Required
- Synchronous Driver for High Current and High Efficiency Operation
- Accurate Regulation without User Trims
- 50kHz to 250kHz Switching Frequency
- Synchronizable

Company Background

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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