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100V Isolated Flyback DC/DC Controller Simplifies Design & Eliminates Optocoupler

MILPITAS, CA – August 5, 2010 – Linear Technology Corporation announces the [LT3748](#), a high input voltage isolated flyback DC/DC controller that significantly simplifies the design of an isolated DC/DC converter. No opto-isolator, third winding or signal transformer is required for feedback since the output voltage is sensed from the primary-side flyback signal. The LT3748 operates over a 5V to 100V input voltage range and drives an external N-channel power MOSFET, making it well suited for a wide variety of industrial, medical, telecom, datacom and automotive applications.

The LT3748 operates in boundary mode, which is a variable frequency current mode control switching scheme, resulting in +/-5% typical regulation over the full line, load and temperature range. Boundary mode also permits the use of a smaller transformer compared to equivalent continuous conduction mode designs. The output voltage is easily set by two external resistors and the transformer turns ratio. Several off-the-shelf transformers identified in the data sheet, can be used for numerous applications. The high level of integration and the use of boundary mode operation results in a simple, clean application solution to the traditionally tough problem of isolated power delivery.

Additional features include an onboard low dropout regulator for IC power, programmable soft start, undervoltage lockout, adjustable current limit and output voltage temperature compensation.

The LT3748 is available in a small MSOP-16 package with 4 pins removed for additional high voltage pin spacing. This device is available in extended and industrial operating junction temperature range at -40°C to 125°C. Pricing starts at \$3.12 each in 1000-piece quantities. For more information, visit www.linear.com/3748.


Photo Caption: High Voltage Isolated Flyback Converter

Summary of Features: LT3748

- V_{IN} Range from 5V to 100V
- No Opto-isolator, Transformer or Third Winding Required for Feedback
- Drives External N-channel Power MOSFET
- Current Mode Control
- Boundary Mode Operation
- V_{OUT} Set with Two External Resistors
- Off-the-Shelf Transformers
- Programmable Soft-Start
- Programmable Undervoltage Lockout
- Output Voltage Temperature Compensation

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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