



Isolated Forward Converter Integrated Circuits Specified over -55°C to 125°C Junction Temperature Range

MILPITAS, CA – June 13, 2011 – Linear Technology Corporation announces the high reliability (MP-grade) version of the [LT1952/-1](#), [LTC3900](#) and [LT4430](#). These devices combine to create a high efficiency (up to 95%) synchronous rectified isolated forward converter that is specified and production tested over a -55°C to 125°C operating junction temperature range. The LT1952/-1 is a single switch forward controller with active transformer reset that provides timing signals to the secondary-side LTC3900 synchronous rectifier driver. The LT4430 is a secondary-side optodriver with a precision reference voltage that completes the tightly regulated isolated forward converter circuit. The LTC3900 and LT4430 are specified to a maximum operating junction temperature of 150°C. This type of forward converter design is well suited for 12V, 24V and 48V nominal input voltages, commonly found in telecom, datacom, industrial and military/aerospace applications.

The LT1952/-1 includes all of the features necessary to implement an active clamp transformer reset, enabling higher efficiencies and greater power densities compared to conventional catch winding or resonant reset techniques. Two control outputs are provided: the main power switch control and the active clamp switch control. Additional features include a fixed programmable operating frequency from 100kHz to 500kHz, synchronizable up to 750kHz, selectable maximum duty cycle, adjustable synchronous timing delay, undervoltage lockout, a low 100mV current sense threshold, leading edge blanking and programmable soft start.

The LT1952/-1MP is available in a SSOP-16 package and 1,000-piece pricing starts at \$9.35 each. The LTC3900MP is available in an SO-8 package and 1,000-piece pricing starts at \$7.00 each. The LT4430MP is available in a TSOT-23 package and 1,000-piece pricing starts at \$5.12 each. For more information, visit www.linear.com/product/LT1952, www.linear.com/product/LTC3900 and www.linear.com/product/LT4430


Photo Caption: Isolated Synchronous Forward Converter

Summary of Features: LT1952/-1, LTC3900, LT4430

- Single Switch Forward Converter with Active Clamp Transformer Reset
- N-Channel Synchronous Rectifier MOSFET Driver
- Precision Reference Voltage/Optocoupler Driver
- -55°C to 125°C Operating Junction Temperature Range
- Adjustable Delay for Synchronous Timing
- Accurate Shutdown Thresholds with Programmable Hysteresis
- Programmable Slope Compensation & Leading Edge Blanking
- Adjustable Fixed 100kHz to 500kHz Operating Frequency
- Synchronizable Operating Frequency Up to 750kHz
- Low 100mV Current Sense Threshold
- Current-Mode Control

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, and μ Module[®] subsystems.

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