Simplify 25W-300W Power Supply Design with Single Switch Synchronous Forward Controller

MILPITAS, CA – September 13, 2004 – Linear Technology Corporation introduces the LT1952, a current mode PWM controller optimized for forward converter topology power supply design. The LT1952 uses only one primary side MOSFET and provides synchronous rectifier control for high operating efficiency without need for an external MOSFET driver or timing circuitry. A programmable volt-second clamp provides a safeguard for transformer reset that prevents saturation and protects the MOSFET. Moreover, this function allows the use of the smallest transformer, MOSFET and rectifiers, resulting in minimum space for a given output power. The LT1952 simplifies design of 25W to 300W power supplies such as isolated 48V input to 12V, 5V or 3.3V output in industrial or telecom applications.

The LT1952 includes soft-start function for a controlled exit from shutdown, overcurrent conditions and undervoltage lockout. To improve efficiency while starting conversion from high input voltages, the LT1952 features a micropower 460uA start-up current. Because of its programmable slope compensation, leading edge blanking and a true error op amp, a wide range of inductors and MOSFETs can be used without jeopardizing circuit stability.

The LT1952 is available in a 16-lead SSOP and is operational from -40°C to 85°C. 1,000-piece price starts at $3.30.

(more...)
Summary of Features: LT1952

- Synchronous Rectifier Control for High Efficiency
- Programmable Volt-Second Clamp
- Output Power Levels from 25W to 300W
- Low Current Start-Up
- True PWM Soft-Start
- Low Stress Short Circuit Protection

COMPANY BACKGROUND: Linear Technology Corporation was founded in 1981 as a manufacturer of high performance linear integrated circuits. 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.

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