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**33V (62V Transient), 3.5A(I_{OUT}), 2.4MHz
Step-Down DC/DC Converter with T_{J(MAX)} = 150°C**

MILPITAS, CA – September 8, 2009 – Linear Technology announces the H-grade version of the LT3972. The LT3972 is a 3.5A, 33V step-down switching regulator with Burst Mode[®] operation to keep quiescent current under 75uA. The LT3972 operates within a V_{IN} range of 3.6V to 33V, with overvoltage lockout protection against transients as high as 62V, making it ideal for load dump and cold-crank conditions found in automotive applications. Its internal 4.6A switch can deliver up to 3.5A of continuous output current to voltages as low as 0.79V. The LT3972's Burst Mode operation offers ultralow quiescent current, well suited for applications such as automotive or telecom systems, which demand always-on operation and optimum battery life. Switching frequency is user programmable from 200kHz to 2.4MHz, enabling the designer to optimize efficiency while avoiding critical noise-sensitive frequency bands. The combination of its thermally enhanced MSOP-10E package and high switching frequency, which keeps external inductors and capacitors small, provides a compact, thermally efficient footprint.

The H-grade version operates up to a junction temperature of 150°C, compared to the 125°C maximum junction temperature of the E- and I-grade versions. All electrical specifications are identical for the E-, I- and H-grade versions. H-Grade parts are tested and guaranteed to a maximum junction temperature of 150°C and are ideal for automotive and industrial applications, which are subjected to high ambient temperatures.

Pricing for the LT3972HMSE starts at \$5.47 each in 1,000-piece quantities and is available from stock. For more information, visit www.linear.com.


Photo Caption: 33V (62V Transient) 3.5A Step-Down Converter with T_{J(MAX)} = 150°C

Summary of Features: LT3972H

- Wide Input Range: Operation from 3.6V to 33V
- Overvoltage Lockout Protects Circuits Through 62V Transients
- 3.5A Maximum Output Current
- Low Ripple (<15mVP-P) Burst Mode[®] Operation: I_Q = 75uA at 12V_{IN} to 3.3V_{OUT}
- Adjustable Switching Frequency: 200kHz to 2.4MHz
- Low Shutdown Current: I_Q < 1uA
- Integrated Boost Diode
- Synchronizable Between 250kHz to 2MHz
- Power Good Flag
- Saturating Switch Design: 95mOhm On-Resistance
- Output Voltage: 0.79V to 30V
- Thermal Protection
- Soft-Start Capability
- Small 10-Pin Thermally Enhanced MSOP
- T_{J(MAX)} = 150°C

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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