



## **Micropower Linear Regulator Withstands 80V Input at 140°C**

MILPITAS, CA – February 12, 2007 – Linear Technology Corporation announces a new higher temperature version of the LT3010, a high voltage micropower, low dropout regulator that delivers up to 50mA of continuous output current. The newly released H grade version enables operation up to 140°C, compared to the E grade which operates up to 125°C. The LT3010 features an input voltage range of 3V to 80V, delivering output voltages as low as 1.275V. The LT3010-5 provides a fixed 5V output. The 80V input voltage capability makes it ideal for automotive applications, 48V telecom backup supplies and industrial control applications. Low quiescent current of 30uA (operating) and 1uA (in shutdown) make it an excellent choice for battery-powered “keep alive” systems that require optimum run time.

Output noise is minimized at only 100uV<sub>RMS</sub> over a 10Hz to 100kHz bandwidth, making the LT3010/-5 ideal for noise sensitive applications. For high voltage applications that require large input-to-output voltage differentials, the LT3010/-5 offers a very compact solution. Its thermally enhanced MSOP-8 package offers thermal resistance equivalent to much larger conventional packages.

The LT3010/-5 is able to operate with very small, low cost, ceramic output capacitors. It is stable with only a 1uF output capacitor while older linear regulators require between 10uF and 100uF to maintain stability. These tiny external capacitors can be used without the necessary addition of series resistance as is common with many other regulators. Internal circuitry includes reverse-battery protection, current limiting, thermal limiting, and reverse current protection.

The LT3010/-5 is available from stock in an 8-lead thermally enhanced MSOP package. Pricing starts at \$2.05 each for 1,000-piece quantities.

**Photo Caption: 80V Supply at 140°C Capable LDO****Summary of Features: LT3010/-5 H Grade**

- 3V to 80V Input Voltage Range
- Temperature Range:
  - up to +140°C Operation (H Grade)
  - up to +125°C Operation (E Grade)
- 50mA Output Current
- Low Dropout Voltage: 300mV
- Very Low Quiescent Current: Only 30uA
- Adjustable (down to 1.275V Output) or Fixed 5V Output
- Stable with 1uF Ceramic Capacitors
- Reverse Battery Protection
- Low Shutdown Current <1uA
- Thermally Enhanced MSOP-8E Package

**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, 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](http://www.linear.com)

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