



FMEA Compliant, 45V LDO Features 3 μ A I_Q with H-Grade Temperature Range up to +150°C

MILPITAS, CA – December 11, 2014 – Linear Technology Corporation announces a new wider temperature range, H grade version of the [LT3007](#), the latest member in a family of high voltage, micropower, robust PNP-based LDOs, featuring an ultralow 3 μ A quiescent current. The device's H grade 150°C junction temperature rating enables high temperature or high power automotive and industrial applications. Its high input voltage capability, spanning 2.0V to 45V with an adjustable output voltage ranging from 0.6V to 44.5V, enables operation in a wide range of applications. The LT3007's pinout is FMEA (Failure Mode Effects Analysis) compliant, so the output stays at or below the regulation voltage during an adjacent pin short event, or if a pin is left floating. The device's 3 μ A quiescent and shutdown currents (<1 μ A) enable ultralow standby power consumption, making the IC ideal for applications not requiring shutdown, or those needing moderate output drive capability and high input voltage, such as remote monitoring and low-current battery-powered memory for "keep alive" systems requiring extended run times.

The LT3007 delivers up to 20mA output current with a corresponding low dropout voltage of only 300mV. Output voltage tolerance is tightly regulated to within $\pm 2\%$ over line, load and temperature. The IC optimizes stability and transient response with low ESR, ceramic output capacitors as small as 2.2 μ F. Internal protection circuitry includes reverse-battery protection, reverse output and reverse output-to-input protection, current limiting and thermal limiting for robustness.

The LT3007 is offered in E, I and H grades in an 8-lead SOT-23 package with 3 pins fused to the ground paddle for enhanced thermal performance in both fixed and adjustable versions. 1,000-piece pricing starts at \$1.20 each for the E grade and 1.75 for the H grade. For more information, visit www.linear.com/product/LT3007

Photo Caption: H-Grade +150°C, FMEA-Tolerant, 45V, 3 μ A I_Q, 20mA, Wide V_{IN} & V_{OUT} LDO

Summary of Features: LT3007

- FMEA Fault Tolerant
 - Output Stays at or Below Regulation Voltage During Adjacent Pin Short or if a Pin Is Left Floating
- Ultra-Low Quiescent Current: 3 μ A
- H Grade Operating Junction Temperature Range: -40°C to +150°C
- V_{IN} Range: 2.0V to 45V
- Adjustable V_{OUT}: 0.6V to 44.5V
- Fixed Output Voltages: 1.2V, 1.5V, 1.8V, 2.5V, 3.3V, 5V
- Output Tolerance: \pm 2% Over Line, Load & Temperature
- Low Dropout Voltage: 300mV Typical at Full Load
- Output Current: 20mA
- Stable with Low-ESR, Ceramic Output Capacitors (2.2 μ F minimum)
- Shutdown Current: <1 μ A
- Reverse-Battery, Reverse-Output and Reverse-Current Protection
- Thermal Limit and Current Limit Protection
- 8-Pin Thermally Enhanced TSOT-23 Package

The USA list pricing shown is for budgetary use only. International prices may differ due to local duties, taxes, fees and exchange rates.

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 over 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, μ Module[®] subsystems, and wireless sensor network products. For more information, visit www.linear.com

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