



45V Input 100mA LDO Offers Active Output Discharge

MILPITAS, CA – August 13, 2014 – Linear Technology Corporation announces the [LT3061](#), a high voltage, low noise, low dropout voltage linear regulator with active output discharge. The device delivers up to 100mA of continuous output current with a 250mV dropout voltage at full load. The LT3061 includes an internal NMOS pull-down that discharges the output voltage if either the SHDN pin is driven low or the input voltage is turned off. This rapid output discharge helps protect the load in applications requiring power conditioning on both start-up and shutdown, such as in high-end imaging sensors.

The LT3061 features a wide 1.6V to 45V input voltage range and delivers adjustable output voltages from 0.6V to 19V. A single capacitor provides programmable ultralow noise operation, only $30\mu\text{V}_{\text{RMS}}$ across a 10Hz to 100kHz bandwidth and reference soft-start functionality, preventing output voltage overshoot at turn-on. The LT3061's output voltage tolerance is highly accurate at $\pm 2\%$ over line, load and temperature. The device's wide input and output voltage range, fast transient response, low quiescent current of 45 μA (operating) and <2 μA (in shutdown) make it ideal for portable battery-powered systems that require optimum run time, and for use in automotive, industrial and avionic power supply applications.

The LT3061 operates with a small, low cost, ceramic output capacitor, optimizing stability and transient response. The IC is stable with a minimum value 3.3 μF output capacitor. The device's internal protection circuitry includes reverse-battery protection, reverse-current protection, current limit with foldback and thermal limiting.

The LT3061 is housed in thermally enhanced 8-lead 2mm x 3mm DFN and MSOP packages, offering a compact footprint. The E- and I-grade versions feature an operating junction temperature of -40°C to $+125^{\circ}\text{C}$, the high reliability H-grade is specified from -40°C to $+150^{\circ}\text{C}$ and the military MP-grade operates from -55°C to $+150^{\circ}\text{C}$. 1,000 piece pricing starts at \$1.55 each for both the DFN and MSOP package E-grades, respectively. All devices are available from stock. For more information, visit www.linear.com/product/LT3061

Photo Caption: 45V_{IN} , 0.6V_{OUT} 100mA Ultralow Noise LDO with Active Output Discharge

Summary of Features: LT3061


- Output Current: 100mA
- Low Dropout Voltage: 250mV
- Active Output Voltage Discharge in Shutdown or Input Supply Removal
- Low Noise: $30\mu\text{V}_{\text{RMS}}$ (10Hz to 100kHz)
- Low Quiescent Current: 45 μA
- Wide Input Voltage Range: 1.6V to 45V
- Adjustable Output Voltage Range: 0.6V to 19V
- Output Tolerance: $\pm 2\%$ Over Load, Line & Temperature
- Single Capacitor Soft-Starts Reference & Lowers Output Noise
- Stable with 3.3 μF Ceramic Capacitors
- Low Shutdown Current <2 μA
- Reverse Battery & Reverse-Current Protection
- Thermal Limiting & Current Limiting with Foldback
- Thermally Enhanced 8-Lead 2mm x 3mm DFN & MSOP Packages

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

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