



Dual Positive/Negative $\pm 20V_{IN}$ $\pm 150mA$ LDO Offers $20\mu V_{RMS}$ Noise

MILPITAS, CA – February 24, 2010 – Linear Technology Corporation announces the LT3032, a dual, low noise, positive/negative low dropout voltage linear regulator. The device delivers up to $\pm 150mA$ continuous output current on each channel with a 300mV dropout voltage at full load. The LT3032 features a wide input voltage range of $\pm 2.3V$ to $\pm 20V$, delivering adjustable output voltages from $\pm 1.22V$ to $\pm 20V$. A single capacitor provides ultralow noise operation only $20\mu V_{RMS}$ across a wide bandwidth of 10Hz to 100kHz for the positive output rail, and only $30\mu V_{RMS}$ for the negative rail. The LT3032's output voltage tolerance is highly accurate at $\pm 3\%$ over line, load and temperature. The device's wide input and output voltage ranges, fast transient response and low quiescent current of 30 μA per channel (operating) and <3 μA in shutdown (total) make it an excellent choice for portable battery-powered systems that require optimum run time, and for use in bipolar op amp/instrumentation power supply and low noise supply applications.

The LT3032 operates with very small, low cost, ceramic output capacitors, optimizing stability and transient response. It is stable with only 2.2 μF output capacitors. These tiny external capacitors can be used without the addition of series resistance (ESR) as is common with many other regulators. The LT3032's internal protection circuitry includes reverse-output protection, current limiting and thermal limiting.


The LT3032EDC and LT3032IDC are housed in a 14-lead 4mm x 3mm DFN package, offering a compact footprint. The E- and I-grade versions are available from stock with an operating junction temperature of $-40^{\circ}C$ to $+125^{\circ}C$. 1,000 piece pricing starts at \$2.20 & \$2.55 each, respectively. For more information, visit www.linear.com.

Photo Caption: $\pm 20V_{IN}$, $\pm 150mA$ Dual Positive/Negative Ultralow Noise LDO**Summary of Features: LT3032**

- Output Current: $\pm 150mA$
- Low Noise: $20\mu V_{RMS}$ Positive, $30\mu V_{RMS}$ Negative (10Hz to 100kHz)
- Low Dropout Voltage: 300mV
- Low Quiescent Current: 30uA/Channel
- Wide Input Voltage Range: $\pm 2.3V$ to $\pm 20V$
- Adjustable Output Voltage: $\pm 1.22V$ to $\pm 20V$
- Output Tolerance: $\pm 3\%$ Over Load, Line & Temperature
- Stable with 2.2uF Ceramic Capacitors
- Low Shutdown Current: $< 3\mu A$ Total (typical)
- Starts into Reverse Output Voltage
- Thermal Limiting & Current Limiting
- Low Profile 4mm x 3mm DFN-14 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, 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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