



Dual 500mA Linear LDO Regulator with Independent Inputs Offers Ultralow Noise

MILPITAS, CA – February 9, 2010 – Linear Technology Corporation announces the LT3029, a dual low noise, low dropout regulator with independent inputs and independent shutdown control for each channel. The device delivers up to 500mA per channel of continuous output current with a low dropout voltage of only 300mV at full load. The LT3029 features a wide input voltage range of 1.8V to 20V, delivering output voltages as low as 1.215V and up to 19.5V. The device features ultralow noise of only 20 μ V_{RMS} across a wide bandwidth of 10Hz to 100kHz, and offers tracking/sequencing capability. Its full feature set and low quiescent current of 55 μ A per regulator (operating) and <1 μ A (in shutdown) make it an excellent choice for battery-powered “keep alive” systems that require optimum run time, in addition to microprocessor core logic supplies, tracking/sequencing supplies and general purpose voltage conversion.

The LT3029 operates with very small, low cost, ceramic output capacitors, optimizing stability and transient response. It is stable with only a 3.3 μ F output capacitor versus older linear regulators that require between 10 μ F and 100 μ F to maintain stability. These tiny external capacitors can be used without the necessary addition of series resistance (ESR) as is common with many other regulators. Internal protection circuitry includes reverse-battery, no reverse current flow from output to input, current limiting with foldback and thermal shutdown. The thermal shutdown circuitry protects both channels if an overload or fault condition on either channel occurs.

The LT3029’s compact packages offer thermal resistances equivalent to much larger conventional packages. The LT3029EMSE, LT3029IMSE, LT3029EDE and LT3029IDE are available from stock in a proprietary 16-lead thermally enhanced MSOP package and a 16-lead 4mm x 3mm DFN package, with operating junction temperature of -40°C to +125°C. The LT3029HMSE and LT3029MPMSE are available and offered in the MSOP package with extended operating junction temperatures of -40°C to +150°C and -55°C to +125°C,

respectively. Pricing starts at \$2.87, \$3.13, \$3.47, and \$7.74 each for the E, I, H and MP grades, respectively, in 1,000-piece quantities. For more information, visit www.linear.com.


Photo Caption: Dual 500mA Ultralow Noise LDO

Summary of Features: LT3029

- Output Current: 500mA per Channel
- Low Dropout Voltage: 300mV
- Low Noise: 20uV_{RMS} (10Hz to 100kHz)
- Low Quiescent Current: 55uA per Channel
- Wide Input Voltage Range: 1.8V to 20V
- Adjustable Output Voltage: 1.215V to 19.5V
- Stable with 3.3uF Minimum Output Ceramic Capacitor
- Low Shutdown Current <1uA
- Reverse Battery Protection
- No Reverse Current Flow from Output to Input
- Thermal Shutdown & Current Limiting with Foldback
- Thermally Enhanced MSOP-16E & 4mm x 3mm DFN-16 Packages

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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