



1A VLDO Outputs Down to 0.2V from 0.9V Input

MILPITAS, CA – May 17, 2010 – Linear Technology Corporation announces the LT3022, a 1A very low dropout linear regulator (VLDO™), featuring input voltage capability down to 0.9V and adjustable output voltage down to 0.2V. The LT3022's low V_{IN} capability, coupled with the device's low dropout (145mV typical at full load), make it ideal for low-voltage, high current rails in digital ICs such as FPGAs, ASICs, DSPs, microprocessors and microcontrollers. It also has applications in general high-efficiency, low-Vin-to-low-Vout conversion (for example, 1.8V to 1.5V, 1.5V to 1.2V or 1.2V to 0.9V). In addition, the device offers low power operation at only 400uA quiescent current with less than 10uA in shutdown, saving run time in handheld applications.

The LT3022 regulator optimizes stability and transient response with low ESR, ceramic output capacitors as small as 10uF. The LT3022 is highly accurate, featuring $\pm 3\%$ output voltage accuracy over line, load and temperature, 0.1% typical line regulation and 0.1% typical load regulation. The device's bulletproof internal protection circuitry includes reverse-battery protection, reverse output protection, reverse output-to-input (current) protection, current limiting, and thermal limiting with hysteresis.


The LT3022EDHC and LT3022IDHC (16-lead 3mm x 5mm DFN) and the LT3022EMSE & LT3022IMSE (thermally enhanced MSOP-16) operate from -40°C to $+125^{\circ}\text{C}$ junction temperature and are available from stock in both E and I grades, providing improved thermal performance and compact solution footprints. 1,000-piece pricing starts at \$2.73 each and \$3.13 each for the DFN package and \$2.87 each and \$3.29 each for the MSOP package. For more information, visit www.linear.com.

Photo Caption: 1A VLDO with 0.2V Output Capability**Summary of Features: LT3022**

- V_{IN} Range: 0.9V to 10V
- V_{REF} Accuracy: $\pm 3\%$ over Line, Load & Temperature
- V_{OUT} Range: 0.2V to 9.5V (adjustable)
- Dropout Voltage: 145mV
- Output Current: 1A
- Stable with Low ESR, Ceramic Output Capacitors (10uF Minimum)
- 0.1% Load Regulation from 1mA to 1A
- Quiescent Current: 400uA, $I_{SD} < 10uA$
- Current Limit & Thermal Limiting with Hysteresis Protection
- Reverse-Battery, Reverse Output, & Reverse Output-to-Input (Current) Protection
- 16-Lead DFN (3mm x 5mm x 0.75mm) Package
- 16-Lead Thermally Enhanced MSOP 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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