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## **500mA Negative Micropower LDO Offers New High Reliability Grade Operating Down to -55°C**

MILPITAS, CA – August 18, 2010 – Linear Technology Corporation announces a new high reliability, military plastic MP-grade version of the [LT1175](#), a 500mA negative micropower low dropout regulator. The MP-grade LT1175 is offered in SOIC-8 and DD-Pak packages with a -55°C to +125°C operating junction temperature range. With a wide input voltage range of -4.3V to -20V, the LT1175 features micropower operating currents of 45uA quiescent and 10uA in shutdown, preventing output voltage rise under no-load conditions. The device's reference amplifier topology ensures precision DC characteristics and the ability to maintain good loop stability with a wide range of output capacitors. The device's power transistor anti-saturation design enables very low dropout voltage of 500mV (typical at full load). Fixed 5V and adjustable (-3.8V to -19.5V) output voltage versions are available.

Several features make the LT1175 very user-friendly. The SHDN pin can interface directly to either positive or negative logic levels. Unlike prior regulators, the increase in quiescent current during a dropout condition is actively limited. The LT1175 offers complete protection including user-selectable current limit at 200mA, 400mA, 600mA and 800mA, power limiting (current limit foldback), thermal shutdown and the ability to force the output to reverse voltage without damage or latchup.

In addition to the SOIC-8 and power DD-Pak packages, the LT1175 is available in a 3-lead SOT-223, a through-hole power TO-220 package and an 8-pin PDIP package. C-grade operating junction temperature is 0°C to +125°C, I grade is specified from -40°C to +125°C, and MP grade is -55°C to +125°C. 1k pricing for the MP grade in DD-Pak is \$9.60 and SOIC is \$8.70, and devices are available in stock. For more information, visit [www.linear.com/1175](http://www.linear.com/1175).


**Photo Caption:** High Reliability MP Grade Offered for LT1175 500mA Negative LDO

### Summary of Features: LT1175

- $V_{IN}$  Range: -4.3V to -20V
- $V_{OUT}$  Range: -3.8V to -19.5V (Adjustable) & Fixed 5V
- Dropout Voltage: 500mV
- Output Current: 500mA
- Stable with Wide Range of Output Capacitors
- Operating Current: 45uA
- Shutdown Current: 10uA
- Adjustable Current Limit
- Positive or Negative Shutdown Logic
- Tolerates Reverse Output Voltage
- Current Limit with Power Limiting (Foldback) & Thermal Shutdown
- SOIC-8, DD-Pak-5, TO-220-5, SOT-223-3, PDIP-8 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<sup>®</sup> 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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