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## **Highest Efficiency Rail-to Rail Op Amp Achieves 180MHz at 1mA**

MILPITAS, CA – November 12, 2009 – Linear Technology introduces the LTC6246, LTC6247 and LTC6248, a family of op amps that utilizes a power-efficient SiGe process to achieve 180MHz gain-bandwidth product and 90V/us slew rate, while consuming just 1mA maximum supply current per amplifier. These single, dual and quad op amps also feature rail-to-rail inputs and outputs, and 4.2nV/ $\sqrt{\text{Hz}}$  wideband noise.

Although these parts were designed to provide the very best speed/power efficiency available in a rail-to-rail amplifier, DC performance is not sacrificed to achieve it. Input offset voltage is specified at 500uV max and open loop gain is 45V/uV. Bias current cancellation is employed to achieve a maximum of 350nA input bias current over most of the input common mode voltage range, allowing these products to be used in many applications with high source resistance such as portable instrumentation and other battery-powered or heat-constrained precision systems.

This LTC6246 family is available in versions fully specified over the commercial (0°C -70°C), industrial (-40°C to 85°C) and high temperature (-40°C to 125°C) ranges. A shutdown feature reduces current consumption to 42uA in the SOT-23 6-lead single and MSOP-10 dual versions. The dual LTC6247 is also available in a tiny 2mm x 2mm x 0.55mm package, as well as the industry-standard MSOP-8 and SOT-23 8-lead packages. The LTC6248 is available in a 16-lead MSOP package. Prices start at \$1.39 each for the single, \$1.95 each the dual, and \$3.07 each for the quad in 1k quantities. For more information, visit [www.linear.com](http://www.linear.com).


**Photo Caption:** Power-Efficient Op Amp Consumes Just 1mA

### Summary of Features: LTC6246-47-48

- Gain Bandwidth Product: 180MHz
- –3dB Frequency ( $A_V = 1$ ): 120MHz
- Low Quiescent Current: 1mA Max
- High Slew Rate: 90V/ $\mu$ s
- Rail-to-Rail Inputs & Outputs
- Low Broadband Voltage Noise: 4.2nV/ $\sqrt{\text{Hz}}$
- Supply Voltage Range: 2.5V to 5.25V
- Input Offset Voltage: 0.5mV Max
- Input Bias Current: 100nA
- Operating Temperature Range: –40°C to 125°C

### 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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