



Tiny Low-Cost Rail-to-Rail Amplifiers Deliver Speed & Precision

MILPITAS, CA – November 13, 2007 – Linear Technology Corporation introduces the LTC6087 and the LTC6088, low cost dual and quad amplifiers, which combine speed, precision and low power in a tiny DFN package. Featuring rail-to-rail input and output stages, these amplifiers achieve 750 μ V (max) offset voltage, 14MHz GBW and 1pA bias current, while consuming only 1.25mA (max) per amplifier. The LTC6087 and LTC6088 offer 93dB (min) PSRR, and the large signal voltage gain of 136dB ensures gain linearity. These amplifiers also maintain a low frequency noise of just 5.8 μ Vp-p.

“High volume industrial applications, like portable test equipment, are both cost sensitive and performance driven,” said Mike Kultgen, design manager in Linear Technology’s Signal Conditioning Group. “The LTC6087 and LTC6088 offer designers best-in-class specifications for general purpose operational amplifiers that are fully specified over the commercial (0°C to 70°C) and extended (-40°C to +125°C) temperature range, making them attractive for a wide variety of applications.”


The LTC6087 dual is offered in the 8-pin MSOP and tiny 3mm x 3mm DFN package. The DFN version includes a shutdown mode, enabling the amplifiers to further reduce their supply current to less than 1 μ A. The LTC6088 quad is available in the 16-pin SSOP and 5mm x 3mm DFN packages. 1,000-piece pricing starts at \$0.91 each for the LTC6087 dual and \$1.40 each for the LTC6088 quad.

Photo Caption: Low Cost CMOS Amplifiers in a DFN package**Summary of Features: LTC6087 & LTC6088**

- Offset Voltage: 750uV Max (25°C)
- Offset Drift: 5uV/°C Max
- Maximum Input Bias: 1pA (Typical at 25°C)
40pA Max ($T_A \leq 70^\circ\text{C}$)
- Large Signal Voltage Gain: 135dB typ
- Gain Bandwidth Product: 14MHz
- CMRR: 70dB Min
- PSRR: 93dB Min
- 0.1Hz to 10Hz Noise: 5.8uV_{P-P}
- Supply Current: 1.3mA
- Rail-to-Rail Inputs and Outputs
- Unity Gain Stable
- 2.7V to 5.5V Operation Voltage
- Specified for Operation Over Commercial & Extended (-40°C to +125°C) Temperature Ranges
- Dual LTC6087 in 8-Lead MSOP & 10-Lead DFN10 Packages; Quad LTC6088 in 16-Lead SSOP & DFN 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, 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. For more information, visit www.linear.com

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