

LTC News for Immediate Release

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AC Measurement IC Operates to 500kHz with 1% Accuracy

MILPITAS, CA – September 29, 2004 – Linear Technology Corporation introduces two new true RMS-to-DC conversion ICs that set new standards for accuracy, linearity and size. The LTC1967 and the wider bandwidth LTC1968 are simple to use and meet the requirements of a broad range of AC voltage and current measurement applications.

True RMS (root mean square) is the most accurate means of measuring the energy of an AC signal, regardless of the waveform shape. Linear Technology's newly expanded line of delta-sigma true RMS-DC converters requires only 1 external capacitor and is accurate to $\pm 1\%$ over bandwidth of 500kHz. With 0.02% linearity, there is no need for in-system calibration. This high precision is maintained over a wide range of input signal levels, giving these devices unmatched linearity and accuracy – guaranteed over the full industrial temperature range. The delta-sigma computational technique is inherently immune from changes vs. temperature, time and PCB stress.

Product marketing manager Erik Soule comments, "The delta sigma technique changes the way system designers approach AC measurements. These new devices enable solutions that are simpler, smaller and more accurate, and also eliminate in-system calibration."

The rail-to-rail inputs can be driven either single-ended or differentially, providing excellent noise rejection. In addition, the rail-to-rail outputs feature a separate output reference pin for flexible level shifting.

Both products are in full production. The LTC1967 and LTC1968 are priced at \$3.40 and \$3.95, respectively, in 1,000-piece quantities.

(more...)

Summary of Features: LTC1967/68

- High Linearity: 0.02%
- Wide Input Bandwidth:
 - LTC1968: Bandwidth to 1% Additional Gain Error: 500kHz
 - LTC1967: Bandwidth to 1% Additional Gain Error: 100kHz
- 3dB Bandwidth Independent of Input Voltage Amplitude
- Delta Sigma Conversion Technology
- Single Supply: +5V
- Ultralow Shutdown Current: 0.1uA
- Flexible Inputs:
 - Differential or Single Ended
 - Rail-to-Rail Common Mode Voltage Range
 - Up to $1V_{PEAK}$ Differential Voltage
- Flexible Output:
 - Rail-to-Rail Output
 - Separate Output Reference Pin Allows Level Shifting
- Small Size: Space Saving 8-Pin MSOP Package

COMPANY BACKGROUND: Linear Technology Corporation was founded in 1981 as a manufacturer of high performance linear integrated circuits. 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.

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