

TI Intros 20MHz, High-Precision CMOS Amplifier Utilizing Proprietary e-trim Technology

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Texas Instruments Incorporated today announced a high-precision, high-speed 12V CMOS operational amplifier from the company's Burr-Brown product line that utilizes e-trim - TI's new trimming technology that calibrates offset voltage and temperature drift during the final steps of manufacturing. The OPA727 is well suited for applications requiring excellent dynamic characteristics such as active filters, transimpedance amplifiers, audio, test equipment and process control.

"The OPA727 delivers excellent offset voltage (150uV max) and extremely low offset voltage drift (1.5uV/C) through e-trim. To correct for offset drift, the op amp is trimmed over temperature," said Frank Haupt, strategic marketing engineer of TI's high-performance amplifier products.

E-trim technology is used to trim the OPA727's offset voltage and offset voltage drift over temperature after packaging. This significantly improves accuracy compared to traditional laser trimming methods by avoiding parameter shifts that occur during plastic molding. E-trim brings best-in-class offset and offset drift over temperature, comparable to precision bipolar amplifiers, to low-cost CMOS operational amplifiers.

The OPA727 also provides excellent AC performance. Its 20MHz bandwidth, 30V/us slew rate, 600ns settling time, 6nV/rtHz noise and

0.0003% harmonic distortion make it ideal for driving fast, 16-bit analog-to-digital converters such as TI's ADS8342 - a 16-bit, 250kSPS, four-channel ADC.

The input common-mode range extends to ground for true single-supply operation and output swings to within 150mV of the rails, maximizing dynamic range. The shutdown version (OPA728) reduces the quiescent current to 6uA (typically) and features a digital ground reference pin for easy interface to standard logic levels in dual-supply applications. The OPA727 and OPA728 are fully specified and tested over the full 4V to 12V or +/-2V to +/-6V supply range.

Available Today

The OPA727 (single version) and OPA728 (single with shutdown) are packaged in MSOP-8 and 3x3mm DFN-8. The OPA2727 (dual) is packaged in 3x3mm DFN-8 and SO-8. These versions are available today from TI and its authorized distributors. A quad version, the OPA4727, will be available in 1Q 2005. All are specified for operation from -40C to +125C.

The OPA727 and OPA728 are priced from \$1.45 in 1,000 piece quantities. The OPA2727 pricing is \$2.20 in 1,000 piece quantities. All prices are suggested resale.

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