Avago Technologies' New ACPL-C797 Sigma-Delta ADC Increase Accuracy and Isolation

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Extended Working Insulation Voltage of 1140 Vpeak

SAN JOSE, Calif. & SINGAPORE, Jul 20, 2010 (BUSINESS WIRE) --

Avago Technologies (Nasdaq:AVGO), a leading supplier of analog interface components for communications, industrial and consumer applications, today announced the ACPL-C797 optically isolated sigma-delta ADC for current and voltage sensing in motor control and power generation applications. The ACPL-C797 satisfies a growing market demand for a higher top-end operating temperature, 3.3 V compatibility, and better accuracy.

The ACPL-C797 is a significant upgrade compared to Avago's successful first generation HCPL-7860 current sense amplifier. Upgraded features and specifications include a -40 to +105° C operating temperature range, both 5 and 3.3 V compatible digital outputs, lower offset voltage, a gain accuracy of ±1%, and a ±10% accurate clock frequency. By implementing a digital filter in an FPGA, ASIC or DSP, the serial output is decoded to 12-bit effective resolution. In addition, the new isolation amplifier features 78 dB signal-to-noise ratio and minimizes EMI with a slew rate controlled output.

Available in a new Stretched SO-8 (SSO-8) package, the ACPL-C797 printed circuit board footprint is 30% smaller than the traditional DIP-8. Even with the miniature package, the ACPL-C797 meets 8 mm clearance and creepage requirements and satisfies 1140 Vpeak working insulation voltage and 5 kVrms/minute isolation voltage safety requirements per IEC/EN/DIN EN 60747-5-5, UL 1577 and CSA standards.

The ACPL-C797 also meets the 0.5 mm distance through isolation (DTI) specification that is required for many medical applications. The SSO-8 package can be used with automatic assembly equipment, unlike many Hall Effect current transducers that require manual insertion in assembly.

Applications for the ACPL-C797 center around current and voltage sensing in power conversion and motor drive systems, such as in AC and DC brushless motor drives, industrial power inverters, servo motor drives, robotics, wind power generation and solar panel power systems. Other applications include switching power supply signal isolation, industrial A/D conversion and general purpose isolated sensing.

ACPL-C797 Isolation Amplifier Key Features

- ±1% maximum gain error
- High resolution: 12-bit effective number of bits
- -40 to 105° C operating temperature range
- 3.3 and 5 V compatible outputs
- Slew rate controlled outputs for low EMI generation
- Reinforced optical isolation and worldwide safety approval
  - 5 kVrms/1 minute isolation voltage per UL 1577
  - 1140 Vpk working insulation voltage per IEC/EN/DIN EN 60747-5-5 and CSA
- 0.5 mm distance through insulation (DTI) specification meets medical application requirements
- Compact, auto-insertable stretched SO-8 package
  - 30% smaller footprint than an 8-pin DIP

Packaging and Temperature Range

The ACPL-C797 is available in a RoHS compliant SSO-8 package. The stretched ACPL-C797 operating temperature range is -40 to +105° C.

U.S. Pricing and Availability

Avago's ACPL-C797 is priced at $4.25 each in 10,000 piece quantities. Samples are available now and production quantities will be available starting August 23, 2010 through Avago's direct sales channel and worldwide distribution partners. More information about Avago's isolation amplifiers can be found at http://www.avagotech.com/.

About Avago Technologies

Avago Technologies is a leading supplier of analog interface components for communications, industrial and consumer applications. By leveraging its core competencies in III-V compound and silicon semiconductor design and processing, the company provides an extensive range of analog, mixed signal and optoelectronics components and subsystems to approximately 40,000 end customers. Backed by strong customer service support, the company's products serve four diverse end markets: wireless communications, wired infrastructure, industrial and automotive electronics, and consumer and computing peripherals. Avago has a global employee presence and heritage of technical innovation dating back 40 years to its Hewlett-Packard roots. Information about Avago is available on the Web at www.avagotech.com

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NOTE TO EDITORS: Please direct reader inquiries to Avago Technologies at +1 800 235 0312, or e-mail us at support@avagotech.com.

ACPL-C797 datasheet web link

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