Avago Technologies Debuts Low-Power Digital Optocouplers with Robust High-Voltage Performance for Hybrid and Electric Vehicles

October 12, 2011

Market's First Reinforced-Insulation, Low-Power and Automotive-Grade Solutions Withstand Up to 1140V Continuous Working Voltage; Enable Standardized Battery Management Systems

SAN JOSE, Calif. & SINGAPORE, Oct 12, 2011 (BUSINESS WIRE) --

Avago Technologies (Nasdaq: AVGO), a leading supplier of analog interface components for communications, industrial and consumer applications, today announced three new digital optocouplers optimized for use in onboard chargers and other high-voltage systems in hybrid and electric vehicles. The new ACPL-K4xT optocouplers are qualified to AEC-Q100 Grade 1 stress test requirements for automotive applications. The devices offer robust working voltage performance up to 1140V, allowing standardization of battery management solutions for mid-voltage car batteries, high-voltage bus and truck batteries, and even future high voltage battery topologies.

The ACPL-K4xT devices are part of the Avago R^2Coupler(TM) family of optocouplers with reinforced insulation for reliable signal isolation, which is critical for onboard chargers for plug-in electric vehicles and other automotive and high-temperature industrial applications. Onboard chargers take in high-voltage, high-current supply to charge quickly, demanding robust isolation of up to 8kV peak transients. The reinforced insulation of the optocouplers meets these stringent requirements, delivering safe electrical signal isolation over a wide operating temperature range from -40 to +125° C. Additionally, the devices' small surface-mount package meets the 8mm creepage and clearance distance required for high-voltage safety regulations.

The low power consumption of the ACPL-K4xT optocouplers helps prevent battery management systems from draining vehicle batteries. The devices feature no quiescent current and thus do not draw power in the "off" state. Also, the current consumption of both their LED and detector IC can be minimized as low as 1.5mA/channel for low-speed switching operation.

"Our new R^2Coupler devices mark another industry-first for Avago and extend our leading automotive-grade solutions for higher-voltage systems in the hybrid and electric vehicle market," said Cheng-Dee Lee, Business and Applications Development Director for Isolation Products at Avago. "We continue to grow the list of manufacturers and tier one suppliers using R^2Coupler isolation products, as we now address high-voltage battery modules and onboard quick chargers, as well as bus and trucks systems."

The ACPL-K4xT optocouplers are compliant to multiple safety standards, including UL 1577 at $5kV_{RMS}$/1 minute, IEC 60747-5-5 with an 8kVpeak transient rating for up to 1140V working voltage, EN/DIN EN 60747-5-2 and CSA. The single-channel ACPL-K43T device and dual-channel ACPL-K44T device each operate at 1 MBd, while the single-channel ACPL-K49T device operates at 20 kBd.

Additional ACPL-K4xT Product Features

- 30 kV/us (typical) common mode rejection (CMR) at V_{CM} = 1500V
- Stretched 8-lead small outline (SO-8) package compatible with standard surface mount processes
- Lead(Pb)-free and RoHS 6 fully-compliant
- LED current input scalable to variety of logic voltage levels
- Large supply voltage range up to 20V
- Zero Off state current

U.S. Pricing and Availability

The ACPL-K43T digital optocouplers are priced at $2.23 each in 1,000 piece quantities, the ACPL-K44T devices are priced at $2.97 each in 1,000 piece quantities, and the ACPL-K49T devices are priced at $1.55 each in 1,000 piece quantities. Samples and production quantities are available now through the Avago direct sales channel and via worldwide distribution partners. More information on Avago optocouplers can be found at www.avagotech.com/optocouplers.

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 nearly 50 years to its Hewlett-Packard roots. Information about Avago is available on the Web at www.avagotech.com.

Follow Avago on Twitter at http://twitter.com/Avagotech and on Facebook at www.facebook.com/Avagotech.

Avago, Avago Technologies and the A logo are trademarks of Avago Technologies. All other trademarks are the property of their respective owners.

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

SOURCE: Avago Technologies

Avago Technologies
Samer Bahou, +1-408-435-7400
Press Relations Manager
press.relations@avagotech.com