Toshiba introduces 2-channel automotive high-speed digital isolators

Support stable operation with high common-mode transient immunity, ensuring the safety and reliability of on-board chargers and battery management systems

Düsseldorf, Germany, 19th June 2025 – Toshiba Electronics Europe GmbH ("Toshiba") extends its lineup of isolation devices with four AEC-Q100 qualified, 2-channel, high-speed digital isolators. The new DCM32xx00 series supports stable operation with high common-mode transient immunity (CMTI) of 100kV/µs (typ.) at data transmission rates of 50Mbps (max.). The devices ensure the safety and reliability of the on-board charger (OBC) and battery management system (BMS) used in hybrid electric vehicles (HEVs) and electric vehicles (EVs).

Leveraging Toshiba's proprietary magnetic coupling technology, the DCM32xx00 series delivers a high CMTI of 100kV/µs (typ.) at supply voltages (V_{DD1}=V_{DD2}) from 3.0V to 5.0V with a common-mode voltage (V_{CM}) of 1500V. The devices are resistant to common-mode electrical noise at the input and output nodes, delivering stable equipment control signals for reliable operation.

The 2-channel devices offer flexible configuration options: 2 forward-only channels and 1 forward and 1 reverse channel. They provide low pulse-width distortion of 0.8ns (typ.) and are suitable high speed communication applications such as I/O interfaces with control area network (CAN) communications.

The DCM32xx00 series of 2-channel digital isolators is available in the narrow 8-pin SOIC8-N package and offers stable operation between -40°C and +125°C. Toshiba will continue to expand the range of channels and packages for automotive and industrial equipment.

For more information about the DCM32xx00 series, please visit Toshiba's website: DCM321C00

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About Toshiba Electronics Europe
Toshiba Electronics Europe GmbH (TEE) offers European consumers and businesses a wide variety of hard disk drive (HDD) products plus semiconductor solutions for automotive, industrial, IoT, motion control, telecoms, networking, consumer, and white goods applications. Next to HDDs, the company's broad portfolio encompasses power semiconductors and other discrete devices ranging from diodes to logic ICs, optical semiconductors as well as microcontrollers and application specific standard products (ASSPs) amongst others.

In addition, TEE also offers SCiB™ battery cells and modules with lithium titanium oxide (LTO) for heavy-duty applications and Silicon Nitride (SiN) ceramic substrates used in power semiconductor modules, inverters, and converters for their heat dissipation characteristics and strength.

TEE has its headquarters in Düsseldorf, Germany, with branch offices in France, Italy, Spain, Sweden and the United Kingdom providing marketing, sales and logistics services.
Visit Toshiba's websites at www.toshiba.semicon-storage.com, www.scib.jp/en and www.toshiba-tmat.co.jp/en/ for further company and product information.

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