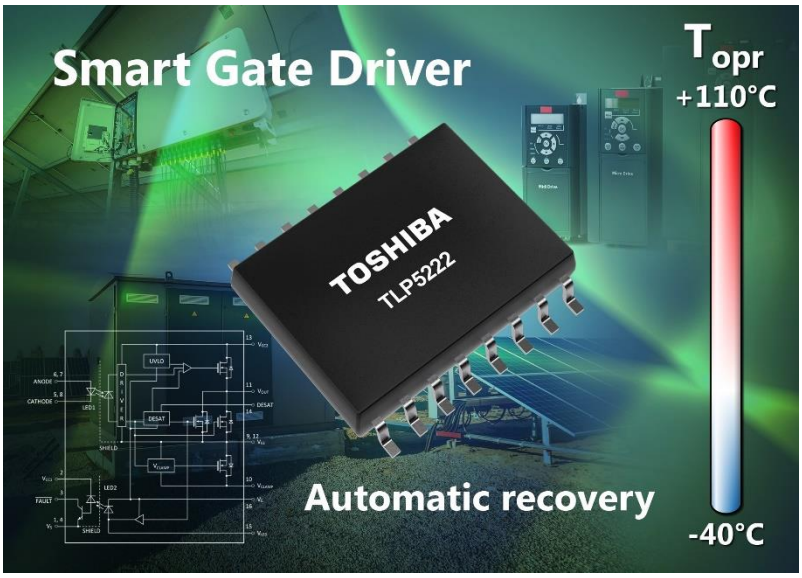

Toshiba Introduces First Smart Gate Driver Photocoupler with Automatic Recovery Function

Overcurrent protection with automatic recovery and fault-status indicator, plus active Miller clamp, simplify design and save bill of materials

Düsseldorf, Germany, 31st August 2022 – Toshiba Electronics Europe GmbH ("Toshiba") has launched the TLP5222 smart gate-driver photocoupler for MOSFETs and IGBTs, which has ±2.5A output-current capability and built-in over-current protection with automatic recovery.

The TLP5222 continuously monitors the MOSFET drain-source voltage (V_{DS}) or IGBT collector-emitter voltage (V_{CE}). If an overcurrent occurs, the driver's built-in protection circuitry detects the associated rise in V_{DS} or V_{CE} and gently turns off the MOSFET or IGBT. The driver's automatic recovery function resumes normal operation, typically 25.5µs (typ.) after protective turn-off is triggered, which helps simplify the design of the power-stage controller. An isolated FAULT status pin indicates detection of the abnormal overcurrent.

In addition, the TLP5222 has an under voltage lockout (UVLO) and an integrated active Miller clamping function that suppresses dV/dt-induced turn-on to prevent short-circuiting of upper and lower arms in a half bridge. These built-in features help simplify design and minimize external components.

Housed in a SO16L package that ensures creepage and clearance distances of at least 8mm (min.), the TLP5222 is used in equipment requiring high insulation performance. In addition, the rated operating-temperature range from -40°C to +110°C makes the driver suitable for applications that are deployed in harsh thermal environments such as photovoltaic power generation systems and uninterruptible power supplies (UPS).

The TLP5222 extends Toshiba's family of smart gate driver devices that also includes the TLP5212, TLP5214A and TLP5214, which have no automatic recovery function and are reset by an external signal. The family thus gives engineers freedom to select the optimum device to meet their application requirements.

Follow the link below for more on the new TLP5222 product: https://toshiba.semicon-storage.com/eu/semiconductor/product/isolators-solid-state-relays/detail.TLP5222.html

Additional information on isolators/solid state relays can be found on Toshiba's website: https://toshiba.semicon-storage.com/eu/semiconductor/product/isolators-solid-state-relays.html

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About Toshiba Electronics Europe

Toshiba Electronics Europe GmbH (TEE) is the European electronic components business of Toshiba Electronic Devices and Storage Corporation. TEE offers European consumers and businesses a wide variety of innovative 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.

TEE has headquarters in Düsseldorf, Germany, with branch offices in France, Italy, Spain, Sweden and the United Kingdom providing marketing, sales and logistics services. The company president is Mr. Tomoaki Kumagai.

For more company information visit TEE's web site at www.toshiba.semicon-storage.com.

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