



**Toshiba release compact power MOSFET gate driver intelligent power device**

*New device offers significantly reduced footprint for automotive 3-phase brushless motor applications*

**Düsseldorf, Germany, 24<sup>th</sup> July 2018** – Toshiba Electronics Europe (“Toshiba”) announces the availability of a new compact power MOSFET gate driver intelligent power device (IPD) for automotive 3-phase brushless motors. The device is intended for use in automotive motor drive applications such as 12V electronic power steering (EPS), oil/water pumps, fan motors and electric turbochargers.

Toshiba’s IPD products provide protection for high-side and low-side power switches – especially valuable in automotive applications. Typically, they protect against a shorted load, open load and an output short-circuit to the power supply as well as ECU abnormalities such as overheating. IPDs can be directly controlled from a microcontroller (MCU) and also provide diagnostic feedback to the MCU. They reduce the number of components required and improve the reliability of automotive ECU circuits.

The new TPD7212F MOSFET gate driver IPD is based upon Toshiba’s 0.13µm BiCD process that allows the integration of analog circuitry with large logic and power (DMOS) devices on the same chip, thereby reducing the size and power consumption of automotive systems.

The device can drive the gates of MOSFETs for 3-phase brushless motors and operates from a +4.5 to +18.0V DC supply, sourcing / sinking up to 1.0 / 1.5A respectively. An inbuilt charge pump circuit makes it easy to configure a 3-phase full-bridge circuit. Included protection functions are supply voltage short, GND short and over voltage protection. Inbuilt diagnosis provides feedback to the system and covers supply voltage shorts, GND shorts and abnormal supply voltages to the driver.

Housed in a RoHS compliant WQFN32 package, with a footprint of just 5.0mm x 5.0mm, the TPD7212F offers a huge 75% reduction in area over its predecessor. It is fully qualified to the AEC-Q100 automotive standard and operates at temperatures from -40°C to +150°C.

Mass production starts in August 2018.

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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. The company's broad portfolio encompasses integrated wireless ICs, power semiconductors, microcontrollers, optical semiconductors, ASICs, ASSPs and discrete devices ranging from diodes to logic ICs.

TEE has headquarters in Düsseldorf, Germany, with branch offices in France, Italy, Spain, Sweden and the United Kingdom providing design, manufacturing, marketing and sales. Company president is Mr. Tomoaki Kumagai

For more company information visit TEE's web site at [www.toshiba.semicon-storage.com](http://www.toshiba.semicon-storage.com).

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