



### New 150V N-channel power MOSFET improves power supply efficiency

*Toshiba's U-MOSX-H process reduces losses and voltage spikes in power applications*

**Düsseldorf, Germany, 31<sup>st</sup> March 2022** – Toshiba Electronics Europe GmbH (“Toshiba”) has launched a new 150V N-channel power MOSFET that uses the latest generation U-MOSX-H process to significantly reduce losses. Additionally, voltage spikes between the drain and source during switching have been reduced, thereby improving EMI performance within switching power supplies.

The new device is suitable for a wide range of applications including switching power supplies within industrial equipment, including applications in communication base stations and data centers.

The new TPH9R00CQH MOSFET has a very low drain-source on-resistance ( $R_{DS(ON)}$ ) of just  $9.0\text{m}\Omega$  (max. @  $V_{GS}=10\text{V}$ ). This represents a reduction of approximately 42% when compared to the existing 150V product (TPH1500CNH) that is based upon the current generation U-MOSVIII-H process. Key figures-of-merit (FoM) including  $R_{DS(ON)} \times Q_{SW}$  and  $R_{DS(ON)} \times Q_{OSS}$  have reduced by approximately 20% and 28% respectively, thereby further enhancing performance.

Through careful optimization of the device structure charge characteristics have been improved. With a total gate charge ( $Q_g$ ) of just  $44\text{nC}$  and a gate switch charge ( $Q_{SW}$ ) of  $11.7\text{nC}$  the device offers excellent performance, especially in high-speed applications.

The new TPH9R00CQH offers two surface mount (SMD) package options – SOP Advance (5.0mm x 6.0mm) and SOP Advance(N) (4.9mm x 6.1mm) which can be selected to meet the needs of any application.

Shipment of the new device starts today.

Toshiba will continue to expand its lineup of power MOSFETs that improve the efficiency of power supplies through reduced losses, to support reduction of power consumption within all types of equipment.

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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](http://www.toshiba.semicon-storage.com).

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