



### Toshiba launches two new 80V N-channel power MOSFETs

Based upon the U-MOSX-H process, the new devices will significantly enhance power supply efficiency

Düsseldorf, Germany, 30<sup>th</sup> March 2020 – Toshiba Electronics Europe (“Toshiba”) has launched two new 80V N-channel power MOSFETs based upon their latest generation U-MOSX-H process. Both devices are suited to a wide range of power applications where low-loss operation is important, including highly efficient AC-DC and DC-DC conversion in data centres and communication base stations as well as a broad range of motor drive equipment.

Both the TPH2R408QM and TPN19008QM are 80V U-MOSX-H products that exhibit a reduction of around 40% in drain-source on-resistance ( $R_{DS(ON)}$ ) compared to corresponding 80V products in earlier processes such as U-MOSVIII-H. As a result, the

TPN19008QM has an  $R_{DS(ON)}$  value of 19m $\Omega$  (max.) while the TPH2R408QM value is just 2.43m $\Omega$ .

Optimising the device structure has improved the trade-off between  $R_{DS(ON)}$  and gate charge characteristics by up to 15% and the trade-off between  $R_{DS(ON)}$  and output charge by 31%. Combining this with the improvements in  $R_{DS(ON)}$  means that the new devices feature the lowest power dissipation in the industry.

Both devices are housed in surface mount packages and rated for a drain-source voltage ( $V_{DSS}$ ) of 80V. They can operate at channel temperatures ( $T_{ch}$ ) as high as 175°C. The TPN19008QM is rated for a drain current ( $I_D$ ) of 34A and is housed in a 3.3mm x 3.3mm TSON advance package while the TPH2R408QM is rated for an  $I_D$  of 120A and housed in a 5.0mm x 6.0mm SOP advance package.

Progressive shipping of the new devices starts today.

Follow the link below for more information on Toshiba's 12-300V MOSFET line-up.

<https://toshiba.semicon-storage.com/eu/product/mosfet/lv-mosfet.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](#) (Toshiba). 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, 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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