



Toshiba expands 80V N-channel MOSFET lineup to support 48V automotive systems

Devices achieve low on-resistance for power saving in 48V systems, and wettable flank package facilitates AOI for enhanced production reliability

Düsseldorf, Germany, 12th May 2026 – Toshiba Electronics Europe GmbH (“Toshiba”) introduces two AEC-Q101 compliant 80V N-channel MOSFETs, expanding its lineup to support 48V automotive systems. The XPH2R608QB and XPH3R908QB are the first products from the latest-generation U-MOSX-H process to be housed in the SOP Advance (WF) package with wettable flanks.

By utilising Toshiba’s U-MOSX-H process, the products achieve low on-resistance ($R_{DS(ON)}$), enabling designers to maximise efficiency in their 48V systems, thereby improving performance and extending the car’s battery life. The $R_{DS(ON)}$ for the XPH2R608QB is $2.55\text{m}\Omega$ (max.) with a total gate charge (Q_g) of 95nC (typ.), and $3.9\text{m}\Omega$ (max.) and 63nC (typ.) for the XPH3R908QB – both with a gate-to-source voltage (V_{GS}) of 10V (max.).

Additionally, the SOP WF package with a copper connector structure reduces MOSFET package resistance, improving efficiency, enhancing heat dissipation, and increasing system reliability. The wettable flank design of the package enhances the visibility of solder fillets, making it easier to verify board mounting conditions using automated optical inspection (AOI) equipment, improving overall system reliability.

The XPH2R608QB and XPH3R908QB are suitable for use in N-channel type brushless DC (BLDC) motor drive and non-isolated DC-DC buck converter circuits. In addition to 28V automotive systems, other applications include motor drives, switching power supplies, and load switches. The automotive 80V U-MOSX-H series lineup also includes the XPQR8308QB, which features the high-heat-dissipation L-TOGL package. Toshiba will continue to develop automotive MOSFET products suitable for 48V systems to meet diverse customer needs and support various automotive applications.

Please follow the links for more information:

[XPH2R608QB](#)

[XPH3R908QB](#)

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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 offers SCiB™ battery cells and modules with lithium titanium oxide (LTO) for heavy-duty applications.

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 and www.scib.jp/en for further company and product information.

Contact details for publication:

Toshiba Electronics Europe GmbH, Hansaallee 181, D-40549 Düsseldorf, Germany

Tel: +49 (0) 211 5296 0

Web: www.toshiba.semicon-storage.com/eu/company/news.html

Contact details for editorial enquiries:

Michelle Shrimpton, Toshiba Electronics Europe GmbH

Tel: +44 (0)7464 493526

E-mail: MShrimpton@teu.toshiba.de

Issued by:

Birgit Schöniger, Pretzl Group Ltd.

Tel: +49 (0) 172 617 8431

Web: www.pretzl.com

E-mail: birgit.schoeniger@pretzl.com

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