



### **Toshiba's announces five 650V superjunction power MOSFETs housed in the new TOLL package**

The new compact SMD TOLL format helps reduce the size of equipment and the Kelvin source connection improves efficiency

**Düsseldorf, Germany, 11 March 2021** – Toshiba Electronics Europe GmbH ("Toshiba") has announced five 650V superjunction power MOSFETs housed in the new compact SMD package in TO-leadless (TOLL) format. Measuring just 9.9mm x11.68mm x2.3mm (WxLxH), the TK065U65Z, TK090U65Z, TK110U65Z, TK155U65Z and TK190U65Z devices have a 27% smaller footprint than the conventional D2PAK package. Typical applications include server power supplies in data centres, solar (PV) power conditioners, uninterruptible power systems (UPS) and other industrial applications.

The lineup has been expanded to products in the DTMOS VI series with low On-resistance down to 65mΩ. In addition, the 4-pin package includes the option of a Kelvin source. This capability can reduce the parasitic inductance of the source wire in the package and enhance switching efficiency by suppressing oscillation. Compared to the TK090N65Z, a device with equivalent voltage and On-resistance that uses the TO-247 package without a Kelvin connection, the TK090U65Z has a 68% lower turn-on switching loss and turn-off switching loss is reduced by about 56%.

Deploying the latest generation of the DTMOS VI series of 650V superjunction power MOSFETs with the TOLL package will help engineers reduce the size of their end equipment and improve efficiency. DTMOS VI is targeting highest efficiency switching with best in class FOM:  $R_{ds(on)} \times Q_{dg}$ .

The new devices enter mass production today and shipments begin immediately.

Further information about the three products is available from the following links:

TK065U65Z - <https://toshiba.semicon-storage.com/eu/semiconductor/product/mosfets/400v-900v-mosfets/detail.TK065U65Z.html>

TK090U65Z - <https://toshiba.semicon-storage.com/eu/semiconductor/product/mosfets/400v-900v-mosfets/detail.TK090U65Z.html>

TK110U65Z - <https://toshiba.semicon-storage.com/eu/semiconductor/product/mosfets/400v-900v-mosfets/detail.TK110U65Z.html>

TK155U65Z - <https://toshiba.semicon-storage.com/eu/semiconductor/product/mosfets/400v-900v-mosfets/detail.TK155U65Z.html>

TK190U65Z - <https://toshiba.semicon-storage.com/eu/semiconductor/product/mosfets/400v-900v-mosfets/detail.TK190U65Z.html>

Follow the link below for more on Toshiba's 400V to 900V MOSFET device lineup.  
<https://toshiba.semicon-storage.com/eu/semiconductor/product/mosfets/400v-900v-mosfets.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. 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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