



## **Toshiba Releases TCKE9 Series Compact Electronic Fuses (eFuse ICs) for High-Voltage Power Management Applications**

*The reusable eFuse ICs help reduce maintenance costs and recovery time for repairs*

**Düsseldorf, Germany, 17<sup>th</sup> October 2024** – Toshiba Electronics Europe GmbH (“Toshiba”) has launched 2 new products to its electronic fuse (eFuse IC) offering. The TCKE903NL and TCKE905ANA products are reusable, thereby reducing maintenance costs and recovery time for equipment repairs, and support various functions to protect power supply line circuits.

The new eFuses are suited for a wide range of power management applications due to their low switch ON resistance of 34mΩ (typ.), high output current of up to 4.0A, and wide input voltage operation characteristics. The products are ideal for electronic slew rate control and power supply line circuit protection in industrial applications such as servers, professional kitchen equipment and more.

The TCKE9 series of 25V high input voltage eFuse ICs offers 2 types of product: an auto-retry type that allows the eFuse IC to automatically recover the circuit itself, and a latch type that is recovered by an external signal. Two different clamping voltage levels are available, i.e. 3.8V and 5.7V.

The current limit and voltage clamp functions of the TCKE9 series protect the circuit against overcurrent and overvoltage conditions, which is not possible with conventional physical fuses. Even if abnormal overcurrent or overvoltage is applied, the specified current and voltage can be maintained. In addition, the new products offer over temperature and short-circuit protection features to protect the circuit by immediately shutting off when abnormal heat is generated in the circuit or an unexpected short-circuit condition occurs.

Another advantage is that eFuse ICs eliminate complex circuit design and a number of components, realising much simpler circuit designs with fewer components and a smaller

area than a protection function secured with discrete parts. As Toshiba intends to obtain IEC 62368-1 certification, the international safety standard for ICT and AV equipment, the eFuse ICs will also simplify and accelerate certification testing process of the end equipment.

The TCKE9 series is available in a thin and compact WSON8 package measuring 2.0×2.0mm (typ.), t=0.8mm (max). Shipments of the new products start today.

For more information about the TCKE9 series of eFuse ICs, please visit:

<https://toshiba.semicon-storage.com/eu/semiconductor/product/power-management-ics/efuse-ics/detail.TCKE903NL.html>

<https://toshiba.semicon-storage.com/eu/semiconductor/product/power-management-ics/efuse-ics/detail.TCKE905ANA.html>

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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 also offers Toshiba's SCiB™ battery cells and modules with lithium titanium oxide (LTO) for heavy-duty applications and Silicon Nitride (SiN) ceramic substrates used in power semiconductor modules, inverters, and converters for their heat dissipation characteristics and strength.

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](http://www.toshiba.semicon-storage.com), [www.scib.jp/en](http://www.scib.jp/en) and [www.toshiba-tmat.co.jp/en/](http://www.toshiba-tmat.co.jp/en/) for further company and product information.

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