



### **Toshiba releases a new range of low current, high input voltage LDO regulators**

*Low 1 $\mu$ A current consumption helps reduce the stand-by power of equipment*

**Düsseldorf, Germany, 22<sup>nd</sup> June 2023** – Toshiba Electronics Europe GmbH (“Toshiba”) has launched the first three devices in the new TCR1HF series of low drop-out (LDO) regulators. Featuring high input voltage and low current consumption the TCR1HF18B, TCR1HF33B, and TCR1HF50B offer fixed output voltages of 1.8V, 3.3V, and 5.0V respectively.

The new additions offer a wide input voltage range of 4V to 36V to support up to 20V for USB power delivery (USB-PD) or 24V-powered equipment like mobile equipment, home appliances and factory automation equipment. They feature a low 1 $\mu$ A quiescent current, allowing electronic equipment to maintain stand-by operation with very low power consumption.

Housed in small plastic molded SOT-25 (Toshiba’s package name: SMV), the TCR1HF ICs drive up to 150mA and operate at temperatures between -40°C to +125°C. Moreover, with their fast load transient response of -60mV/+50mV, they help ensure a stable output voltage – even during a sudden change in current, for example, when equipment moves from stand-by to operating state. Other standard features include overcurrent protection, thermal shutdown, and auto-discharge.

All three new products in the TCR1HF series will start shipping today.

More information can be found here:

<https://toshiba.semicon-storage.com/eu/semiconductor/product/power-management-ics/low-dropout-regulators-ldo-regulators/detail.TCR1HF18B.html>

<https://toshiba.semicon-storage.com/eu/semiconductor/product/power-management-ics/low-dropout-regulators-ldo-regulators/detail.TCR1HF33B.html>

<https://toshiba.semicon-storage.com/eu/semiconductor/product/power-management-ics/low-dropout-regulators-ldo-regulators/detail.TCR1HF50B.html>

Reference design for a Power multiplexer circuit using TCR1HF33B and TCR1HF50B is available here:

<https://toshiba.semicon-storage.com/eu/semiconductor/design-development/referencedesign/detail.RD221.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](#). 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 website at [www.toshiba.semicon-storage.com](http://www.toshiba.semicon-storage.com).

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