



Toshiba expands range of Thermoflagger™ temperature monitoring ICs

A total of eight devices offer variants to suit all applications

Düsseldorf, Germany, 14th September 2023 – Toshiba Electronics Europe GmbH (“Toshiba”) has significantly extended its range of Thermoflagger™ overtemperature detection ICs with the release of six further devices, bringing the total to eight. The new devices, in combination with thermistors that have a positive thermal coefficient (PTC), are intended to detect temperature increases in electronic devices.

With safety paramount in many applications, the new Thermoflagger overtemperature detection ICs monitor internal temperatures to ensure that systems are working as intended, thereby ensuring safety. Typical applications include mobile devices, home appliances, industrial equipment and many others.

Expanding the range of Thermoflagger devices to eight, the new devices (TCTH011AE, TCTH012AE, TCTH021AE, TCTH022AE, TCTH011BE and TCTH012BE) complement the previously released [TCTH021BE](#) and [TCTH022BE](#), adding another PTCO output current (I_{PTCO}) of 1 μ A. A useful FLAG signal (PTCGOOD) is available as either push-pull or open-drain along with the option to have the FLAG signal latching (or not).

Devices in the TCTH0xxxE series can identify temperature rises by detecting a change in resistance value due to temperature within a PTC. By connecting PTC thermistors in series, temperature can be monitored at several points.

The new products are capable of operating in an ambient temperature between -40°C and +125°C. They operate from a supply voltage (V_{DD}) in the range of 1.7V to 5.5V and feature low current consumption as low as 1.8 μ A (typ.). They are housed in a small, industry-standard SOT-553 (ESV) package measuring just 1.6mm x 1.6mm x 0.55mm.

To support designers using these ICs, Toshiba released a new [reference design](#) featuring the Thermoflagger devices.

Toshiba has collaborated with Murata Manufacturing Co., Ltd. and now Murata [recommends](#) Thermoflagger ICs as being suitable for use with their PTC thermistors.

Shipments of the six new Thermoflagger devices start today.

Visit the Toshiba website for further details: <https://toshiba.semicon-storage.com/eu/semiconductor/product/linear-ics/over-temperature-detection-ic-thermoflagger.html>

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Note:

Thermoflagger™ is a trademark of Toshiba Electronic Devices & Storage Corporation.

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, www.scib.jp/en and www.toshiba-tmat.co.jp/en/ for further company and product information.

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