



PCIM 2025 Nuremberg, Germany 6th – 8th May Hall 4A Booth 229

Toshiba drives 'Excellence in Power' at PCIM 2025

High-quality products built to high-performance standards drive sustainability

Düsseldorf, Germany, 15th April 2025 – Toshiba Electronics Europe GmbH ("Toshiba") introduces technologically advanced solutions that enable engineers to meet their system efficiency and sustainability design goals at <u>PCIM 2025</u>. This year, Toshiba showcases semiconductor solutions in key application areas, including e-mobility, industrial, energy, and infrastructure.

"Excellence in power – over its 150-year history, this is what Toshiba stands for," says Armin Derpmanns, VP Marketing & Operations, Toshiba. "Innovative technologies and solutions, highest quality levels, and low-carbon footprint products support engineers in enhancing performance, reliability, and sustainability to build an all-electric society."

At Toshiba's stand, three demonstration areas are set to focus on the latest innovation of wide-bandgap (WBG) technology, advances for the next generation of Silicon MOSFETs and Motor Control related applications.

Toshiba will share updates on its recent advancements in 6-inch diameter silicon carbide (SiC), as well as 8- and 12-inch silicon (Si) wafer production. Additionally, examples of new IGBT/FRD, RC-IGBT and SiC MOSFET dies will be introduced. In terms of modules, samples of a 2-in-1 SiC module with pin fin cooler will be displayed. Visitors to the stand will be able to examine a mock-up of the new 1200V/350A middle voltage multi-chip package (MV-MCP) with double-sided heat dissipation, designed for xEV traction inverter applications.

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Additionally, visitors to the booth can explore how Toshiba's <u>SmartMCD</u>, featuring an integrated microcontroller with a gate driver, contributes to a higher efficiency for automotive motor applications, offering space and system cost savings.

The industrial area will include a new cordless power tool demo, demonstrating how Toshiba's three-phase brushless DC (BLDC) motor drive circuit enables compact yet highly efficient motor control.

The display also features the Click boards[™] demonstrator. Toshiba's specialists will be on hand to explain how evaluation and prototyping boards, developed in collaboration with its partner MIKROE, can simplify the design process for engineers working on automotive and industrial motor control applications. The latest addition to the family, Clicker 4 Inverter Shield 2 extension board, illustrates how it can enable the precise and reliable control of BLDC motors for electric power steering (EPS), powered brakes, and pumps.

The energy (WBG) sector of Toshiba's stand spotlights high power intelligent flexible package low voltage (iXPLV), and E3D SiC MOSFET modules.

For xEV inverter designers, visitors should make a point to see Toshiba's presentation, titled: 'Impact of SBD embedding into SiC MOSFETs on dynamic behaviour at High Temperature' taking place at the Bruessel 1 stage, on 6th May between 11:20 and 11:40. Shunsuke Asaba will share research findings indicating that recovery loss remains constant across temperatures and consistent turn-on loss is therefore anticipated in inverter circuits regardless of temperature.

For those interested in the latest Toshiba power electronics and semiconductor device modelling developments, Kazuyasu Takimoto will present a poster session in the foyer, entitled: 'Accurate IGBT Circuit Model Considering Impact of Dynamic Avalanche Phenomenon'. It takes place during the Modelling and Simulations II session on May 8th, which runs from 11:15 to 12:45.

For more details about Toshiba's presence at PCIM 2025, please visit: https://toshiba.semicon-storage.com/eu/company/exhibition/articles/exhibition_PCIM2025.html

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About Toshiba Electronics Europe

<u>Toshiba Electronics Europe GmbH</u> (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.

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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.

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