

Exhibitions

TDK displays the latest passive component and sensor solutions at PCIM and Sensor+Test

- At PCIM in booth 350 in hall 9, TDK shows “Highlight Solutions for Multiple Energy Conversion” for wind and solar energy, ESS, and hydrolyzer as well as for heat pumps, EV charging, and mobility (xEV, ADAS)
- At Sensor+Test in booth 204 in hall 1, TDK presents how various sensor technologies work together to optimize the performance of an EV drivetrain as well as in other applications
- PCIM and Sensor+Test take place in parallel from June 11 to 13 in the Exhibition Center Nuremberg, Germany

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TDK Corporation (TSE:6762) showcases its latest passive component and sensor innovations at this year’s PCIM and Sensor+Test, taking place in parallel from June 11 to 13 in the Exhibition Center Nuremberg, Germany. “Highlight Solutions for Multiple Energy Conversion” is the theme of TDK’s exhibit at PCIM in hall 9, booth 350, featuring passive components for applications such as energy and power conversion, heat pumps, EV charging, and mobility (xEV, ADAS). Just a few halls away, in hall 1, booth 204, an e-motor demo will show how various TDK sensor technologies work together to optimize the performance of an EV drivetrain. Embedded motor control solutions, ultrasonic sensor modules, and other sensor technologies will also be displayed.

Solution highlights at PCIM, hall 9, booth 350:

- **Energy & Power Conversion (Wind, Solar, ESS, Hydrolyzer, etc.):**
This demo station showcases several key components such as DC link and EMI capacitors as well as high voltage contactors. Highlights include high-temperature DC link film capacitors, an enhanced version of the CLARA (Capacitor Life And Rating Application) web-based tool, and safety-related EMI capacitors. Also new is the second generation of ultra-compact aluminum electrolytic capacitors.
- **Heat Pump:**
To efficiently operate heat pumps, pressure and temperature sensors are needed. This demo station shows TDK’s integrated pressure and temperature sensors that reduce costs by significantly lowering the number of components. Also, other key components are shown like PFC and common-mode chokes.
- **EV Charging:**
Safety is critical to protect passengers, the vehicle, and the charging infrastructure. Therefore, highlights of this demo station include the HVC27 series of high-voltage contactors, an X2 Mini EMI capacitor, and the new InsuGate transformer for driving SiC MOSFETs. Reference designs for charging EVs at 22 kW and 50 kW using various key components from TDK are also shown.
- **Mobility (ADAS and EV):**
The currents in EVs can become very high. Therefore, TDK showcases two new series flat wire high current inductors. Using a metal alloy powder as core material, the saturation characteristics of the ERU27M for surface mount and the ERU33M for through-hole mount are much softer than with the standard material.
- **Haptic Applications:**
Touchscreens can pose a safety risk when drivers are distracted from the traffic while operating them. In this demo station, TDK shows how haptic feedback can emulate push buttons and other control elements.
- **Multilayer AlN Substrate and Submounts:**
TDK’s new smart AlN multilayer substrates and packages push the boundaries of high-power devices in terms of power density, heat dissipation, reliability, and the most compact footprint. Aluminum nitride’s key properties are higher thermal conductivity compared to other ceramics and substrate materials, and a thermal expansion coefficient that matches that of silicon as well as SiC and GaN.

Product highlights at Sensor+Test, Booth 204, Hall 1:

- **Hall-effect Automotive Sensors:**
Stray-field robust 3D Hall-effect position sensors for various automotive applications, like position measurement in high-speed e-motor applications like electro-mechanic or electro-hydraulic brake systems (HAL 302x), or steering wheel applications (HAL/R/C 39xy).
- **TMR Automotive Sensors:**
TMR half-bridge sensors for space efficient motor control applications with scalable functional safety and accuracy levels (TAS2240) or as chipset together with the ASA 2310 TMR front-end IC as resolver replacement.
- **MEMS Motion sensors:**
True Wireless Stereo (TWS) devices showing 360° spatial audio and active noise cancellation, enabled by ultra-low power VibeSense360™ motion sensor solution.
- **Ultrasonic Time of flight (ToF) sensors:**
Ultrasonic sensing wake-up with power-saving smart detection, enabled by SmartSonic™ presence detection and obstacle avoidance.
- **SmartEdgeML Machine Learning:**
Advanced edge machine learning solution to run ultra-low power ML models on a 6-axis IMU chip, enabling new possibilities for IoT products like wearables, hearables, and AR glasses.
- **Pressure sensors:**
Pressure-temperature sensors for thermal management, and pressure sensors for fuel tank leakage detection, and for industrial applications.
- **Temperature sensors:**
Industrial surface temperature sensing and automotive temperature sensors including an e-motor busbar sensor, an e-motor small case series, clip-on sensors for heat pumps, and a sensor for high-voltage.
- **Embedded motor control solutions:**
HVC 5x, a new family of programmable system-on-chip (SOC) motor controllers for driving small stepper, brushed (BDC), and brushless (BLDC) motors in automotive and industrial applications.
- **Ultrasonic sensor modules:**
This module can detect objects and measure distances in challenging environments, including full sunlight, translucent targets, and vibration, in autonomous mobile robots (AMR) or autonomous guided vehicles (AGV).
- **Acoustic Data Link (ADL):**
This technology uses acoustic material waves instead of electromagnetic waves, making it possible to transfer data and electrical power through hermetically sealed metal surfaces without a hole.

Presentations and Posters

- **Fernando Auñon, TDK Electronics:** “Film Capacitor Standard Series Digitalization: Electromagnetic & Thermal Modelling implementation in CLARA Web Tool”, June 11 at 1 pm at the Poster Session in Hall 10.1
- **Frederik Berstecher, TDK-Micronas:** “Sensor solutions for e-motor applications: Angular accuracy performance under challenging mechanical and electrical conditions”, June 11 at 1 pm in Hall 1 at the Forum
- **David Olalla, TDK Electronics:** “A Modular DC-Link Capacitor Solution for the Main Powertrain Inverter of xEVs”, June 11 at 3:30 pm at the Poster Session in the foyer of the entrance Mitte



About TDK Corporation

TDK Corporation is a world leader in electronic solutions for the smart society based in Tokyo, Japan. Built on a foundation of material sciences mastery, TDK welcomes societal transformation by resolutely remaining at the forefront of technological evolution and deliberately “Attracting Tomorrow.” It was established in 1935 to commercialize ferrite, a key material in electronic and magnetic products. TDK’s comprehensive, innovation-driven portfolio features passive components such as ceramic, aluminum electrolytic and film capacitors, as well as magnetics, high-frequency, and piezo and protection devices. The product spectrum also includes sensors and sensor systems such as temperature and pressure, magnetic, and MEMS sensors. In addition, TDK provides power supplies and energy devices, magnetic heads and more. These products are marketed under the product brands TDK, EPCOS, InvenSense, Micronas, Tronics and TDK-Lambda. TDK focuses on demanding markets in automotive, industrial and consumer electronics, and information and communication technology. The company has a network of design and manufacturing locations and sales offices in Asia, Europe, and in North and South America. In fiscal 2024, TDK posted total sales of USD 14.6 billion and employed about 101,000 people worldwide.

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