

Press release

Key topic power electronics

GaN and SiC continue to gain traction

23. July 2025

- Increasing share of SiC and GaN for power semiconductors
- Power electronics are a key component of the energy transition
- Over 1,400 exhibitors showcasing their comprehensive product portfolio

From November 18 to 21, the electronics industry will meet in Munich at productronica, the world's leading trade fair for electronics development and production. One of the focus topics this year will be power electronics, as they are of central importance for electromobility or the decarbonization and digitalization of the economy. The trade fair will give visitors a comprehensive insight into the world of GaN, SiC and co. The conceptual and technical sponsor of the trade fair is the VDMA Productronic department.

Power electronics are a central component of modern technologies and can be found in power supply units, power supplies, and motor drives. Power semiconductors are essential, for example, for converting direct current into alternating current and vice versa. Modern power electronics therefore play a key role in the energy and mobility transition, decarbonization, and digitalization – all of which will be focus topics at productronica 2025.

New production facilities in Europe

The fact that power electronics are a component of all important future technologies is clear to see from the market trend. Analysts from [Markets and Markets](#) estimate the CAGR for power electronics at 5.7% through 2028, with the market size increasing from USD 46.2 billion in 2023 to USD 61 billion in 2028.

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While North America previously led the way as a producer of global power electronics with over 30 percent of the [market share](#), the APAC region (Asia Pacific) in particular is set to become the forerunner in the future in the [global market](#) with a market volume of around 54 percent, and the largest contributions coming from China, Japan, South Korea, and India. Europe is, however, also making confident strides, with well-known semiconductor manufacturers like Infineon Technologies and Vishay currently investing in new production facilities, for example, in Germany, Italy and the Czech Republic.

GaN and SiC gradually increasing market share

The most important growth drivers in the field of power electronics are the so-called wide bandgap semiconductors gallium nitride (GaN) and silicon carbide (SiC). Although they are currently still more expensive than conventional power semiconductors such as silicon IGBTs or MOSFETs, they can switch much higher voltages and frequencies.

The biggest [advantage of GaN and SiC](#) is the wide bandgap of 3.4 eV for GaN and 3.2 eV for SiC compared to 1.1 eV for Si IGBTs. That provides advantages such as efficient heat dissipation, high switching frequencies, high breakdown strength, and low power consumption, hence high energy efficiency. [Compared to SiC](#), GaN is predestined for high frequencies and is therefore often used for server and low-power applications, while SiC has advantages over GaN at high power levels and is therefore preferred in applications such as energy supply, transport, or motor controls.

Si IGBTs are currently even more cost-effective than wide bandgap technologies and impress with their fast switching speeds and high current carrying capacity. However, they are much more thermally unstable, which is why they will be used a lot less in future than the new technologies.

Exhibits and exhibitors at productronica

Manufacturers of power semiconductors are faced with the challenge of making the new materials technically manageable and economically viable, while at the same time having to meet growing demands on efficiency, reliability, and miniaturization. In addition, high investment costs, the global struggle for raw materials, and the shortage of skilled workers make it difficult to scale up production quickly.

At productronica 2025, exhibitors from the semiconductor ecosystem will show how they are solving these challenges with a good instinct for the right technologies and an innovative spirit. F&S Bondtec, for example, will show how the company is using the right connection technology to manufacture high-quality machines for chiplet production that meet miniaturization requirements. Panasonic also always offers the right connection with its convincing SiC packaging solutions. Leading high-volume packaging technologies for SiC and GaN will be presented by ASMPT, for example, and Yamaha Robotics will showcase suitable robots for packaging semiconductor components.

VDMA Productronic Special Exhibit

In addition, the VDMA – conceptual sponsor of productronica – will offer visitors to its “Special Exhibit” stand B2 in Hall 461 an insight into various collaborations for research and development in the field of power electronics. Schweizer Elektronik, for example, will demonstrate how a Si-MOSFET improves the power unit of an inverter for a starter generator. Silicon Austria Labs will show, among other things, how an energy converter control panel for wind turbines can work much more efficiently with modern power components. Elektra Solar will also present an electrically powered aircraft at productronica.

Ideal platform for exchange

Visitors to productronica 2025 can find out first-hand about the new trends in the field of power electronics. The world’s leading trade fair for electronics development and production will bring together more than 1,400 exhibitors in November in Munich. True to the motto “the pulse of innovation”, visitors can dive deeper into the world of SiC, GaN and Si IGBTs and get the latest information straight from the exhibitors or

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via the extensive additional offerings such as panel discussions, lectures, or networking events.

At the same time, SEMICON Europa invites visitors to find out about the entire value chain of the semiconductor industry in Halls B1, C1 and C2.

More information: productronica.com

productronica

productronica is the world's leading trade fair for electronics development and production and is supported from a conceptual and technical perspective by the Productronics Department of the VDMA (German Mechanical Engineering Industry Association). The trade fair has been held in Munich every two years since 1975 and the next productronica will take place from November 18 to 21, 2025.

productronica worldwide

In addition to productronica, Messe München also organizes productronica China and productronica India. The network of electronics trade fairs also includes electronica in Munich, electronica China, as well as electronica India, Smart Tech Asia, electronicAsia and LOPEC.

Messe München

As one of the world's leading trade fair organizers, Messe München presents the world of tomorrow at its around 90 international trade fairs. These include twelve of the world's leading trade fairs such as bauma, BAU, IFAT, and electronica. Its portfolio comprises trade fairs for capital and consumer goods, as well as for new technologies. Together with its 1,300 employees in the group and the affiliated companies, it organizes trade fairs in China, India, Brazil, South Africa, Turkey, Singapore, Vietnam, Hong Kong, Thailand, and the U.S. With an international network of affiliated companies and foreign representatives, Messe München is active worldwide. The more than 150 events held annually attract around 50,000 exhibitors and around three million visitors in Germany and abroad. This makes Messe München an important economic driver, triggering purchasing power effects in the billions.

With the LOCATIONS OF MESSE MÜNCHEN, it offers a variety of spaces for a wide range of events: These are the exhibition grounds, the ICM – International Congress Center Messe München, the CCN – Conference Center North and the MOC – Event Center Messe München in Munich-Freimann.