

Bosch wants to create a European supply chain for SiC semiconductors - November 10, 2021

In a consortium led by Bosch, a total of 34 companies, universities, and research institutes from seven European countries have joined forces to work toward securing a leading role for Europe in new technologies based on silicon carbide

Many of today's key projects focus on the same objective: to improve energy efficiency and thereby protect the environment. These projects are typically in areas such as electromobility, renewable energy, and edge and cloud computing – including the requisite data centers. Experts agree that silicon carbide (SiC) semiconductors and the electronic components containing them will ensure the most efficient use of the electricity at our disposal.

The object of the publicly funded "Transform" project (trusted European SiC value chain for a greener economy) is to establish a resilient European supply chain for this technology, ranging from wafers and other basic materials right up to finished SiC power semiconductor devices and power electronic applications.

"The aim of the Transform project is to secure a leading role for Europe in new technologies based on silicon carbide," says Jens Fabrowsky, executive vice-president in the Bosch Automotive Electronics division in a press release.

The project is scheduled to run until 2024, and will be focusing on five use cases in the automotive, industry, renewable energy, and agriculture sectors.

The objective of the Transform project is as stated earlier to establish a resilient European supply chain for the production of power electronic applications based on innovative SiC power semiconductor devices. The demand for such technology is set to grow rapidly, especially with respect to energy-intensive applications such as electrical vehicle powertrains, EV charge spots, and power supply infrastructure. A forecast by the market research and consulting company Yole indicates that, between now and 2025, the SiC market as a whole will grow on average by 30% a year to over USD 2.5 billion. The Transform project will therefore also cover the development of new SiC technology along with the requisite production processes and methods. In addition, it will endeavor to secure the availability of machinery and equipment for the production of this technology by European suppliers, ranging from wafers to finished power electronic applications.

This project has a budget of more than EUR 89 million euros and is funded by the European Union as well as national bodies. Among the partnering companies we find Aixtron, Danfoss, EV Group, Premo, Saint-Gobain, Semikron, Soitec, STMicroelectronics, and Valeo-Siemens Automotive.

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