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Mitsubishi Electric and Nexperia to Partner in Joint SiC Power Semiconductors Development

*Developing and supplying SiC chips to Nexperia, implementing the technologies accumulated through
SiC power module experiences*

TOKYO, November 13, 2023 – [Mitsubishi Electric Corporation](https://www.mitsubishielectric.com) (TOKYO: 6503) announced today that it will enter into a strategic partnership with Nexperia B.V. to jointly develop silicon carbide (SiC) power semiconductors for the power electronics market. Mitsubishi Electric will leverage its wide-bandgap semiconductor technologies to develop and supply SiC MOSFET chips that Nexperia will use to develop SiC discrete devices.

The electric vehicle market is expanding worldwide and is helping to drive the exponential growth of SiC power semiconductors, which offer lower energy loss, higher operating temperatures and faster switching speeds than conventional silicon power semiconductors. The high efficiency of SiC power semiconductors is expected to contribute significantly to global decarbonization and green transformation.

Mitsubishi Electric has established leading positions in applications such as high-speed trains, high-voltage industrial applications and home appliances. The company launched the world's first SiC power modules* for air conditioners in 2010 and became the first supplier of an all-SiC power module** for Shinkansen bullet trains in 2015. Mitsubishi Electric has accumulated superior expertise for the development and manufacture of SiC power modules, which are known for their advanced performance and high reliability.

Going forward, Mitsubishi Electric expects to strengthen its partnership with Nexperia, a global leader with decades of experience in the design, manufacture, quality assurance and supply of diverse discrete devices. Nexperia's devices are used in the automotive, industrial, mobile and consumer markets, contributing to decarbonization and a more sustainable future. Mitsubishi Electric will continue to improve the performance and quality of its SiC chips and focus on the development of power modules using proprietary module technologies.

* According to Mitsubishi Electric research as of August 24, 2010

** According to Mitsubishi Electric research as of June 25, 2015

Mark Roeloffzen, SVP & General Manager Business Group Bipolar Discretes at Nexperia, said: "This mutually beneficial strategic partnership with Mitsubishi Electric represents a significant stride in Nexperia's silicon carbide journey. Mitsubishi Electric has a strong track record as a supplier of technically proven SiC device and modules. Combined with Nexperia's high-quality standards and expertise in discrete products and packaging, we will certainly generate positive synergies between both companies - ultimately enabling our customers to deliver highly energy efficient products in the industrial, automotive or consumer markets they serve."

Masayoshi Takemi, Executive Officer and Group President, Semiconductor & Device at Mitsubishi Electric, said: "Nexperia is a leading company in the industrial sector with proven technologies for high quality discrete semiconductors. We are delighted to enter into this co-development partnership that will leverage the semiconductor technologies of both companies."

About Nexperia

Headquartered in the Netherlands, Nexperia is a global semiconductor company with a rich European history and over 15,000 employees across Europe, Asia, and the United States. As a leading expert, Nexperia designs, builds and delivers components that enable the basic functionality of virtually every electronic design in the world – from automotive and industrial to mobile and consumer applications.

The company serves a global customer base, shipping more than 100 billion products annually. These products are recognized as benchmarks in efficiency – in process, size, power, and performance. Nexperia's commitment to innovation, efficiency, sustainability, and stringent industry requirements is evident in its extensive IP portfolio, its expanding product range, and its certification to IATF 16949, ISO 9001, ISO 14001 and ISO 45001 standards.

For more information, please visit www.nexperia.com.

CEO	Xuezheng Zhang
Location	Jonkerbosplein 52, 6534 AB Nijmegen, the Netherlands
Established	2017
Revenue	2.4 billion USD (FY2022)
Employees	Over 15,000 (FY2022)
URL	https://www.nexperia.com/

About Mitsubishi Electric's Power Semiconductor Business

Mitsubishi Electric has positioned its power device business as a key growth driver capable of contributing to a more sustainable world through decarbonization. The company's power semiconductor products help to realize significant energy savings in a wide range of fields, including automobiles, home appliances, industrial equipment and traction motors. Going forward, Mitsubishi Electric expects to continue make timely investments in the power semiconductor business to support the company's solid business growth.

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About Mitsubishi Electric Corporation

With more than 100 years of experience in providing reliable, high-quality products, Mitsubishi Electric Corporation (TOKYO: 6503) is a recognized world leader in the manufacture, marketing and sales of electrical and electronic equipment used in information processing and communications, space development and satellite communications, consumer electronics, industrial technology, energy, transportation and building equipment. Mitsubishi Electric enriches society with technology in the spirit of its “Changes for the Better.” The company recorded a revenue of 5,003.6 billion yen (U.S.\$ 37.3 billion*) in the fiscal year ended March 31, 2023. For more information, please visit www.MitsubishiElectric.com

*U.S. dollar amounts are translated from yen at the rate of ¥134=U.S.\$1, the approximate rate on the Tokyo Foreign Exchange Market on March 31, 2023