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## **Mitsubishi Electric and Coherent Enter into A Collaboration to Scale Manufacturing of SiC Power Electronics on A 200 mm Technology Platform**

**TOKYO and PITTSBURGH, May 26, 2023** – [Mitsubishi Electric Corporation](https://www.mitsubishielectric.com) (TOKYO: 6503) and Coherent Corp. (NYSE: COHR), a global leader in materials, networking, and lasers, today announced that they have signed a memorandum of understanding (MOU) to collaborate on a program to scale manufacturing of SiC power electronics on a 200 mm technology platform.

The market for electric vehicles is expanding worldwide and is just one of several emerging applications driving the exponential growth in SiC power devices, which have lower energy losses, higher operating temperatures, and higher switching speeds compared with power devices based on silicon. The high efficiency of SiC power devices is expected to be a significant contributor to global decarbonization and the green transformation.

To meet the rapidly growing demand, Mitsubishi Electric announced an investment of approximately 260 billion yen in the five-year period ending March 2026. A major portion of the investment, approximately 100 billion yen, will be used to construct a new plant for SiC power devices, based on a 200 mm technology platform, and enhance related production facilities. Under the MOU, Coherent will develop a supply of 200 mm n-type 4H SiC substrates for Mitsubishi Electric's future SiC power devices manufactured at the new facility.

Coherent has decades of experience in the development of SiC materials. The company demonstrated the world's first 200 mm conductive substrates\* in 2015. In 2019, Coherent began to supply 200 mm SiC substrates under REACTION, a Horizon 2020 four-year program funded by the European Commission.

Over the years, Mitsubishi Electric has led the SiC power module markets for high-speed trains, high-voltage industrial applications, and home appliances. Mitsubishi Electric made history by launching the world's first

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\* According to Coherent research as of July 16, 2015

SiC power modules\*\* for air conditioners in 2010, and became the first supplier of a full SiC power module\*\*\* for Shinkansen high-speed trains in 2015. Mitsubishi Electric has also built extensive expertise by serving customers' needs for high performance and high reliability through its outstanding techniques of processing and screening, as well as many other facets of developing and manufacturing SiC power modules.

Power electronics based on SiC have demonstrated their potential to have a highly beneficial impact on the environment via significant reductions in carbon dioxide emissions. Through the rapidly growing demand for SiC power devices, Coherent and Mitsubishi Electric will accelerate their contribution to sustainable energy consumption and the decarbonization of society.

**Comment from Masayoshi Takemi, Executive Officer, Group President, Semiconductor & Device at Mitsubishi Electric**

Coherent has been for many years a reliable supplier of high-quality 150 mm SiC wafer substrates to Mitsubishi Electric. We are delighted to enter into this close partnership with Coherent to scale our respective SiC manufacturing platforms to 200 mm.”

**Comment from Sohail Khan, Executive Vice President, New Ventures & Wide-Bandgap Electronics Technologies at Coherent.**

We are excited to build on our relationship with Mitsubishi Electric, a pioneer in SiC power devices and a global market leader in SiC power modules for high-speed trains, including the famous Shinkansen in Japan. We have a long track record of supplying SiC substrates to Mitsubishi Electric and are looking forward to expanding our relationship with them to scale their new 200 mm SiC platform.

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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](http://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

**About Coherent**

Coherent empowers market innovators to define the future through breakthrough technologies, from materials to systems. We deliver innovations that resonate with our customers in diversified applications for the industrial, communications, electronics, and instrumentation markets. Headquartered in Saxonburg, Pennsylvania, Coherent has research and development, manufacturing, sales, service, and distribution facilities worldwide. For more information, please visit us at [coherent.com](http://coherent.com).

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

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

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