

November 29, 2024
DENSO Corporation
Fuji Electric Co., Ltd.

Approval Received from Ministry of Economy, Trade and Industry for Semiconductor Supply Plan Jointly Submitted by DENSO and Fuji Electric

November 29, 2024, Tokyo—DENSO Corporation and Fuji Electric Co., Ltd., announced today that a semiconductor supply plan submitted jointly by the companies has been approved by the Ministry of Economy, Trade and Industry. Under this plan, the companies will take part in joint investment and production of silicon carbide (SiC) power semiconductors to develop and strengthen frameworks for the supply of said semiconductors.

Power semiconductors are vital to the efficient supply of electric power. Demand for power semiconductors has been rising rapidly given that they are used in electrified vehicles, which are being adopted at an accelerated pace amid the push for the decarbonization of society. In comparison to prior silicon semiconductors, SiC power semiconductors are able to deliver superior performance under high-temperature, high-frequency, and high-voltage conditions. These devices are therefore anticipated to make large contributions to reductions in power losses as well as to more compact and lighter-weight designs for battery electric vehicle systems and other power electronics. Accordingly, growth in demand is projected for SiC power semiconductors.

In response to electrification trends, DENSO has advanced SiC technology development projects targeting increased quality and efficiency in relation to everything from wafers and element devices to modules and inverters. Meanwhile, Fuji Electric has constructed extensive frameworks encompassing all tasks spanning from the development of SiC power semiconductor elements that enable increased efficiency and more compact designs for power electronics equipment to mass production of the related modules. Based on the approved plan, these companies will combine their respective automotive product development and production technology capabilities in a joint effort to expand their capacity for the efficient and stable supply of SiC power semiconductors throughout Japan.

Through this partnership, the companies will contribute to the development of semiconductor supply frameworks within Japan and to the improvement of the international competitiveness of Japan's domestic semiconductor and automotive industries. In addition, this partnership is anticipated to help advance the decarbonization of society.

Overview of Approved Semiconductor Supply Plan

Involved companies	DENSO Corporation Fuji Electric Co., Ltd.
Total investment	¥ 211.6 billion (Total subsidies: ¥70.5 billion)
Production sites	DENSO Corporation Daian Plant (SiC wafers), Kota Plant (SiC epitaxial wafers) Fuji Electric Co., Ltd. Matsumoto Factory (SiC epitaxial wafers, SiC power semiconductors)
Goals	Improvement of SiC power semiconductor production capacity within Japan