

# Overview



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## Latest Technology Trends and Prospects for Power Modules

In view of dwindling reserves, rising prices and the greenhouse gases produced by combustion, fossil fuels are rapidly being replaced by electricity in all sectors. Power electronics (PE) technologies are essential for converting power, and power devices are a vital part of this. Mitsubishi Electric Corporation provides a wide variety of power modules ranging from 100 watts to several megawatts by combining optimum semiconductor chips (e.g., IGBTs) and packaging technologies. These power modules are supplied to applications including agricultural, household, industrial, automotive, electric railway, and electric power sectors.

To satisfy the diversifying requirements for power modules of PE devices, Mitsubishi Electric has released the latest 7th Generation silicon (Si) and silicon carbide (SiC) chip technologies. We have combined this chip technology with the latest packaging technology to reduce the size and weight of modules, increase efficiency and package density, while also reducing electro-magnetic interference (EMI) and improving functionality.

Mitsubishi Electric power modules are ideal for high-reliability, high-efficiency PE systems thanks to their high quality, low loss, excellent noise performance, and simple user assembly.