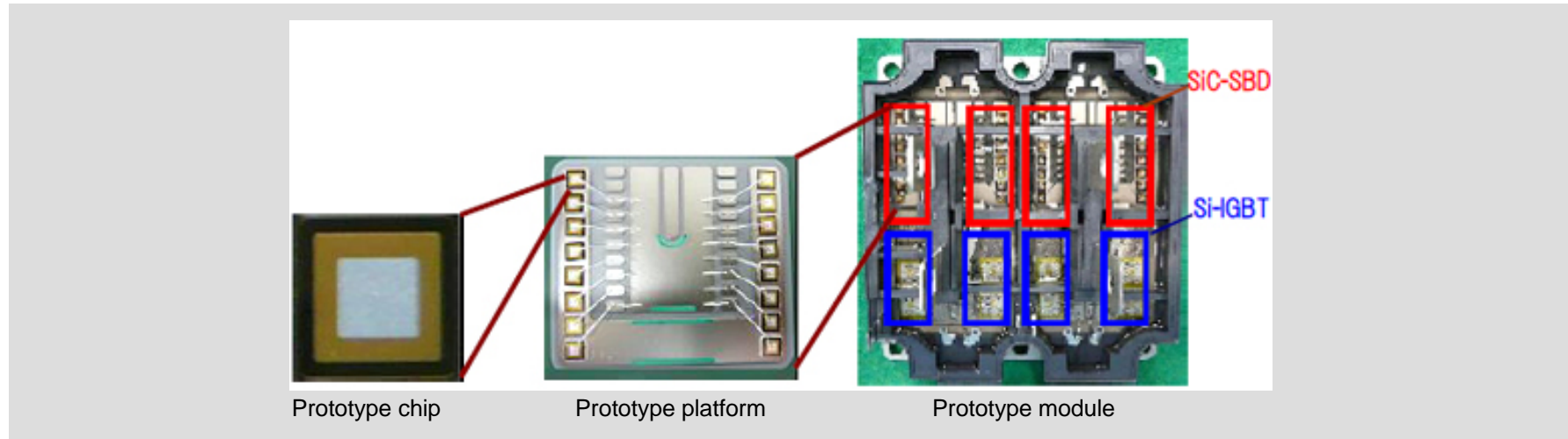


2009/4/21 Release

Development of 3-kV SiC diode-equipped power module

About 30% loss reduction in power conversion of railcar inverter



Hitachi, Ltd. has developed a diode resistant to breakdown voltage that is made of silicon carbide (SiC). This “SiC Schottky barrier diode (SiC-SBD)” features a next-generation power device material instead of silicon and is resistant to a breakdown voltage of up to 3.3 kV. A prototype 3-kV SiC-SBD-equipped power module demonstrated about 30% loss reduction in the power conversion of a railcar inverter compared with the use of the currently used Si-pn diode.