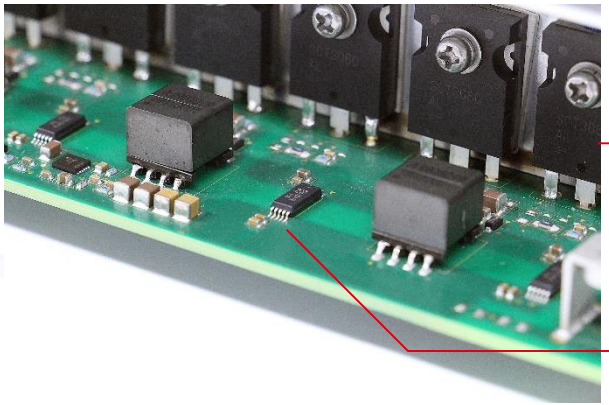
SiC Application Examples

CATL (Contemporary Amperex Technology Co., Ltd.) https://www.catlbattery.com/en

V2X*1 Power Unit



ROHM Products

SiC MOSFET
SCT3060AL

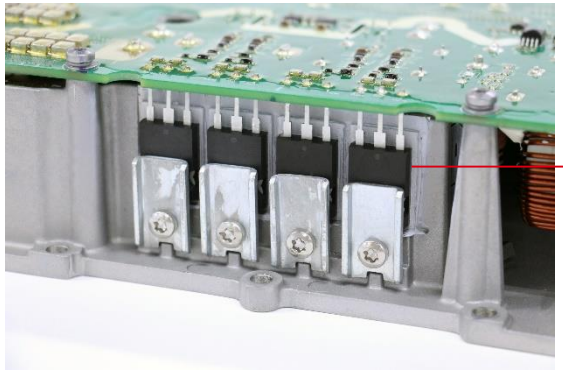
Isolated Gate Driver
BM61S41RFV-C

SiC made it possible to reduce the thermal design resources on the entire set, reduce the size, and improve the power conversion efficiency.

* 1: V2X (Vihecle to X): A general term for next-generation power supply systems that supply power by connecting in-vehicle batteries to different equipment outside the vehicle. As a device for extracting power from a car, V2G (Grid): for smart grid (next-generation power grid), V2H (Home): for general households, V2B (Build) / commercial facilities, and portable Equipment for supplying power from a V2V (Vehicle) vehicle to a different vehicle, is expanding as a new market.

BAIC BJEV (Beijing Electric Vehicle Co.,Ltd.) https://www.bjev.com.cn/

On-Board Charger (6.6kW Bi-direction)



ROHM Products

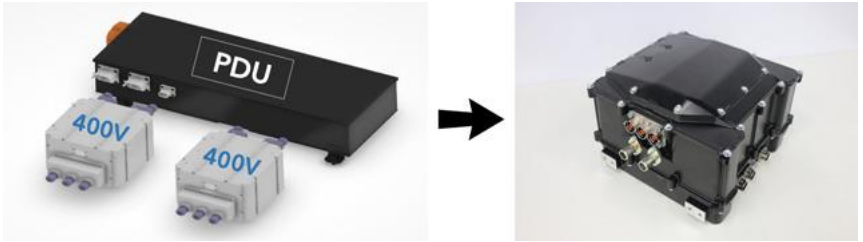
SiC MOSFET
SCT3030ALGC11

Incorporates ROHM SiC MOSFETs, ensuring 97% high efficiency, along with greater reliability.

Achieves improved safety by utilizing a transformer to isolate the high voltage battery from the electrical grid.
Utilizes digital control to facilitate software upgrades, modifications, diagnostics, and maintenance.

Main Inverter (800V System) Prototype

3 in 1 inverter (two inverters and PDU)

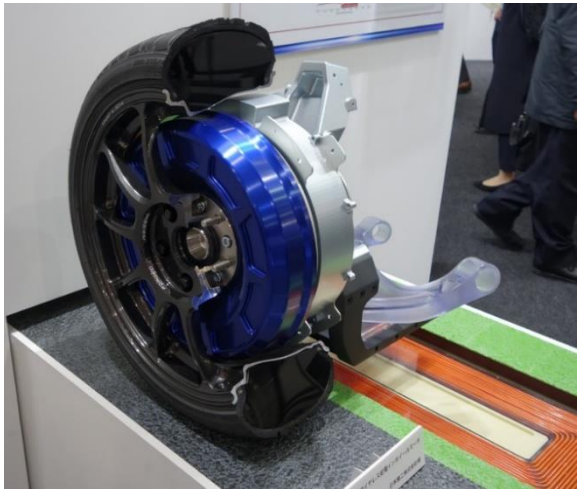


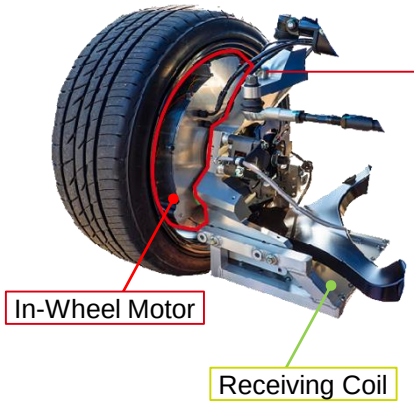
SiC power devices contribute to the size & weight reduction of the main inverter & improve system efficiency.

Joint development with

The Fujimoto Laboratory at Tokyo University & several other companies

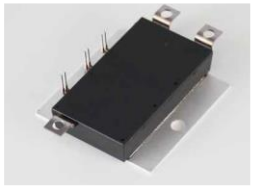
Wireless Power Supply for In-Wheel Motors While Driving





ROHM R&D Products

Transfer Molded SiC Power Module



R&D

ROHM's SiC Power Module Provides all features required by IWMs.

High efficiency, Compact size, High power, High reliability

ROHM Semiconductor GmbH