

## ROHM SEMICONDUCTOR GMBH

# ROHM Semiconductor – Quality at all times

ROHM is a leading global semiconductor and electronic component manufacturer having its headquarters in Kyoto/Japan. The Company's portfolio includes numerous products ranging from innovative power management solutions to eco devices. Its SiC diodes, SiC MOSFETs and modules are widely deployed in automotive, industrial, and energy harvesting applications. SiCrystal AG, a German-based company and part of ROHM group, has adopted a 6 inch integrated SiC wafer production system, which is the successor to the current 4 inch wafers. ROHM is able to offer full-scale mass production of SiC components providing high reliability and advanced characteristics.

#### **Acquires Powervation**

The strategic combination of Powervation's Intelligent Digital Power™ platform with ROHM will enable addressing a broad range of fast-growing market opportunities, as customers increasingly seek digital power solutions to power next generation high density systems and ICs such as Processors, Memory, FPGAs and ASICs.

### New Technology Highlight of SiC MOSFET (MOS)

In 2015 ROHM started mass production of Gen.3 SiC MOS (Trench Gate Structure) enhancing the MOSFETs family of products; which in turn contributes in general to the evolution of Power Electronics.



### Industry's First Mass-Produced "Full SiC" Power Modules

ROHM has pioneered power modules equipped with SiC-MOS and SiC-SBD, which allow substantial reduction in switching losses.

Currently ROHM is co-operating with various power module manufacturers all over the world, in order to maximize the SiC appeal in the global market.

#### Isolated SiC/IGBT Gate Drivers

The new family of isolated gate drivers facilitates compact designs. Therefore, they are considered to be optimal for inverters and DC/DC converters; they are capable of driving SiC MOS and IGBT as well. With the market's highest CMR of 100 kV/µS, along with multiple protection functions, they guarantee a stable and high frequency operation.

# World's lowest VF – SiC Schottky Barrier Diode (SBD)

Compared to Si-FRD, SiC-SBD has ultrasmall reverse recovery time. This reduces switching losses dramatically and allows operation with High-speed switching, which contributes to end-product miniaturization.

#### **Power Shunt Resistors**

Based on an innovative metal alloy, ROHM started mass production of ultralow OHM power shunt resistors up to 5W and low TCR, which are suitable for high current detection circuits, such as automotive applications and motor control units.