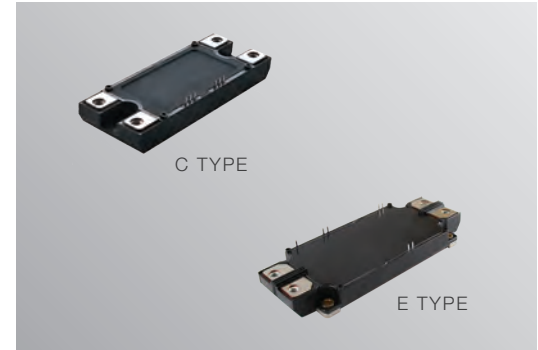


# SiC Power Modules

Low ON resistance, low switching loss

## GENERAL DESCRIPTION

ROHM offers Silicon Carbide (SiC) Power Modules in a variety of current ratings and packages. Features include a wide current range (80A to 600A, continuous) and 1200V  $V_{DS}$ . Both half-bridge and chopper topologies are available. Unlike IGBTs, there is no tail current during turn-off, resulting in faster operation and reduced switching loss. And unlike silicon devices, the ON resistance remains relatively constant even at high temperatures, minimizing conduction losses. Select between either 2<sup>nd</sup> generation planar (maximum short-circuit withstand time) or 3<sup>rd</sup> generation trench (reduced input capacitance and lower gate charge) types.



## FEATURES

- Fast switching with low loss
- Maximum junction temperature = 175°C
- Devices rated for  $V_{DS} = 1200V$
- $I_D$  rated from 80A to 600A
- Spice model and thermal models available
- 3<sup>rd</sup> gen trench technology delivers low input capacitance ( $C_{iss}$ ) and low gate charge ( $Q_g$ )
- 2<sup>nd</sup> gen planar technology provides longer short-circuit withstand time
- No limitations on the use of the body diode

## SPECIFICATIONS

- DC Blocking Voltage  $V_{DS} = 1200V$
- Characterized for switching losses
- Operating temperature range: -40°C to +175°C

## ADVANTAGES

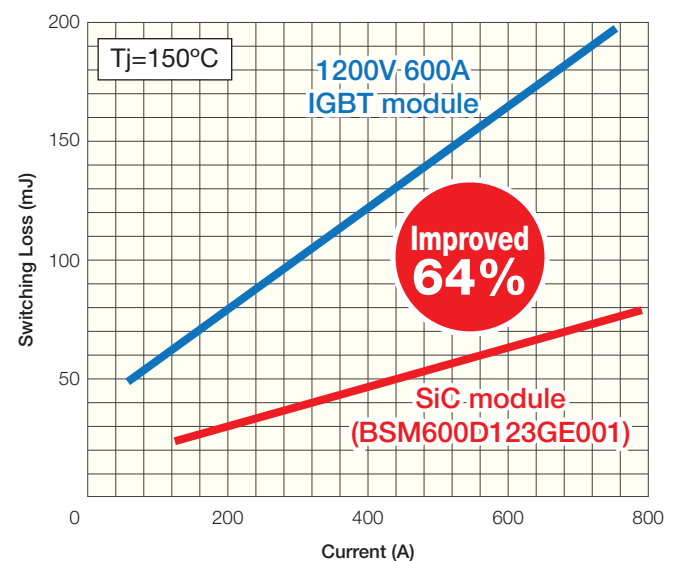
- No tail current during turn-off
- $R_{DS(on)}$  has a positive temperature coefficient, enabling easy parallel operation

## APPLICATIONS

- Inverters for Induction Heating
- Motor Drive Inverters
- Bidirectional Converters
- Solar Inverters
- Power Conditioners

| Packages | W (typ) x D (typ) x H (max) | Stray Inductance |
|----------|-----------------------------|------------------|
| C        | 122mm x 16mm x 45mm         | 25 nH            |
| E        | 152mm x 17mm x 62mm         | 13 nH            |
| G        | 152mm x 17mm x 62mm         | 10 nH            |

## CHARACTERISTICS



CLICK [HERE](#) FOR MORE INFORMATION