

# SiC SBD Module

**$V_{RRM}=650V$   $I_F=2 \times 100A$**

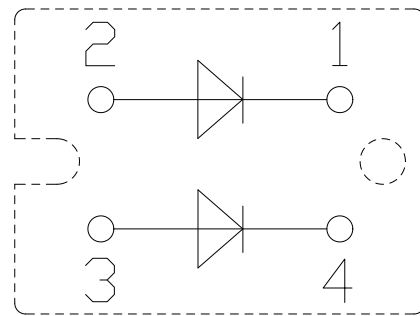
## Applications

- Welding and Plasma Cutting Machines
- DC chopper
- UPS (Uninterruptible Power Supplies)



## Features

- SiC SBD
- Low forward voltage drop
- Positive temperature coefficient
- Low inductance
- Isolated copper baseplate using DBC technology
- SOT-227 package



2X100A / 650V in one-package

## ● Absolute Maximum Ratings

$T_{vj}=25^{\circ}C$  (unless otherwise noted) per diode

Parameter	Symbol	Conditions	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$		650	V
Average Forward Current	$I_{F(AV)}$	$T_c=80^{\circ}C$	100	A
Surge Forward Current	$I_{FSM}$	$V_R=0V, t_p=10ms$	200	A
Maximum Power Dissipation	$P_D$	$T_{vj}=150^{\circ}C$	260	W

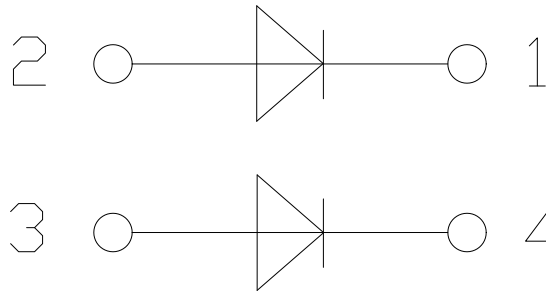
**● Characteristic values**

Parameter	Symbol	Conditions	Value			Unit
			Min.	Typ.	Max.	
Diode Forward Voltage	$V_F$	$I_F=100A, T_{vj}=25^{\circ}C$		1.6	1.9	V
		$I_F=100A, T_{vj}=125^{\circ}C$		1.9		
		$I_F=100A, T_{vj}=150^{\circ}C$		1.9		
Diode Reverse Current	$I_R$	$V_R=V_{RRM}, T_{vj}=25^{\circ}C$		100	1000	uA
		$V_R=V_{RRM}, T_{vj}=150^{\circ}C$		400	2000	

**● Module Characteristics**

Parameter	Symbol	Conditions	Value			Unit
			Min.	Typ.	Max.	
Isolation Voltage	$V_{isol}$	$t=1min, f=50Hz$	2500			V
Maximum Junction Temperature	$T_{jmax}$				150	$^{\circ}C$
Operating Junction Temperature	$T_{vj op}$		-40		150	$^{\circ}C$
Storage Temperature	$T_{stg}$		-40		125	$^{\circ}C$
Thermal Resistance Junction-to Case	$R_{\theta jc}$				0.48	K/W
Thermal Resistance Case to Sink	$R_{\theta cs}$	Conductive grease applied		0.15		K/W
Module Electrodes Torque	$M_t$	Recommended(M4)	0.7	1.0	1.5	N·m
Module-to-Sink Torque	$M_s$	Recommended(M4)	0.7	1.0	1.5	N·m
Weight of Module	G			35		g

- **Circuit Diagram**



- **Package Dimensions**

