

## All-SiC Power Module

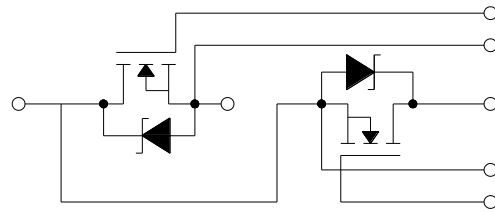
**$V_{DS}=1200V$     $R_{DS(on)}=6.5m\Omega$**

### Applications

- Induction heating
- Solar and wind inverters
- DC/AC converters

### Features

- Ultra low loss
- High-Frequency operation
- Zero reverse recovery current from diode
- Zero turn-off tail current from MOSFET
- Normally-off, fail-safe device operation
- Ease of paralleling



1200V/6.5mΩ I in one-package

### ● Absolute Maximum Ratings

Parameter	Symbol	Conditions	Value	Unit
Drain-source voltage	$V_{DS}$		1200	V
Continuous collector current	$I_D$	$T_{vj}=25^{\circ}C$	300	A
Gate-emitter voltage	$V_{GS}$	$T_{vj}=25^{\circ}C$	$\pm 20$	V
Gate-source voltage	$V_{GSop}$		-10V/+20V	V
Continuous diode forward current	$I_F$	$T_{vj}=25^{\circ}C$	300	A

## ● Electrical Characteristics

Parameter	Symbol	Conditions	Value			Unit
			Min.	Typ.	Max.	
Gate threshold voltage	$V_{GSth}$	$I_D = 80mA, T_{vj} = 25^\circ C$	2.0	2.1	2.4	V
Zero gate voltage drain current	$I_{DSS}$	$V_{DS} = 1200V, V_{GS} = 0V, T_{vj} = 25^\circ C$			800	$\mu A$
Gate-source leakage current	$I_{GSS}$	$V_{GS} = 20V, T_{vj} = 25^\circ C$			800	nA
On state resistance	$R_{DS(on)}$	$V_{GS} = 20V, I_{DS} = 300A$		6.5		m $\Omega$
Diode forward voltage	$V_{SD}$	$I_F = 300A, T_{vj} = 25^\circ C$		1.4	3.0	V

## ● Module Characteristics

$T_c = 25^\circ C$  unless otherwise specified

Parameter	Symbol	Conditions	Value			Unit
			Min.	Typ.	Max.	
Case isolation voltage	$V_{isol}$	$t = 1min, f = 50Hz$	2500			V
Maximum junction temperature	$T_{jmax}$				175	$^\circ C$
Operating junction temperature	$T_{vj op}$		-40		150	$^\circ C$
Storage temperature	$T_{stg}$		-40		125	$^\circ C$
Module electrodes torque	$M_t$	Recommended(M6)	3.0		6.0	Nm
Module to heatsink torque	$M_s$	Recommended(M6)	3.0		6.0	
Weight of module	G			300		g

