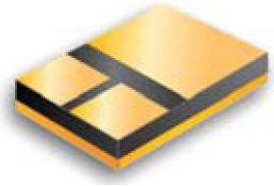
HERMETIC SILICON CARBIDE RECTIFIER

DESCRIPTION: A 1200-VOLT, 2 AMP POWER SILICON CARBIDE RECTIFIER IN A HERMETIC SMD 0.2 PACKAGE

FEATURES:

- NO RECOVERY TIME OR REVERSE RECOVERY LOSSES
- NO TEMPERATURE INFLUENCE ON SWITCHING BEHAVIOR

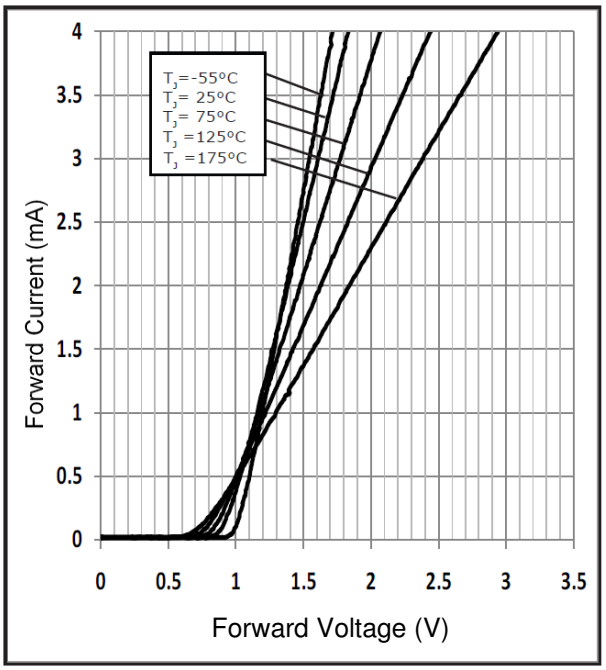


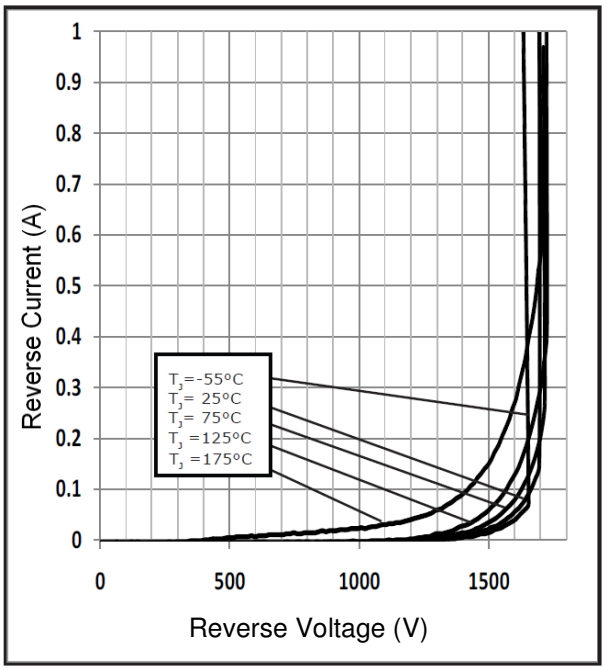
MAXIMUM RATINGS ALL RATINGS ARE @ T_C = 25 °C UNLESS OTHERWISE SPECIFIED.

RATING	SYMBOL	MAX.	UNITS
PEAK INVERSE VOLTAGE	PIV	1200	Volts
MAXIMUM DC OUTPUT CURRENT (With T_C = 135 ^{O}C)	I_O	2	Amps
MAXIMUM FORWARD SURGE CURRENT (t = 8.3ms, Sine), T_C = 25 ^{O}C	I_{FSM}	13	Amps
MAXIMUM POWER DISSIPATION, T_C = 25 ^{O}C	P_d	18.7	W
MAXIMUM THERMAL RESISTANCE, Junction to Case	$R_{\theta JC}$	8	°C/W
MAXIMUM OPERATING AND STORAGE TEMPERATURE RANGE	Top, Tstg	-55 to +175	°C

ELECTRICAL CHARACTERISTICS

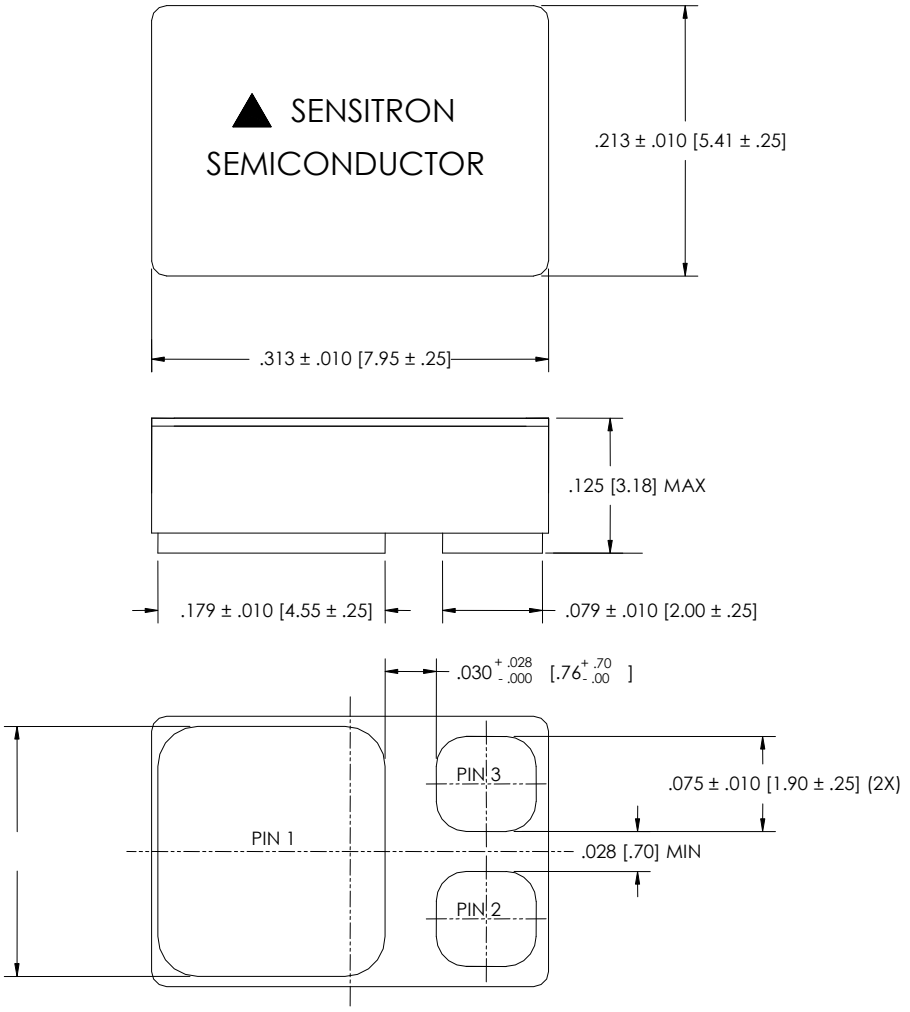
CHARACTERISTIC		TYP	MAX.	UNITS
MAXIMUM FORWARD VOLTAGE DROP (I_f =10A) V_f	T_J=25 °C	1.4	1.8	
	T_J=175 °C	1.9	3.0	Volts
MAXIMUM REVERSE CURRENT (1200V PIV) I_r	T_J = 25 °C	10	50	
	T_J = 175 °C	40	150	µA
TOTAL CAPACITIVE CHARGE (V_R=1200V, I_F=2A, di/dt=200A/µs, T_J=25°C)	Q_C	15		nC
TOTAL JUNCTION CAPACITANCE (V_r =400V, f=1MHz)	C_T	11		pF





MECHANICAL DIMENSIONS

SMD 0.2



PINOUT TABLE

TYPE	PIN 1	PIN 2	PIN 3
SINGLE RECTIFIER	CATHODE	ANODE	ANODE

Application Note: Customers should be aware that at the current stage of technical development of SiC, the reverse avalanche capabilities of the device are limited.

Customer designs will need to accommodate these limitations and avoid exposure of the device to this and other potentially damaging conditions in their applications.

SENSITRON SEMICONDUCTOR

SHD687182

DATA SHEET 5349, Rev. A

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