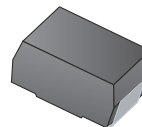


RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

## FEATURES

- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

SMC



## MECHANICAL DATA

- Case: SMC
- Terminals: Lead Free Plating (Tin Finish)  
Solderable per MIL-STD-750 method 2026
- Mounting position: Any

## PACKAGE INFORMATION

Package	MPQ	Leader Size
SMC	3K	13 inch

## ORDER INFORMATION

Part Number	Type
SM5T100C-C	Lead (Pb)-free and Halogen-free

Cathode  Anode 

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Rating 25°C ambient temperature unless otherwise specified. Single phase half wave, 60Hz, resistive or inductive load.  
For capacitive load, de-rate current by 20%.)

Parameter	Symbol	Rating	Unit
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	100	V
Maximum RMS Voltage	$V_{RMS}$	70	V
Maximum DC Blocking Voltage	$V_{DC}$	100	V
Maximum Average Forward Rectified Current	$I_F$	5	A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	150	A
Max Instantaneous Forward Voltage @ 5 A	$V_F$	0.85	V
Maximum DC Reverse Current @ Rated DC Blocking Voltage	$I_R$	$T_A=25^\circ\text{C}$	1
		$T_A=100^\circ\text{C}$	50
Typical Junction Capacitance <sup>1</sup>	$C_J$	400	pF
Single Pulse Reverse Avalanche Energy	$E_{AS}$	$T_A=25^\circ\text{C}$	67.5
		$T_A=100^\circ\text{C}$	50.7
Single Pulse Reverse Avalanche Current	$I_{Pr}$	$T_A=25^\circ\text{C}$	3
		$T_A=100^\circ\text{C}$	2.5
Typical Thermal from Junction-Ambient <sup>2</sup>	$R_{\theta JA}$	35	°C/W
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55~150	°C

Notes:

1. Measured at 1MHz and applied reverse voltage of 4 V D.C.
2. P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

**CHARACTERISTIC CURVE**

Fig.1 Forward Current Derating Curve

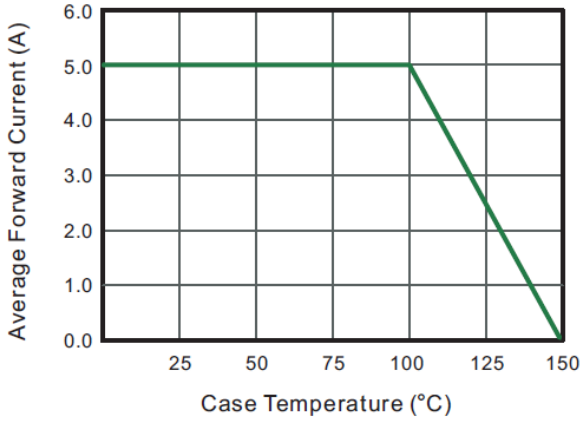


Fig.2 Typical Reverse Characteristics

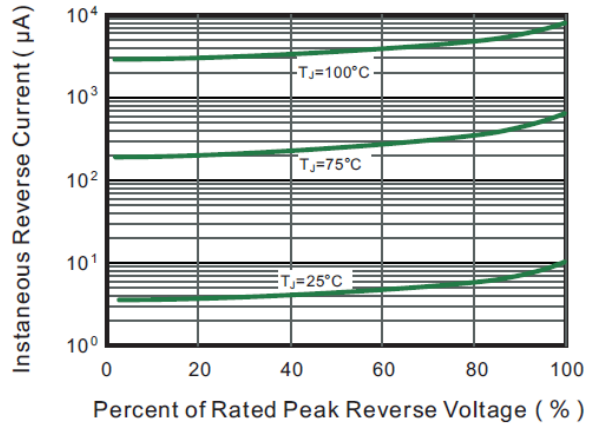


Fig.3 Typical Forward Characteristic

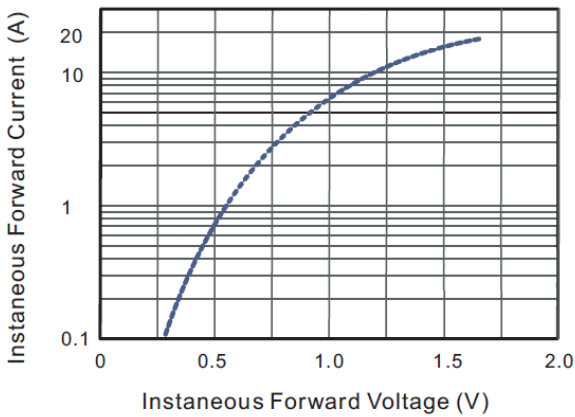


Fig.4 Typical Junction Capacitance

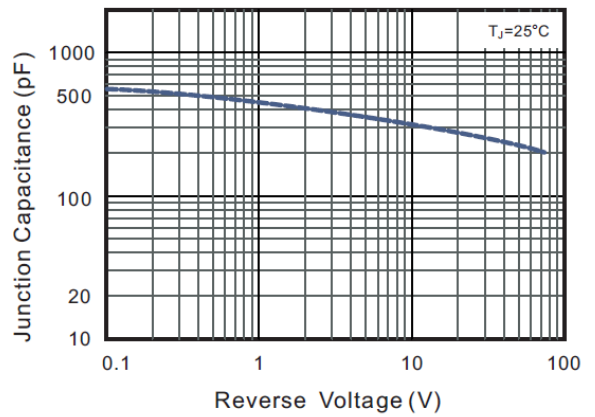


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

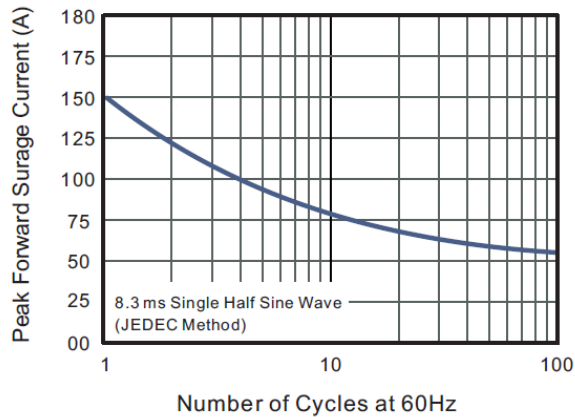
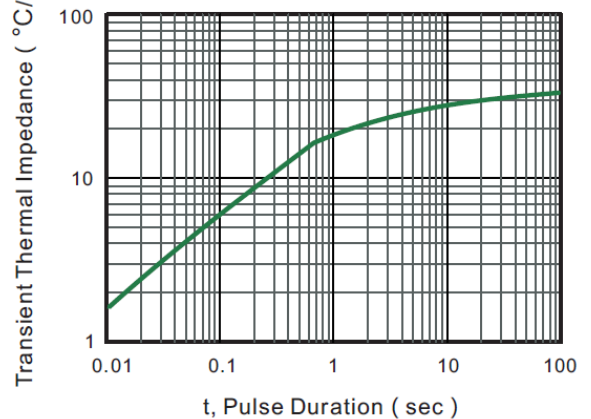
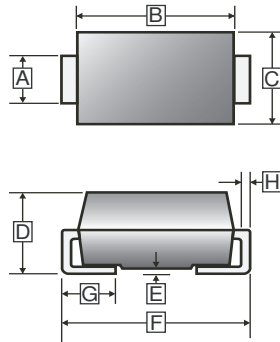


Fig.6 Typical Transient Thermal Impedance



**PACKAGE OUTLINE DIMENSIONS**

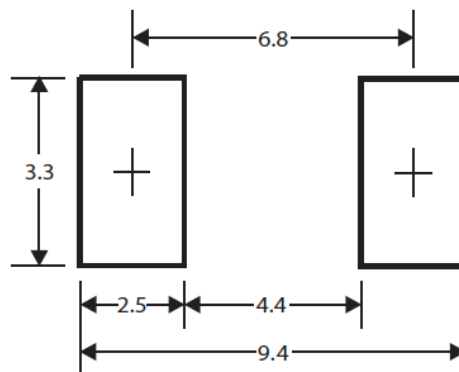
**SMC**



REF.	Millimeter	
	Min.	Max.
A	2.75	3.27
B	6.52	7.11
C	5.50	6.22
D	1.98	2.62
E	-	0.203
F	7.64	8.17
G	0.75	1.60
H	0.23 TYP.	

**MOUNTING PAD LAYOUT**

**SMC**



\*Dimensions in millimeters