

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

## FEATURES

- High Current Capability
- Extremely Low Thermal Resistance
- For Surface Mount Application
- Low Reverse Current
- Higher Temp Soldering

## MECHANICAL DATA

- Case: Molded Plastic
- Epoxy: UL 94V-0 Rate Flame Retardant
- Lead: Axial Leads, Solderable per MIL-STD-202 method 208 Guaranteed
- Polarity: Color Band Denotes Cathode End
- Mounting Position: Any

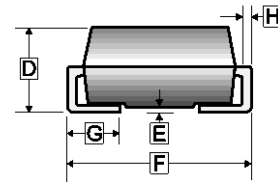
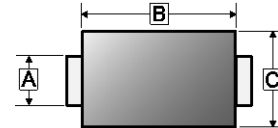
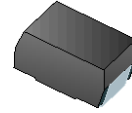
## PACKAGE INFORMATION

Package	MPQ	Leader Size
SMC	3K	13 inch

## ORDER INFORMATION

Part Number	Type
SM5100C-C	Lead (Pb)-free and Halogen-free

## SMC



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.750	3.270	E	-	0.203
B	6.520	7.110	F	7.640	8.170
C	5.50	6.220	G	0.750	1.520
D	1.980	2.620	H	0.23 TYP	

## 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, derate current by 20%.)

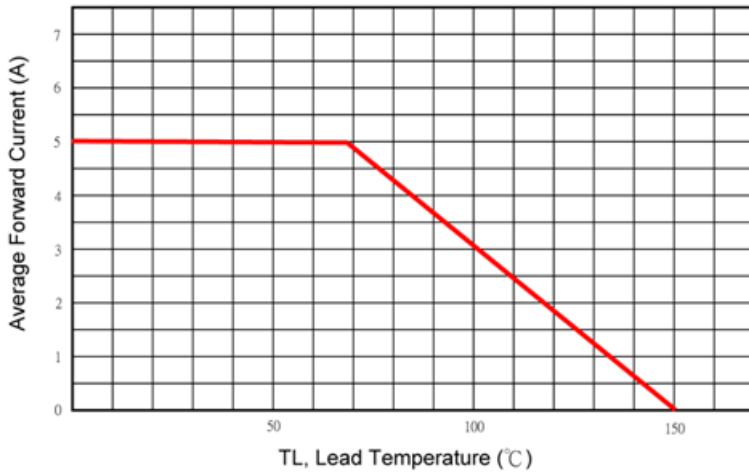
Parameter	Symbol	Ratings	Unit
Peak Repetitive Peak Reverse Voltage	$V_{RRM}$	100	V
Working Peak Reverse Voltage	$V_{RWM}$		
Maximum DC Blocking Voltage	$V_R$		
Average Forward Current @ $T_J=25^\circ\text{C}$	$I_{F(AV)}$	5	A
Peak Forward Current @8.3ms Half Sine	$I_{FSM}$	125	A
Maximum Instantaneous Forward Voltage @ $I_{FM}=5\text{A}$	$T_A=25^\circ\text{C}$	0.82	V
	$T_A=75^\circ\text{C}$	0.73	
	$T_A=125^\circ\text{C}$	0.65	
Maximum DC Reverse Current <sup>1</sup> @ Rated DC Blocking Voltage	$T_J=25^\circ\text{C}$	100	$\mu\text{A}$
	$T_J=100^\circ\text{C}$	800	
Typical Junction Capacitance <sup>2</sup>	$C_J$	350	pF
Typical Thermal Resistance Junction-Case	$R_{\theta JC}$	25	$^\circ\text{C/W}$
Typical Thermal Resistance Junction-Lead	$R_{\theta JL}$	20	$^\circ\text{C/W}$
Voltage Rate of Change (Rated $V_R$ )	$dv/dt$	1000	$\text{V}/\mu\text{s}$
Operating Temperature Range	$T_J$	-50~150	$^\circ\text{C}$
Storage temperature	$T_{STG}$	-65~150	$^\circ\text{C}$

Notes:

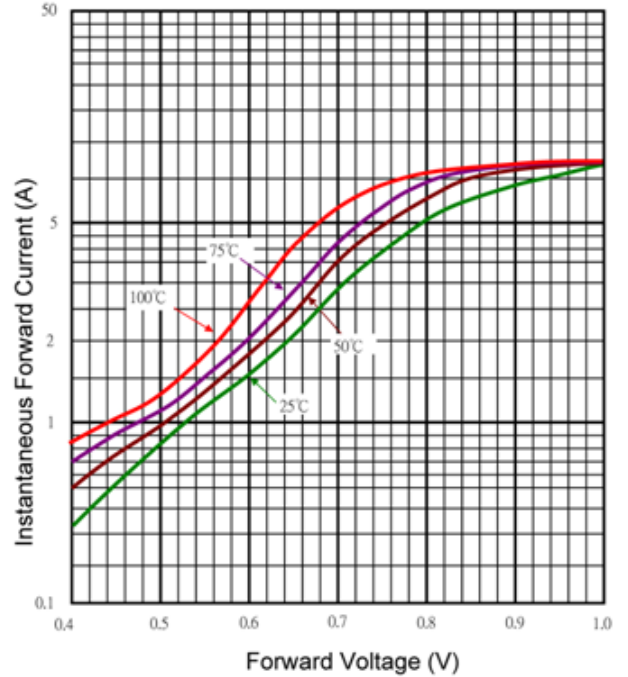
1. Pulse Test: Pulse Width=300 $\mu\text{s}$ , Duty Cycle  $\leq 2\%$ .
2. Measured at 1MHz and applied reverse voltage of 5V D.C.

**RATINGS AND CHARACTERISTIC CURVES**

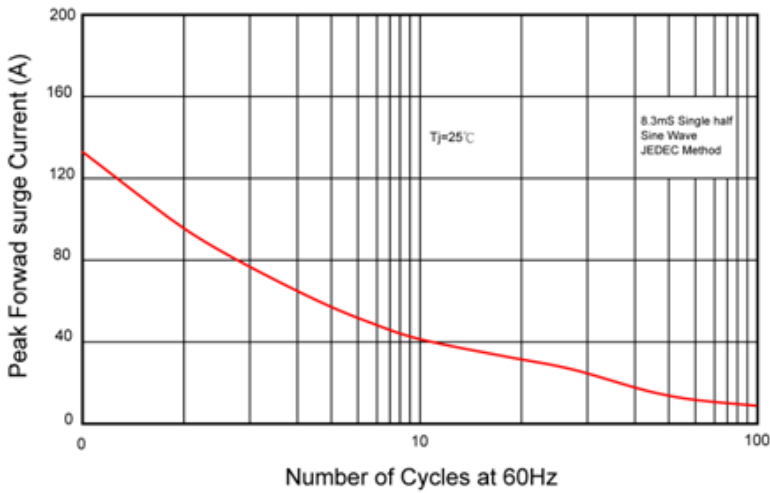
Typical Forward Current Derating Curve



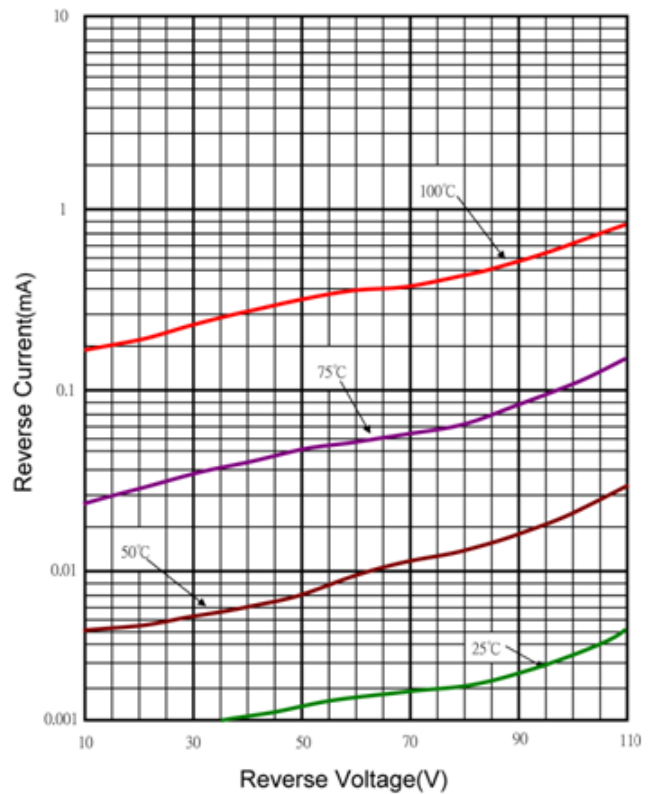
Typical Forward Characteristic



Maximum Non- Repetitive Forward Surge Current



Typical Reverse Characteristic



Typical Junction Capacitance

