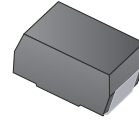


RoHS Compliant Product  
 A suffix of "-C" specifies halogen & lead-free

**SMC**

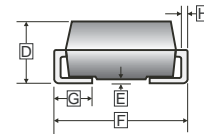
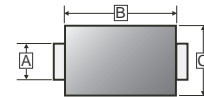
**FEATURES**

- High Current Capability
- Extremely Low Thermal Resistance
- For Surface Mount Application
- Higher Temp Soldering : 250°C for 10 Seconds at Terminals
- Low Reverse Current



**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	LeaderSize
<b>SMC</b>	<b>3K</b>	<b>13' inch</b>

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.75	3.15	E	-	0.203
B	6.60	7.11	F	7.75	8.13
C	5.59	6.22	G	0.76	1.27
D	2.00	2.62	H	0.15	0.31

**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%.

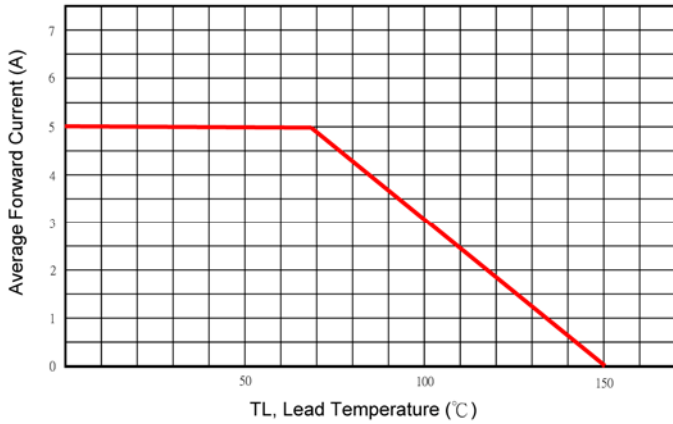
TYPE NUMBER	SYMBOL	SM5100C	UNITS
Peak Repetitive Peak reverse voltage	$V_{RRM}$	100	V
Working Peak Reverse Voltage	$V_{RWM}$		
Maximum DC Blocking Voltage	$V_R$		
Average Forward Current @ $T_J=25^\circ\text{C}$	$I_{F(AV)}$	5	A
Peak Forward Current @ 8.3 ms Half Sine	$I_{FSM}$	125	A
Maximum Instantaneous Forward Voltage	$V_F$	0.82	V
$V_F @ I_{FM} = 5.0 \text{ A}, T_A = 25^\circ\text{C}$		0.73	
$V_F @ I_{FM} = 5.0 \text{ A}, T_A = 75^\circ\text{C}$		0.65	
$V_F @ I_{FM} = 5.0 \text{ A}, T_A = 125^\circ\text{C}$			
Maximum DC Reverse Current (Note: 3)	$I_R$	100	$\mu\text{A}$
At Rated DC Blocking Voltage @ $T_J = 25^\circ\text{C}$		800	
At Rated DC Blocking Voltage @ $T_J = 100^\circ\text{C}$			
Typical Junction Capacitance	$C_J$	350	pF
Typical Thermal Resistance (Note 2)	$R_{\theta JL}$	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:

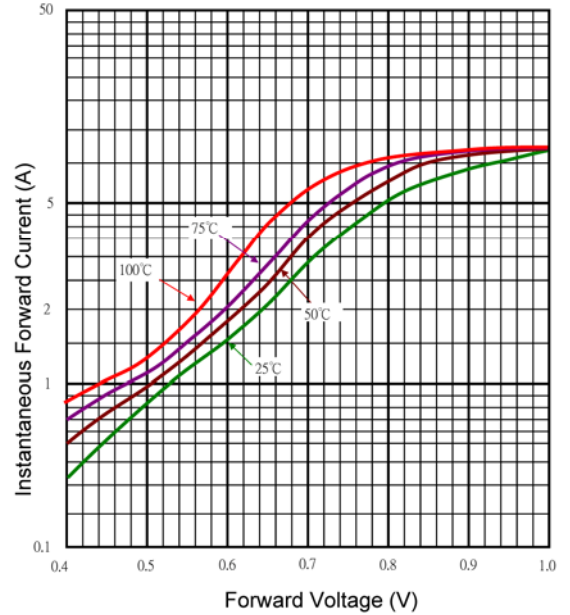
1. Measured at 1MHz and applied reverse voltage of 5.0 V D.C.
2. Thermal Resistance Junction to Lead
3. Pulse Test : Pulse Width = 300  $\mu\text{s}$ , Duty Cycle  $\leq 2.0\%$ .

**RATINGS AND CHARACTERISTIC CURVES**

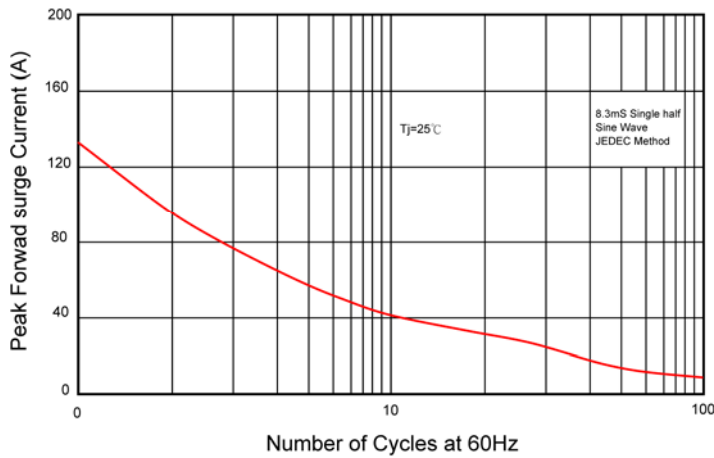
Typical Forward Current Derating Curve



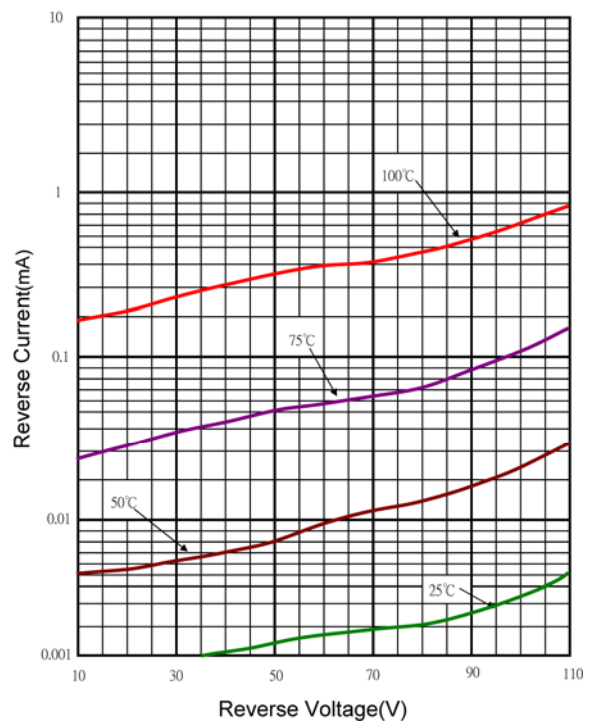
Typical Forward Characteristic



Maximum Non- Repetitive Forward Surge Current



Typical Reverse Characteristic



Typical Junction Capacitance

