

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

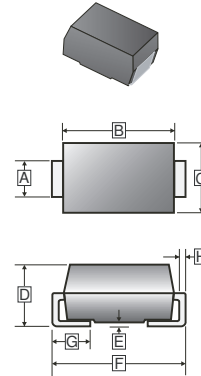
### FEATURES

- 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
- Polarity: Color Band Denotes Cathode End
- Mounting Position: Any

### SMC



### PACKAGE INFORMATION

Package	MPQ	Leader Size
SMC	3K	13 inch

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	2.750	3.270	E	-	0.203
B	6.520	7.110	F	7.640	8.130
C	5.50	6.220	G	0.750	1.520
D	1.980	2.620	H	0.23 TYP	

### ORDER INFORMATION

Part Number	Type
SM5200C	Lead (Pb)-free
SM5200C-C	Lead (Pb)-free and Halogen-free

### 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%.)

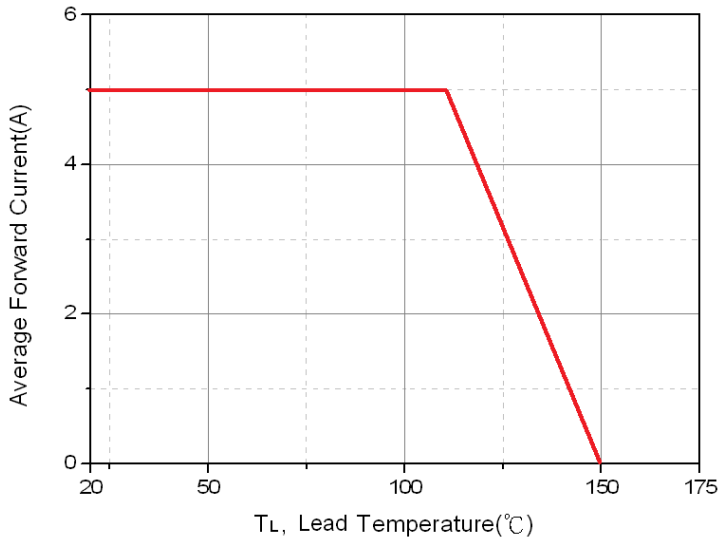
Parameter	Symbol	Rating	Unit
Peak Repetitive Peak reverse voltage	$V_{RRM}$	200	V
Working Peak Reverse Voltage	$V_{RWM}$	200	V
Maximum DC Blocking Voltage	$V_{DC}$	200	V
Average Forward Current	$I_{F(AV)}$	5	A
Peak Forward Current @ 8.3 ms Half Sine	$I_{FSM}$	150	A
Maximum Instantaneous Forward Voltage @ 5A	$V_F$	0.88	V
Maximum DC Reverse Current At Rated DC Blocking Voltage <sup>1</sup>	$I_R$	$T_J=25^\circ C$	0.04
		$T_J=125^\circ C$	0.7
Typical Junction Capacitance <sup>2</sup>	$C_J$	250	pF
Voltage Rate of Change (Rated VR)	dv/dt	10000	V / $\mu$ S
Typical Thermal Resistance from Junction to Ambient <sup>3</sup>	$R_{\theta JA}$	50	°C / W
Typical Thermal Resistance from Junction to Lead <sup>3</sup>	$R_{\theta JL}$	9	°C / W
Operating Temperature Range	$T_J$	-50~150	°C
Storage temperature	$T_{STG}$	-50~150	°C

Notes:

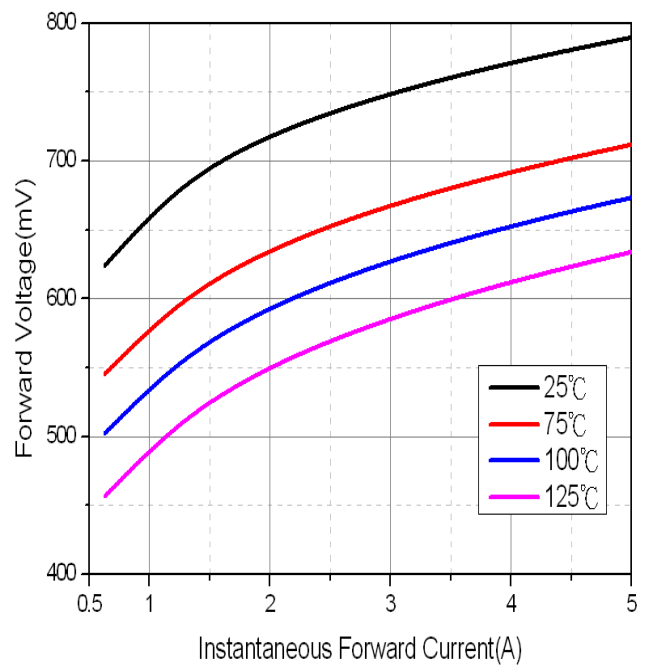
1. Pulse test: 300 $\mu$ s pulse width, 1% duty cycle.
2. Measured at 1MHz and applied reverse voltage of 5.0 V D.C.
3. Units mounted on PCB with 25 mm x 25 mm copper pad areas.

**RATINGS AND CHARACTERISTIC CURVES**

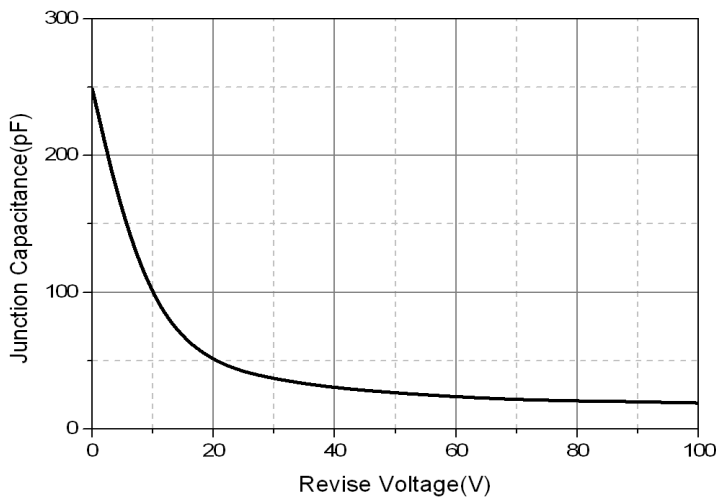
Typical Forward Current Derating Curve



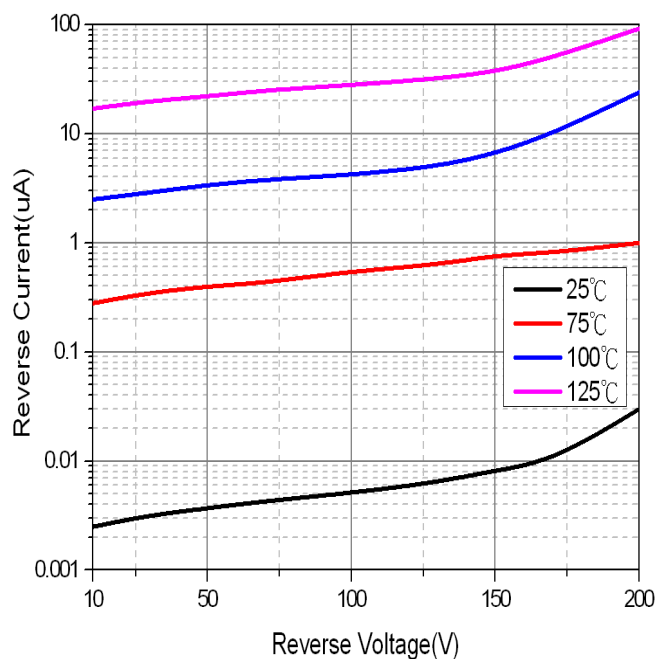
Typical Forward Characteristic



Typical Junction Capacitance



Typical Reverse Characteristic



Maximum Non-Repetitive Forward Surge Current

