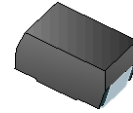


RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

FEATURES

- Low forward voltage drop
- High current capability
- High reliability
- High surge current capability
- Epitaxial construction

SMC



MECHANICAL DATA

- Case: Molded Plastic
- Epoxy: UL 94V-0 Rate Flame Retardant
- Metallurgically bonded construction
- Polarity: Color Band Denotes Cathode End
- Mounting Position: Any

PACKAGE INFORMATION

Package	MPQ	Leader Size
SMC	3K	13 inch

ORDER INFORMATION

Part Number	Type
SM520C-C~SM560C-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	Part Number			Unit
		SM520C-C	SM540C-C	SM560C-C	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	20	40	60	V
Maximum RMS Voltage	V_{RMS}	14	28	42	V
Maximum DC Blocking Voltage	V_{DC}	20	40	60	V
Average Rectified Output Current @ $T_L=100^\circ\text{C}$	I_F	5			A
Peak Forward Surge Current @8.3ms Half Sine-Wave superimposed on rated load (JEDEC method)	I_{FSM}	110			
Forward Voltage @ $I_F=5\text{A}$	V_F	0.53		0.67	V
Peak Reverse Current @Rated DC Blocking Voltage	$T_A=25^\circ\text{C}$	0.1			mA
	$T_A=100^\circ\text{C}$	10			
Typical Junction Capacitance ¹	C_J	35			pF
Thermal Resistance Junction-Lead ²	$R_{\theta JL}$	19			°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55~150			°C

Notes:

1. Measured at 1MHz and applied reverse voltage of 4V D.C.
2. Thermal Resistance from Junction to Ambient at 0.375(9.5mm) lead length.

CHARACTERISTIC CURVES

Fig.1 Forward Current Derating Curve

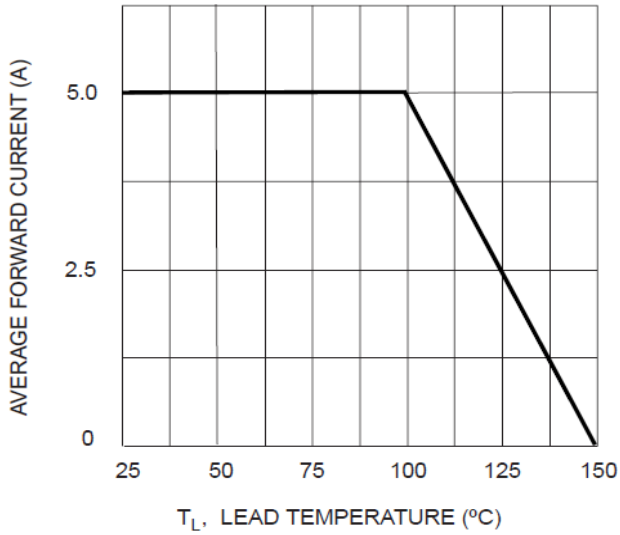


Fig.2 Typ. Forward Characteristics

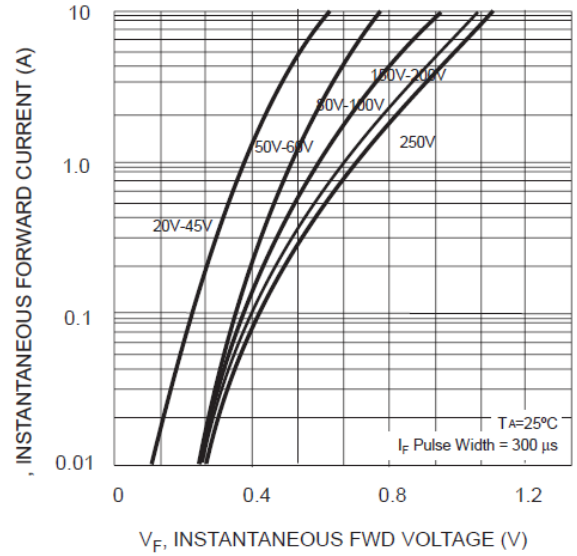


Fig.3 Max Non-Repetitive Peak Fwd Surge Current

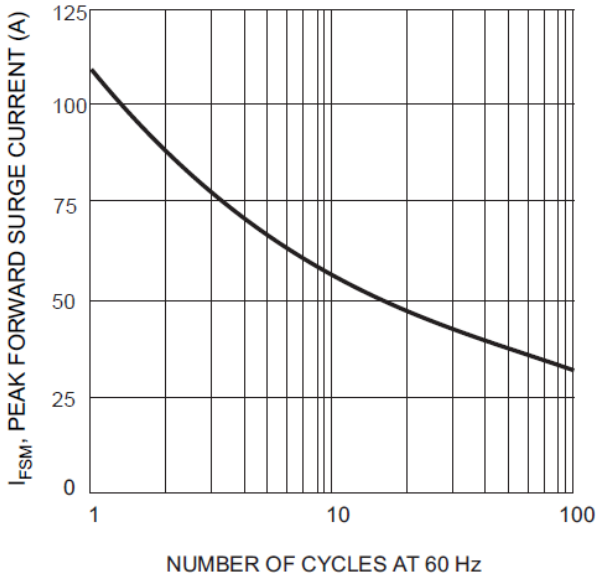
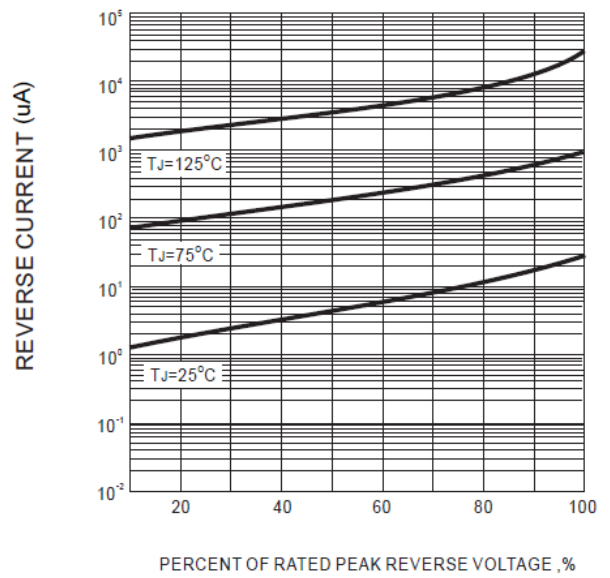
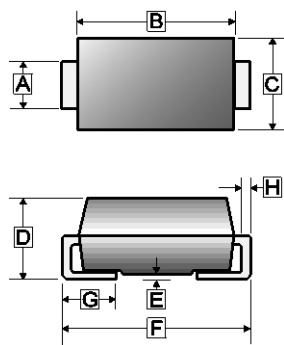


Fig.4 Typical reverse Characteristic



PACKAGE OUTLINE DIMENSIONS

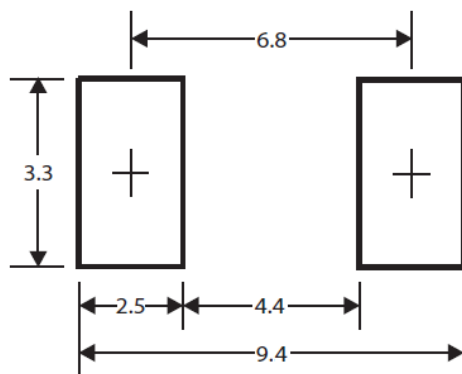
SMC



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