

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

MECHANICAL DATA

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

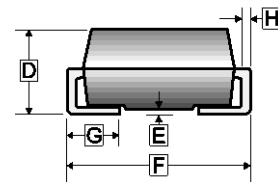
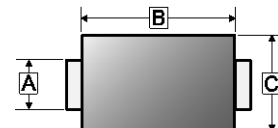
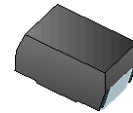
PACKAGE INFORMATION

Package	MPQ	Leader Size
SMC	3K	13 inch

ORDER INFORMATION

Part Number	Type
SM520C-C~SM560C-C	Lead (Pb)-free and Halogen-free

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, de-rate current by 20%.)

Parameter	Symbol	Part Number			Unit
		SM520C-C	SM540C-C	SM560C-C	
Peak Repetitive Peak Reverse Voltage	V_{RRM}	20	40	60	V
Working Peak Reverse Voltage	V_{RSM}	20	40	60	V
Maximum DC Blocking Voltage	V_{DC}	20	40	60	V
Maximum Average Forward Current, See Fig. 1	I_F	5			A
Peak Forward Surge Current @8.3ms Half Sine-Wave superimposed on rated load (JEDEC method)	I_{FSM}	125			
Maximum Instantaneous Forward Voltage @ $I_F=5A$	V_F	0.55		0.65	V
Maximum DC Reverse Current @Rated DC Blocking Voltage ²	I_R	0.2		0.1	mA
		30		15	
Typical Junction Capacitance ¹	C_J	380			pF
Voltage Rate of Change (Rated VR)	dv/dt	10000			V/μS
Thermal Resistance Junction-Case	$R_{\theta JC}$	25			°C/W
Thermal Resistance Junction-Lead	$R_{\theta JL}$	20			°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-50~150			°C

Notes:

1. Measured at 1MHz and applied reverse voltage of 4V D.C.
2. Pulse Test: Pulse Width=300μs, Duty Cycle ≤ 2%.

CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

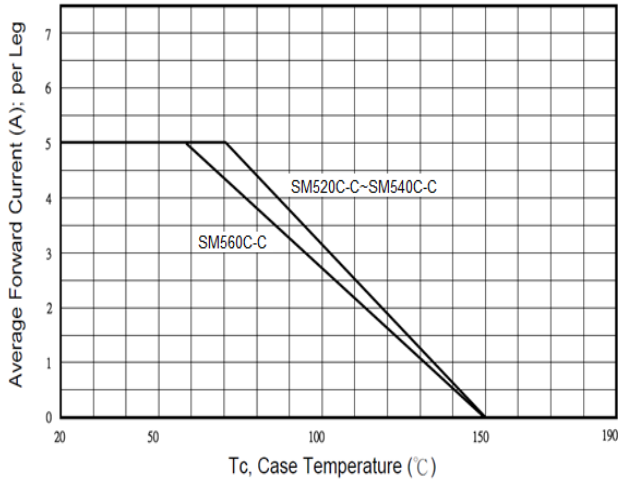


FIG.2-TYPICAL FORWARD CHARACTERISTICS

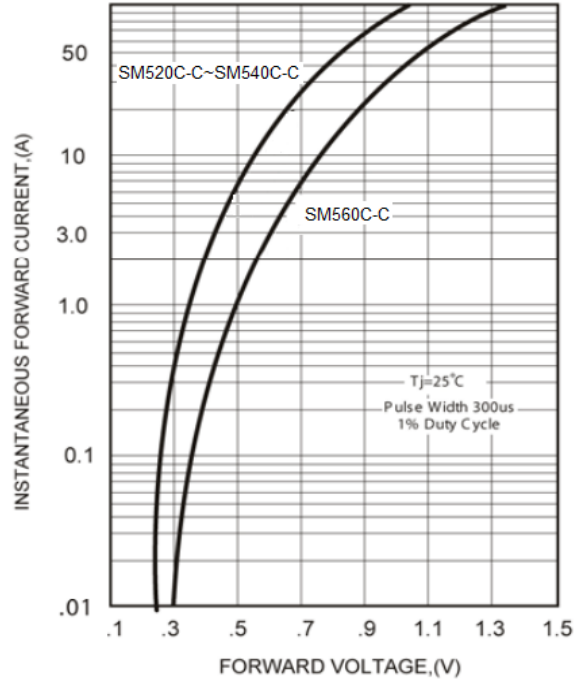


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

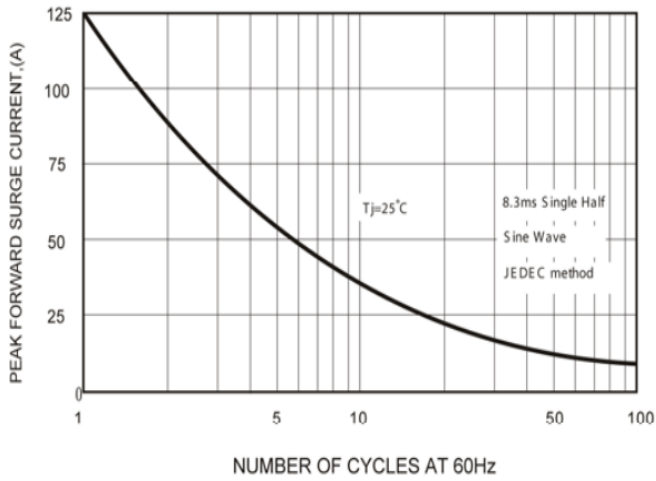


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

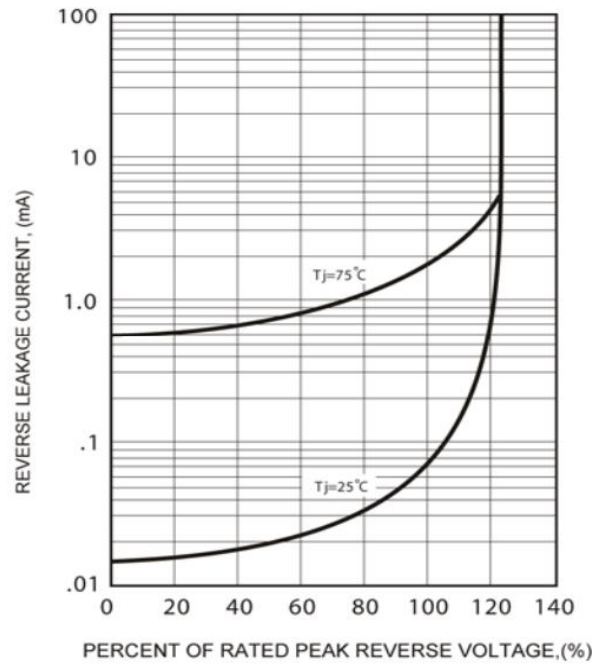


FIG.4-TYPICAL JUNCTION CAPACITANCE

