

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

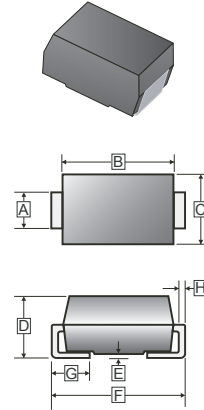
FEATURES

- 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
- Weight : 1.10 grams

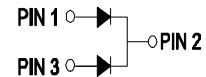
SMC



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

PACKAGE INFORMATION

Package	MPQ	Leader Size
SMC	3K	13 inch



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
		SM1020C	SM1040C	SM1060C	SM10100C	
Peak Repetitive Peak reverse voltage	V_{RRM}	20	40	60	100	V
Working Peak Reverse Voltage	V_{RWM}	20	40	60	100	
Maximum DC Blocking Voltage	V_R	20	40	60	100	
Maximum Average Forward Current, See Fig. 1	$I_{F(AV)}$	10				A
Peak Forward Surge Current @ 8.3 ms Half Sine-Wave superimposed on rated load (JEDEC method)	I_{FSM}	180				
Maximum Instantaneous Forward Voltage V_F @ $I_F = 10$ A, $T_A = 25^\circ\text{C}$	V_F	0.56		0.7	0.83	V
Maximum DC Reverse Current At Rated DC Blocking Voltage	$T_J = 25^\circ\text{C}$	I_R	0.3	0.2	0.1	mA
	$T_J = 100^\circ\text{C}$		22	15	10	
Typical Junction Capacitance ¹	C_J	380				pF
Typical Thermal Resistance	$R_{\theta JC}$	10				$^\circ\text{C} / \text{W}$
Operating Temperature Range	T_J	-50~150				$^\circ\text{C}$
Storage temperature	T_{STG}	-65~175				$^\circ\text{C}$

Notes:

1. Measured at 1MHz and applied reverse voltage of 4.0 V D.C.

CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

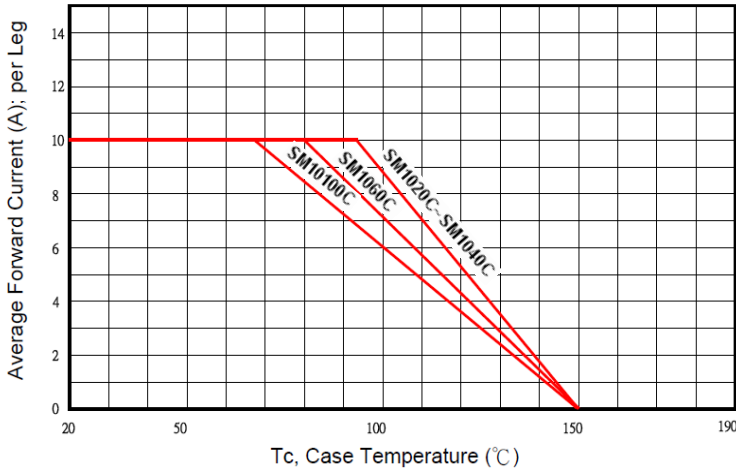


FIG.2-TYPICAL FORWARD CHARACTERISTICS

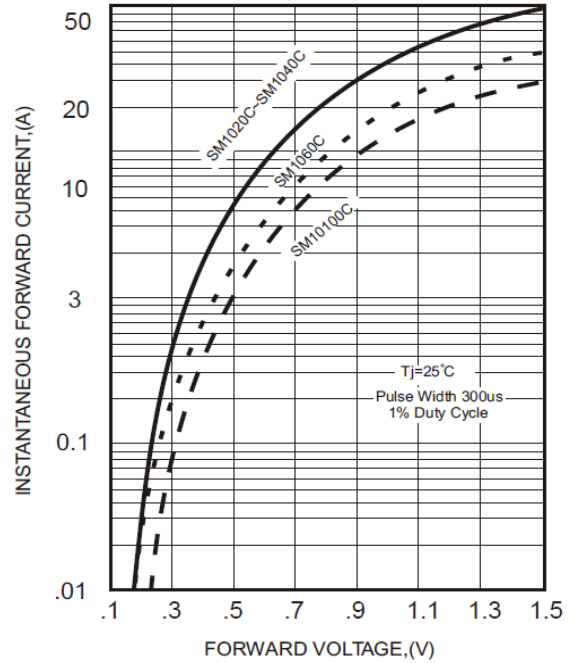


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

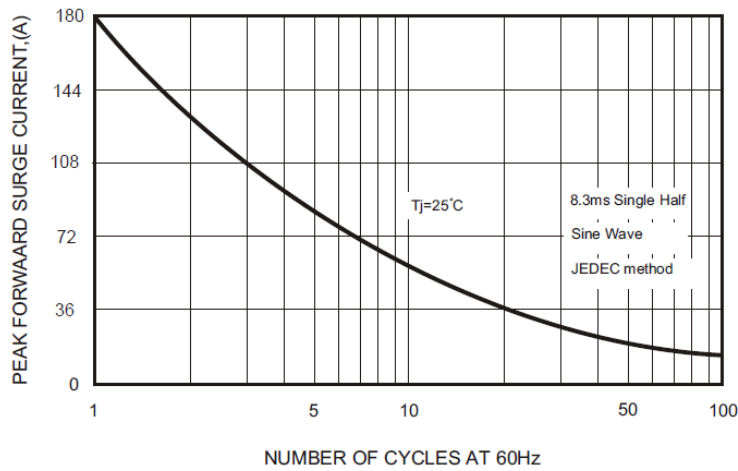


FIG.4-TYPICAL JUNCTION CAPACITANCE

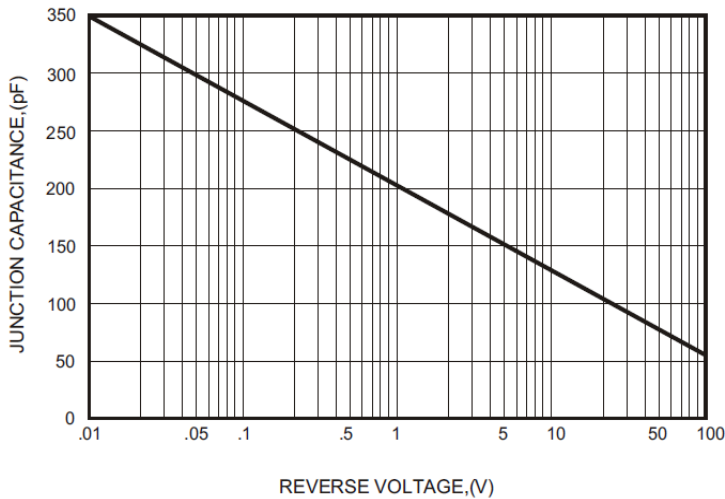


FIG.5 - TYPICAL REVERSE CHARACTERISTICS

