

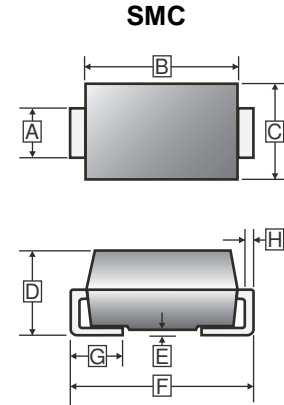
RoHS Compliant Product  
A suffix of "-C" specifies halogen & lead-free

## FEATURES

- Ideal for surface mount applications
- Easy pick and place
- Built-in strain relief
- Fast switching speed

## 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: 1.1 grams(Approx.)



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	

## 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
		SMF 301C	SMF 302C	SMF 303C	SMF 304C	SMF 305C	SMF 306C	SMF 307C	
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current.375"(9.5mm) Lead Length at $T_A=55^\circ\text{C}$	$I_F$	3							A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	80							A
Maximum Instantaneous Forward Voltage @3A	$V_F$	1.3		1.5		1.7		V	
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	5							$\mu\text{A}$
	$T_A=125^\circ\text{C}$	100							
Maximum Reverse Recovery Time <sup>1</sup>	$T_{rr}$	150			250	500		nS	
Typical Junction Capacitance <sup>2</sup>	$C_J$	44							pF
Typical Thermal Resistance <sup>3</sup>	$R_{\theta JL}$	15							$^\circ\text{C/W}$
	$R_{\theta JC}$	50							
Operating & Storage Temperature	$T_J, T_{STG}$	-65~150							$^\circ\text{C}$

Notes:

1. Reverse Recovery Time test condition :  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{RR}=0.25\text{A}$
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
3. Rating applies when surface mounted on the minimum pad size recommended, PC Board with 8.0 X 8.0mm copper pad.

**CHARACTERISTIC CURVES**

FIG.1-TYPICAL FORWARD CHARACTERISTICS

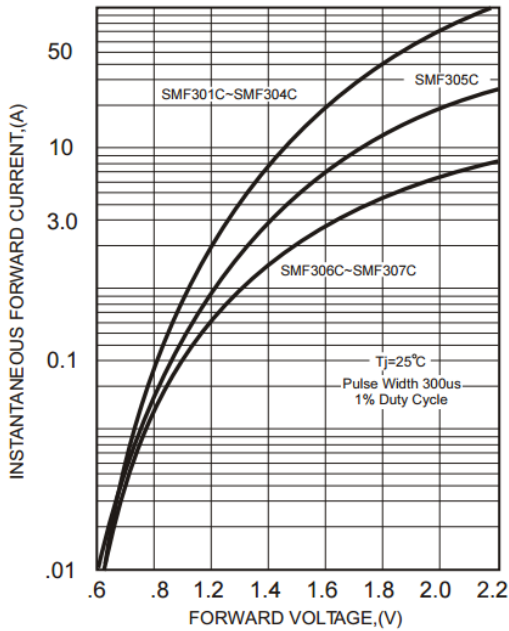


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

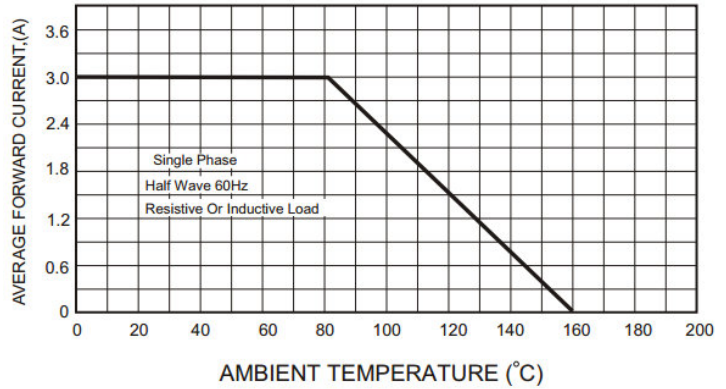


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

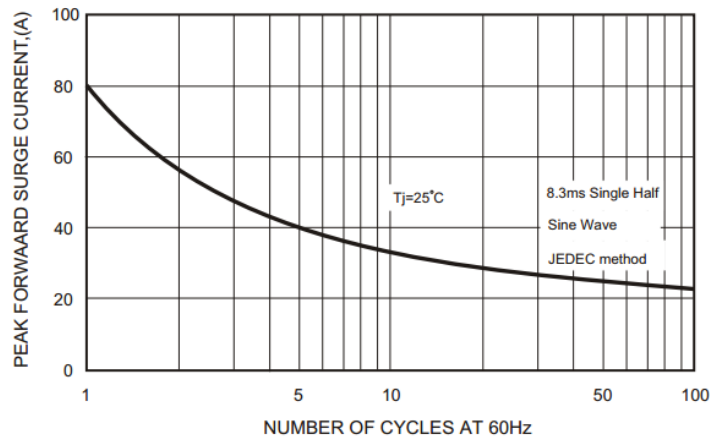
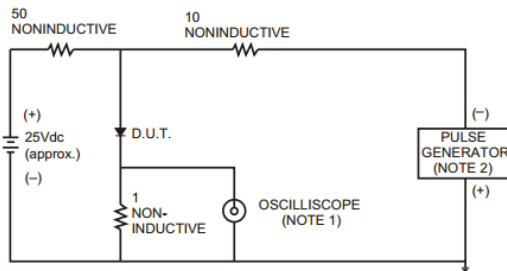


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.

2. Rise Time= 10ns max., Source Impedance= 50 ohms.

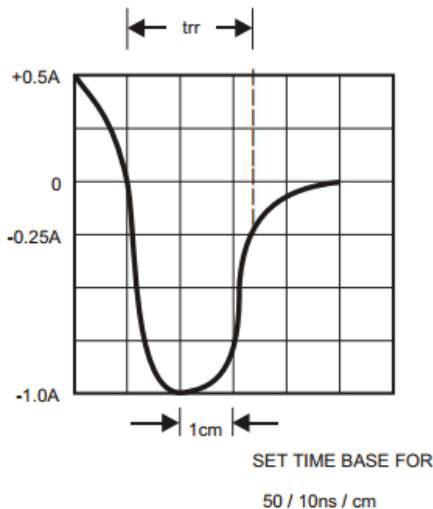


FIG.5-TYPICAL JUNCTION CAPACITANCE

