

RoHS Compliant Product

A suffix of "-C" specifies halogen-free

**SMA**

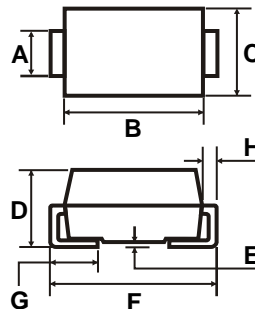
## FEATURES

- \* 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: 0.063 grams



	Dimensions in Millimeters		Dimensions in Inches	
<b>A</b>	1.25	1.65	0.049	0.065
<b>B</b>	3.99	4.60	0.157	0.181
<b>C</b>	2.50	2.90	0.098	0.114
<b>D</b>	1.98	2.44	0.078	0.096
<b>E</b>	0.051	0.203	0.002	0.008
<b>F</b>	4.78	5.28	0.188	0.208
<b>G</b>	0.76	1.52	0.030	0.060
<b>H</b>	0.152	0.305	0.006	0.012

## 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, derate current by 20%.

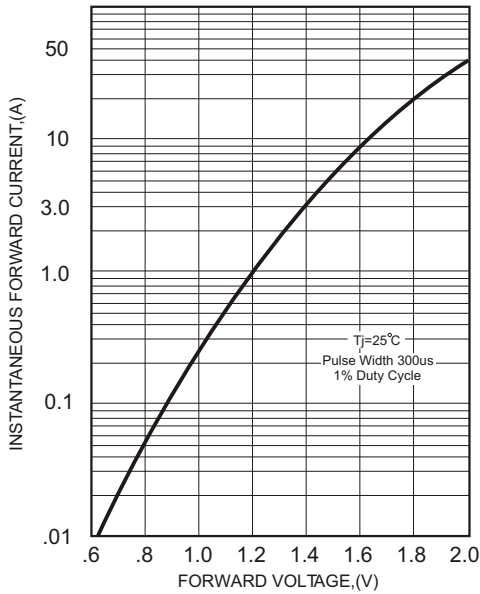
TYPE NUMBER	SMF101A	SMF102A	SMF103A	SMF104A	SMF105A	SMF106A	SMF107A	UNITS	
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V	
Maximum RMS Voltage	35	70	140	280	420	560	700	V	
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V	
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at Ta=55°C	1.0							A	
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	30							A	
Maximum Instantaneous Forward Voltage at 1.0A	1.3				1.5	1.7		V	
Maximum DC Reverse Current Ta=25°C at Rated DC Blocking Voltage Ta=125°C				5.0					µA
				50					µA
Maximum Reverse Recovery Time (Note 1)	150			250		500		nS	
Typical Junction Capacitance (Note 2)				15					pF
Thermal Resistance, Junction to Lead (Note 3)				30					°C/W
Thermal Resistance, Junction to Ambient (Note 3)				220					°C/W
Operating and Storage Temperature Range T <sub>J</sub> , T <sub>STG</sub>				-65 ~ +150					°C

### NOTES:

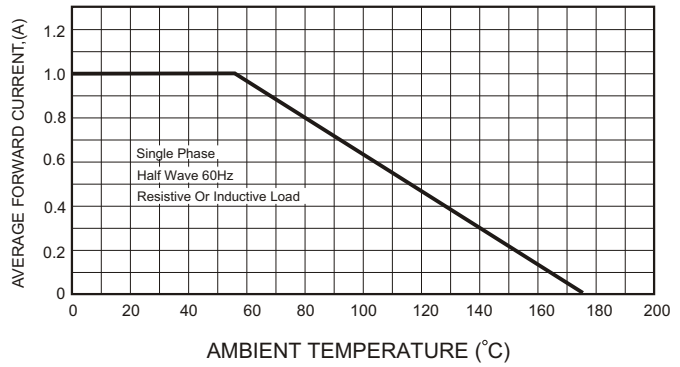
1. Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
2. Measured at 1MHz and applied reverse voltage of 4.0V D.C.
3. Rating applies when surface mounted on the minimum pad size recommended, PC Board FR-4.

**RATING AND CHARACTERISTIC CURVES (SMF101A THRU SMF107A)**

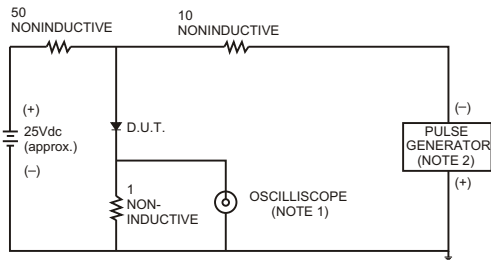
**FIG.1-TYPICAL FORWARD CHARACTERISTICS**



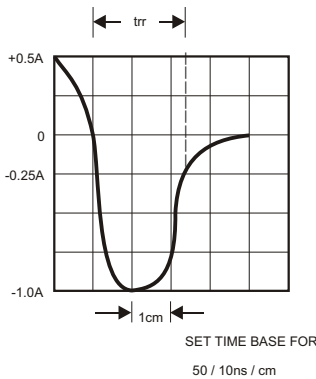
**FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE**



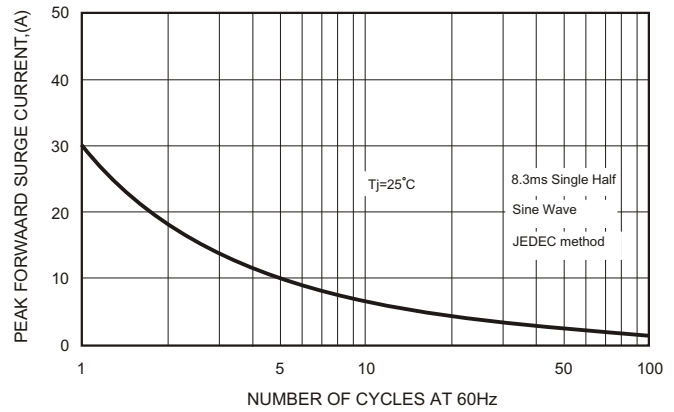
**FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS**



NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm.22pF.  
2. Rise Time= 10ns max., Source Impedance= 50 ohms.



**FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG.5-TYPICAL JUNCTION CAPACITANCE**

