

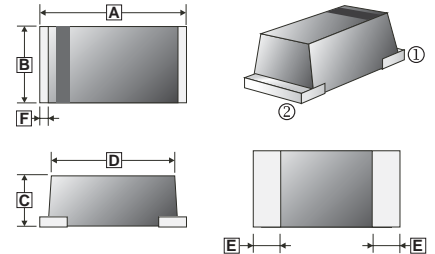
RoHS Compliant Product

A suffix of "-C" specifies halogen-free and RoHS Compliant

## FEATURES

- Batch process design, excellent power dissipation offers better reverse leakage current and thermal resistance.
- Low profile surface mounted application in order to optimize board space.
- Small plastic SMD package.
- High surge and high current capability.
- Fast switching for high efficiency.
- Glass-passivated chip junction.

## SOD-123M



## PACKAGING INFORMATION

- Case: Molded plastic
- Epoxy: UL94-V0 rate flame retardant
- Weight: 0.02700 g (Approximately)

REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	3.50	3.90	D	3.60 (MAX.)	
B	1.40	1.80	E	0.80 (TYP.)	
C	1.30	1.70	F	0.30 (TYP.)	

## MARKING CODE

Part Number	Marking Code	Part Number	Marking Code
SM4001M	A1	SM4005M	A5
SM4002M	A2	SM4006M	A6
SM4003M	A3	SM4007M	A7
SM4004M	A4		

## MAXIMUM RATINGS (T<sub>a</sub> = 25°C unless otherwise specified.)

PARAMETERS	SYMBOL	PART NUMBERS							UNITS	TESTING CONDITIONS
		SM 4001 M	SM 4002 M	SM 4003 M	SM 4004 M	SM 4005 M	SM 4006 M	SM 4007 M		
Recurrent Peak Reverse Voltage (Max.)	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V	
RMS Voltage (Max.)	V <sub>RMS</sub>	35	70	140	280	420	560	700	V	
Reverse Voltage (Max.)	V <sub>R</sub>	50	100	200	400	600	800	1000	V	
Forward Voltage (Max.)	V <sub>F</sub>	1.10							V	I <sub>F</sub> = 1A
Average Forward Rectified Current (Max.)	I <sub>O</sub>	1.0							A	See Fig.2
Peak Forward Surge Current	I <sub>FSM</sub>	30							A	8.3ms single half sine-wave superimposed on rated load (JEDEC method)
DC Reverse Current at Rated DC Blocking Voltage (Max.)	I <sub>R</sub>	5.0							μA	V <sub>R</sub> =V <sub>RRM</sub> , T <sub>a</sub> =25°C
		50								V <sub>R</sub> =V <sub>RRM</sub> , T <sub>a</sub> =125°C
Junction – Ambient Thermal Resistance (Typ.)	R <sub>θJA</sub>	60							°C/W	
Junction – Case Thermal Resistance (Typ.)	R <sub>θJC</sub>	30							°C/W	
Junction Capacitance (Typ.)	C <sub>J</sub>	15							pF	f=1MHz and applied 4V DC reverse voltage
Storage and Operating Temperature Range	T <sub>STG</sub> , T <sub>J</sub>	-65 ~ 175, -55 to 150							°C	

**RATINGS AND CHARACTERISTIC CURVES**

FIG.1-TYPICAL FORWARD CHARACTERISTICS

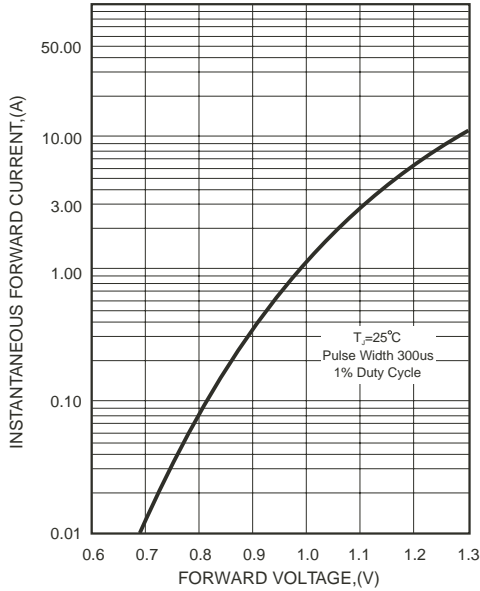


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

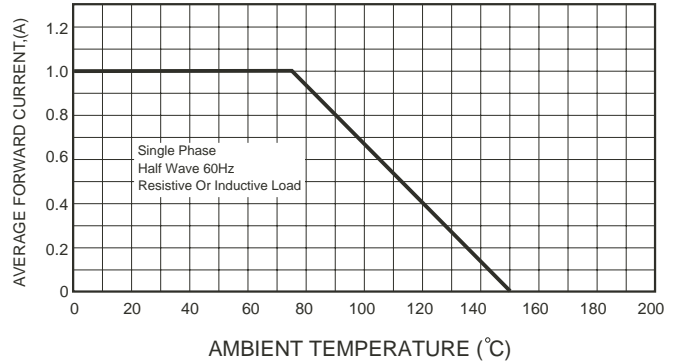


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

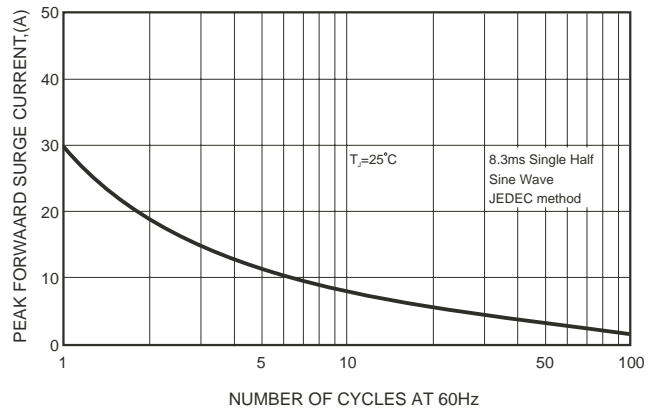


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

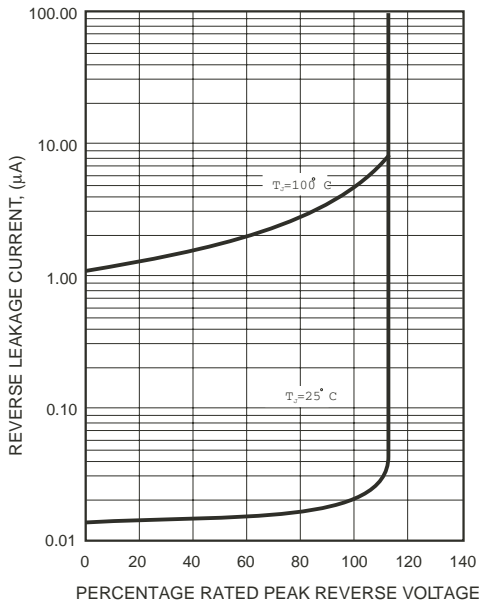


FIG.5-TYPICAL JUNCTION CAPACITANCE

