

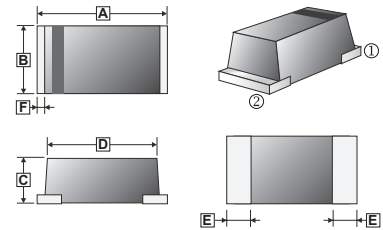
RoHS Compliant Product

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

## DESCRIPTIONS

- 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.
- Superfast recovery time for switching mode application.
- Glass-passivated chip junction.

## SOD-123M



## PACKAGING INFORMATION

- Case: Molded plastic
- Epoxy: UL94-V0 rate flame retardant
- Weight: 0.0270 g (approximately)

## MARKING CODE

Part Number	Marking Code	Part Number	Marking Code
SUF11M	S1	SUF16M	S6
SUF12M	S2	SUF18M	S8
SUF14M	S4		

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.)	

## ELECTRICAL CHARACTERISTICS AND RATINGS (T<sub>A</sub> = 25°C unless otherwise specified.)

PARAMETERS	SYMBOL	PART NUMBERS					UNITS	TESTING CONDITIONS
		SUF11M	SUF12M	SUF14M	SUF16M	SUF18M		
Recurrent Peak Reverse Voltage (Max.)	V <sub>RRM</sub>	50	100	200	400	600	V	
RMS Voltage (Max.)	V <sub>RMS</sub>	35	70	140	280	420	V	
Reverse Voltage (Max.)	V <sub>R</sub>	50	100	200	400	600	V	
Forward Voltage (Max.)	V <sub>F</sub>	0.95			1.25	1.70	V	I <sub>F</sub> = 1A
Average Forward Rectified Current (Max.)	I <sub>O</sub>	1.0					A	Ambient temperature = 50°C
Peak Forward Surge Current	I <sub>FSM</sub>	25					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
		100						V <sub>R</sub> =V <sub>RRM</sub> , T <sub>A</sub> =100°C
Reverse Recovery Time	t <sub>RR</sub>	35					nS	
Junction – Ambient Thermal Resistance (Typ.)	R <sub>θJA</sub>	42					°C/W	
Junction Capacitance (Typ.)	C <sub>J</sub>	10					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

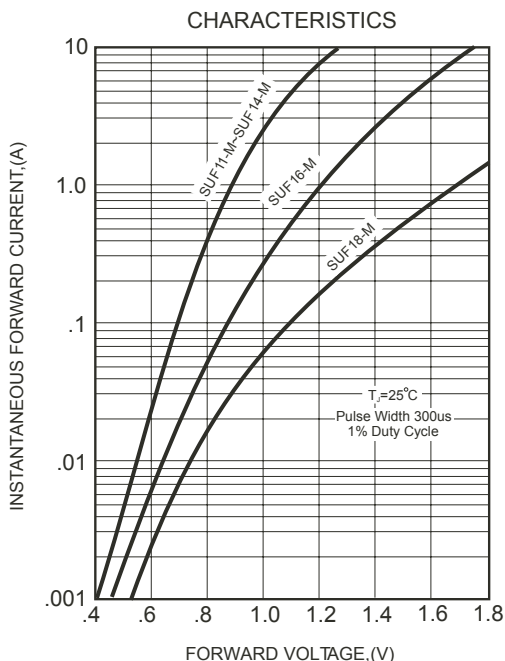


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

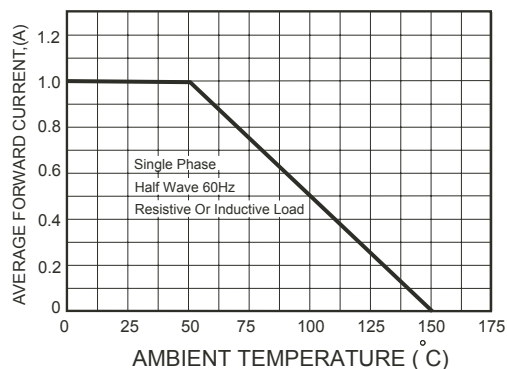
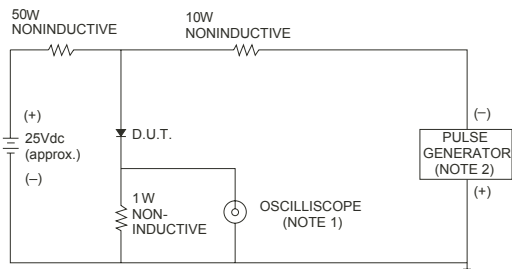


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

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

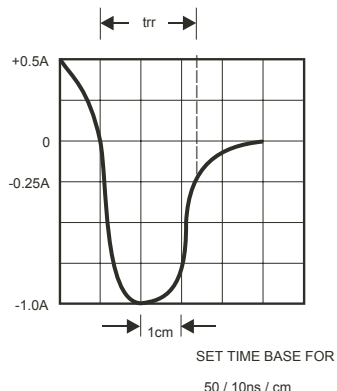


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

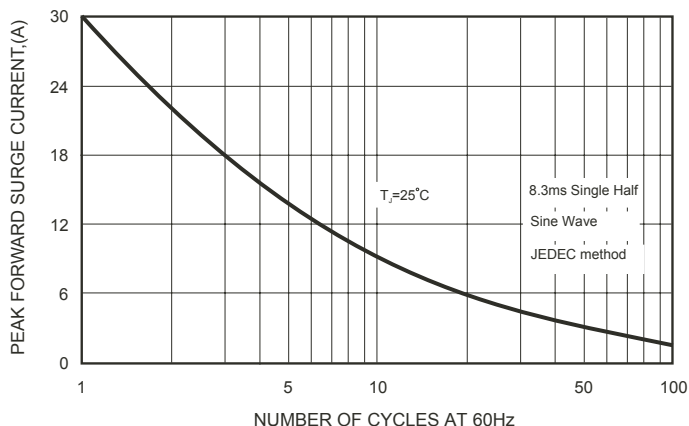


FIG.5-TYPICAL JUNCTION CAPACITANCE

