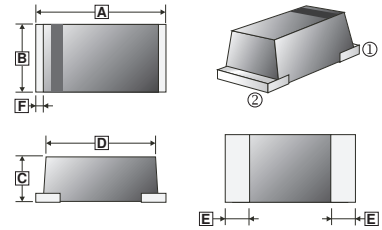


RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

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 current capability.
- Fast switching for high efficiency.
- High surge current capability.
- Glass-passivated chip junction.

SOD-123M



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.)	

MECHANICAL DATA

- Case: Molded plastic, SOD-123 / Mini SMA
- Epoxy: UL94-V0 rate flame retardant
- Polarity: Indicated by cathode band
- Mounting position: Any
- Weight: Approximated 0.027 gram

MARKING

Part Number	Marking	Part Number	Marking
SMF101M	F4	SMF105M	F5
SMF102M	F4	SMF106M	F6
SMF103M	F4	SMF107M	F7
SMF104M	F4		

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOD-123M	2.5K	7 inch

ABSOLUTE MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$ unless otherwise specified)

Parameters	Symbol	Part Number							Unit
		SMF 101M	SMF 102M	SMF 103M	SMF 104M	SMF 105M	SMF 106M	SMF 107M	
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 Continuous reverse voltage	V_R	50	100	200	400	600	800	1000	V
Maximum Instantaneous Forward Voltage	V_F	1.3							V
Maximum average forward rectified current @ $T_A=55^{\circ}\text{C}$	I_O	1							A
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	30							A
Maximum DC Reverse Current at Rated DC Blocking Voltage	$T_A=25^{\circ}\text{C}$	5							μA
	$T_A=125^{\circ}\text{C}$	100							
Diode Junction Capacitance ¹	C_J	15							pF
Maximum Reverse Recovery Time ²	T_{rr}	150			250	500			nS
Thermal resistance Junction to ambient	$R_{\theta JA}$	42							$^{\circ}\text{C} / \text{W}$
Operating & Storage Temperature	T_J, T_{STG}	-65~150, -65~175							$^{\circ}\text{C}$

NOTE:

1. Measured at 1.0MHz and applied reverse voltage of 4.0V D.C.
2. Reverse recovery time test condition, $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$.

RATINGS AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CHARACTERISTICS

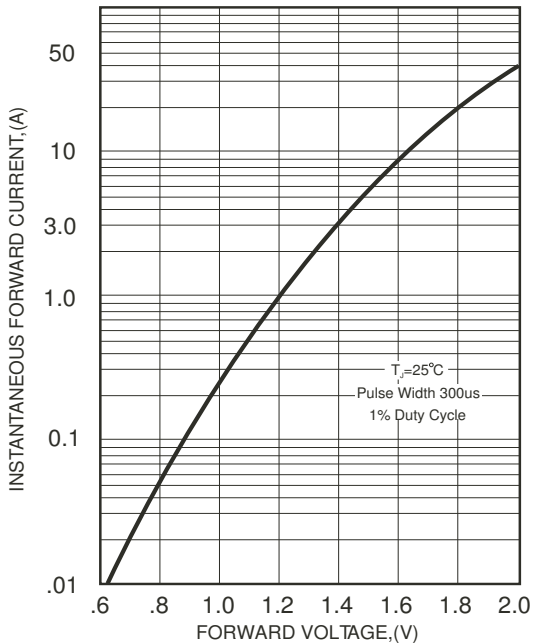


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

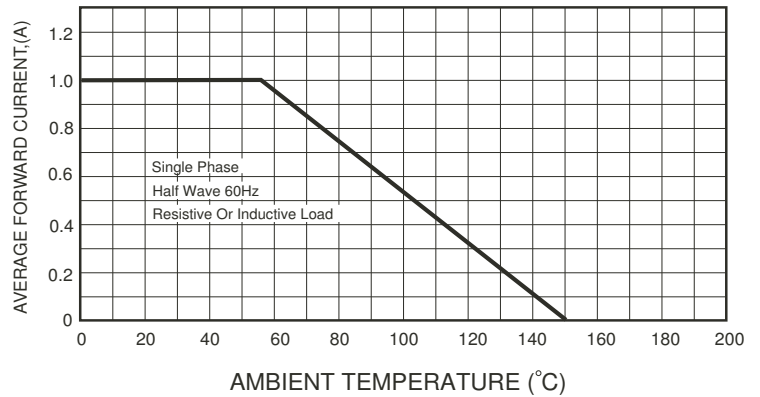


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

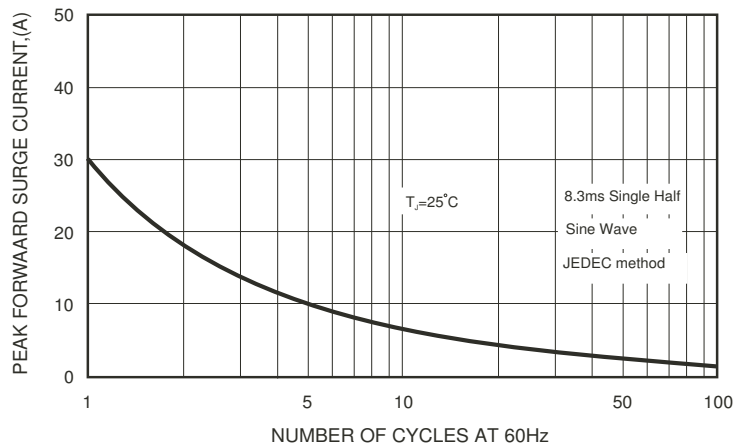
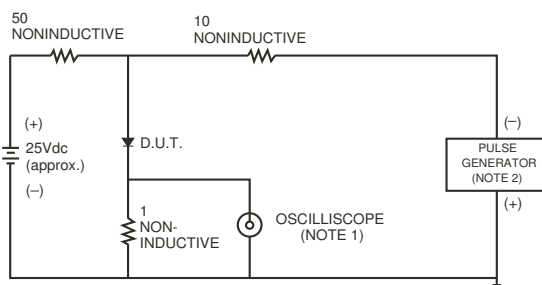


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

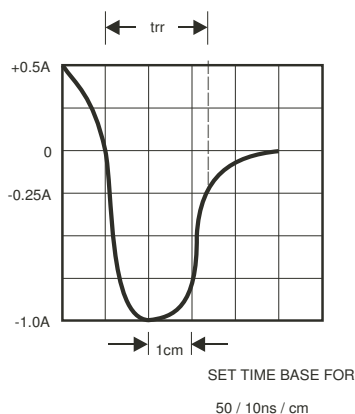


FIG.5-TYPICAL JUNCTION CAPACITANCE

