

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.

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

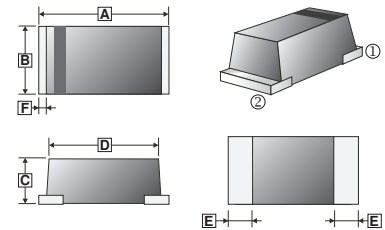
MARKING

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

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.)	

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℃		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℃	I _R	5							μA
	T _A =125℃		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 _{θJA}	42							℃ / W
Operating & Storage Temperature		T _J , T _{STG}	-65~150, -65~175							℃

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

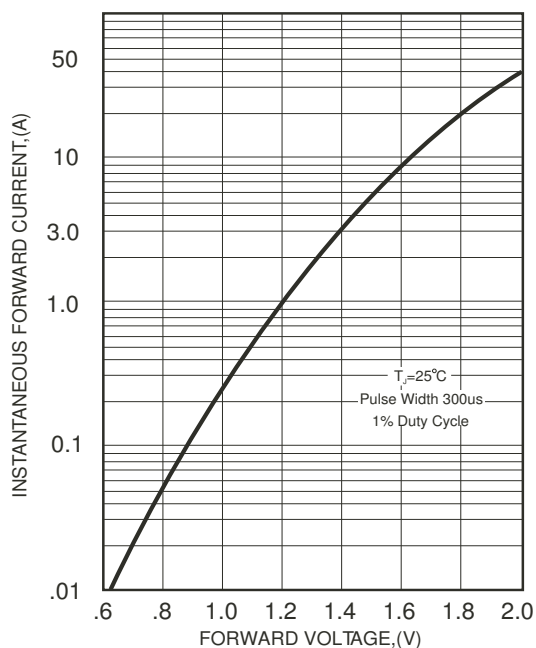


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

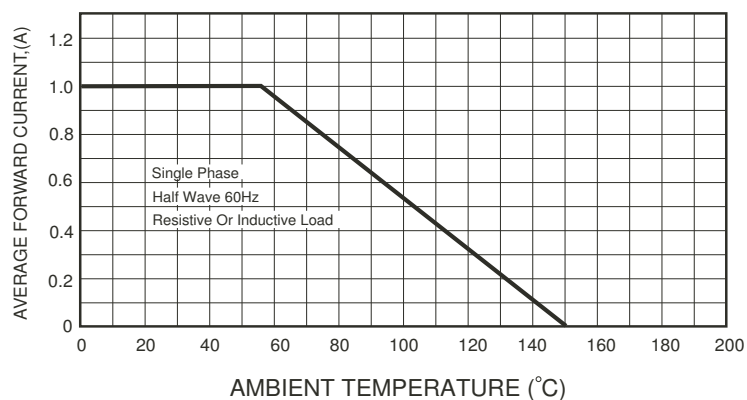


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

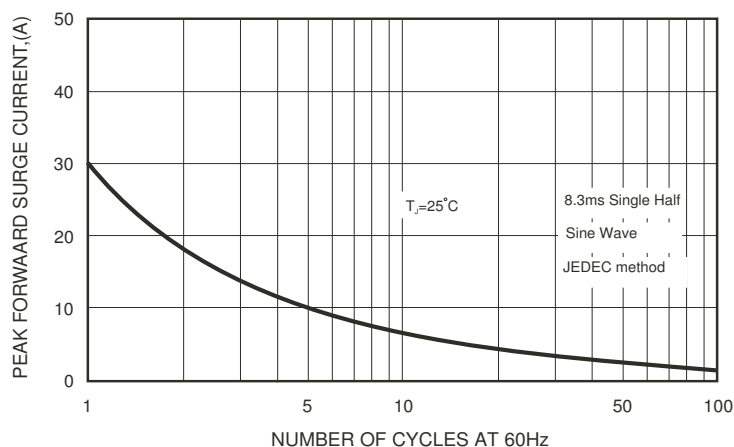
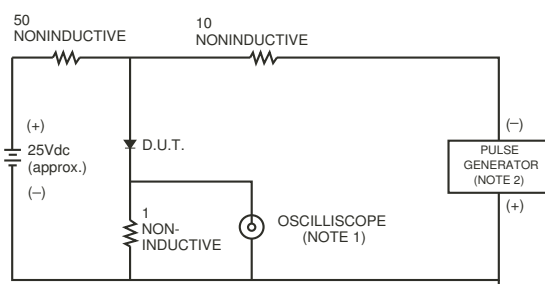


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

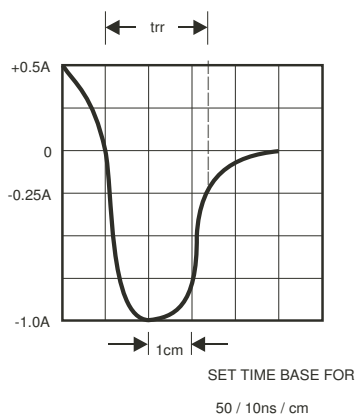


FIG.5-TYPICAL JUNCTION CAPACITANCE

