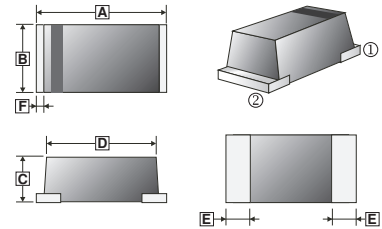


RoHS Compliant Product  
 A suffix of "-C" specifies halogen & lead-free

**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.
- $T_{RR}$  less than 25nS for high efficiency
- Low forward drop down voltage
- High surge and high current capability.
- Superfast recovery time for switching mode application.
- 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
- Epoxy: UL94-V0 rate flame retardant
- Weight: 0.0270 g (approximately)

**MARKING**

Part Number	Marking	Part Number	Marking
ES11M	E3	ES14M	E4
ES12M	E3	ES15M	E5
ES13M	E3		

**PACKAGING 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					Units
		ES11M	ES12M	ES13M	ES14M	ES15M	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	V
Maximum Reverse Voltage	$V_R$	50	100	200	400	600	V
Maximum Forward Voltage @ $I_F=1A$	$V_F$	0.875		1.25	1.75		V
Maximum Average Forward Rectified Current @ $T_A=55^\circ\text{C}$	$I_O$	1.0					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					$\mu\text{A}$
	$T_A=125^\circ\text{C}$	100					
Reverse Recovery Time	$T_{RR}$	25					nS
Typical Junction Capacitance <sup>1</sup>	$C_J$	15					pF
Storage and Operating Temperature Range	$T_{STG}, T_J$	-65~175, -55~150					$^\circ\text{C}$

Note:

1.  $f=1\text{MHz}$  and applied 4V DC reverse voltage

**RATINGS AND CHARACTERISTIC CURVES**

FIG.1-TYPICAL FORWARD CHARACTERISTICS

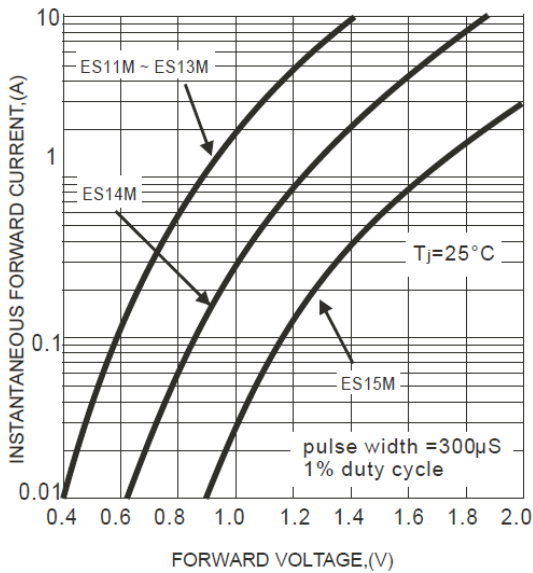


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

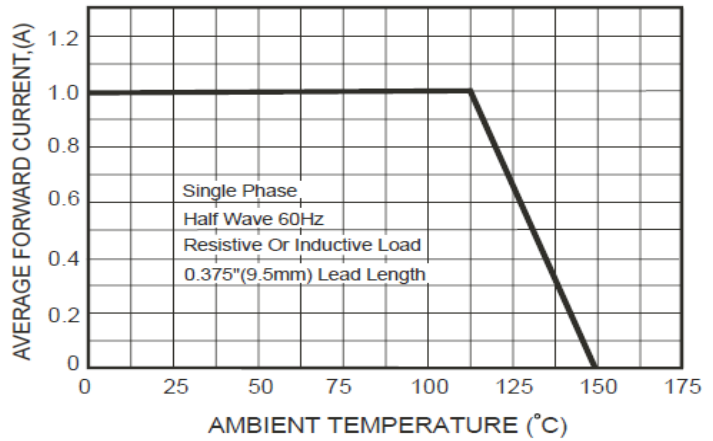


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

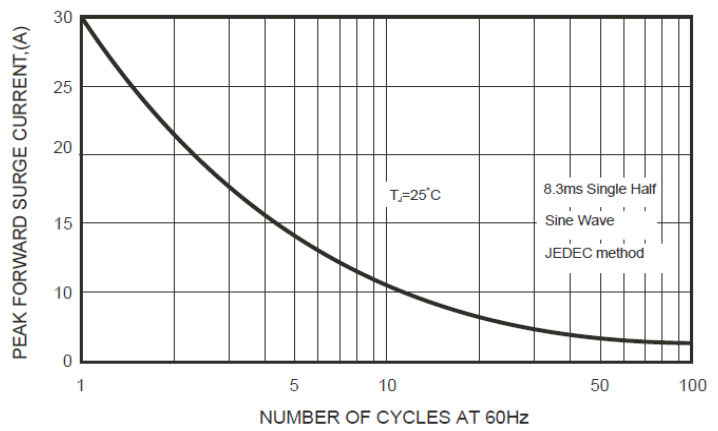
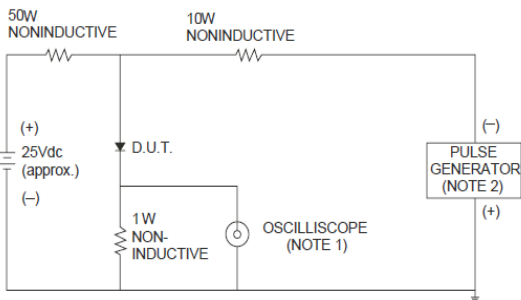


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

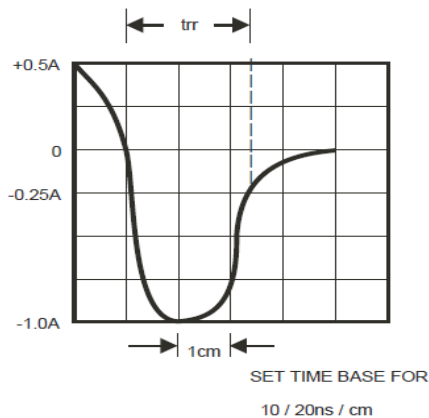


FIG.5-TYPICAL JUNCTION CAPACITANCE

