

RoHS Compliant Product

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

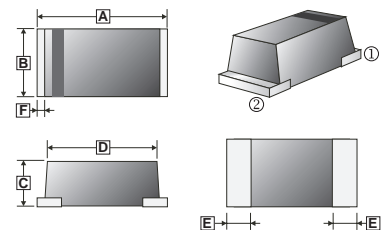
DESCRIPTIONS

- 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.
- 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

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
ES11M	E1	ES14M	E4
ES12M	E2	ES15M	E5
ES13M	E3		

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

PARAMETERS	SYMBOL	PART NUMBERS					UNITS	TESTING CONDITIONS
		ES11M	ES12M	ES13M	ES14M	ES15M		
Recurrent Peak Reverse Voltage (Max.)	V_{RRM}	50	100	200	400	600	V	
RMS Voltage (Max.)	V_{RMS}	35	70	140	280	420	V	
Reverse Voltage (Max.)	V_R	50	100	200	400	600	V	
Forward Voltage (Max.)	V_F	0.875			1.25	1.75	V	$I_F = 1\text{A}$
Average Forward Rectified Current (Max.)	I_O	1.0					A	Ambient temperature = 55°C
Peak Forward Surge Current	I_{FSM}	30					A	8.3ms single half sine-wave superimposed on rated load (JEDEC method)
DC Reverse Current at Rated DC Blocking Voltage (Max.)	I_R	5.0					μA	$V_R = V_{RRM}, T_A = 25^\circ\text{C}$
		100						$V_R = V_{RRM}, T_A = 125^\circ\text{C}$
Reverse Recovery Time	t_{RR}	25					nS	
Junction Capacitance (Typ.)	C_J	15					pF	f=1MHz and applied 4V DC reverse voltage
Storage and Operating Temperature Range	T_{STG}, T_J	-65 ~ 175, -55 to 150					$^\circ\text{C}$	

RATINGS AND CHARACTERISTIC CURVES

FIG.1-TYPICAL FORWARD CHARACTERISTICS

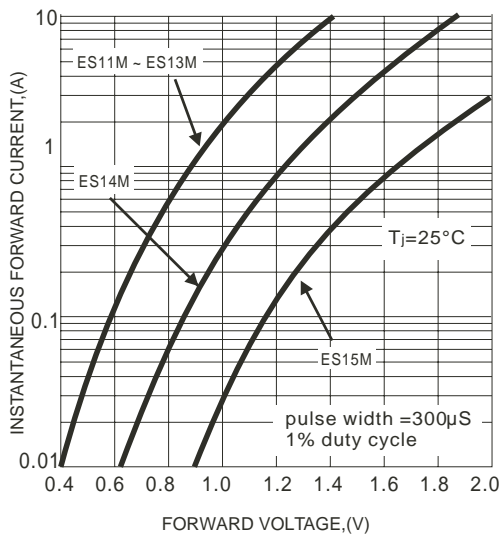


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

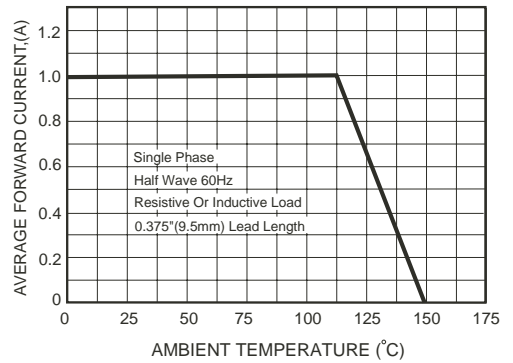
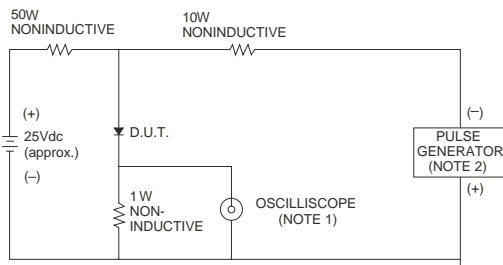


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



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

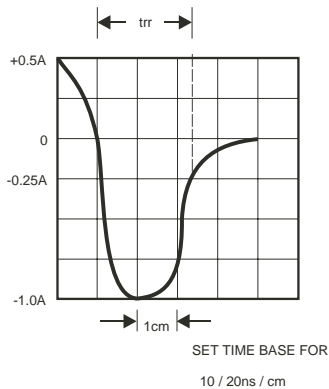


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

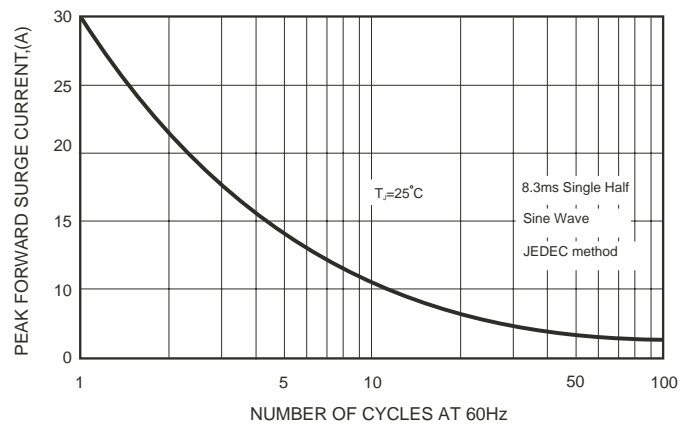


FIG.5-TYPICAL JUNCTION CAPACITANCE

