

## Surface Mount Standard Recovery

### Glass Passivated Rectifiers

**(Pb)** Lead(Pb)-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.
- \* Tiny plastic SMD package.
- \* High current capability.
- \* Super fast recovery time for switching mode application.
- \* High surge current capability.
- \* Glass passivated chip junction.

#### Mechanical Data:

- \* Case : Molded plastic, JEDEC SOD-123H
- \* Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- \* Polarity : Indicated by cathode band
- \* Mounting Position : Any
- \* Weight : 0.011 gram

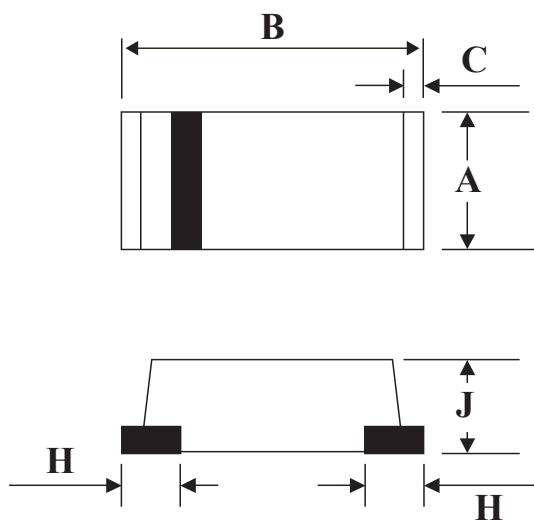
**REVERSE VOLTAGE  
50 TO 600 VOLTS  
FORWARD CURRENT  
1.0 AMPERE**



**SOD-123H**

### SOD-123H Outline Dimension

unit:mm



<b>SOD-123H</b>		
<b>Dim</b>	<b>Min</b>	<b>Max</b>
<b>A</b>	1.40	1.80
<b>B</b>	3.30	3.70
<b>C</b>	-	0.30(TYP)
<b>H</b>	-	0.80(TYP)
<b>J</b>	0.6	1.00

**Maximum Ratings** ( $T_A=25^{\circ}\text{C}$  Unless Otherwise noted)

Characteristics	Symbol	SFM11 MH	SFM12 MH	SFM13 MH	SFM14 MH	SFM15 MH	SFM16 MH	SFM17 MH	SFM18 MH	Unit
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	150	200	300	400	500	600	V
Maximum RMS Voltage	VRMS	35	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	VDC	50	100	150	200	300	400	500	600	V
Maximum Average Forward Rectified Current @ $T_A=50^{\circ}\text{C}$	IF(AV)	1.0								A
Peak Forward Surge Current, 8.3 ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	IFSM	25								A
Maximum Instantaneous At 1.0A DC	VF	0.95				1.25		1.70		V
Maximum DC Reverse Current @ $T_A=25^{\circ}\text{C}$ At Rated DC Blocking Voltage @ $T_A=100^{\circ}\text{C}$	IR					5.0		100		$\mu\text{A}$
Typical Junction Capacitance (Note 1)	$C_J$	10(TYP)								Pf
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	42(TYP)								$^{\circ}\text{C}/\text{W}$
Operating Temperature Range	$T_J$	-65 to +175								$^{\circ}\text{C}$
Storage Temperature Range	TSTG	-65 to +175								$^{\circ}\text{C}$

**Device Marking**

Item	Marking	Item	Marking
SFM11MH	S1	SFM15MH	S5
SFM12MH	S2	SFM16MH	S6
SFM13MH	S3	SFM17MH	S6
SFM14MH	S4	SFM18MH	S7

## Rating and characteristic curves (SFM11MH THRU SFM18MH)

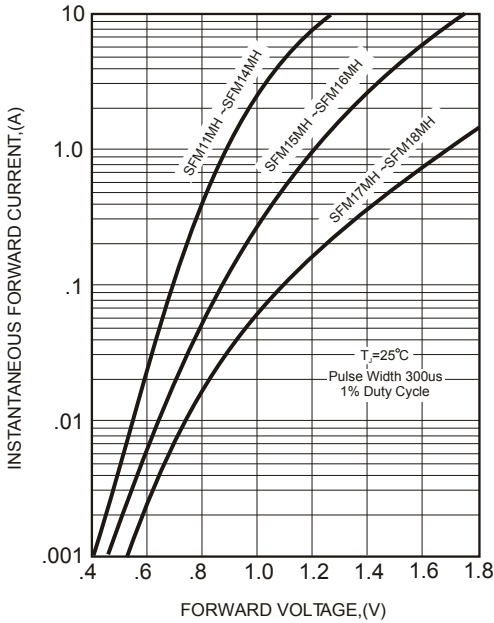


FIG.1-TYPICAL FORWARD CHARACTERISTICS

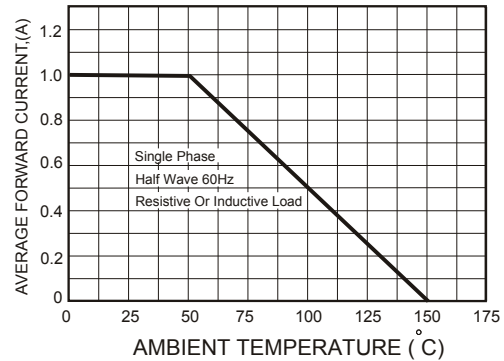
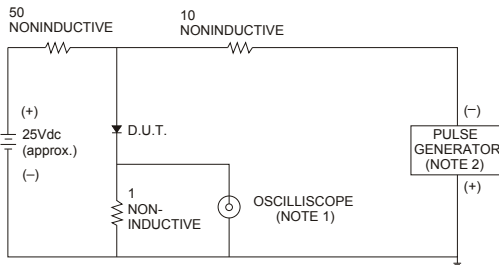


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE



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

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

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

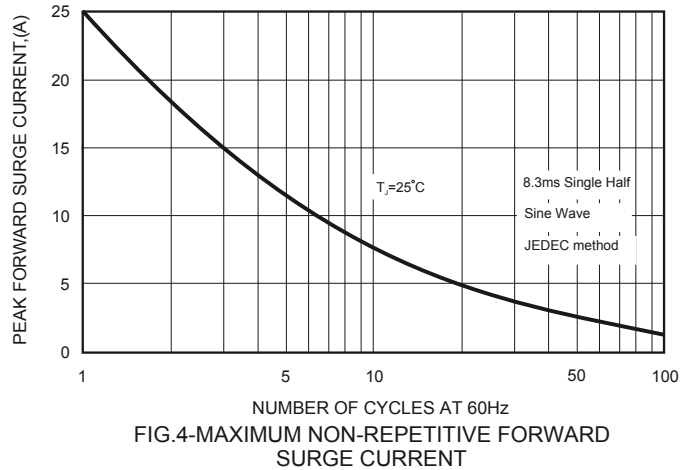
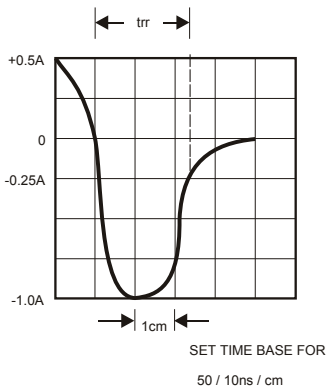


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

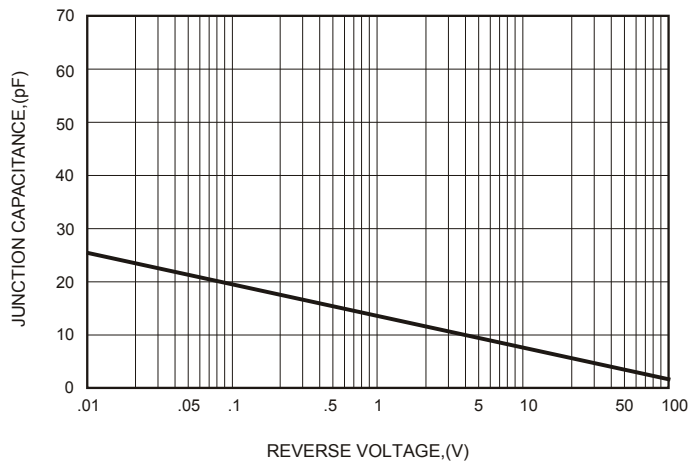


FIG.5-TYPICAL JUNCTION CAPACITANCE