



RoHS COMPLIANCE

HALOGEN FREE



Features

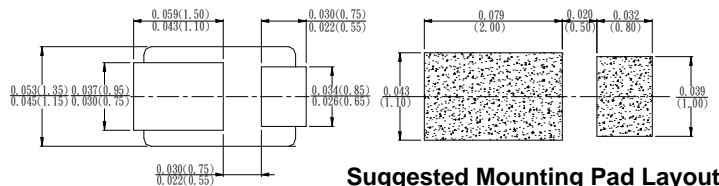
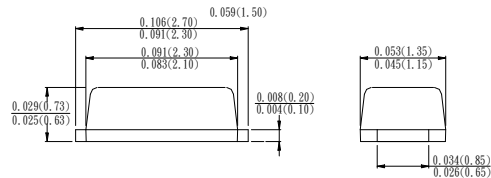
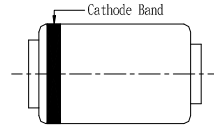
- ✧ Very low profile - typical height of 0.68mm
- ✧ Ideal for automated placement
- ✧ Low forward voltage drop. Low power loss.
- ✧ High efficiency
- ✧ Meet MSL level 1, per J-STD-020D, lead free maximum peak of 260 °C
- ✧ Solder dip 265 °C max. 10 s, per JESD 22-A111
- ✧ Compliant to RoHS directive 2002/95/EC and in accordance to WEEE 2002/96/EC
- ✧ Halogen-free according to IEC 61249-2-21 definition

Typical Application

- ✧ For use in low voltage high frequency inverter, freewheeling, DC to DC converter, and polarity protection applications.

Mechanical Data

- ✧ Case: Micro SMA
- ✧ Molding Compound meet UL 94V-0 flammability rating.
- ✧ Terminals: Matte tin plated leads, solderable per J-STD-002B, and JESD22-B102D.
- ✧ Polarity: Indicated by Cathode Band
- ✧ Packaging: 8 mm tape per EIA Std RS-481
- ✧ Weight: 0.006 gram



Suggested Mounting Pad Layout

Dimensions in inches and (millimeters)

Marking Diagram



X = Device Marking Code
Y = Year
M = Month

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

Parameter	Symbol	SS13M	SS14M	SS16M	Unit	
Device Marking Code		A	B	C		
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	30	40	60	V	
Maximum Average Forward Rectified Current (Fig.1)	$I_{(AV)}$	1			A	
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load	I_{FSM}	25			A	
Maximum Instantaneous Forward Voltage @ 0.5A / $T_a=25^\circ\text{C}$ @ 0.5A / $T_a=125^\circ\text{C}$ @ 1.0A / $T_a=25^\circ\text{C}$ @ 1.0A / $T_a=125^\circ\text{C}$	V_F	TYP. 0.45 0.35 0.52 0.46	MAX. - - 0.55 0.50	TYP. 0.51 0.46 0.64 0.57	MAX. - - 0.68 0.60	V
Maximum Reverse Current @ Rated VR $T_a=25^\circ\text{C}$ $T_a=125^\circ\text{C}$ $T_a=150^\circ\text{C}$	I_R	TYP. 1 2 6	MAX. 50 10 -	TYP. 2 2 7	MAX. 50 10 -	uA mA mA
Typical Junction Capacitance (Note 1)	C_j	50		40	pF	
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$ $R_{\theta JL}$ $R_{\theta JC}$	125 30 40			$^\circ\text{C/W}$	
Operating Temperature Range	T_J	-55 to + 150			$^\circ\text{C}$	
Storage Temperature Range	T_{STG}	-55 to + 150			$^\circ\text{C}$	

Note1: Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

Note2: Mount on Cu-Pad Size 6mm x 6mm x 1.6mm on P.C.B.

RATINGS AND CHARACTERISTIC CURVES (SS13M/SS14M/SS16M)

Fig. 1 Maximum Forward Current Derating Curve

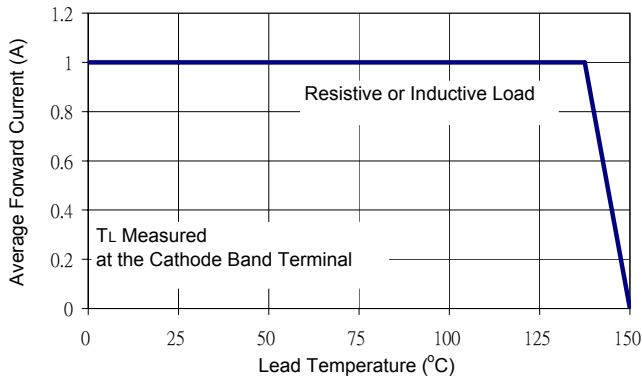


Fig. 2 Maximum Forward Surge Current

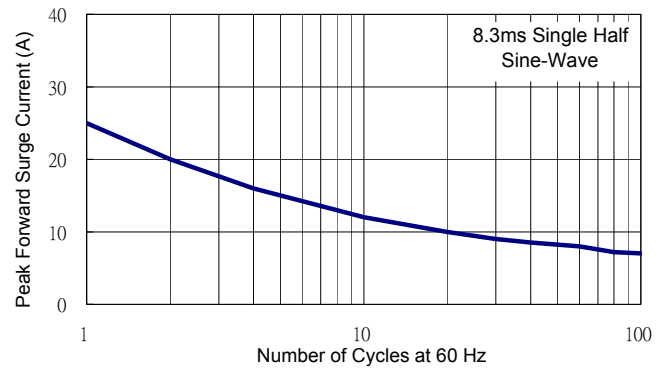


Fig. 3 Typical Forward Characteristics - SS13M/14M

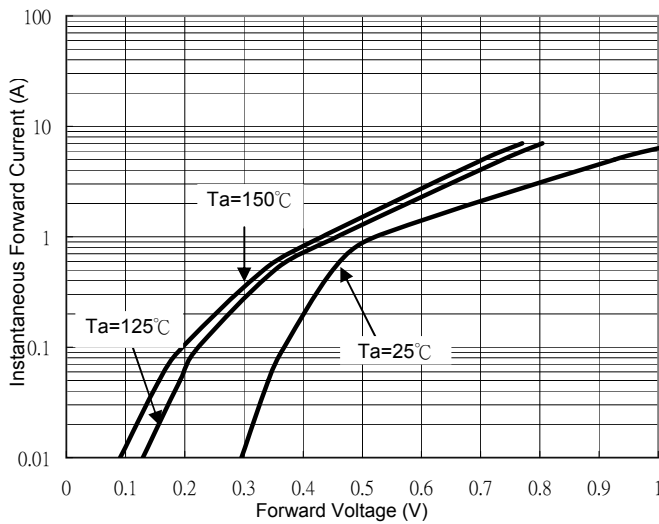


Fig. 4 Typical Forward Characteristics - SS16M

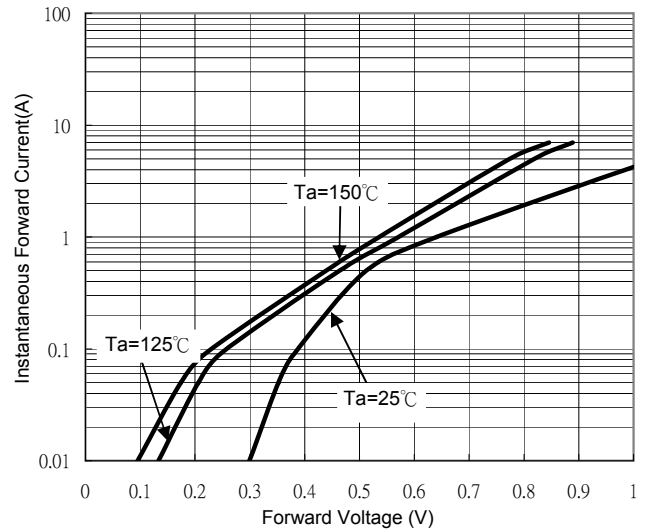


Fig. 5 Typical Reverse Characteristics - SS13M/14M

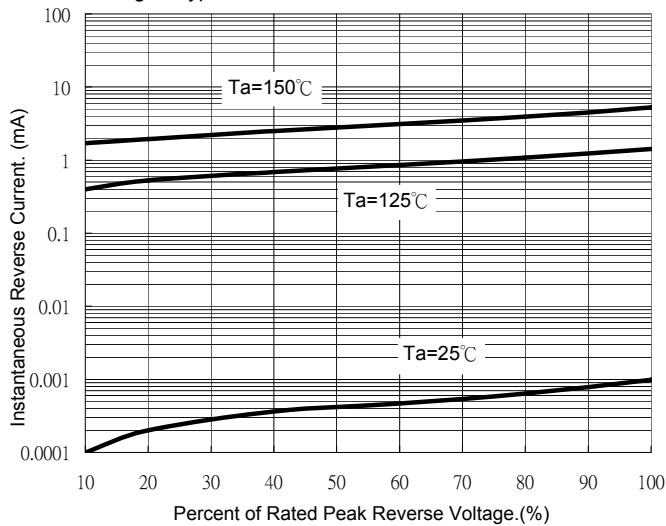
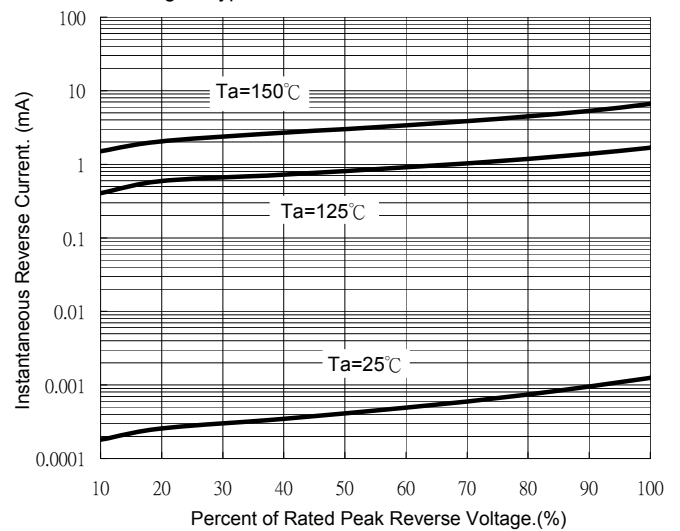


Fig. 6 Typical Reverse Characteristics - SS16M



RATINGS AND CHARACTERISTIC CURVES (SS13M/SS14M/SS16M)

Fig. 7 Typical Junction Capacitance

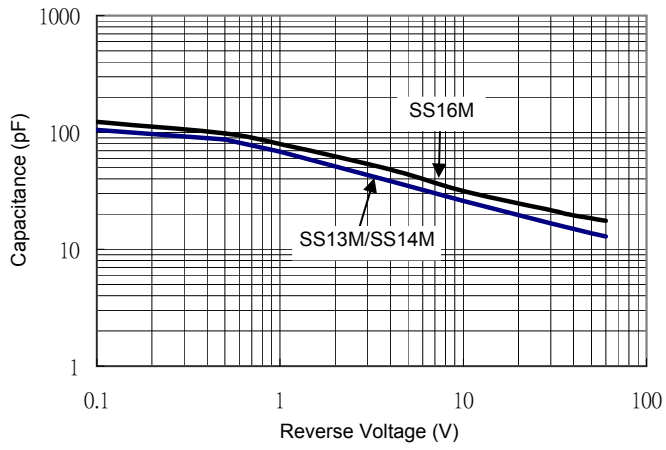


Fig. 8 Typical Transient Thermal Impedance

