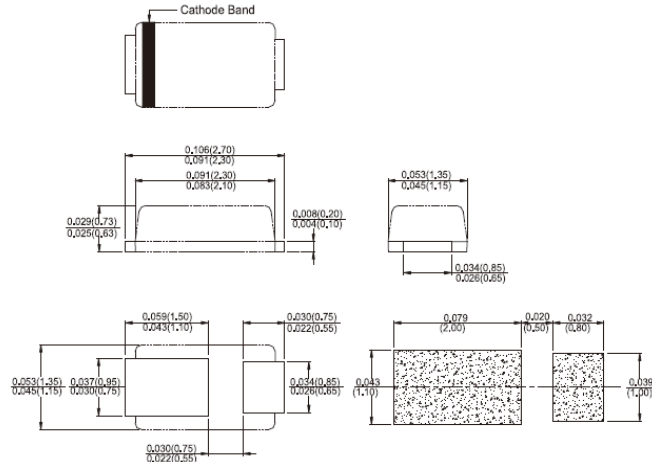




Features

- ✧ 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
- ✧ Qualified as per AEC-Q101
- ✧ Green compound



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 rate flame flammability rating.
- ✧ Terminals: Pure 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 grams

Dimensions in inches and (millimeters)

Marking Diagram



- X = Device Marking Code
- Y = Year
- M = Work 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%

Type Number	Symbol	SS13M	SS14M	SS16M	Units	
Device Marking Code		A	B	C		
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	30	40	60	V	
Maximum Average Forward Rectified Current	$I_{F(AV)}$	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 (Note 1) @ 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. 5 3 5.3	MAX. 50 10 -	TYP. 5 3 6.7	MAX. 50 10 -	uA mA mA
Typical Junction Capacitance (Note 2)	C_j	50		40	pF	
Typical Thermal Resistance	$R_{\theta JA}$ $R_{\theta JL}$ $R_{\theta JC}$	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			$^\circ\text{C}$	

Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle

Note 2: Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

RATINGS AND CHARACTERISTIC CURVES (SS13M THRU SS16M)

Fig. 1 Maximum Forward Current Derating Curve

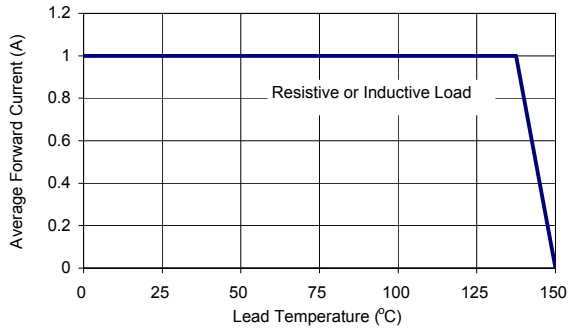


Fig. 2 Maximum Forward Surge Current

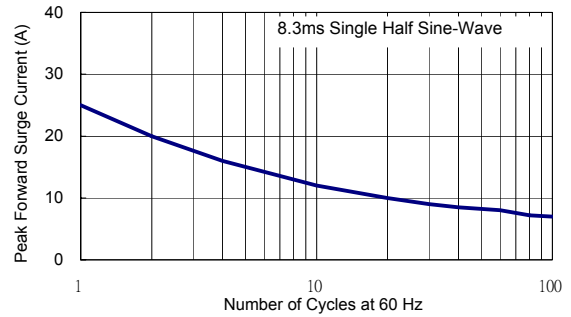


Fig. 3 Typical Forward Characteristics - SS13M/14M

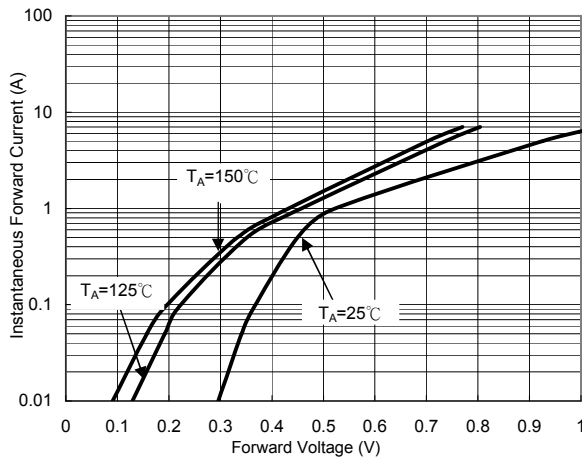


Fig. 4 Typical Forward Characteristics - SS16M

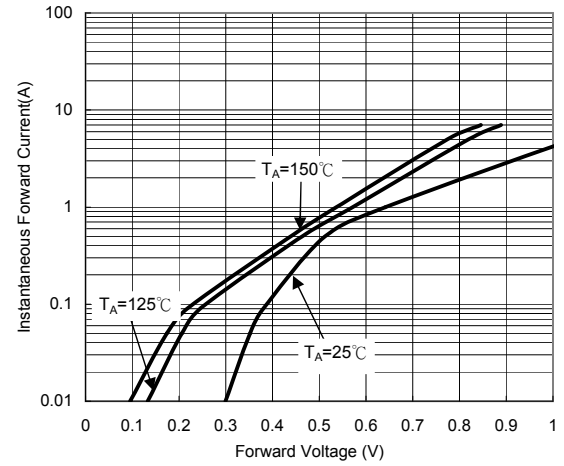


Fig. 5 Typical Reverse Characteristics - SS13M/14M

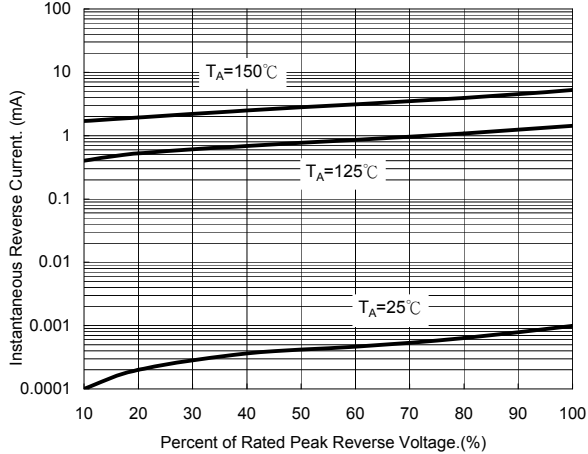
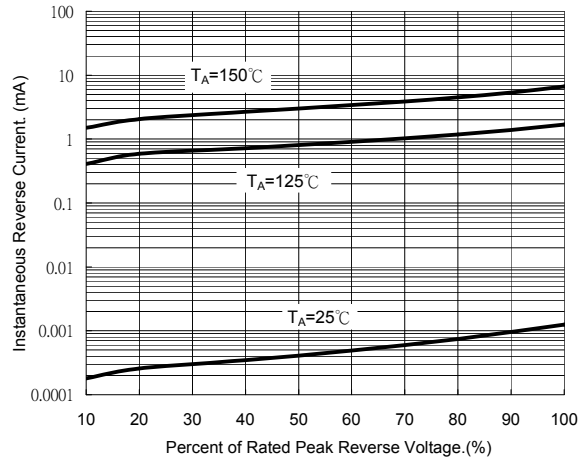


Fig. 6 Typical Reverse Characteristics - SS16M



Version:G11

RATINGS AND CHARACTERISTIC CURVES (SS13M THRU SS16M)

Fig. 7 Typical Junction Capacitance

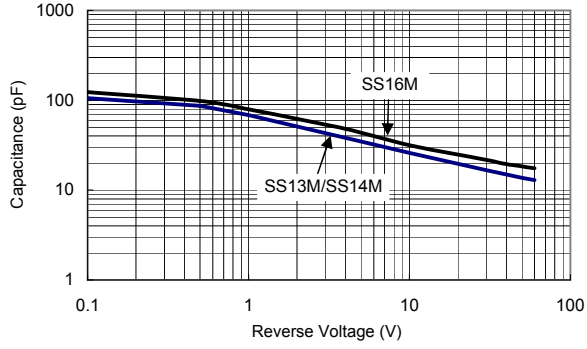
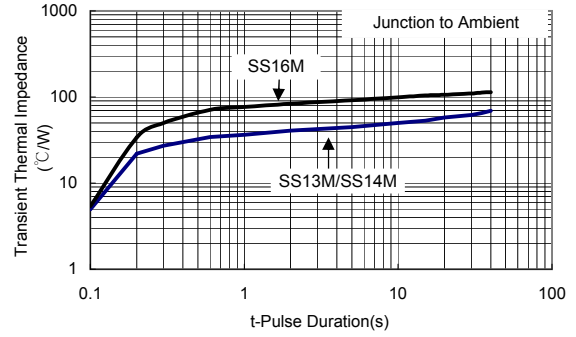


Fig. 8 Typical Transient Thermal Impedance



Version:G11