



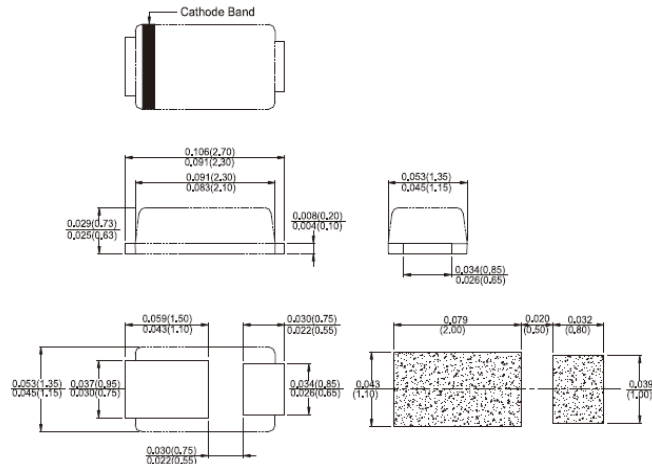
SS13M - SS16M

1.0 AMP. Surface Mount Schottky Barrier Rectifier

Micro SMA

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	I	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)	V_F	TYP.	MAX.	TYP.	MAX.
@ 0.5A / $T_A=25^{\circ}\text{C}$		0.45	-	0.51	-
@ 0.5A / $T_A=125^{\circ}\text{C}$		0.35	-	0.46	-
@ 1.0A / $T_A=25^{\circ}\text{C}$		0.52	0.55	0.64	0.68
@ 1.0A / $T_A=125^{\circ}\text{C}$		0.46	0.50	0.57	0.60
Maximum Reverse Current @ Rated VR	I_R	TYP.	MAX.	TYP.	MAX.
$T_A=25^{\circ}\text{C}$		5	50	5	50
$T_A=125^{\circ}\text{C}$		3	10	3	10
$T_A=150^{\circ}\text{C}$		5.3	-	6.7	-
Typical Junction Capacitance (Note 2)	C_j	50		40	
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

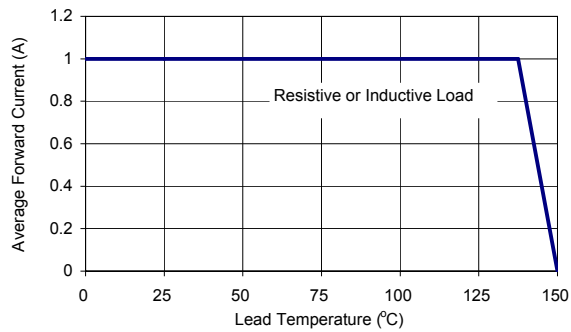


Fig. 2 Maximum Forward Surge Current

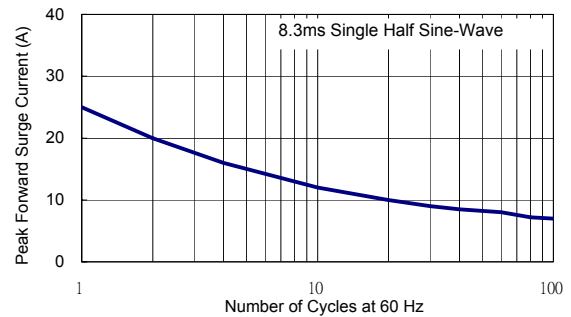


Fig. 3 Typical Forward Characteristics - SS13M/14M

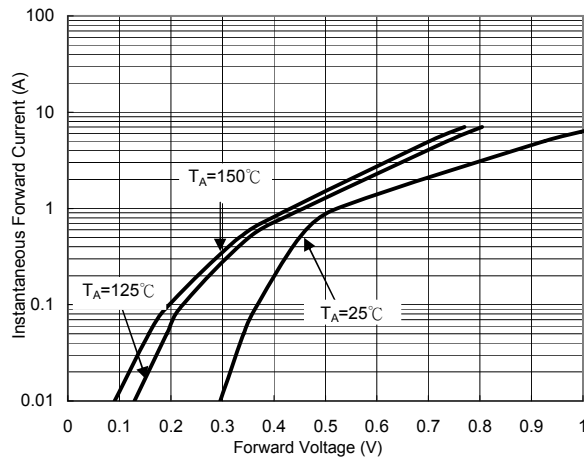


Fig. 4 Typical Forward Characteristics - SS16M

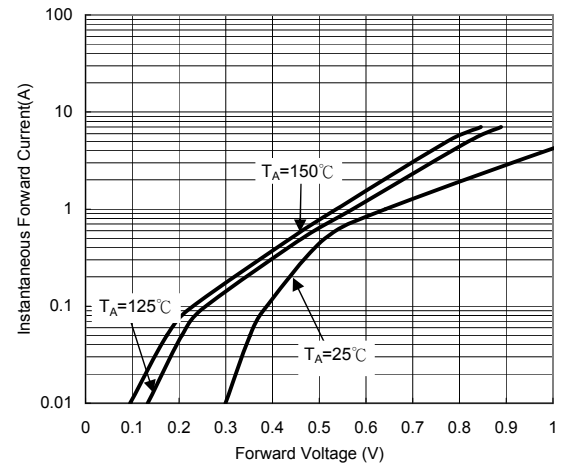


Fig. 5 Typical Reverse Characteristics - SS13M/14M

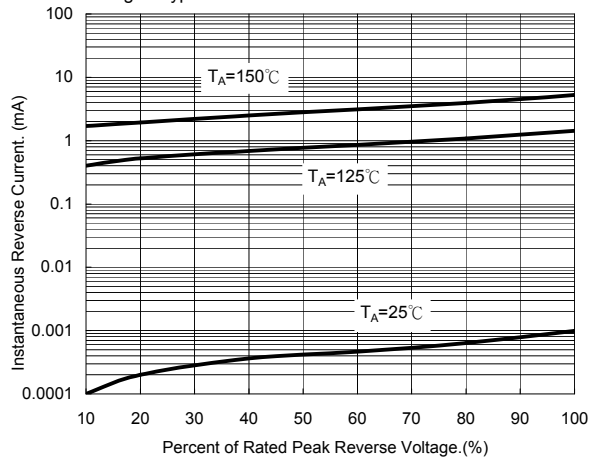
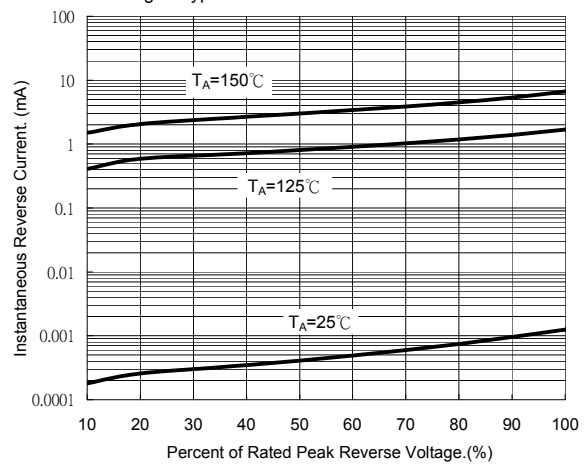


Fig. 6 Typical Reverse Characteristics - SS16M



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RATINGS AND CHARACTERISTIC CURVES (SS13M THRU SS16M)

Fig. 7 Typical Junction Capacitance

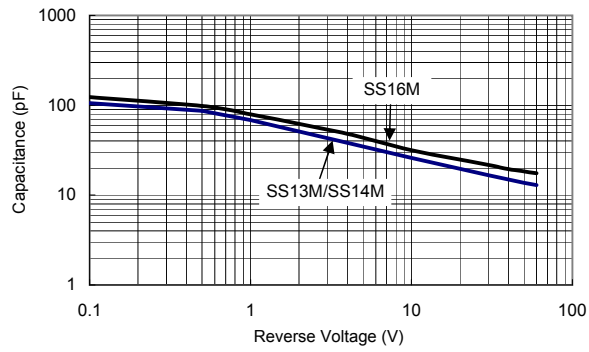
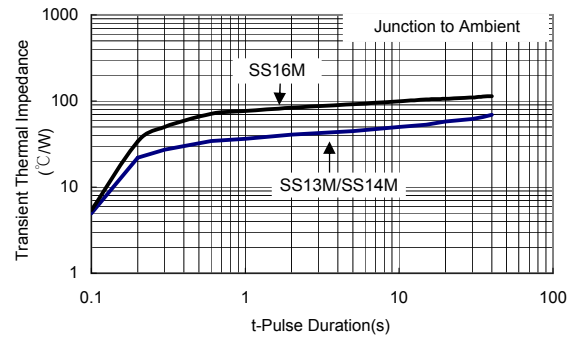


Fig. 8 Typical Transient Thermal Impedance



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