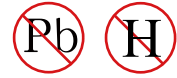




**SURFACE MOUNT RECTIFIER**

**VOLTAGE - 50 to 1000 Volts CURRENT - 1.0 Ampere**

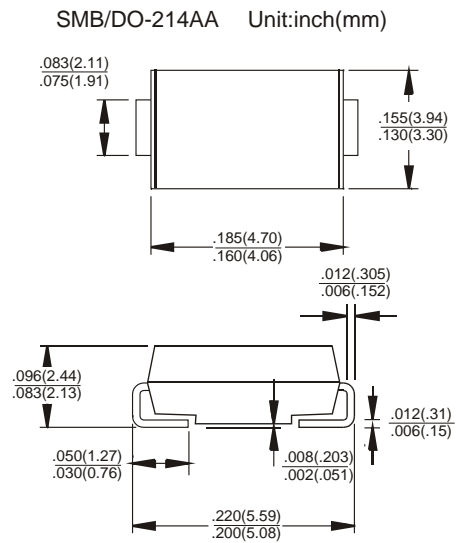


**FEATURES**

- Forsurface mounted applications
- Hightemperature metallurgically bonded-no compressioncontacts as found in other diode-constructed rectifiers
- Glass passivated junction
- Built-in strainrelief
- Easy pick and place
- Plastic packagehas Underwriters Laboratory Flammability Classification 94V-0
- Complete devicesubmersible temperature of 260 °C for 10 seconds in solder bath
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request
- AEC-Q101 qualified

**MECHANICAL DATA**

- Case: JEDEC DO-214AA molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Indicated by cathode band



**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

PARAMETER	SYMBOL	S1A	S1B	S1D	S1G	S1J	S1K	S1M	UNIT
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @TL=100°C	$I_{F(AV)}$	1							A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	30							A
I <sup>2</sup> t Rating for Fusing (t<8.3ms)	$I^2t$	3.736							A <sup>2</sup> S
Maximum Instantaneous Forward Voltage at 1A	$V_F$	1							V
Maximum DC Reverse Current at T <sub>J</sub> =25°C at Rated DC Blocking Voltage T <sub>J</sub> =125°C	$I_R$	5							uA
		50							uA
Typical Junction Capacitance (Note 1)	$C_J$	12							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JL}$	30							°C/W
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150							°C

Notes: 1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2. Thermal Resistance from Junction to lead mounted on PCB with 0.3"x 0.3" (8.0mm x 8.0mm) copper pad areas.

# DEVICE CHARACTERISTICS

## S1A-A THRU S1M-A

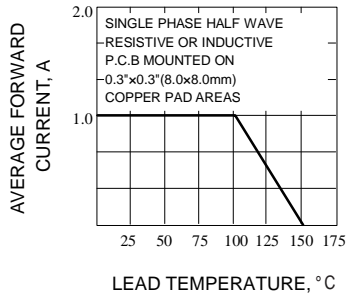


Fig. 1-FORWARD CURRENT DERATING CURVE

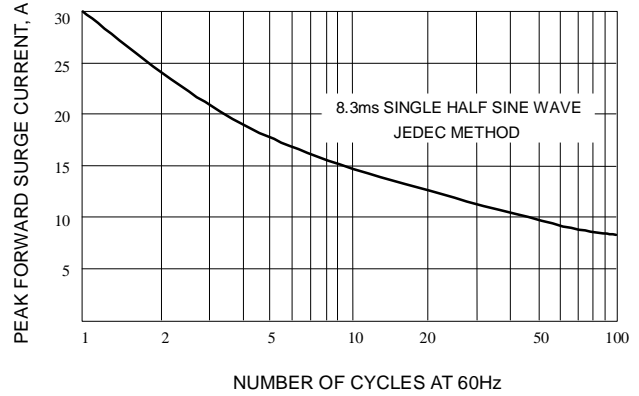


Fig.2-MAXIMUMNON-REPETITIVE PEAK FORWARD SURGE CURRENT

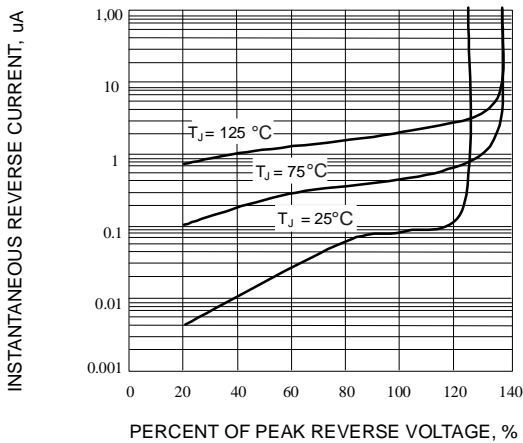


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

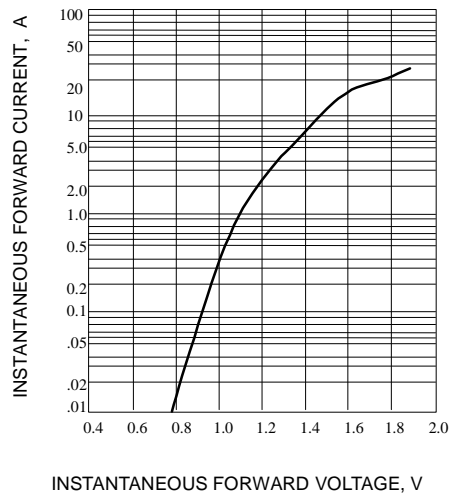


Fig. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

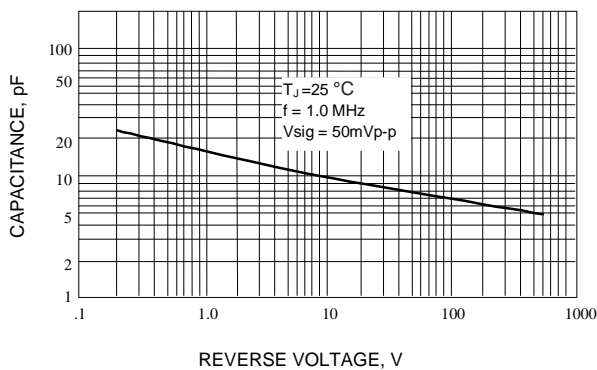


Fig.5-TYPICAL JUNCTION CAPACITANCE