



# S1A~S1M

## SURFACE MOUNT RECTIFIER

**VOLTAGE** 50 to 1000 Volts **CURRENT** 1.0 Amperes

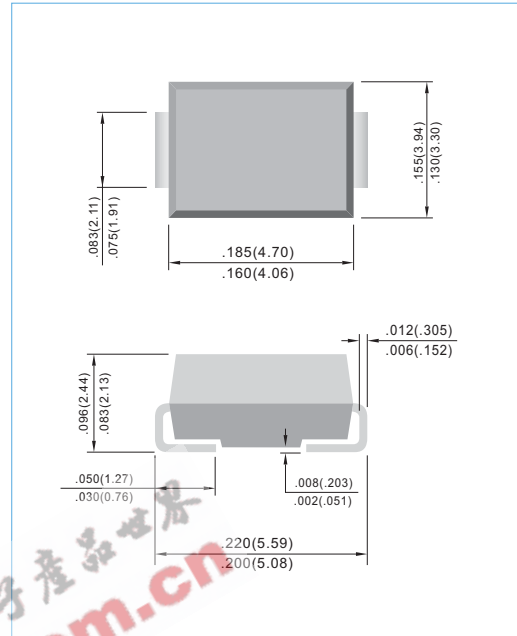
**SMB/DO-214AA** Unit: inch (mm)

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Glass passivated junction
- Complete device submersible temperature of 260°C for 10 seconds in solder bath
- In compliance with EU RoHS 2002/95/EC directives

### MECHANICAL DATA

- Case: JEDEC DO-214AA molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Indicated by cathode band
- Standard packaging: 12mm tape (EIA-481)
- Weight: 0.003 ounce, 0.093 gram



### 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	UNITS
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 Current .375" (9.5mm) lead length at $T_L=100^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load(JEDEC method)	$I_{FSM}$	30							A
Maximum Forward Voltage at 1.0A	$V_F$	1.1							V
Maximum DC Reverse Current at $T_J=25^\circ\text{C}$ Rated DC Blocking Voltage $T_J=125^\circ\text{C}$	$I_R$	5.0 50							uA
Typical Junction capacitance (Note 1)	$C_J$	12							pF
Typical Junction 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 1.0 Mhz and Applied Vr = 4.0 volts.
2. 8.0mm<sup>2</sup> (.013 mm thick) land areas.



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## RATING AND CHARACTERISTIC CURVES

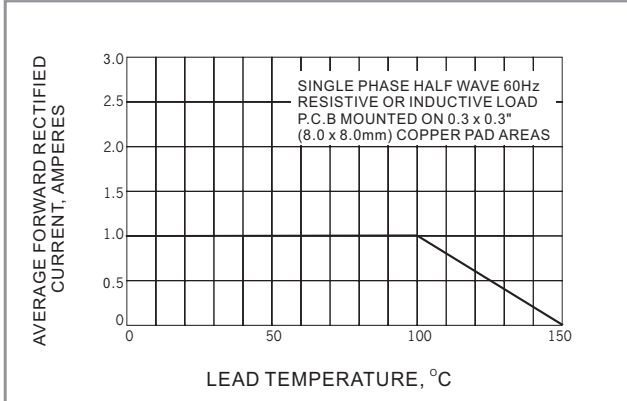


Fig.1 FORWARD CURRENT DERATING CURVE

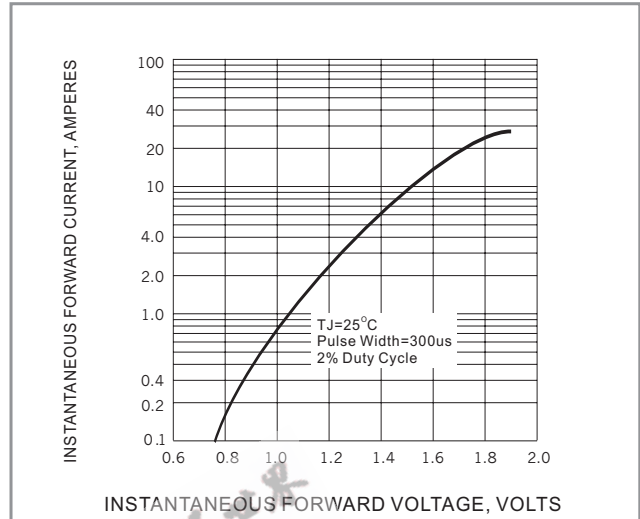


Fig.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

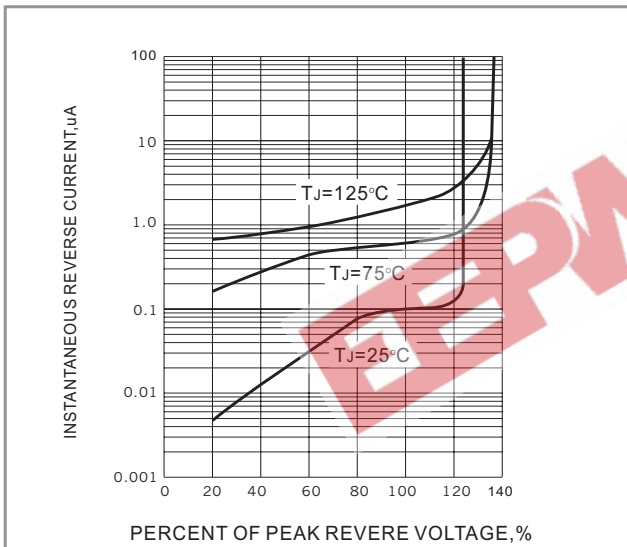


Fig.3 TYPICAL REVERSE CHARACTERISTICS

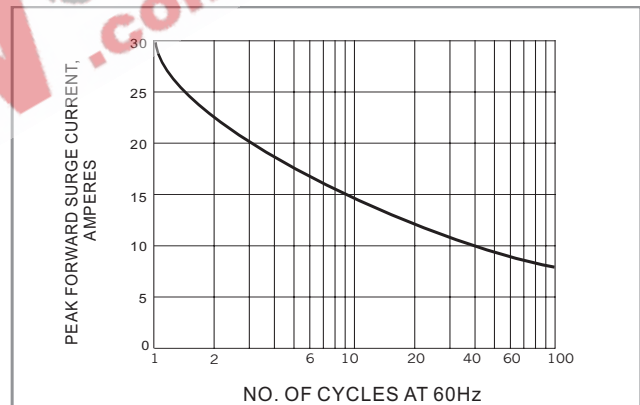


Fig.4 MAXIMUM NON REPETITIVE PEAK SURGE CURRENT

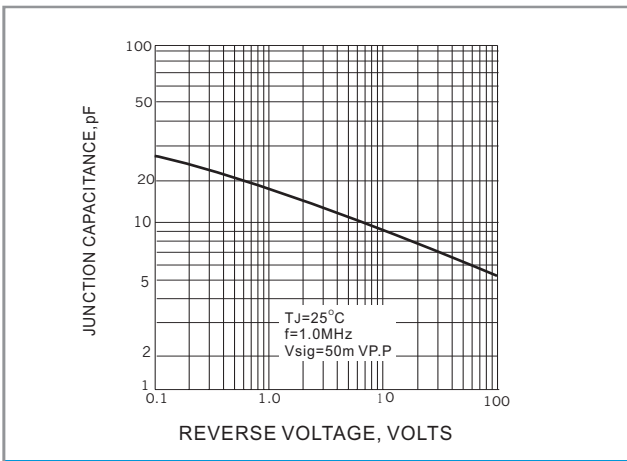


Fig.5 TYPICAL JUNCTION CAPACITANCE

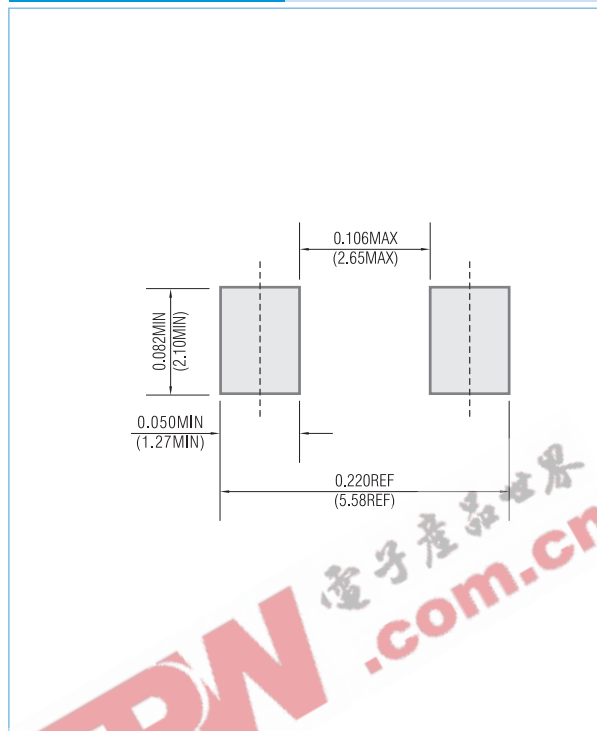


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### MOUNTING PAD LAYOUT

SMB/DO-214AA

Unit: inch ( mm )



### ORDER INFORMATION

- Packing information
  - T/R - 3K per 13" plastic Reel
  - T/R - 0.5Kper 7" plastic Reel

### LEGAL STATEMENT

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