

S1A~S1M

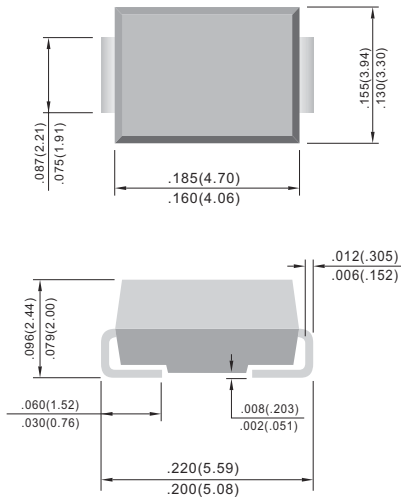
SURFACE MOUNT RECTIFIER

VOLTAGE 50 to 1000 Volts CURRENT 1.0 Amperes



SMB / DO-214AA

Unit: inch (mm)



FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- 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
- Lead free in comply with EU RoHS 2002/95/EC directives

MECHANICAL DATA

- Case: JEDEC SMB molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Indicated by cathode band
- Standard packaging: 12mm tape (EIA-481)

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 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 50							μA
Typical Junction capacitance (Note 1)	C_J	12							pF
Typical Junction Resistance(Note 2)	$R_{\theta JL}$	30							$^\circ\text{C} / \text{W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							$^\circ\text{C}$

NOTES:

1. Measured at 1.0 Mhz and Applied Vr = 4.0 volts.
2. 8.0mm² (.013 mm thick) land areas.

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RATING AND CHARACTERISTIC CURVES

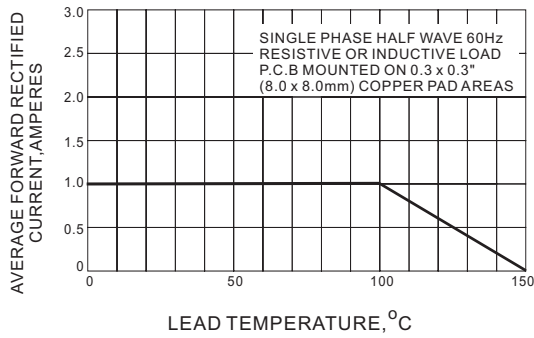


Fig.1 FORWARD CURRENT DERATING CURVE

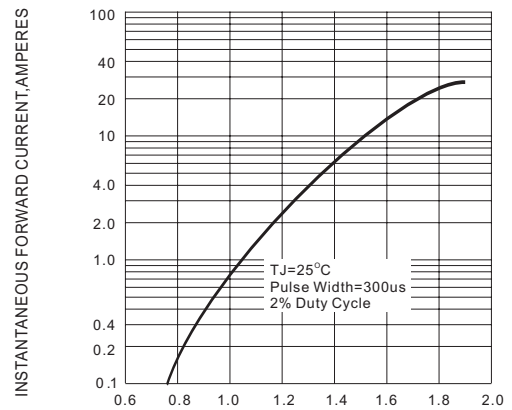


Fig.2 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

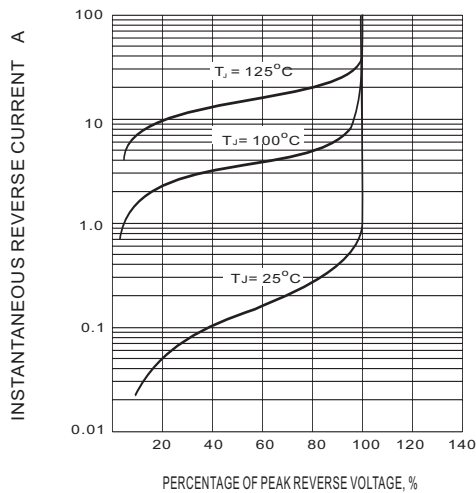


Fig.3-TYPICAL REVERSE CHARACTERISTIC

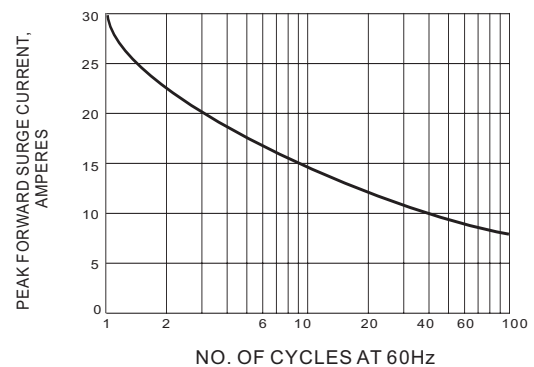


Fig.4 MAXIMUM NON REPETITIVE PEAK SURGE CURRENT

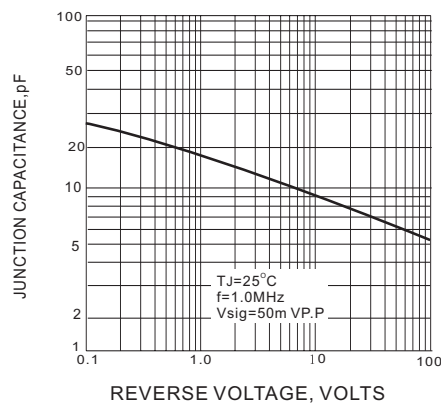


Fig.5 TYPICAL JUNCTION CAPACITANCE