

S1A THRU S1M

SURFACE MOUNT RECTIFIER
VOLTAGE - 50 - 1000 Volts CURRENT - 1.0 Ampere

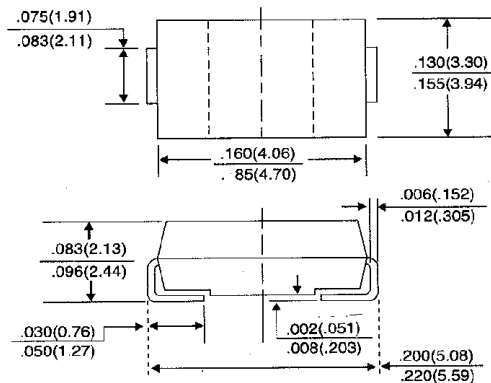
FEATURES

- For surface mounted applications
 - High temperature metallurgically bonded-no compression contacts as found in other diode-constructed rectifiers
 - Glass passivated junction
 - Built-in strain relief
 - Easy pick and place
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- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
 - Complete device submersible temperature of 260°C for 10 seconds in solder bath

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 ounces, 0.093 gram

SMB/DO-214AA



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings 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%.

	SYMBOLS	S1A	S1B	S1D	S1G	S1J	S1K	S1M	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V _{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V _{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at T _L = 100°C	I <sub(av)< sub=""></sub(av)<>	1.0							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	30.0							Amps
Maximum Instantaneous Forward Voltage at 1.0A	V _F	1.10							Volts
Maximum DC Reverse Current T _A = 25°C	I _R	5.0							μA
at Rated DC Blocking Voltage T _A = 125°C		50							
Maximum Reverse Recovery Time (NOTE 1)	T _{RR}	2.5							μS
Typical Junction Capacitance (NOTE 2)	C _J	12							pf
Maximum Thermal Resistance (NOTE 3)	R _{θJL}	30.0							°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150							°C

NOTES:

1. Reverse Recovery Test Conditions: I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A.
2. Measured at 1.0 MHz and Applied V_r = 4.0 volts.
3. 8.0mm² (.013mm thick) land areas.

**RATING AND CHARACTERISTIC CURVES
S1A THRU S1M**

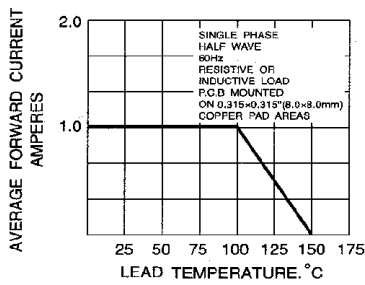


FIG. 1 - FORWARD CURRENT DERATING CURVE

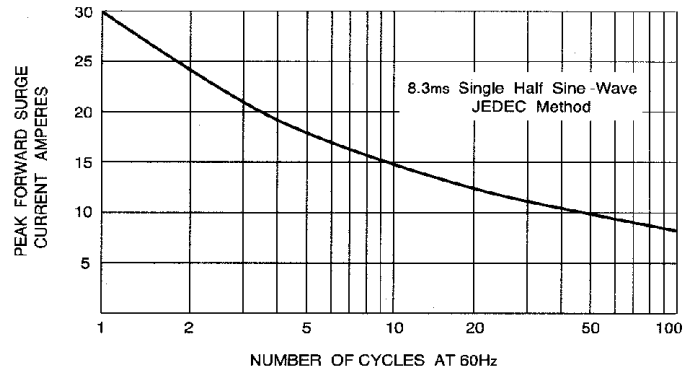


FIG. 2 - MAXIMUM NON REPETITIVE PEAK FORWARD SURGE CURRENT

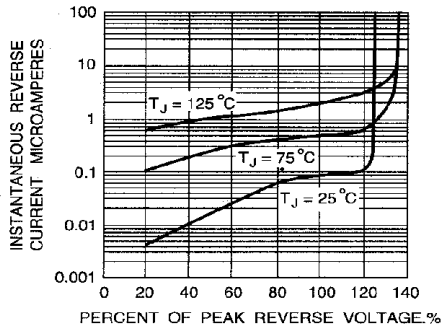


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

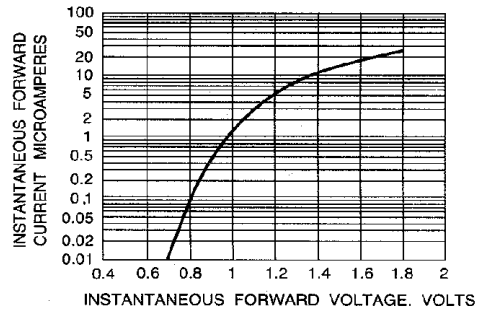


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

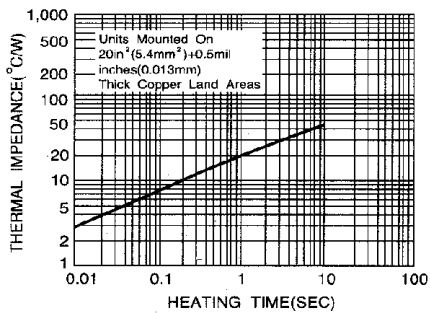


FIG. 5 - TRANSIENT THERMAL IMPEDANCE

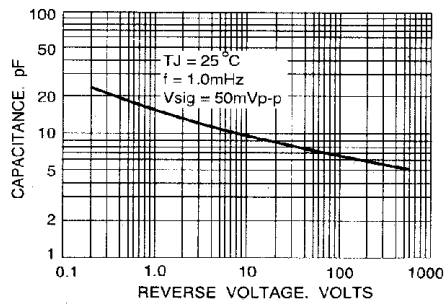


FIG. 6 - TYPICAL JUNCTION CAPACITANCE