

S1A THRU S1M

SURFACE MOUNT RECTIFIER

VOLTAGE - 50 to 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
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Complete device submersible temperature of 260for 10 seconds in solder bath

MECHANICAL DATA

Case: JEDEC DO-214AA molded plastic

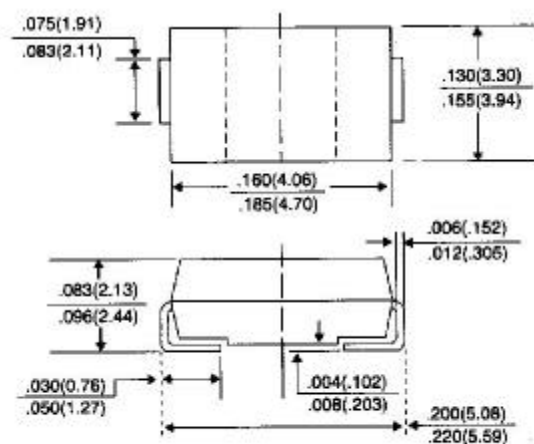
Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

Polarity: Indicated by cathode band

Standard packaging: 12mm tape (EIA-481)

Weight: 0.003 ounce, 0.093 gram

SMA/DO-214AA



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 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 $T_A=100$	$I_{(AV)}$	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 $T_A=25$	I_R	5.0							A
At Rated DC Blocking Voltage $T_A=125$		50							
Maximum Reverse Recovery Time (Note 1)	T_{RR}	2.5							S
Typical Junction capacitance (Note 2)	C_J	12							pF
Typical Thermal Resistance (Note 3)	RJL	30.0							/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							

NOTES:

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

RATING AND CHARACTERISTIC CURVES S1A THRU S1M

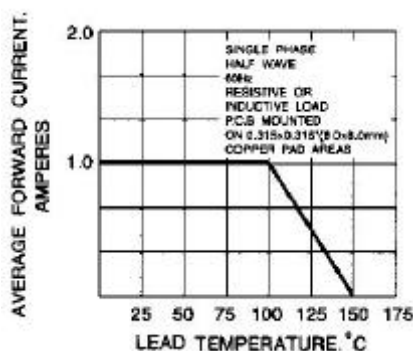


Fig. 1-FORWARD CURRENT DERATING CURVE

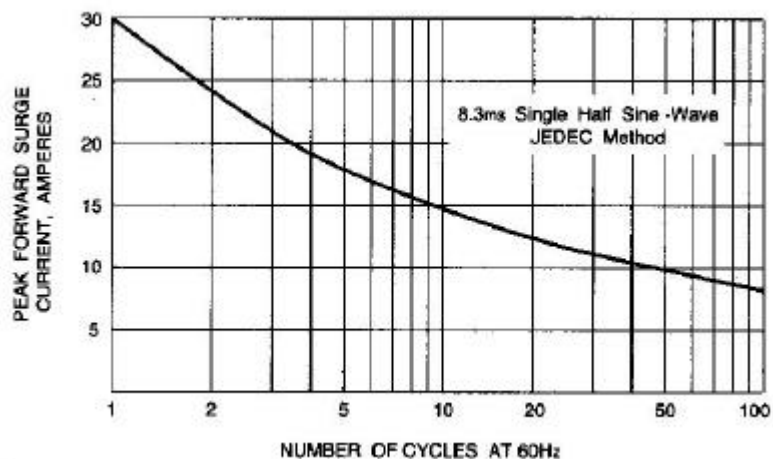


Fig. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

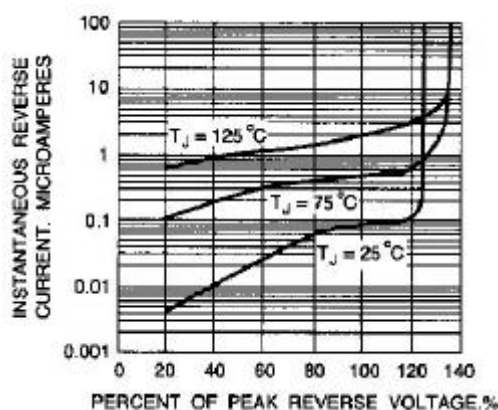


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

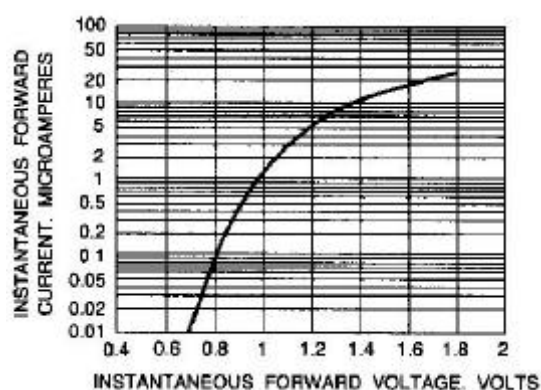


Fig. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

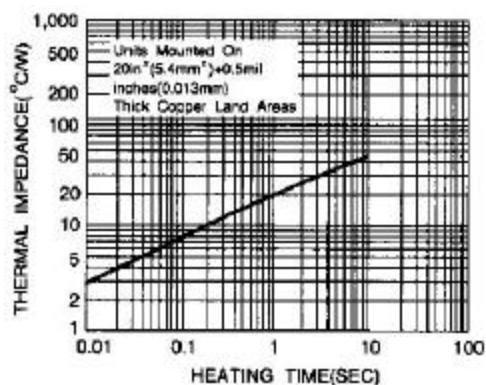


Fig. 5-TRANSIENT THERMAL IMPEDANCE

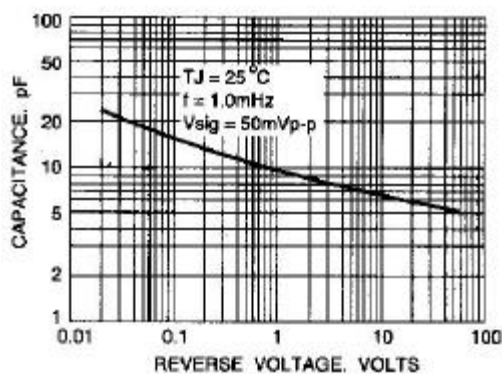


Fig. 6-TYPICAL JUNCTION CAPACITANCE