



# S1A THRU S1M

## 1.0 AMP. SURFACE MOUNT RECTIFIERS



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

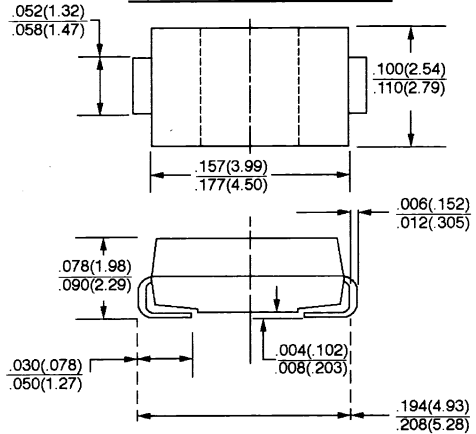
### FEATURES

- \* For surface mounted application
- \* Glass passivated junction
- \* Low forward voltage drop
- \* High current capability
- \* Easy pick and place
- \* High surge current capability
- \* Plastic material used carries Underwriters Laboratory classification 94V-0

### MECHANICAL DATA

- \* Case: Molded plastic
- \* Terminals: Solder plated
- \* Polarity: Indicated by cathode band
- \* Packaging: 12mm tape per EIA STD RS-481
- \* Weight: 0.064 gram

### SMA/DO-214AC



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

TYPE NUMBER	SYMBOLS	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 Rectified Current @ $T_L = 75^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Peak Forward Surge Current, 8.3 ms half sine	$I_{FSM}$	30							A
Maximum Instantaneous Forward Voltage @ 1.0A	$V_F$	1.1							V
Maximum D. C Reverse Current @ $T_a = 25^\circ\text{C}$ at Rated D. C Blocking Voltage @ $T_a = 125^\circ\text{C}$	$I_R$	5.0 50							$\mu\text{A}$ $\mu\text{A}$
Maximum Reverse Recovery Time (Note 1)	$T_{rr}$	1.8							$\mu\text{S}$
Typical Junction Capacitance (Note 2)	$C_J$	12							pF
Operating Temperature Range	$T_J$	- 55 to + 150							$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	- 55 to + 150							$^\circ\text{C}$

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.

## RATINGS AND CHARACTERISTIC CURVES (S1A THRU S1M)

FIG. 1 - FORWARD CURRENT DERATING CURVE

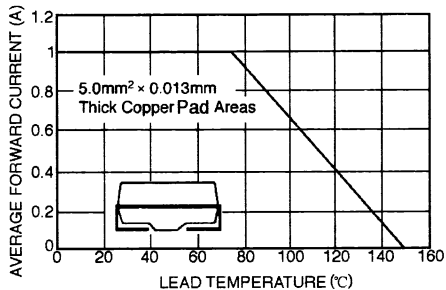


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

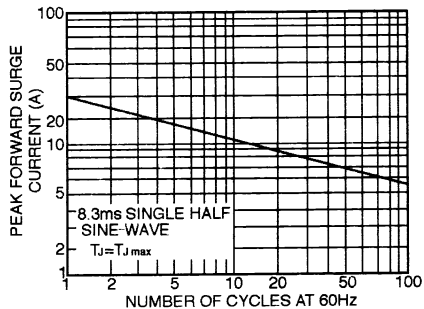


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

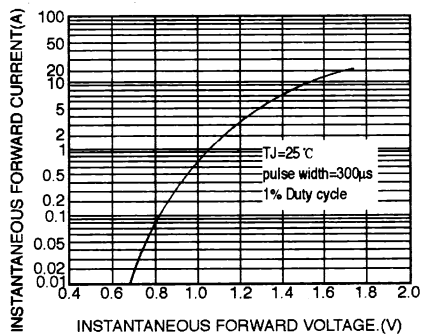


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

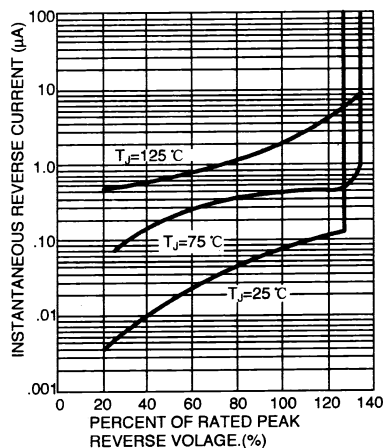


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

