



S1A THRU S1M

1.0 AMP. SURFACE MOUNT RECTIFIERS



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

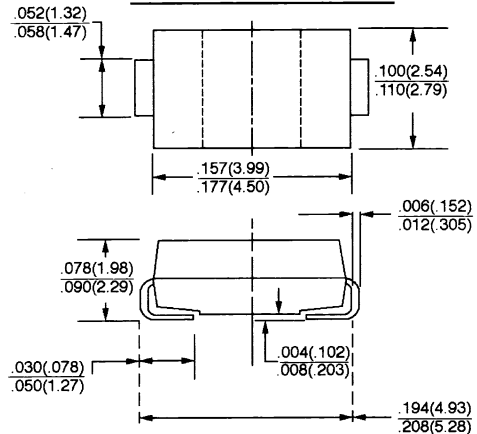
VOLTAGE RANGE

50 to 1000 Volts

CURRENT

1.0 Ampere

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							μA μA
Maximum Reverse Recovery Time (Note 1)	T_{rr}	1.8							μs
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: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$

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

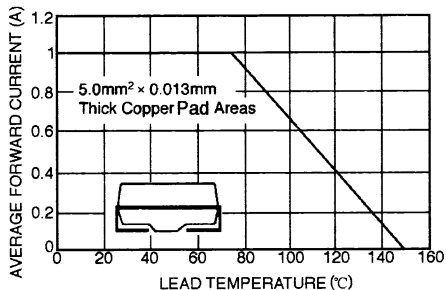


FIG. 2 – MAXIMUM NON - REPETITIVE PEAK FORWARD SURGE CURRENT

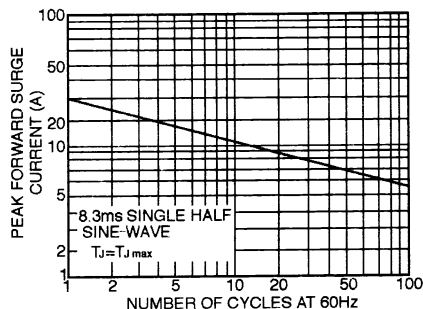


FIG. 3 – TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

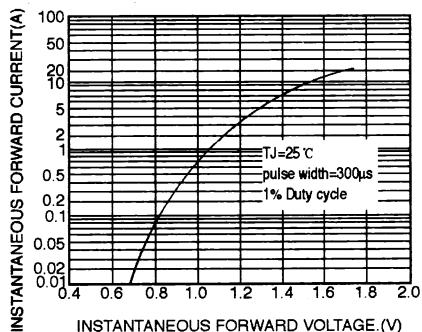


FIG. 4 – TYPICAL REVERSE CHARACTERISTICS

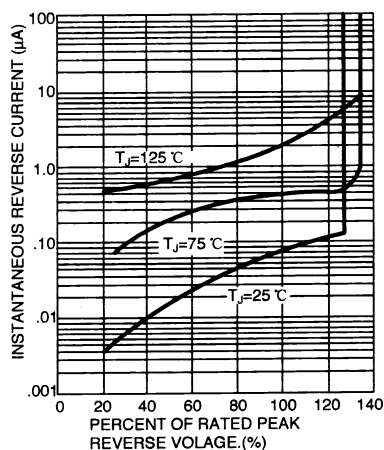


FIG. 5 – TYPICAL JUNCTION CAPACITANCE

