

# ***SIX SERIES***

**SURFACE MOUNT GLASS PASSIVATED SILICON RECTIFIER**

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# S1A THRU S1M



康比電子  
HORNBY ELECTRONIC

## SURFACE MOUNT GLASS PASSIVATED SILICON RECTIFIER

**REVERSE VOLTAGE:** 50 to 1000 VOLTS

**FORWARD CURRENT:** 1.0 AMPERE

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Low profile package
- Easy pick and place
- Built-in strain relief
- Low forward voltage drop
- High temperature soldering : 250°C /10 seconds at terminals

### MECHANICAL DATA

Case: Molded plastic, DO-214AA(SMB)

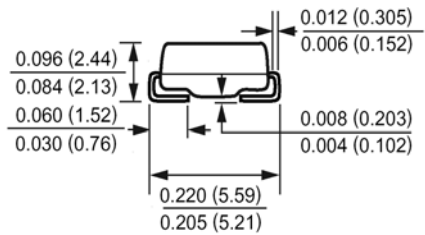
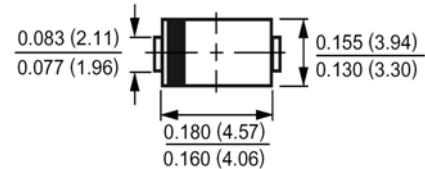
Terminals: Solder plated, solderable per MIL-STD-750, method 2026 guaranteed

Polarity: Color band denotes cathode end

Packaging: 12mm tape per EIA STD RS-481

Weight: 0.003 ounce, 0.093 gram

### DO214-AA(SMB)



Dimensions in inches and (millimeters)

### 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%.

	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 $T_L=100^\circ\text{C}$	$I_{(AV)}$	1.0							Amp
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	30							Amp
Maximum Forward Voltage at 1.0A	$V_F$	1.1							Volts
Maximum Reverse Current at $T_A=25^\circ\text{C}$	$I_R$	5.0							$\mu\text{Amp}$
at Rated DC Blocking Voltage $T_A=125^\circ\text{C}$		100							
Typical Junction Capacitance (Note 1)	$C_J$	12							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JL}$	30							$^\circ\text{C/W}$
Maximum Reverse Recovery Time (Note 3)	$T_{RR}$	2.5							$\mu\text{S}$
Operating Junction Temperature Range	$T_J$	-55 to +150							$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to +150							$^\circ\text{C}$

### NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Thermal resistance from junction to lead mounted on P.C.B. with 0.3 x 0.3" (8.0 x 8.0mm) copper pad areas

3- Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{RR}=0.25\text{A}$ .

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### RATINGS AND CHARACTERISTIC CURVES

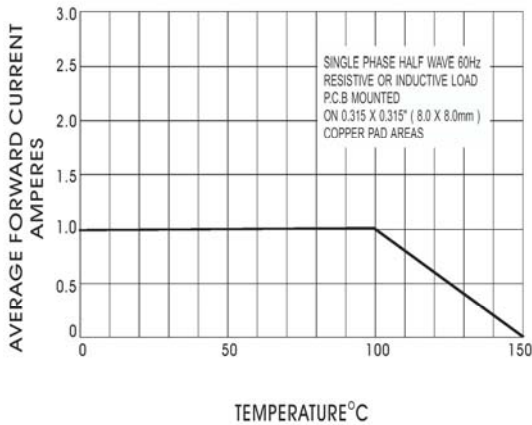


Fig. 1- DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

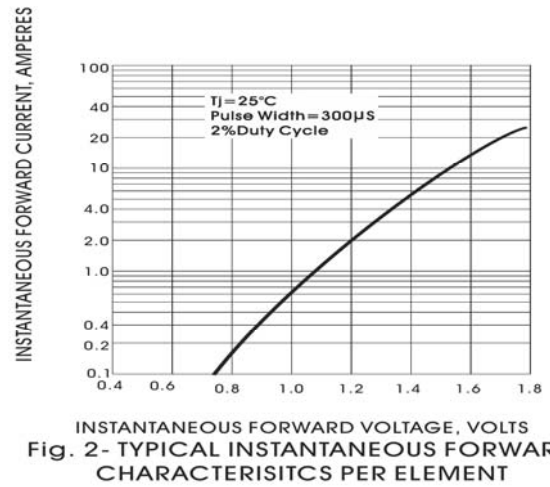


Fig. 2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER ELEMENT

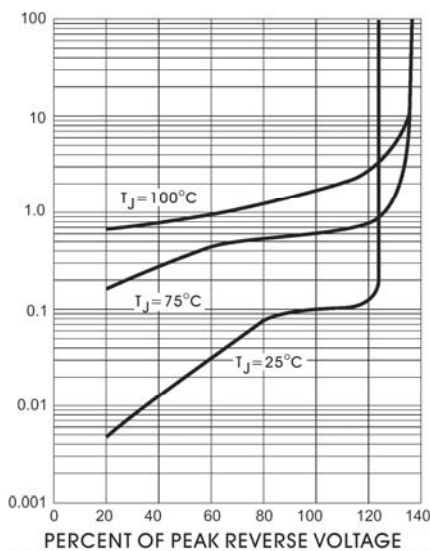


Fig. 3- TYPICAL REAK REVERSE CHARACTERISTICS

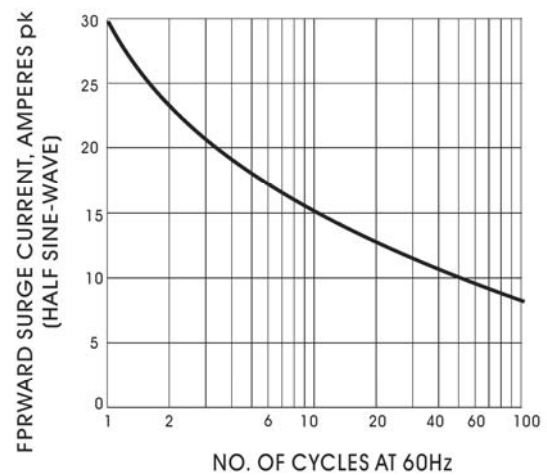


Fig. 4- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

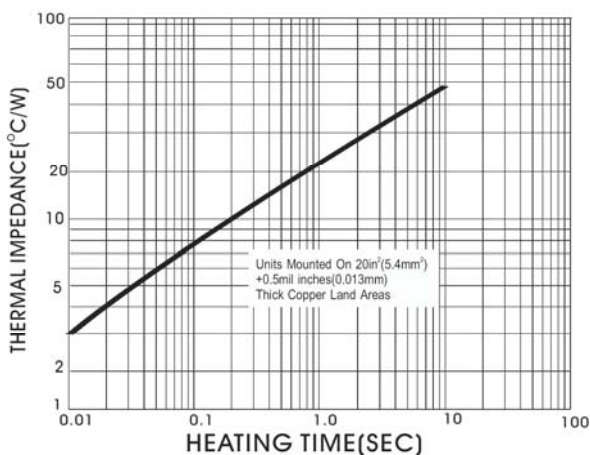


Fig. 5- TRANSIENT THERMAL IMPEDANCE

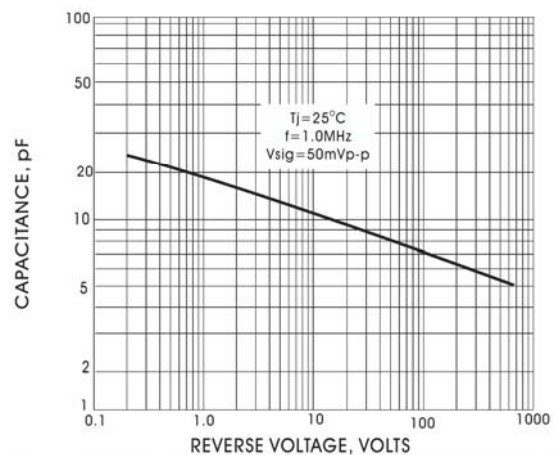


Fig. 6- TYPICAL JUNCTION CAPACITANCE PER ELEMENT