

## S1A THRU S1M

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

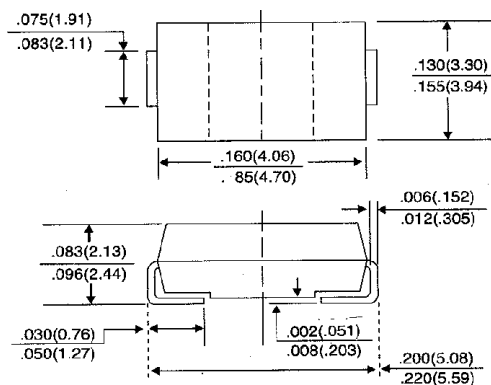
### FEATURES

- 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
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
  - 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	VRRM	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	VRMS	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at $T_L = 100^\circ\text{C}$	$I_{(AV)}$	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 $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A = 125^\circ\text{C}$	$I_R$	5.0 50							$\mu\text{A}$
Maximum Reverse Recovery Time (NOTE 1)	$T_{RR}$	2.5							$\mu\text{S}$
Typical Junction Capacitance (NOTE 2)	$C_J$	12							pf
Maximum Thermal Resistance (NOTE 3)	$R_{\theta J L}$	30.0							$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-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 1.0 MHz and Applied  $V_r = 4.0$  volts.
3. 8.0mm<sup>2</sup> (.013mm thick) land areas.

**RATING AND CHARACTERISTIC CURVES  
S1A THRU S1M**

