



# SURFACE MOUNT GLASS PASSIVATED RECTIFIER

## S1AB THRU S1MB

VOLTAGE RANGE 50 to 1000 Volts  
CURRENT 1.0 Ampere

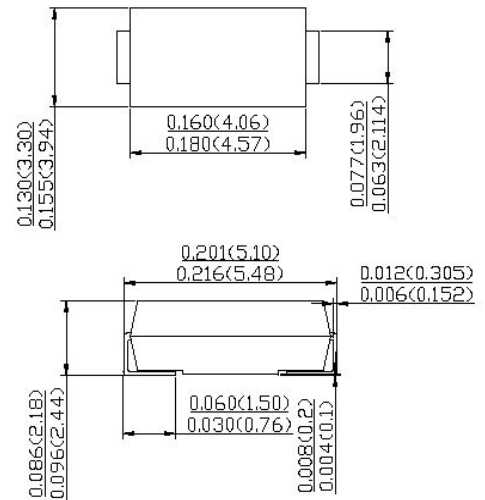
### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- For surface mounted applications
- Low profile package
- Built-in strain relief, ideal for automated placement
- Glass Passivated chip junction
- High temperature soldering:  
260 degree C /10 seconds, 265 degree C /5 seconds at terminals.

### MECHANICAL DATA

- Case: JEDEC DO-214AC molded plastic over glass passivated chip
- Terminals: Solder plated, solderable per MIL - STD - 750, Method 2026
- Polarity: Color band denotes cathode end
- Weight: 0.002 ounce, 0.064 gram

### SMB



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified

Dimensions in inches and (millimeters)

### Maximum Ratings & Thermal Characteristics

Parameter	Symbol	S1AB	S1BB	S1DB	S1GB	S1JB	S1KB	S1MB	Unit
Maximum recurrent peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum average forward rectified current (see fig.1)	I <sub>F(AV)</sub>	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) T <sub>L</sub> =110°C	I <sub>FSM</sub>	40				30			A
Typical thermal resistance (NOTE 1)	R <sub>θJA</sub>	75				85			°C/W
	R <sub>θJL</sub>	27				30			
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150							°C

### Electrical Characteristics

 Ratings at 25°C ambient temperature unless otherwise specified.

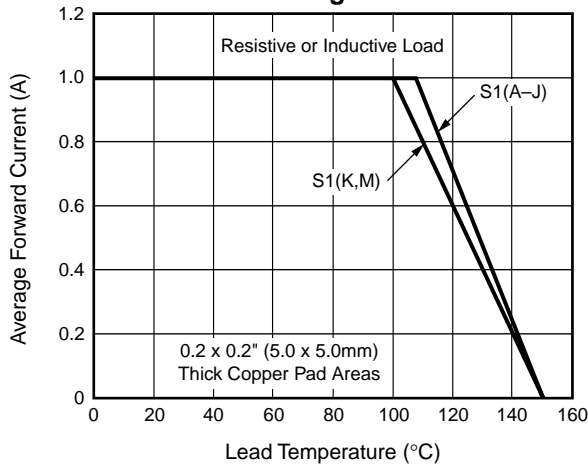
Parameter	Symbol	S1AB	S1BB	S1DB	S1GB	S1JB	S1KB	S1MB	Unit
Maximum instantaneous forward voltage at 1.0A	V <sub>F</sub>	1.10							V
Maximum DC reverse current at Rated DC blocking voltage	I <sub>R</sub>	1.0				5.0			μA
		50							
Typical reverse recovery time at I <sub>F</sub> = 0.5A, I <sub>R</sub> = 1.0A, I <sub>rr</sub> = 0.25A	t <sub>rr</sub>	1.8							μs
Typical junction capacitance at 4.0V, 1MHz	C <sub>J</sub>	12							pF

Note: (1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with 0.2 x 0.2" (5.0 x 5.0mm) copper pad areas

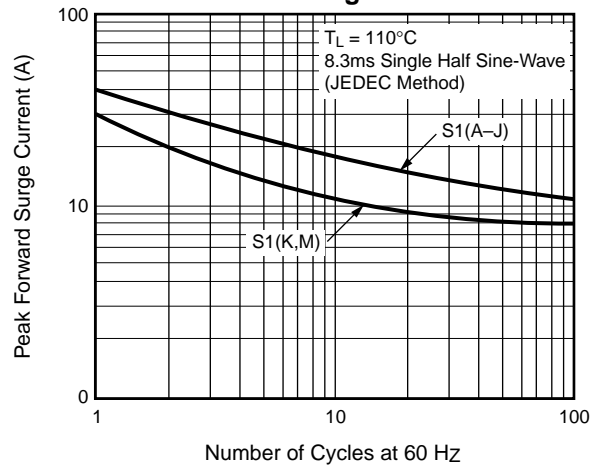


# RATINGS AND CHARACTERISTIC CURVES S1AB THRU S1MB

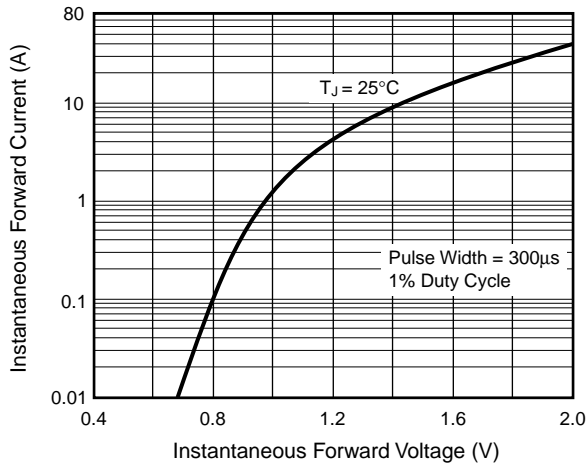
**Fig. 1 – Forward Current Derating Curve**



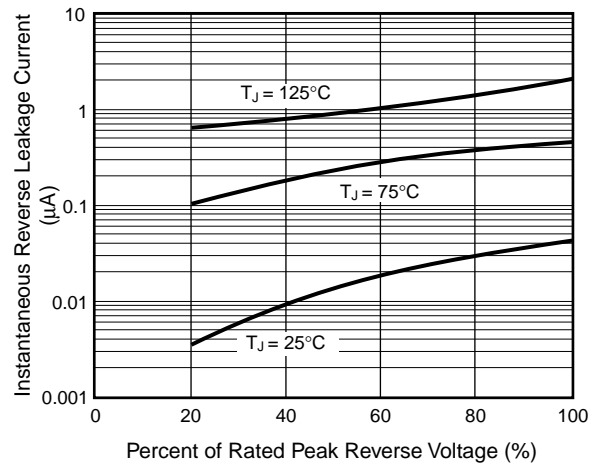
**Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current**



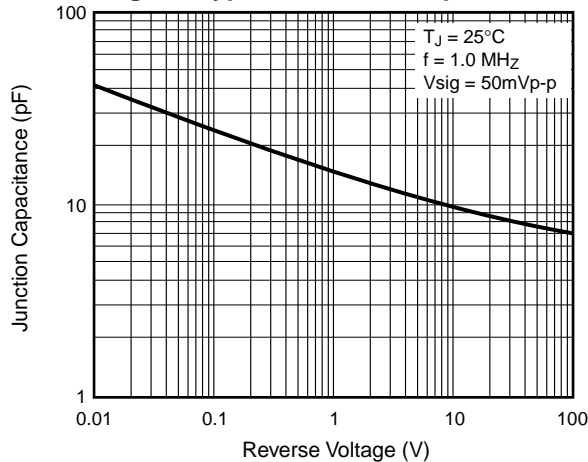
**Fig. 3 – Typical Instantaneous Forward Characteristics**



**Fig. 4 – Typical Reverse Leakage Characteristics**



**Fig. 5 – Typical Junction Capacitance**



**Fig. 6 – Transient Thermal Impedance**

