

# SB14-B

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

VOLTAGE: 40V

CURRENT: 1.0A



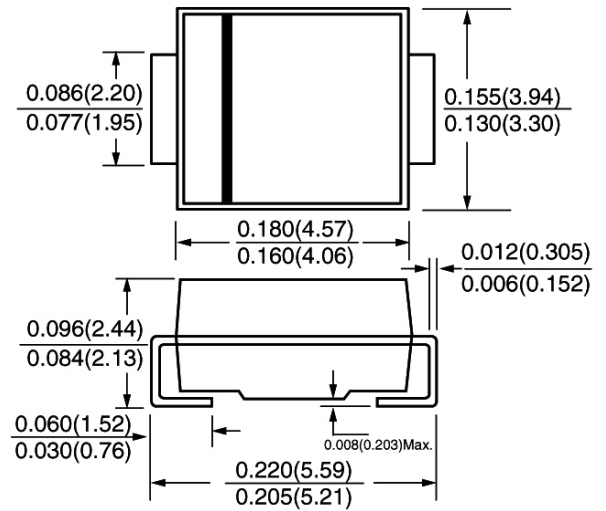
### FEATURE

Plastic package has Underwriters Laboratory Flammability Classification 94V-0  
For surface mounted applications  
Low profile package  
Built-in strain relief  
Low power loss, high efficiency  
High current capability, low forward voltage drop  
High surge capability  
For use in low voltage high frequency inverters, free wheeling, and polarity protection applications  
Guardring for overvoltage protection  
High temperature soldering guaranteed:  
250°C /10 seconds at terminals

### MECHANICAL DATA

Case: JEDEC DO-214AA molded plastic body  
Terminals: Solder plated, solderable per MIL-STD-750, Method 2026  
Polarity: Color band denotes cathode end  
Weight: 0.003 ounce, 0.093 gram

### SMB/DO--214AA



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

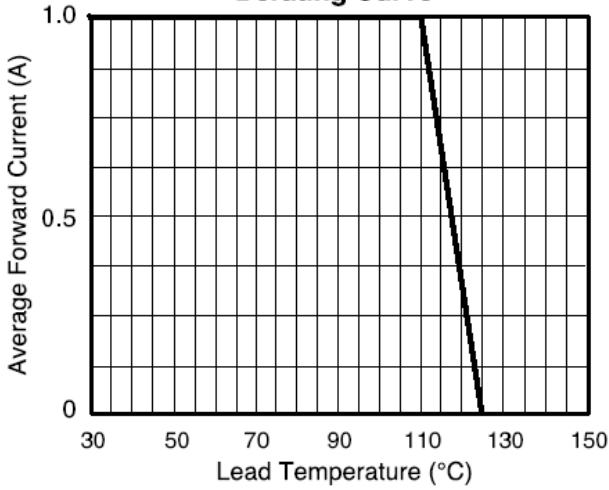
(single-phase, half-wave, 60Hz, resistive or inductive load rating at 25°C, unless otherwise stated)

|  | Symbol                            | SB14-B      | units |
|--|-----------------------------------|-------------|-------|
| Maximum Recurrent Peak Reverse Voltage   | V <sub>rrm</sub>                  | 40          | V     |
| Maximum RMS Voltage  | V <sub>rms</sub>                  | 28          | V     |
| Maximum DC blocking Voltage  | V <sub>dc</sub>                   | 40          | V     |
| Maximum Average Forward Rectified Current at T <sub>L</sub> =110°C                               | I <sub>f(av)</sub>                | 1.0         | A     |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load                | I <sub>fsm</sub>                  | 40.0        | A     |
| Maximum Instantaneous Forward Voltage at rated forward current and T <sub>j</sub> =25°C (Note 1) | V <sub>f</sub>                    | 0.50        | V     |
| Maximum Instantaneous Reverse Current at rated DC V <sub>l</sub> tage (Note 1)                   | I <sub>r</sub>                    | 1.0<br>10.0 | mA    |
| Typical Thermal Resistance   | R <sub>th(jl)</sub>               | 12.0        | °C/W  |
| Operating junction and Storage temperature range   | T <sub>stg</sub> , T <sub>j</sub> | -65 to +125 | °C    |

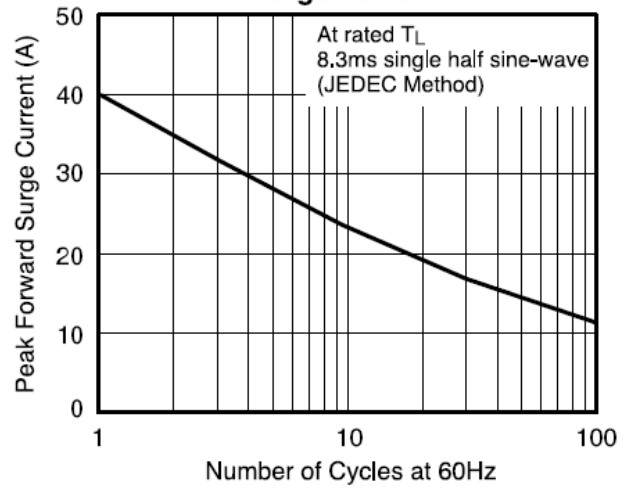
Note:

1. Pulse Test: Pulse Width=300us, Duty Cycle≤2.0%

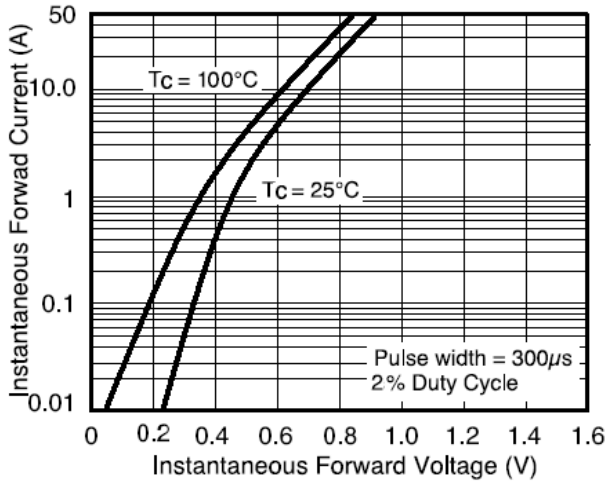
**Fig. 1 - Forward Current Derating Curve**



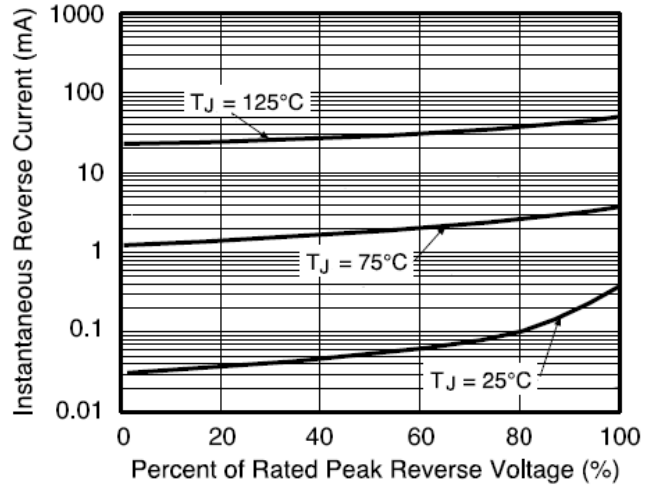
**Fig. 2 - Maximum Non-repetitive Surge Current**



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



**Fig. 4 - Typical Reverse Current Characteristics**



**Fig. 5 - Typical Junction Capacitance**

