



## SS52B THRU SS520B

Surface Mount Schottky Barrier Rectifier  
Reverse Voltage - 20 to 200V  
Forward Current - 5.0A

### FEATURES

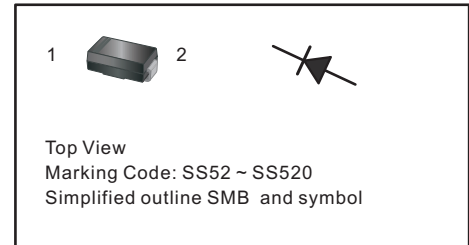
- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

### MECHANICAL DATA

- Case: SMB
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 0.055g / 0.002oz

### PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Cathode     |
| 2   | Anode       |



### Absolute Maximum Ratings and Electrical characteristics

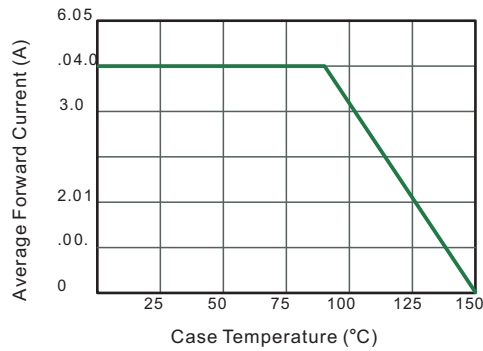
Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60Hz resistive or inductive load, for capacitive load, derate by 20 %

| Parameter                                                                                                 | Symbols            | SS52B      | SS54B | SS56B | SS58B | SS510B    | SS512B | SS515B | SS520B | Units |
|-----------------------------------------------------------------------------------------------------------|--------------------|------------|-------|-------|-------|-----------|--------|--------|--------|-------|
| Maximum Repetitive Peak Reverse Voltage                                                                   | V <sub>RRM</sub>   | 20         | 40    | 60    | 80    | 100       | 120    | 150    | 200    | V     |
| Maximum RMS voltage                                                                                       | V <sub>RMS</sub>   | 14         | 28    | 42    | 56    | 70        | 84     | 105    | 140    | V     |
| Maximum DC Blocking Voltage                                                                               | V <sub>DC</sub>    | 20         | 40    | 60    | 80    | 100       | 120    | 150    | 200    | V     |
| Maximum Average Forward Rectified Current                                                                 | I <sub>F(AV)</sub> | 5.0        |       |       |       |           |        |        |        | A     |
| Peak Forward Surge Current,8.3ms<br>Single Half Sine-wave Superimposed<br>on Rated Load (JEDEC method)    | I <sub>FSM</sub>   | 100        |       |       |       |           |        |        |        | A     |
| Max Instantaneous Forward Voltage at 5 A                                                                  | V <sub>F</sub>     | 0.55       |       | 0.70  |       | 0.85      |        | 0.95   |        | V     |
| Maximum DC Reverse Current   T <sub>a</sub> = 25°C<br>at Rated DC Reverse Voltage   T <sub>a</sub> =100°C | I <sub>R</sub>     | 0.5<br>20  |       |       |       | 0.1<br>10 |        |        |        | mA    |
| Typical Junction Capacitance <sup>(1)</sup>                                                               | C <sub>j</sub>     | 500        |       |       |       | 300       |        |        |        | pF    |
| Typical Thermal Resistance <sup>(2)</sup>                                                                 | R <sub>θJA</sub>   | 50         |       |       |       |           |        |        |        | °C/W  |
| Operating Junction Temperature Range                                                                      | T <sub>j</sub>     | -55 ~ +150 |       |       |       |           |        |        |        | °C    |
| Storage Temperature Range                                                                                 | T <sub>stg</sub>   | -55 ~ +150 |       |       |       |           |        |        |        | °C    |

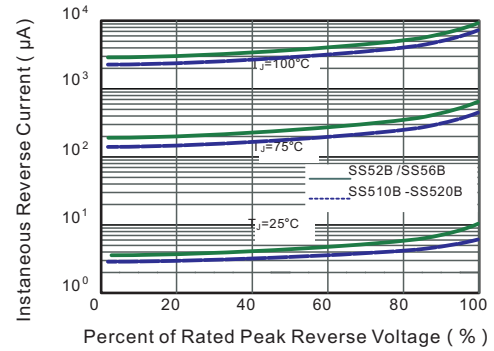
( 1 ) Measured at 1MHz and applied reverse voltage of 4 V D.C.

( 2 ) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

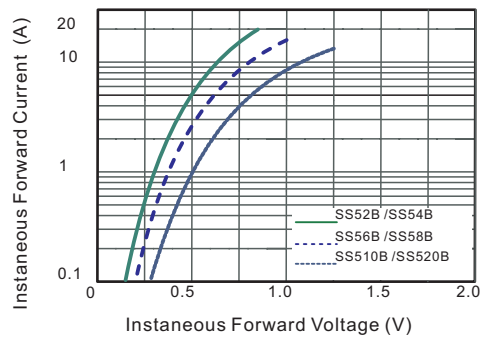
**Fig.1 Forward Current Derating Curve**



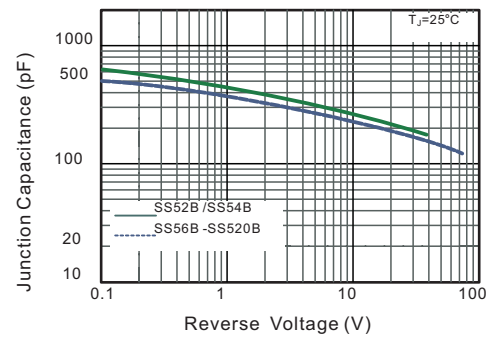
**Fig.2 Typical Reverse Characteristics**



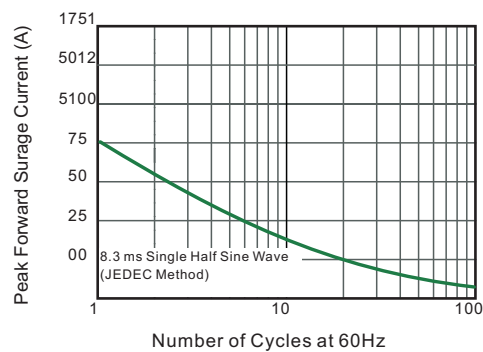
**Fig.3 Typical Forward Characteristic**



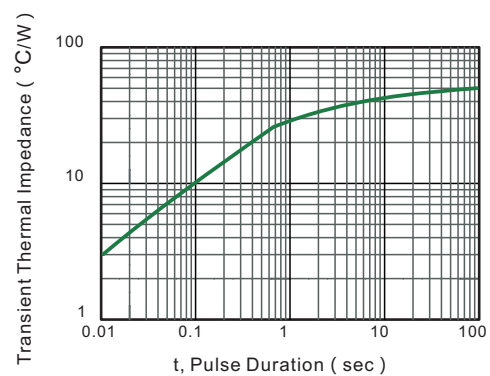
**Fig.4 Typical Junction Capacitance**



**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



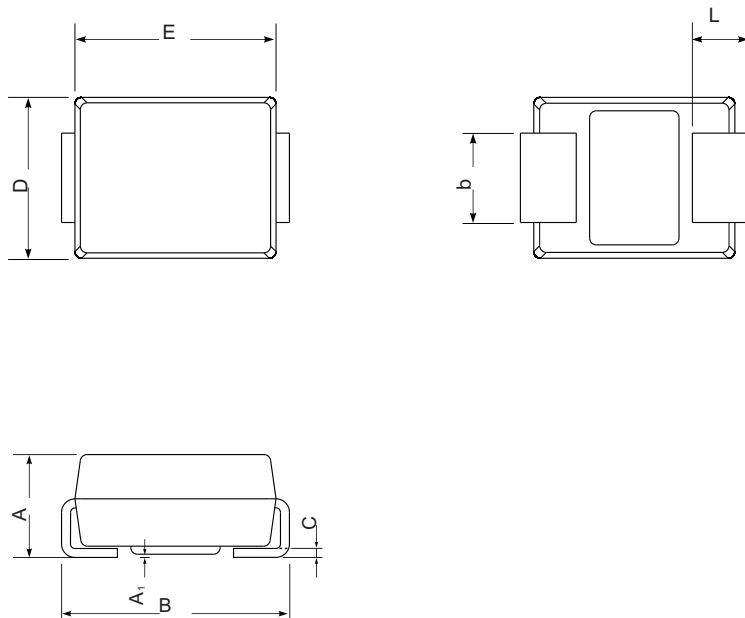
**Fig.6- Typical Transient Thermal Impedance**



## PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMB



SMB mechanical data

| UNIT |     | A   | E    | D    | B   | A <sub>1</sub> | L   | C     | b   |
|------|-----|-----|------|------|-----|----------------|-----|-------|-----|
| mm   | max | 2.5 | 4.70 | 3.94 | 5.5 | 0.21           | 1.5 | 0.305 | 2.2 |
|      | min | 2.1 | 4.06 | 3.3  | 5.0 | 0.05           | 0.8 | 0.152 | 1.9 |
| mil  | max | 98  | 185  | 155  | 216 | 8.3            | 59  | 12    | 87  |
|      | min | 82  | 160  | 130  | 196 | 2.0            | 32  | 6     | 75  |