



# SS52B THRU SS5200B

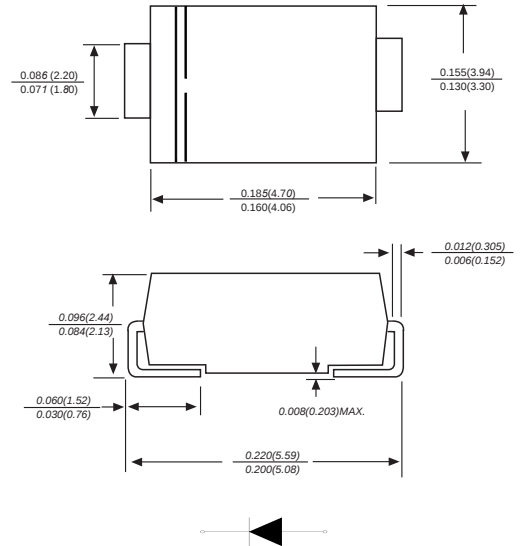
Reverse Voltage - 20 to 200 Volts Forward Current - 5.0 Ampere

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

### Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:  
250 °C/10 seconds at terminals

**DO-214AA/SMB**



Dimensions in inches and (millimeters)

### Mechanical Data

Case : JEDEC DO-214AA/SMB molded plastic body  
Terminals : Solderable per MIL-STD-750, Method 2026  
Polarity : Color band denotes cathode end Mounting  
Position : Any  
Weight : 0.003 ounce, 0.095 grams

### 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 current derate by 20%.

| Parameter                                                                                               | SYMBOLS           | SS52B        | SS53B        | SS54B        | SS55B        | SS56B        | SS58B        | SS510B        | SS5150B        | SS5200B        | UNITS |
|---------------------------------------------------------------------------------------------------------|-------------------|--------------|--------------|--------------|--------------|--------------|--------------|---------------|----------------|----------------|-------|
| Marking Code                                                                                            |                   | MDD<br>SS52B | MDD<br>SS53B | MDD<br>SS54B | MDD<br>SS55B | MDD<br>SS56B | MDD<br>SS58B | MDD<br>SS510B | MDD<br>SS5150B | MDD<br>SS5200B |       |
| Maximum repetitive peak reverse voltage                                                                 | V <sub>RRM</sub>  | 20           | 30           | 40           | 50           | 60           | 80           | 100           | 150            | 200            | V     |
| Maximum RMS voltage                                                                                     | V <sub>RMS</sub>  | 14           | 21           | 28           | 35           | 42           | 56           | 70            | 105            | 140            | V     |
| Maximum DC blocking voltage                                                                             | V <sub>DC</sub>   | 20           | 30           | 40           | 50           | 60           | 80           | 100           | 150            | 200            | V     |
| Maximum average forward rectified current at TL(see fig.1)                                              | I <sub>(AV)</sub> | 5.0          |              |              |              |              |              |               |                |                | A     |
| Peak forward surge current<br>8.3ms single half sine-wave<br>superimposed onrated load (JEDEC Method)   | I <sub>FSM</sub>  | 150          |              |              |              |              |              |               |                |                | A     |
| Maximum instantaneous forward voltage at 5.0A                                                           | V <sub>F</sub>    | 0.55         |              |              | 0.70         |              | 0.85         |               |                |                | V     |
| Maximum DCreverse current    T <sub>A</sub> =25℃<br>at rated DCblocking voltage    T <sub>A</sub> =125℃ | I <sub>R</sub>    | 1.0          |              |              | 0.3          |              |              |               |                |                | mA    |
|                                                                                                         |                   | 50           |              |              | 25           |              |              |               |                |                |       |
| Typical junction capacitance (NOTE 1)                                                                   | C <sub>J</sub>    | 500          |              |              | 300          |              |              |               |                |                | pF    |
| Typical thermal resistance (NOTE 2)                                                                     | R <sub>θJA</sub>  | 50.0         |              |              |              |              |              |               |                |                | ℃/W   |
| Operating junction temperature range                                                                    | T <sub>J</sub>    | -50 to +150  |              |              |              |              |              |               |                |                | ℃     |
| Storage temperature range                                                                               | T <sub>STG</sub>  | -50 to +150  |              |              |              |              |              |               |                |                | ℃     |

**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
2. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas



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## Typical Characteristics

Fig.1 Forward Current Derating Curve

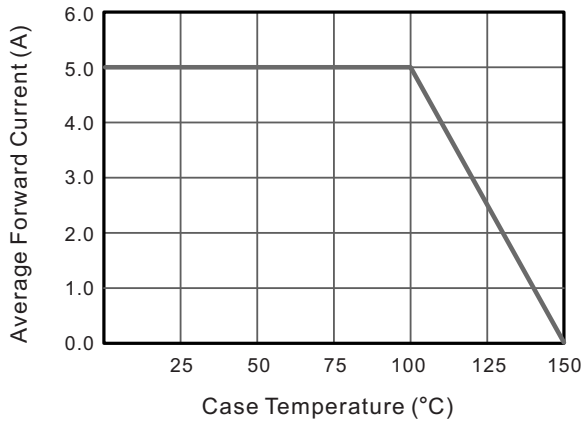


Fig.2 Typical Reverse Characteristics

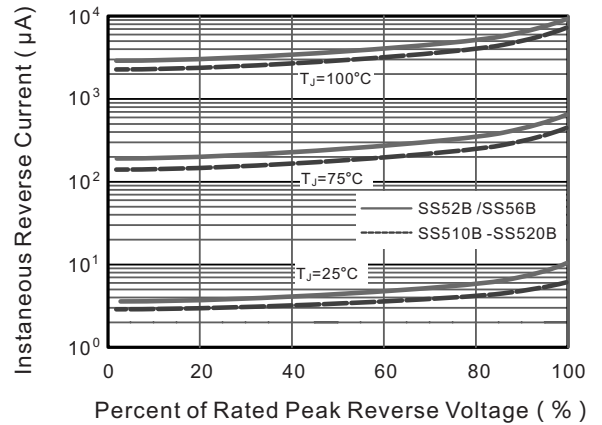


Fig.3 Typical Forward Characteristic

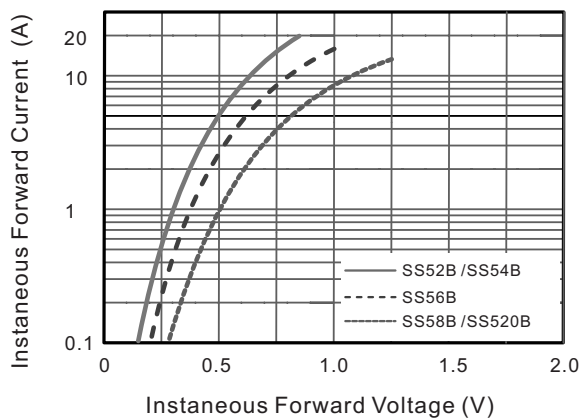


Fig.4 Typical Junction Capacitance

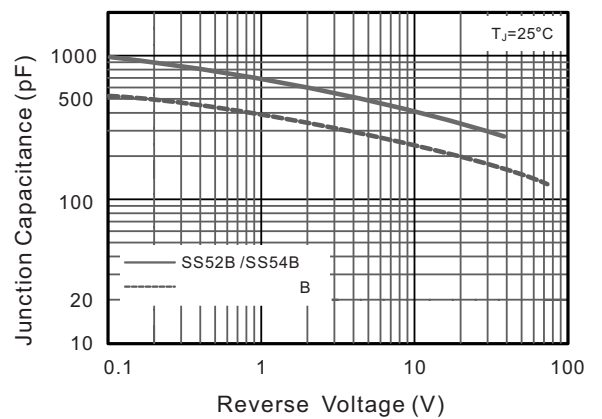


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

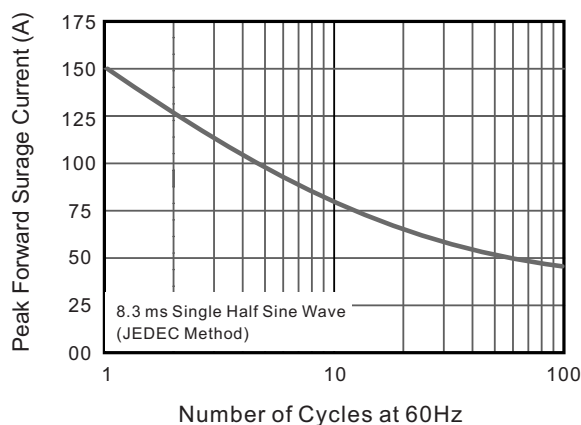
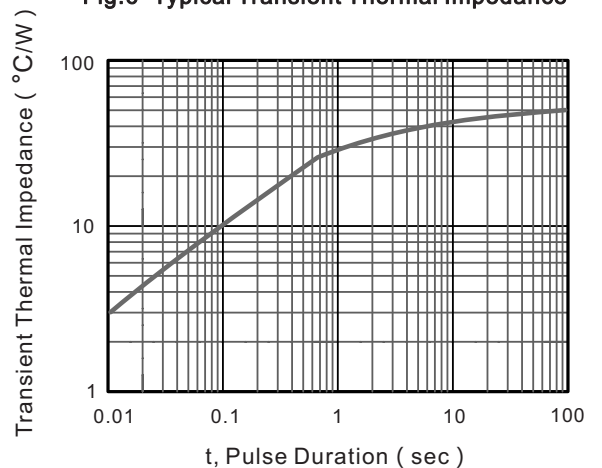


Fig.6- Typical Transient Thermal Impedance



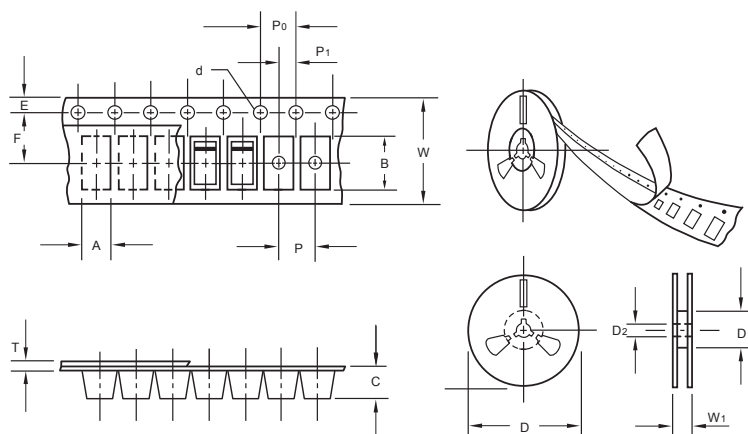
The curve above is for reference only.



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## Packing information



unit:mm

| Item                      | Symbol | Tolerance | SMB    |
|---------------------------|--------|-----------|--------|
| Carrier width             | A      | 0.1       | 3.81   |
| Carrier length            | B      | 0.1       | 5.41   |
| Carrier depth             | C      | 0.1       | 2.42   |
| Sprocket hole             | d      | 0.05      | 1.50   |
| 13" Reel outside diameter | D      | 2.0       | 330.00 |
| 13" Reel inner diameter   | D1     | min       | 50.00  |
| Feed hole diameter        | D2     | 0.5       | 13.00  |
| Sprocket hole position    | E      | 0.1       | 1.75   |
| Punch hole position       | F      | 0.1       | 5.55   |
| Punch hole pitch          | P      | 0.1       | 8.00   |
| Sprocket hole pitch       | P0     | 0.1       | 4.00   |
| Embossment center         | P1     | 0.1       | 2.00   |
| Overall tape thickness    | T      | 0.1       | 0.30   |
| Tape width                | W      | 0.3       | 12.00  |
| Reel width                | W1     | 1.0       | 12.30  |

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.

## Reel packing

| PACKAGE | REEL SIZE | REEL (pcs) | COMPONENT SPACING (mm) | BOX (pcs) | INNER BOX (mm) | REEL DIA, (mm) | CARTON SIZE (mm) | CARTON (pcs) | APPROX. GROSS WEIGHT (kg) |
|---------|-----------|------------|------------------------|-----------|----------------|----------------|------------------|--------------|---------------------------|
| SMB     | 13"       | 3,000      | 4.0                    | 6,000     | 190*190*41     | 330            | 365*365*360      | 48,000       | 14.0                      |

## Suggested Pad Layout



| Symbol | Unit (mm) | Unit (inch) |
|--------|-----------|-------------|
| A      | 2.8       | 0.110       |
| B      | 2.4       | 0.094       |
| C      | 4.6       | 0.181       |
| D      | 2.2       | 0.086       |
| E      | 7.0       | 0.276       |

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