

| <b>SURFACE MOUNT<br/>SCHOTTKY BARRIER RECTIFIERS</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <b>REVERSE VOLTAGE - 20 to 100 Volts<br/>FORWARD CURRENT - 5.0 Amperes</b>                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| <p><b>FEATURES</b></p> <ul style="list-style-type: none"> <li>● Metal-Semiconductor junction with guard ring</li> <li>● Epitaxial construction</li> <li>● Low forward voltage drop</li> <li>● High current capability</li> <li>● The plastic material carries UL recognition 94V-0</li> <li>● For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications</li> </ul> <p><b>MECHANICAL DATA</b></p> <ul style="list-style-type: none"> <li>● Case: Molded Plastic</li> <li>● Polarity: Color band denotes cathode</li> <li>● Weight: 0.003 ounces, 0.093 grams</li> </ul> | <p style="text-align: center;"><b>SMB</b></p> <p style="text-align: center;">Dimensions in inches and (millimeters)</p> |

| <b>MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS</b>          |  |  |  |  |  |  |  |  |  |
|----------------------------------------------------------------|--|--|--|--|--|--|--|--|--|
| Rating at 25°C ambient temperature unless otherwise specified. |  |  |  |  |  |  |  |  |  |
| Single phase, half wave, 60Hz, resistive or inductive load.    |  |  |  |  |  |  |  |  |  |
| For capacitive load, derate current by 20%                     |  |  |  |  |  |  |  |  |  |

| CHARACTERISTICS                                                                                         | SYMBOL            | SS52B       | SS53B | SS54B | SS55B | SS56B | SS58B | SS510B | UNIT |
|---------------------------------------------------------------------------------------------------------|-------------------|-------------|-------|-------|-------|-------|-------|--------|------|
| Maximum Recurrent Peak Reverse Voltage                                                                  | V <sub>RRM</sub>  | 20          | 30    | 40    | 50    | 60    | 80    | 100    | V    |
| Maximum RMS Voltage                                                                                     | V <sub>RMS</sub>  | 14          | 21    | 28    | 35    | 42    | 56    | 70     | V    |
| Maximum DC Blocking Voltage                                                                             | V <sub>DC</sub>   | 20          | 30    | 40    | 50    | 60    | 80    | 100    | V    |
| Maximum Average Forward Rectified Current<br>0.375" (9.5mm) Lead Lengths @T <sub>L</sub> =95 °C         | I <sub>(AV)</sub> | 5.0         |       |       |       |       |       |        | A    |
| Peak Forward Surage Current<br>8.3ms Single Half Sine-Wave<br>Super Imposed on Rated Load(JEDEC Method) | I <sub>FSM</sub>  | 150         |       |       |       |       |       |        | A    |
| Maximum Forward Voltage at 5.0A DC                                                                      | V <sub>F</sub>    | 0.45        | 0.55  | 0.6   | 0.7   |       | 0.85  |        | V    |
| Maximum DC Reverse Current @T <sub>J</sub> =25°C<br>at Rated DC Bolcking Voltage @T <sub>J</sub> =100°C | I <sub>R</sub>    | 1.0<br>50   |       |       |       |       |       |        | mA   |
| Typical Junction Capacitance (Note1)                                                                    | C <sub>J</sub>    | 500         |       |       | 350   |       |       |        | pF   |
| Typical Thermal Resistance (Note2)                                                                      | R <sub>θJA</sub>  | 15          |       |       | 10    |       |       |        | °C/W |
| Operating Temperature Range                                                                             | T <sub>J</sub>    | -55 to +150 |       |       |       |       |       |        | °C   |
| Storage Temperature Range                                                                               | T <sub>STG</sub>  | -55 to +150 |       |       |       |       |       |        | °C   |

|                                                                                                                               |  |  |  |  |  |  |  |  |  |
|-------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|
| <p>NOTES: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC</p> <p>2. Thermal resistance junction to ambient,</p> |  |  |  |  |  |  |  |  |  |
|-------------------------------------------------------------------------------------------------------------------------------|--|--|--|--|--|--|--|--|--|

FIG. 1 – FORWARD CURRENT DERATING CURVE

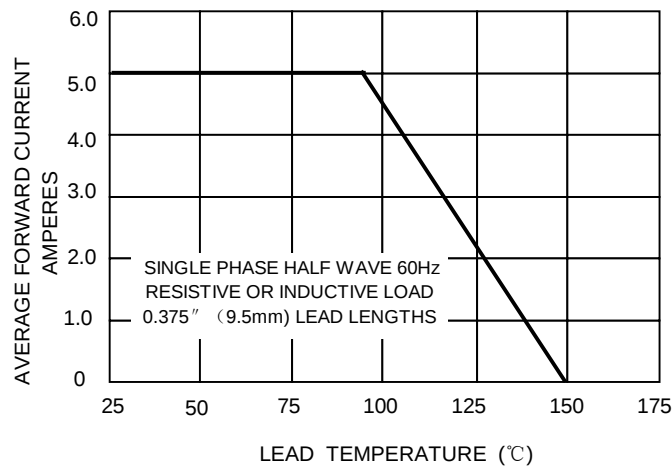


FIG. 2 – MAXIMUM NON-REPETITIVE SURGE CURRENT

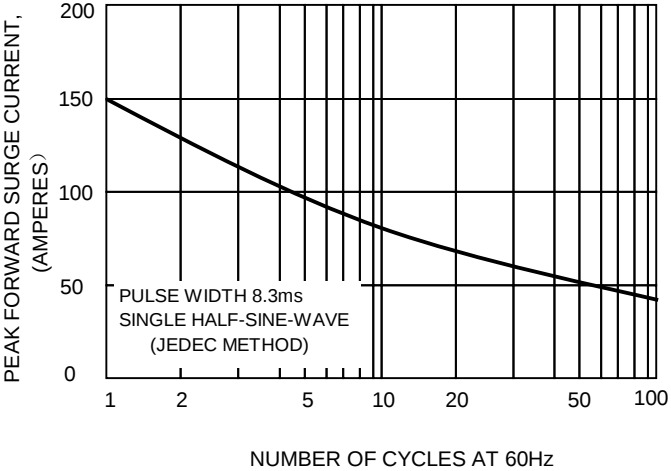


FIG.3 – TYPICAL JUNCTION CAPACITANCE

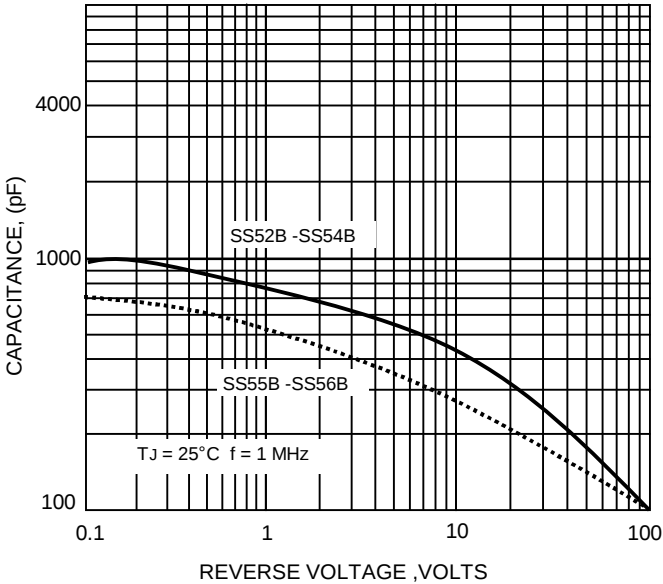


FIG.4-TYPICAL FORWARD CHARACTERISTICS

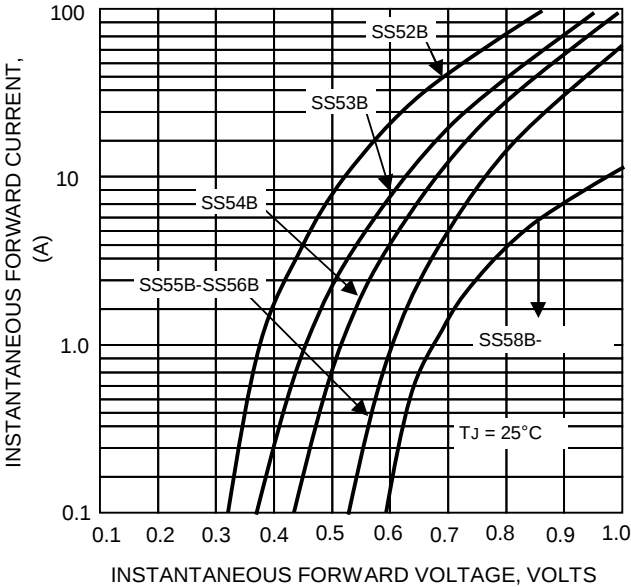


FIG.5-TYPICAL REVER CHARACTERISTICS

