



*DC COMPONENTS CO., LTD.*

RECTIFIER SPECIALISTS

SS52BF  
THRU  
SS520BF

**TECHNICAL SPECIFICATIONS OF SCHOTTKY BARRIER RECTIFIER**

**VOLTAGE RANGE - 20 to 200 Volts**

**CURRENT - 5.0 Amperes**

**FEATURES**

- \* Ideal for surface mounted applications
- \* Glass passivated junction
- \* Low leakage current
- \* Low power loss
- \* High efficiency

**MECHANICAL DATA**

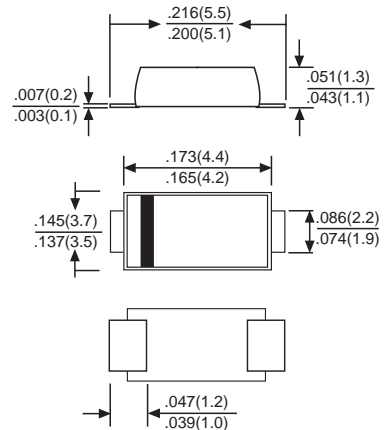
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solder plated solderable per MIL-STD-750, Method 2026
- \* Polarity: As marked
- \* Mounting position: Any
- \* Weight: 0.06 gram

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

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



SMBFL



Dimensions in inches and (millimeters)

|   | SYMBOL | SS52BF      | SS54BF | SS56BF | SS58BF | SS510BF | SS512BF | SS515BF | SS520BF | UNITS |
|---|--------|-------------|--------|--------|--------|---------|---------|---------|---------|-------|
| Maximum Recurrent Peak Reverse Voltage  | VRRM   | 20          | 40     | 60     | 80     | 100     | 120     | 150     | 200     | Volts |
| Maximum RMS Voltage   | VRMS   | 14          | 28     | 42     | 56     | 70      | 84      | 105     | 140     | Volts |
| Maximum DC Blocking Voltage   | VDC    | 20          | 40     | 60     | 80     | 100     | 120     | 150     | 200     | Volts |
| Maximum Average Forward Rectified Current at Derating Lead Temperature at TA = 75 °C              | IO     | 5.0         |        |        |        |         |         |         |         | Amps  |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) | IFSM   | 150         |        |        |        |         |         |         |         | Amps  |
| Maximum Instantaneous Forward Voltage at 5.0A DC  | VF     | 0.45        | 0.55   | 0.70   |        | 0.85    |         |         | Volts   |       |
| Maximum DC Reverse Current at Rated DC Blocking Voltage   | IR     | @TA = 25°C  |        |        |        |         |         |         |         | mAmps |
|   |        | @TA = 100°C |        |        |        |         |         |         |         |       |
| Typical Thermal Resistance (Note 1)   | RθJA   | 40          |        |        |        |         |         |         |         | °C/W  |
| Typical Junction Capacitance (Note 2)   | CJ     | 800         |        |        | 500    |         |         |         |         | pF    |
| Operating Temperature Range   | TJ     | -55 to +125 |        |        |        |         |         |         |         | °C    |
| Storage Temperature Range   | TSTG   | -55 to +150 |        |        |        |         |         |         |         | °C    |

- NOTES : 1. Thermal Resistance (Junction to Ambient)  
2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.  
3. P.C.B. mounted with 0.5x0.5"(12.7x12.7mm<sup>2</sup>) copper pad area.

# RATING AND CHARACTERISTIC CURVES ( SS52BF THRU SS520BF )

FIG.1 - TYPICAL FORWARD CURRENT DERATING CURVE

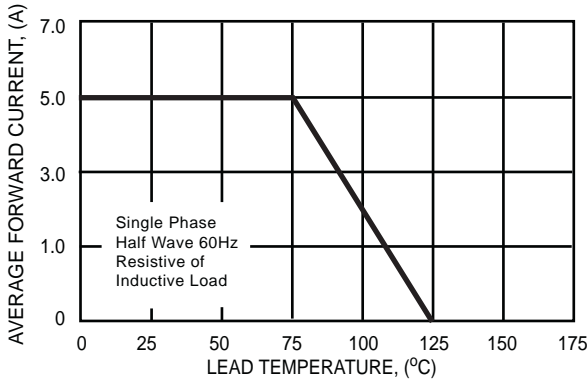


FIG.2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

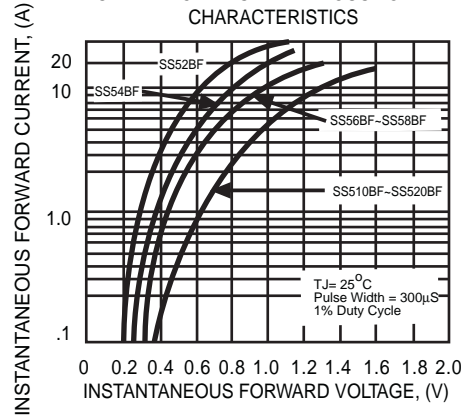


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

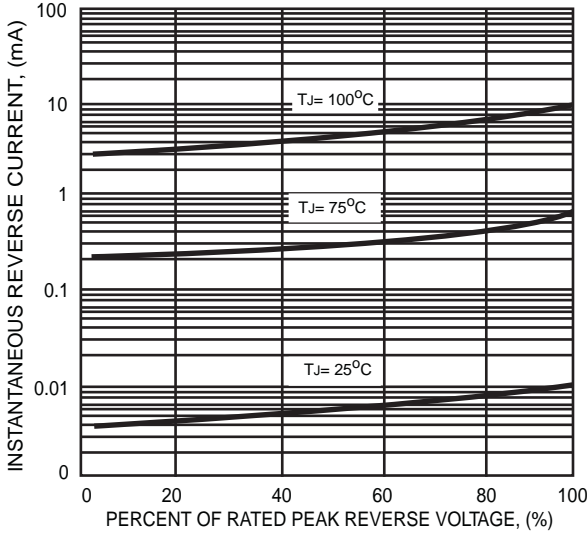


FIG.4 - TYPICAL TRANSIENT THERMAL IMPEDANCE

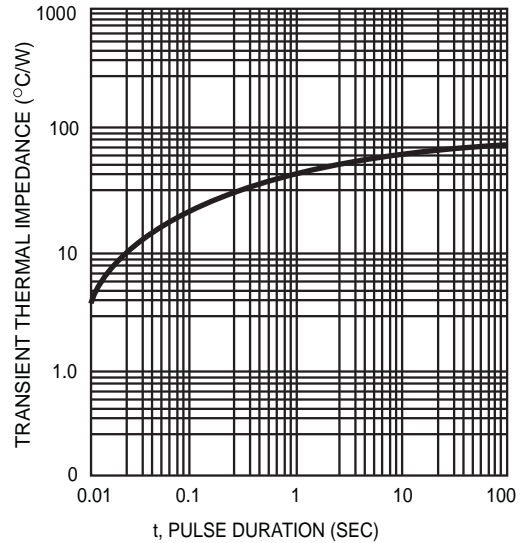


FIG.5 - TYPICAL JUNCTION CAPACITANCE

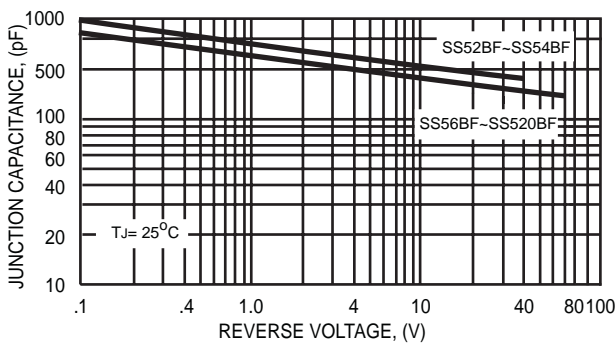
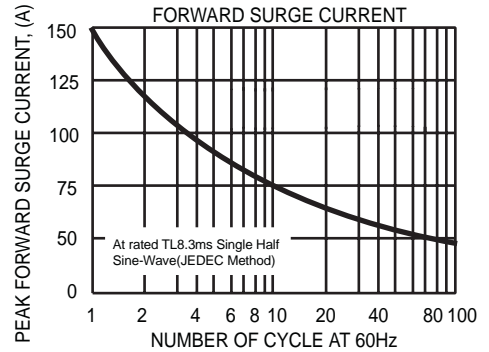


FIG.6 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



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