

SMBF Surface Mount Schottky Barrier Rectifier

Features

- High efficiency operation
- Metal silicon junction,majority carrier conduction
- Ultra low forward voltage drop,low power losses
- High forward surge current capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

Applications

For use in low voltage,high frequency inverters,free wheeling,and polarity protection applications.

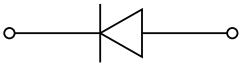
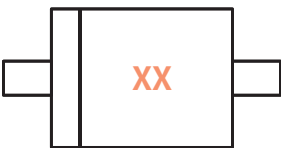
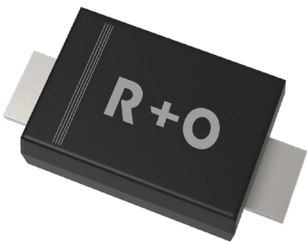
Mechanical Data

- Case: SMBF  
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026
- Polarity: Cathode line denotes the cathode end

Function Diagram

Reverse Voltage  
20-200 V  
Forward Current  
3 Ampere

SMBF



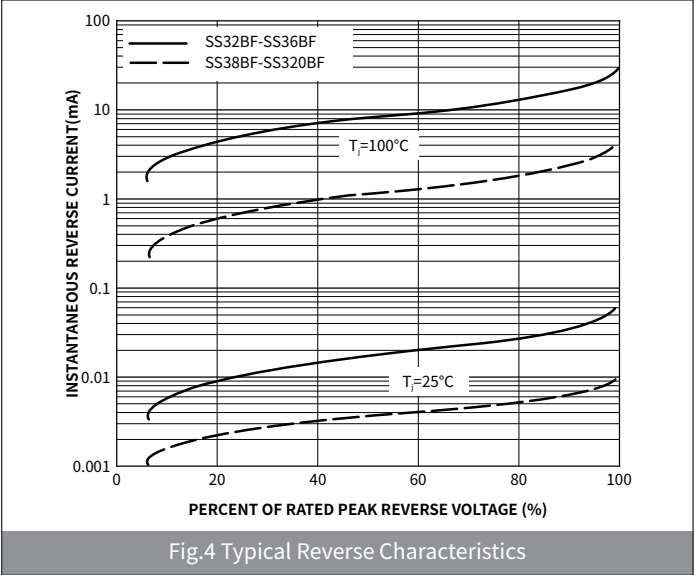
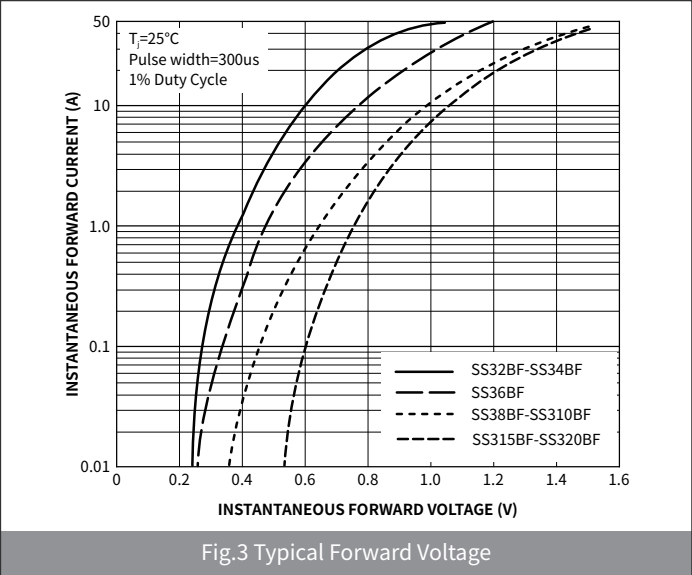
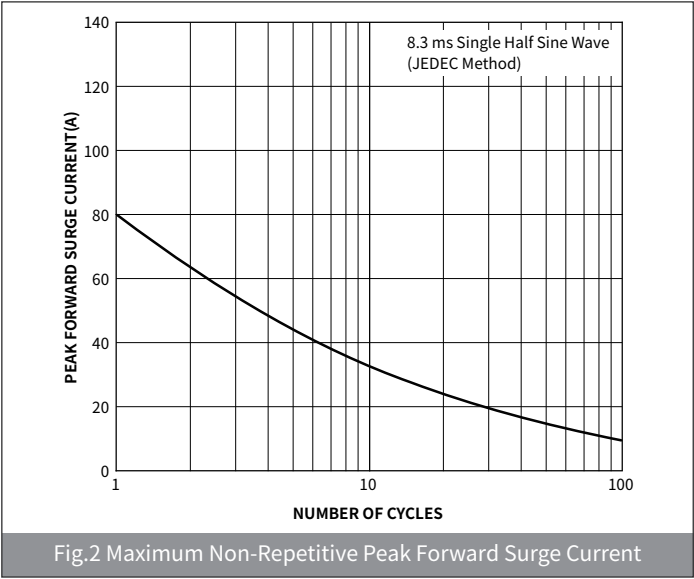
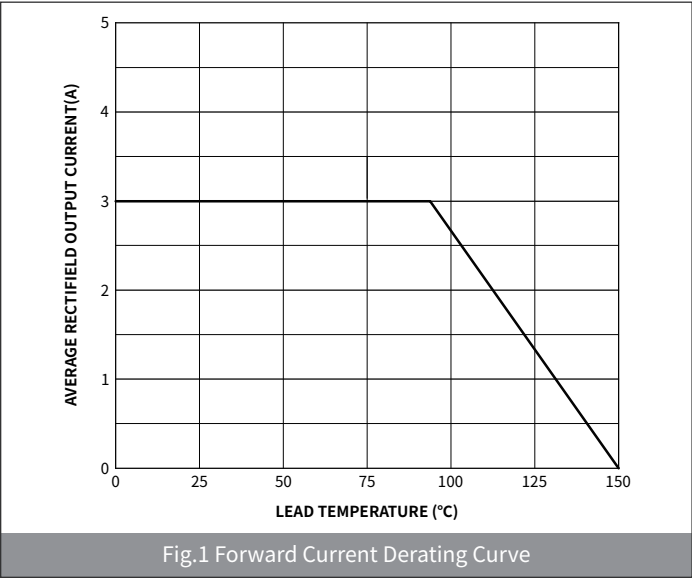
Maximum Ratings (Ta=25°C Unless otherwise specified)

| PARAMETER                                                                             | SYMBOL             | UNIT  | SS32BF     | SS34BF | SS36BF | SS38BF | SS310BF | SS315BF | SS320BF |
|---------------------------------------------------------------------------------------|--------------------|-------|------------|--------|--------|--------|---------|---------|---------|
| Device marking code                                                                   |                    |       | SS32BF     | SS34BF | SS36BF | SS38BF | SS310BF | SS315BF | SS320BF |
| Maximum Repetitive Peak Reverse Voltage                                               | V <sub>RRM</sub>   | V     | 20         | 40     | 60     | 80     | 100     | 150     | 200     |
| Maximum RMS Voltage                                                                   | V <sub>RMS</sub>   | V     | 14         | 28     | 42     | 56     | 70      | 105     | 140     |
| Maximum DC blocking Voltage                                                           | V <sub>DC</sub>    | V     | 20         | 40     | 60     | 80     | 100     | 150     | 200     |
| Maximum Average Forward Rectified Current @60Hz sine wave, Resistance load,TL (Fig.1) | I <sub>F(AV)</sub> | A     | 3.0        |        |        |        |         |         |         |
| Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave                    | I <sub>FSM</sub>   | A     | 80         |        |        |        |         |         |         |
| Storage temperature                                                                   | T <sub>stg</sub>   | °C    | -55 ~ +150 |        |        |        |         |         |         |
| Junction temperature                                                                  | T <sub>j</sub>     | °C    | -55 ~ +150 |        |        |        |         |         |         |
| Typical Thermal Resistance                                                            | R <sub>θJ-A</sub>  | °C /W | 78         |        |        |        |         |         |         |
|                                                                                       | R <sub>θJ-L</sub>  | °C /W | 20         |        |        |        |         |         |         |

● Electrical Characteristics (Ta=25°C Unless otherwise noted)

| PARAMETER                                               | TEST CONDITIONS                | SYMBOL   | UNIT | SS32BF | SS34BF | SS36BF | SS38BF | SS310BF | SS315BF | SS320BF |
|---------------------------------------------------------|--------------------------------|----------|------|--------|--------|--------|--------|---------|---------|---------|
| Maximum instantaneous forward voltage                   | $I_F=3.0A$                     | $V_F$    | V    | 0.55   |        | 0.70   |        | 0.85    |         | 0.95    |
| Maximum DC reverse current at rated DC blocking voltage | $V_R=V_{DC}, T_A=25^{\circ}C$  | $I_{R1}$ | mA   | 0.5    |        |        |        | 0.05    |         |         |
|                                                         | $V_R=V_{DC}, T_A=100^{\circ}C$ | $I_{R2}$ |      | 50     |        |        |        | 10      |         |         |
| Typical junction capacitance                            | 4.0V DC, 1MHz                  | $C_J$    | pF   | 450    |        |        |        | 400     |         |         |

● Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)



# SS32BF THRU SS320BF

SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

## ● Ordering Information

| PACKAGE | PACKAGE CODE | UNIT WEIGHT(g) | REEL(pcs) | BOX(pcs) | CARTON(pcs) | DELIVERY MODE |
|---------|--------------|----------------|-----------|----------|-------------|---------------|
| SMBF    | R2           | 0.065          | 3000      | 6000     | 48000       | 11"           |
| SMBF    | R3           | 0.065          | 5000      | 10000    | 80000       | 13"           |

## ● Package Outline Dimensions (SMBF)

| Symbol | Dimensions  |      |        |       |
|--------|-------------|------|--------|-------|
|        | Millimeters |      | Inches |       |
|        | Min.        | Max. | Min.   | Max.  |
| A      | 1.90        | 2.10 | 0.074  | 0.083 |
| B      | 4.15        | 4.45 | 0.163  | 0.175 |
| C      | 3.40        | 3.80 | 0.133  | 0.150 |
| D      | 5.10        | 5.60 | 0.200  | 0.220 |
| E      | 1.05        | 1.55 | 0.041  | 0.061 |
| F      | 0.70        | 1.35 | 0.027  | 0.053 |
| G      | 0.15        | 0.25 | 0.006  | 0.010 |

Cathode Band

## ● Suggested Pad Layout

| Symbol | Dimensions  |      |        |       |
|--------|-------------|------|--------|-------|
|        | Millimeters |      | Inches |       |
|        | Min.        | Max. | Min.   | Max.  |
| M      | 2.20        | -    | 0.086  | -     |
| J      | 1.90        | -    | 0.075  | -     |
| K      | -           | 2.40 | -      | 0.094 |