

# BR38F~BR320F

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

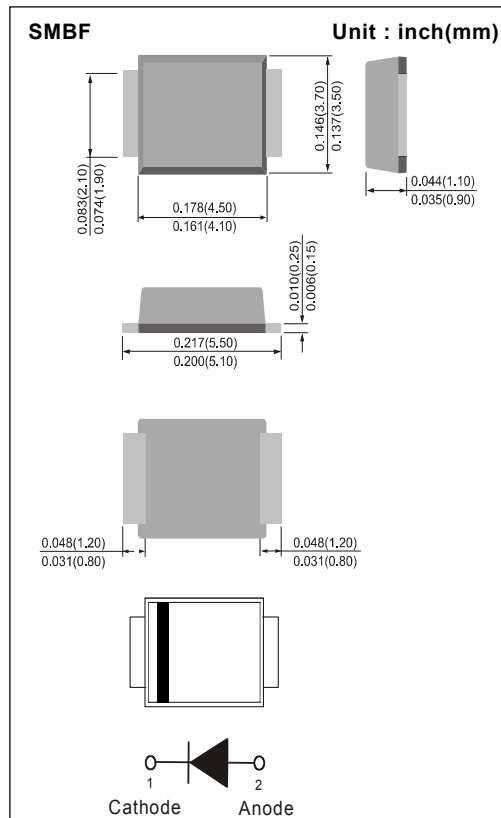
**VOLTAGE** 80-200Volt **CURRENT** 3 Ampere

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications in order to optimize board space
- Ultra thin profile package for space constrained utilization
- Package suitable for automated handling
- Low power loss,high efficiency
- High surge capacity
- Lead free in compliance with EU RoHS2.0 (2011/65/EU & 2015/865/EU directive)
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### MECHANICAL DATA

- Case: SMBF molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750,Method 2026
- Approx. Weight: 0.0018 ounces, 0.05 grams
- Polarity: Color band denotes cathode end
- Marking: Part number



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS (Ta=25°C unless otherwise noted)

| PARAMETER                                                                             | SYMBOL                               | BR38F       | BR39F | BR310F | BR315F | BR320F | UNITS  |
|---------------------------------------------------------------------------------------|--------------------------------------|-------------|-------|--------|--------|--------|--------|
| Recurrent Peak Reverse Voltage                                                        | V <sub>RRM</sub>                     | 80          | 90    | 100    | 150    | 200    | V      |
| RMS Voltage                                                                           | V <sub>RMS</sub>                     | 56          | 63    | 70     | 105    | 140    | V      |
| DC Blocking Voltage                                                                   | V <sub>R</sub>                       | 80          | 90    | 100    | 150    | 200    | V      |
| Average Forward Current                                                               | I <sub>F(AV)</sub>                   | 3           |       |        |        |        | A      |
| Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load   | I <sub>FSM</sub>                     | 80          |       |        |        |        | A      |
| Forward Voltage at 3A                                                                 | V <sub>F</sub>                       | 0.8         |       |        | 0.9    |        | V      |
| DC Reverse Current at Rated DC Blocking Voltage                                       | I <sub>R</sub>                       | 0.05        |       |        |        |        | mA     |
| Typical Junction Capacitance (V <sub>R</sub> =4V, f=1MHz)                             | C <sub>J</sub>                       | 120         |       |        | 100    | 70     | pF     |
| Typical Thermal Resistance ,Junction to Lead (Note 1)<br>Junction to Ambient (Note 2) | R <sub>θJL</sub><br>R <sub>θJA</sub> | 17<br>135   |       |        |        |        | °C / W |
| Operating Junction Temperature and Storage Temperature Range                          | T <sub>J</sub> , T <sub>STG</sub>    | -65 to +150 |       |        |        |        | °C     |

### NOTES :

1. Mounted on FR-4 PCB, single-sided copper, with 100cm<sup>2</sup> copper pad area.
2. Mounted on FR-4 PCB, single-sided copper, mini pad.

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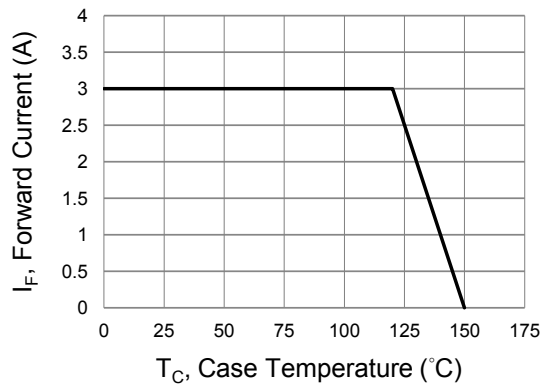


Fig.1 Forward Current Derating Curve

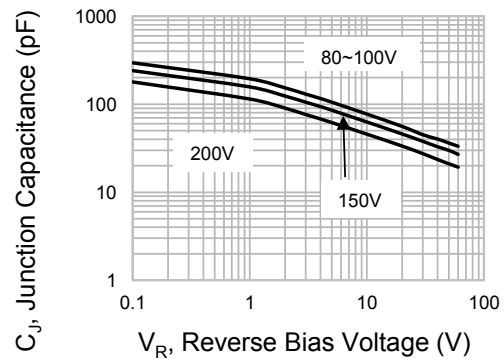


Fig.2 Typical Junction Capacitance

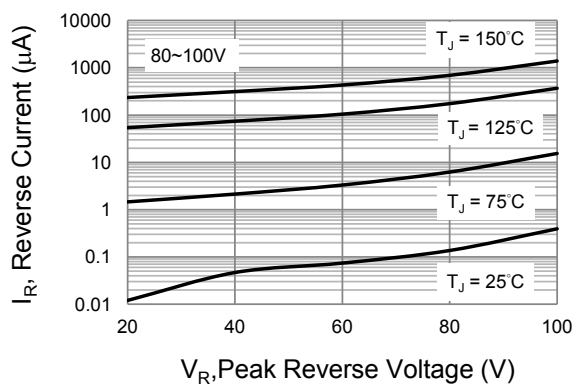


Fig.3 Typical Reverse Characteristics

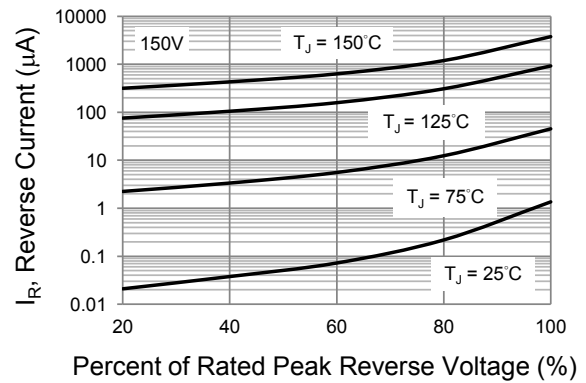


Fig.4 Typical Reverse Characteristics

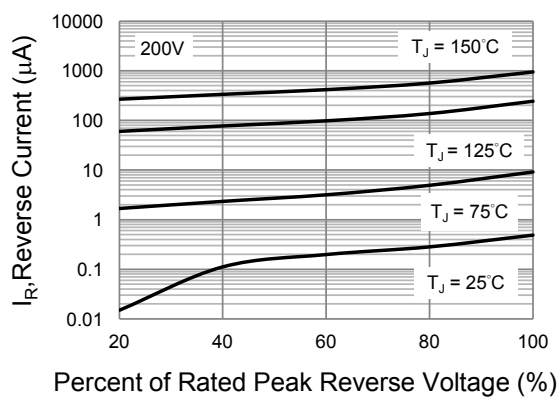


Fig.5 Typical Reverse Characteristics

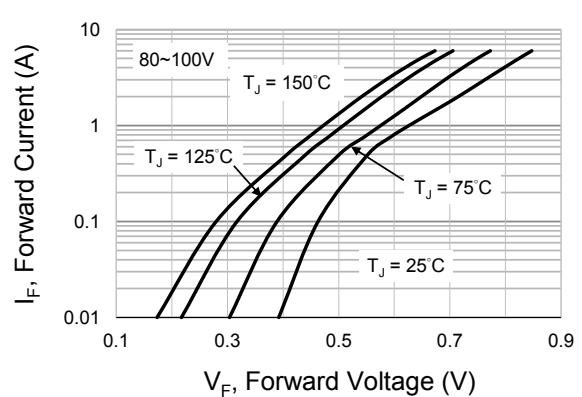
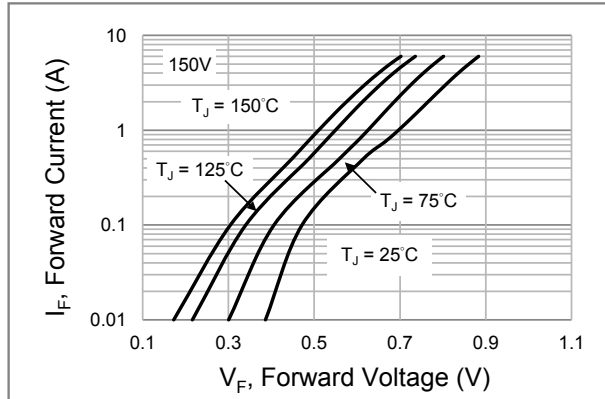
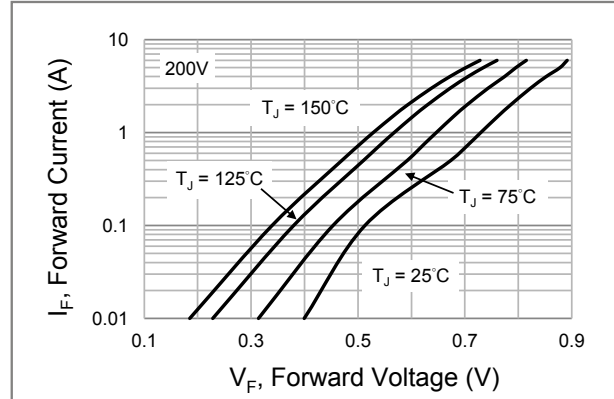


Fig.6 Typical Forward Characteristics

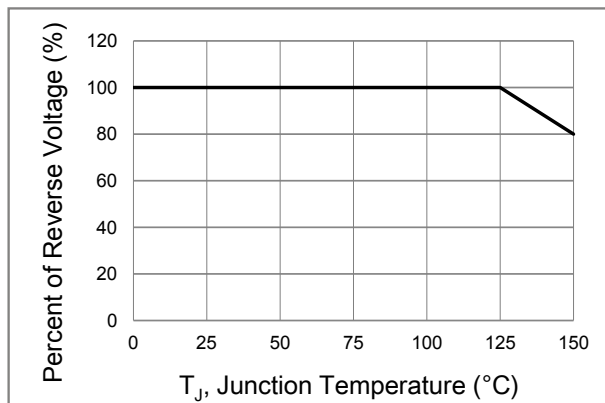
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**Fig.7 Typical Forward Characteristics**



**Fig.8 Typical Forward Characteristics**



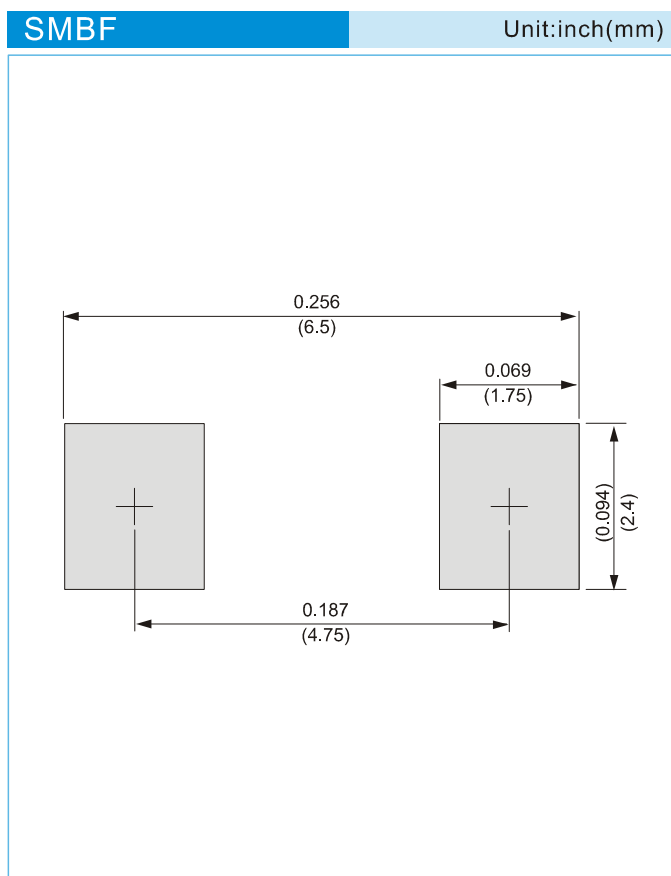
**Fig.9 Operating Temperature Derating Curve**

## BR38F~BR320F

### PART NO PACKING CODE VERSION

| Part No Packing Code | Package Type | Packing Type      | Marking | Version      |
|----------------------|--------------|-------------------|---------|--------------|
| BR38F_R2_00001       | SMBF         | 5K pcs / 13" reel | BR38F   | Halogen free |

### MOUNTING PAD LAYOUT





## BR38F~BR320F

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