

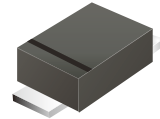
## SS24BF-HF Thru. SS220BF-HF

Reverse Voltage: 40 to 200 Volts

Forward Current: 2.0 Amp

RoHS Device

Halogen Free

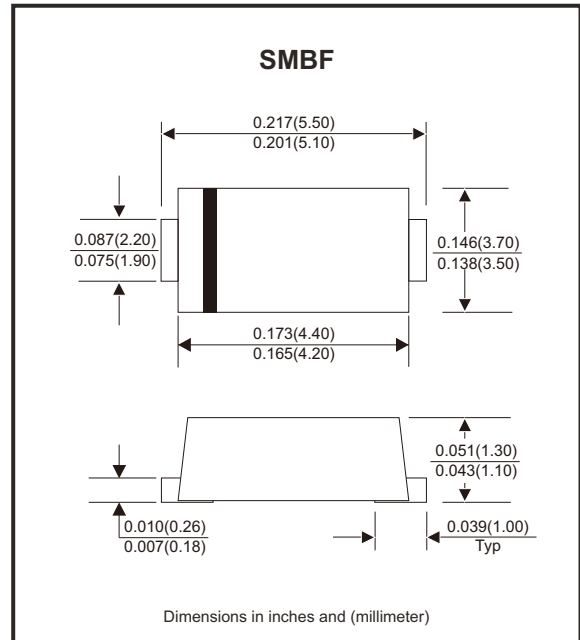


### Features

- Metal silicon junction, majority carrier conduction.
- For surface mounted applications.
- Low power loss, high efficiency.
- High forward surge current capability.
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications.

### Mechanical data

- Case: SMBF
- Terminals: Solderable per MIL-STD-750, method 2026.



### Circuit Diagram



### 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, derate by 20%

| Parameter   | Symbols         | SS24BF-HF                 | SS26BF-HF | SS210BF-HF                 | SS215BF-HF | SS220BF-HF | Units |
|---|-----------------|---------------------------|-----------|----------------------------|------------|------------|-------|
| Maximum repetitive peak reverse voltage   | $V_{RRM}$       | 40                        | 60        | 100                        | 150        | 200        | V     |
| Maximum RMS voltage   | $V_{RMS}$       | 28                        | 42        | 70                         | 105        | 140        | V     |
| Maximum DC blocking voltage   | $V_{DC}$        | 40                        | 60        | 100                        | 150        | 200        | V     |
| Maximum average forward rectified current   | $I_{F(AV)}$     | 2                         |           |                            |            |            | A     |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | $I_{FSM}$       | 55                        |           | 45                         |            |            | A     |
| Max instantaneous forward voltage at 2A   | $V_F$           | 0.55                      | 0.70      | 0.85                       | 0.95       |            | V     |
| Maximum DC reverse current<br>at rated DC reverse voltage   | $I_R$           | $T_J = 25^\circ C$<br>0.5 |           | $T_J = 100^\circ C$<br>0.3 |            |            | mA    |
| Typical junction capacitance (Note 1)   | $C_j$           | 220                       |           | 110                        |            |            | pF    |
| Typical thermal resistance (Note 2)   | $R_{\theta JA}$ | 75                        |           |                            |            |            | °C/W  |
| Operating junction temperature range  | $T_J$           | -55 ~ +150                |           |                            |            |            | °C    |
| Storage temperature range   | $T_{stg}$       | -55 ~ +150                |           |                            |            |            | °C    |

Notes: 1. Measured at 1 MHz and applied reverse voltage of 4 V D.C  
2. P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

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REV:A

## Rating and Characteristic Curves (SS24BF-HF Thru. SS220BF-HF)

Fig.1 - Forward Current Derating Curve

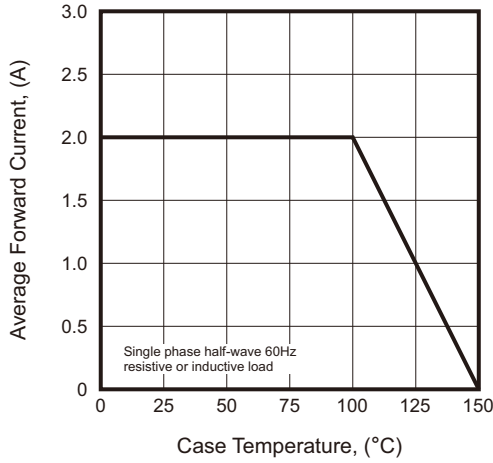


Fig.2 - Typical Reverse Characteristics

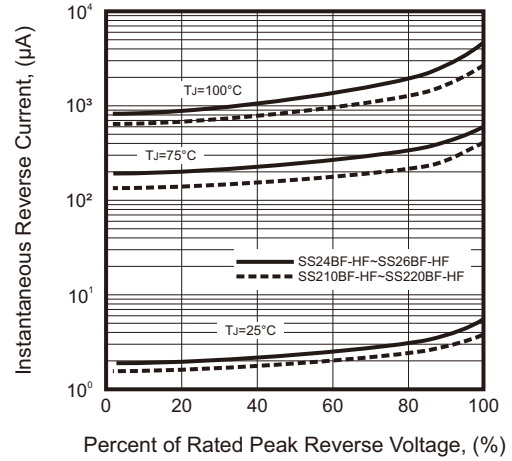


Fig.3 - Typical Forward Characteristic

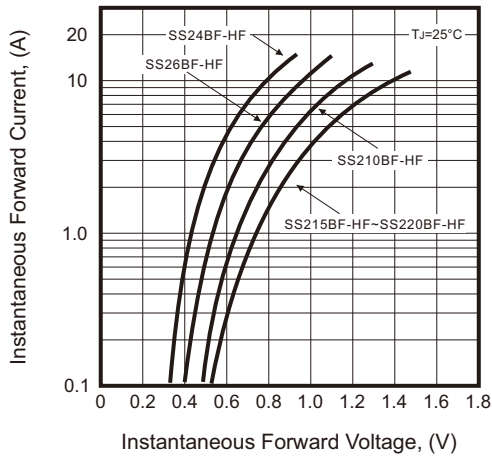


Fig.4 - Typical Junction Capacitance

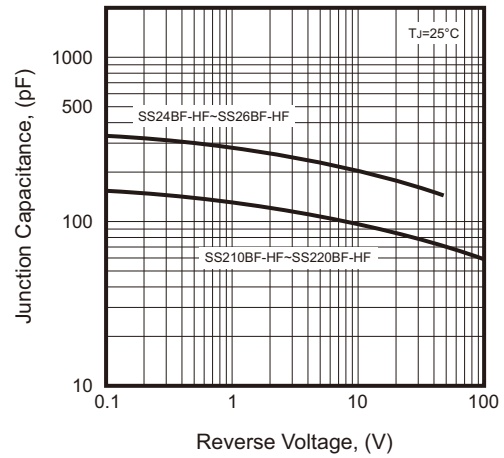


Fig.5 - Maximum Non-Repetitive Peak Forward Surge Current

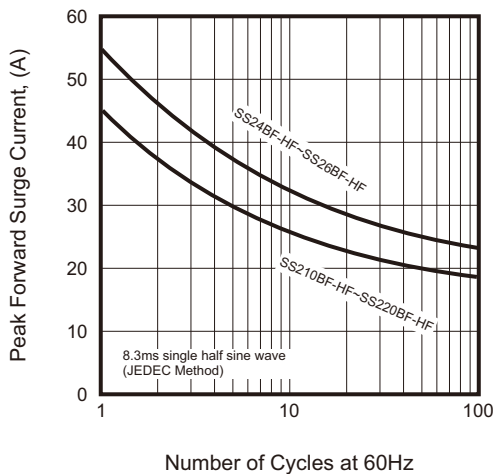
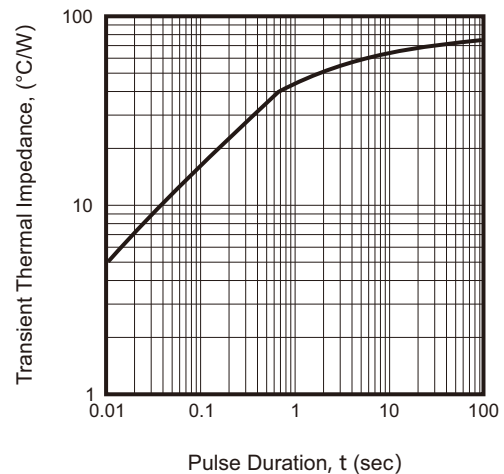
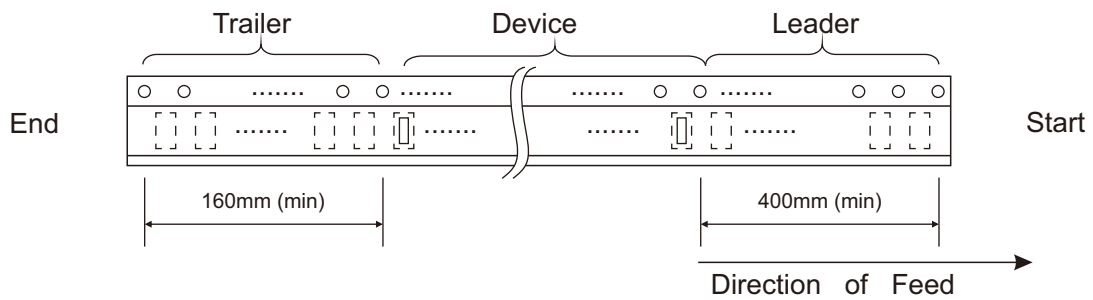
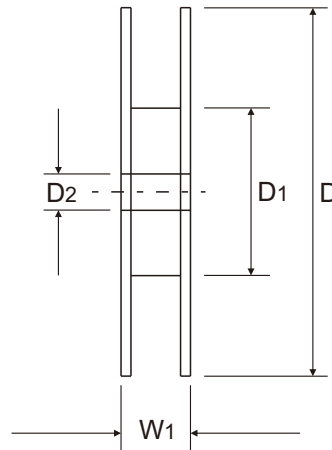
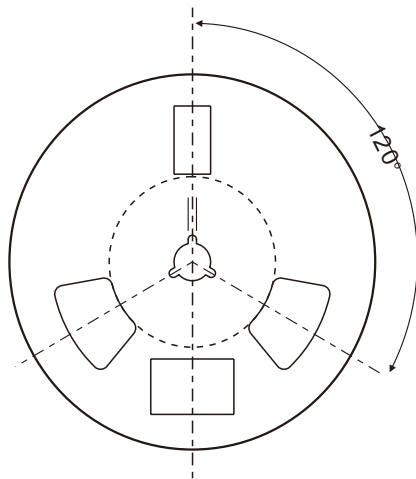
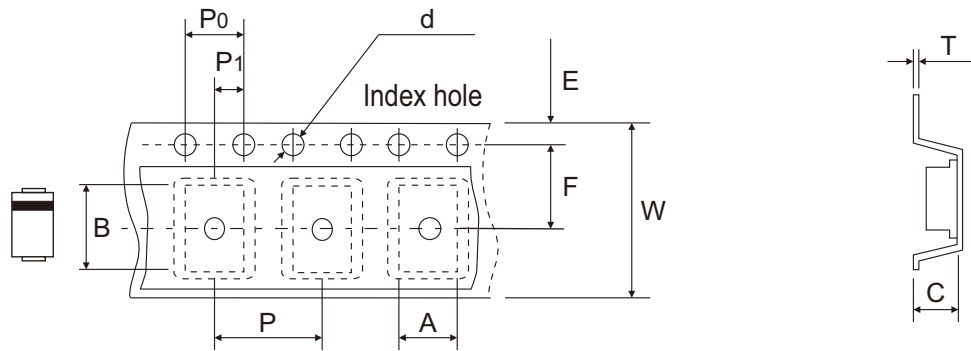


Fig.6 - Typical Transient Thermal Impedance



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## Reel Taping Specification



| SMBF | SYMBOL | A             | B             | C             | d             | D              | D1            | D2            |
|------|--------|---------------|---------------|---------------|---------------|----------------|---------------|---------------|
|      | (mm)   | 3.80 ± 0.10   | 5.75 ± 0.10   | 1.40 ± 0.10   | 1.55 ± 0.05   | 330 ± 2.00     | 75 ± 1.00     | 13.00 ± 0.20  |
|      | (inch) | 0.150 ± 0.004 | 0.226 ± 0.004 | 0.055 ± 0.004 | 0.061 ± 0.002 | 12.992 ± 0.079 | 2.953 ± 0.039 | 0.512 ± 0.008 |

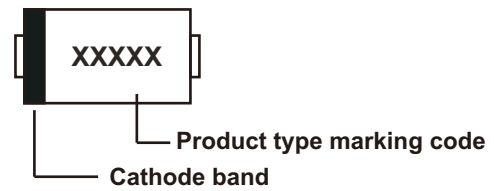
| SMBF | SYMBOL | E             | F             | P             | P0            | P1            | T             | W             | W1                       |
|------|--------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|--------------------------|
|      | (mm)   | 1.75 ± 0.10   | 5.50 ± 0.10   | 8.00 ± 0.10   | 4.00 ± 0.10   | 2.00 ± 0.05   | 0.23 ± 0.02   | 12.00 ± 0.10  | 14.70 + 2.00<br>- 1.00   |
|      | (inch) | 0.069 ± 0.004 | 0.217 ± 0.004 | 0.315 ± 0.004 | 0.157 ± 0.004 | 0.079 ± 0.002 | 0.009 ± 0.001 | 0.472 ± 0.004 | 0.579 + 0.079<br>- 0.039 |

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REV:A

## Marking Code

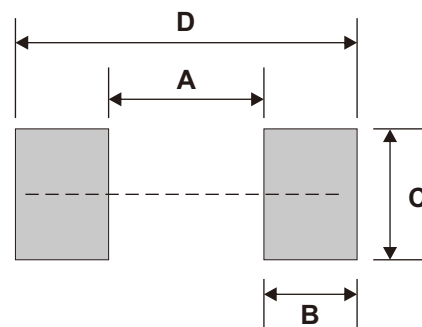
| Part Number | Marking Code |
|-------------|--------------|
| SS24BF-HF   | S24B         |
| SS26BF-HF   | S26B         |
| SS210BF-HF  | S210B        |
| SS215BF-HF  | S215B        |
| SS220BF-HF  | S220B        |



xxxx/xxxxx = Product type marking code

## Suggested PAD Layout

| SIZE | SMBF |        |
|------|------|--------|
|      | (mm) | (inch) |
| A    | 3.00 | 0.118  |
| B    | 1.80 | 0.071  |
| C    | 2.54 | 0.100  |
| D    | 6.60 | 0.260  |



Note: 1. The pad layout is for reference purpose only.

## Standard Packaging

| Case Type | REEL PACK       |                     |
|-----------|-----------------|---------------------|
|           | REEL<br>( pcs ) | Reel Size<br>(inch) |
| SMBF      | 5,000           | 13                  |