



# SS32F THRU SS320F

Surface Mount Schottky Barrier Rectifier  
Reverse Voltage - 20 to 200 V  
Forward Current - 3.0A

## Features

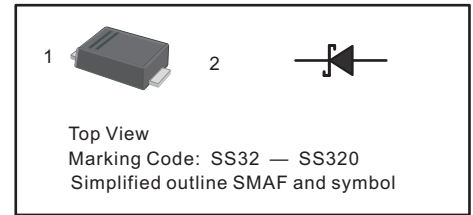
- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

## MECHANICAL DATA

- Case: SMAF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 27mg / 0.00095oz

## PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1   | Cathode     |
| 2   | Anode       |



## Absolute 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 %

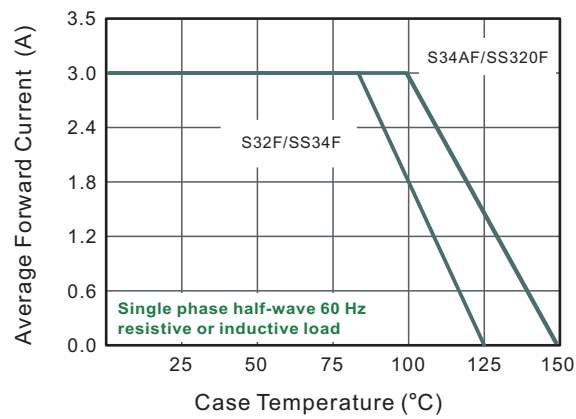
| Parameter                                                                                                 | Symbols                              | SS32F      | SS34F | SS34AF     | SS36F | SS38F    | SS310F | SS312F | SS315F | SS320F | Units |
|-----------------------------------------------------------------------------------------------------------|--------------------------------------|------------|-------|------------|-------|----------|--------|--------|--------|--------|-------|
| Maximum Repetitive Peak Reverse Voltage                                                                   | V <sub>RRM</sub>                     | 20         | 40    | 45         | 60    | 80       | 100    | 120    | 150    | 200    | V     |
| Maximum RMS voltage                                                                                       | V <sub>RMS</sub>                     | 14         | 28    | 31.5       | 42    | 56       | 70     | 84     | 105    | 140    | V     |
| Maximum DC Blocking Voltage                                                                               | V <sub>DC</sub>                      | 20         | 40    | 45         | 60    | 80       | 100    | 120    | 150    | 200    | V     |
| Maximum Average Forward Rectified Current                                                                 | I <sub>F(AV)</sub>                   | 3.0        |       |            |       |          |        |        |        |        | A     |
| Peak Forward Surge Current, 8.3ms<br>Single Half Sine-wave Superimposed<br>on Rated Load (JEDEC method)   | I <sub>FSM</sub>                     | 80         |       |            |       |          |        |        |        |        | A     |
| Max Instantaneous Forward Voltage at 3 A                                                                  | V <sub>F</sub>                       | 0.55       | 0.70  |            |       | 0.85     |        | 0.95   |        | V      |       |
| Maximum DC Reverse Current   T <sub>a</sub> = 25°C<br>at Rated DC Reverse Voltage   T <sub>a</sub> =100°C | I <sub>R</sub>                       | 0.5<br>5   |       |            |       | 0.3<br>3 |        |        |        | mA     |       |
| Typical Junction Capacitance <sup>(1)</sup>                                                               | C <sub>j</sub>                       | 250        |       |            |       | 180      |        |        |        | pF     |       |
| Typical Thermal Resistance <sup>(2)</sup>                                                                 | R <sub>θJA</sub><br>R <sub>θJC</sub> | 70<br>18   |       |            |       |          |        |        |        |        | °C/W  |
| Operating Junction Temperature Range                                                                      | T <sub>j</sub>                       | -55 ~ +125 |       | -55 ~ +150 |       |          |        |        |        |        | °C    |
| Storage Temperature Range                                                                                 | T <sub>stg</sub>                     | -55 ~ +150 |       |            |       |          |        |        |        |        | °C    |

( 1 ) Measured at 1 MHz and applied reverse voltage of 4 V D.C

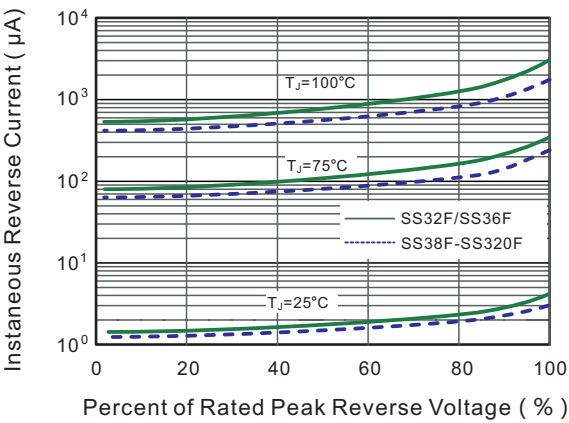
( 2 ) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.

**Rating and Characteristic Curves** (  $T_A = 25^{\circ}\text{C}$  Unless otherwise noted )  
**SS32F THRU SS320F**

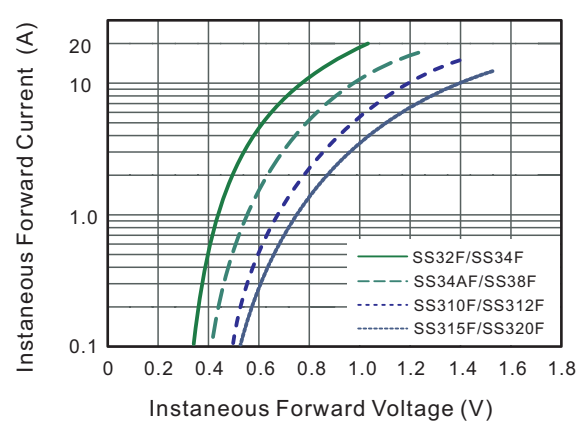
**Fig.1 Forward Current Derating Curve**



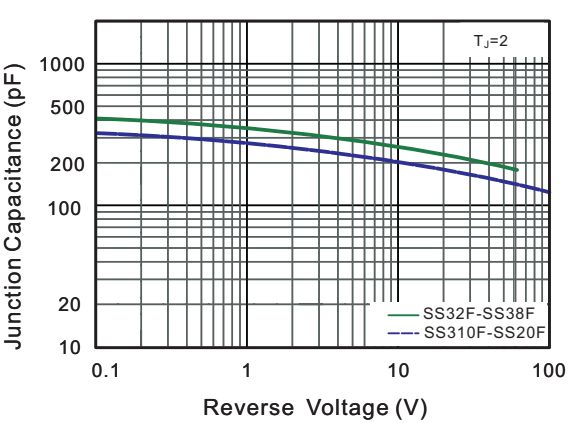
**Fig.2 Typical Reverse Characteristics**



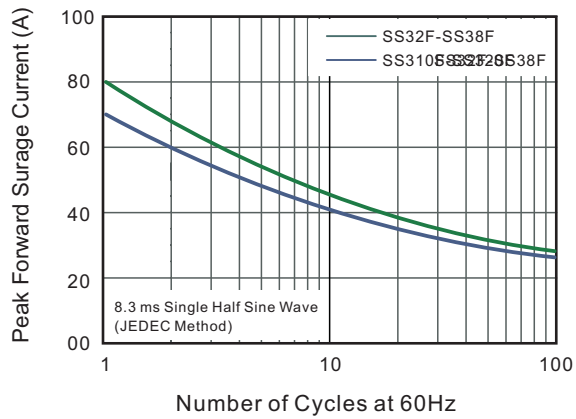
**Fig.3 Typical Forward Characteristic**



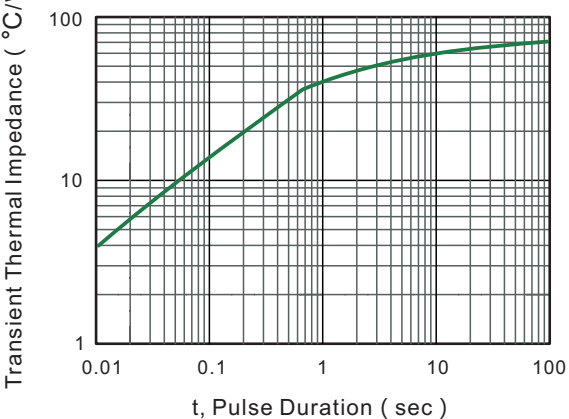
**Fig.4 Typical Junction Capacitance**



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



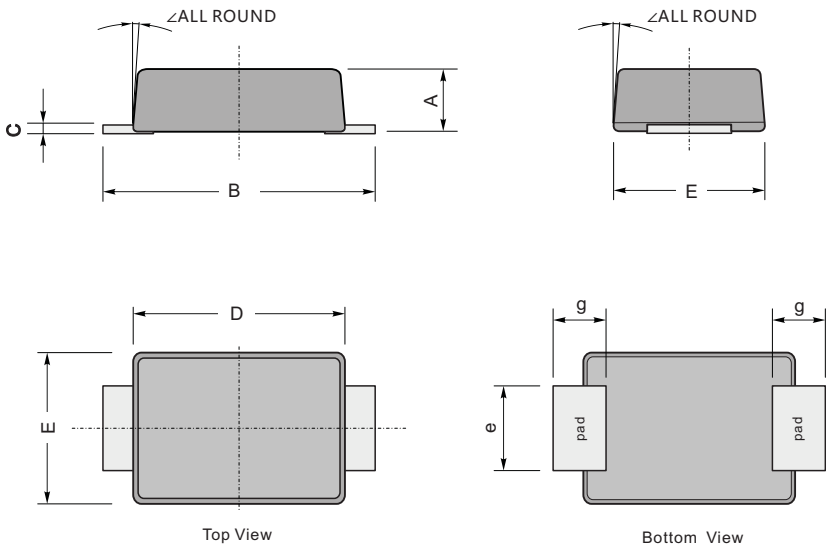
**Fig.5- Typical Transient Thermal Impedance**



PACKAGE OUTLINE

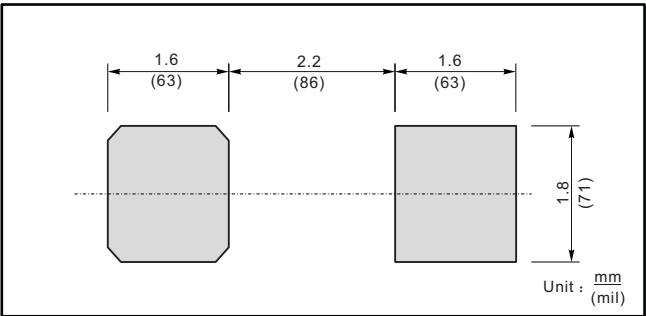
Plastic surface mounted package; 2 leads

SMAF



| UNIT |     | A   | C    | D   | E   | e   | g   | B   | ∠  |
|------|-----|-----|------|-----|-----|-----|-----|-----|----|
| mm   | max | 1.2 | 0.20 | 3.7 | 2.7 | 1.6 | 1.2 | 4.9 | 5° |
|      | min | 0.9 | 0.12 | 3.3 | 2.4 | 1.3 | 0.8 | 4.4 |    |
| mil  | max | 47  | 7.9  | 146 | 106 | 63  | 47  | 193 |    |
|      | min | 35  | 4.7  | 130 | 94  | 51  | 31  | 173 |    |

The recommended mounting pad size



Marking

| Type number | Marking code |
|-------------|--------------|
| SS32F       | SS32         |
| SS34F       | SS34         |
| SS34AF      | SS34A        |
| SS36F       | SS36         |
| SS38F       | SS38         |
| SS310F      | SS310        |
| SS312F      | SS312        |
| SS315F      | SS315        |
| SS320F      | SS320        |