



Surface Mount Schottky Barrier Rectifier
Reverse Voltage - 20 to 200V
Forward Current - 5.0A

FEATURES

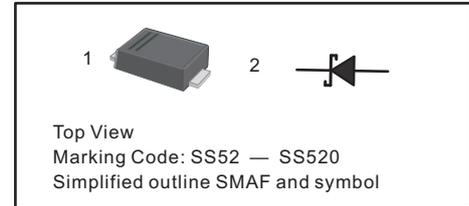
- Metal silicon junction, majority carrier conduction
- For surface mounted applications
- Low power loss, high efficiency
- High forward surge current capability
- For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

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 | SS52F | SS54F | SS56F | SS58F | SS510F | SS512F | SS515F | SS520F | Units |
|---|-----------------|------------|-------|-------|-------|--------|--------|--------|--------|--------------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 20 | 40 | 60 | 80 | 100 | 120 | 150 | 200 | V |
| Maximum RMS voltage | V_{RMS} | 14 | 28 | 42 | 56 | 70 | 84 | 105 | 140 | V |
| Maximum DC Blocking Voltage | V_{DC} | 20 | 40 | 60 | 80 | 100 | 120 | 150 | 200 | V |
| Maximum Average Forward Rectified Current | $I_{F(AV)}$ | 5.0 | | | | | | | | A |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I_{FSM} | 150 | | | | | | | | A |
| Max Instantaneous Forward Voltage at 5 A | V_F | 0.45 | 0.55 | 0.70 | | 0.85 | | | V | |
| Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Reverse Voltage $T_a = 100^\circ\text{C}$ | I_R | 1.0 50 | | | | | | | | mA |
| Typical Junction Capacitance ¹⁾ | C_j | 800 | | 500 | | | | | pF | |
| Typical Thermal Resistance ²⁾ | $R_{\theta JA}$ | 45 | | | | | | | | $^\circ\text{C/W}$ |
| Operating Junction Temperature Range | T_j | -55 ~ +125 | | | | | | | | $^\circ\text{C}$ |
| Storage Temperature Range | T_{stg} | -55 ~ +150 | | | | | | | | $^\circ\text{C}$ |

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

2) P.C.B. mounted with 0.5 X 0.5" (12.7 X 12.7 mm) copper pad areas.



Fig.1 Forward Current Derating Curve

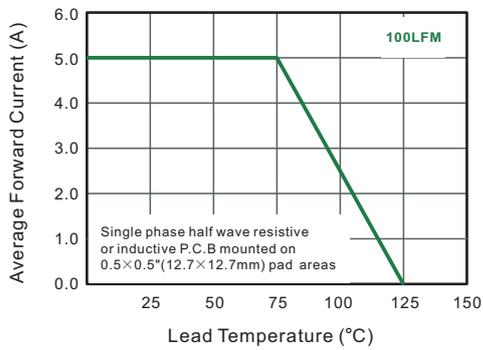


Fig.2 Typical Reverse Characteristics

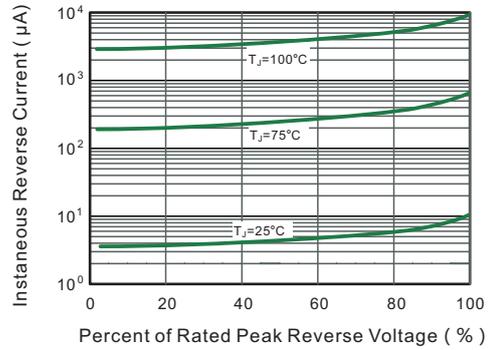


Fig.3 Typical Forward Characteristic

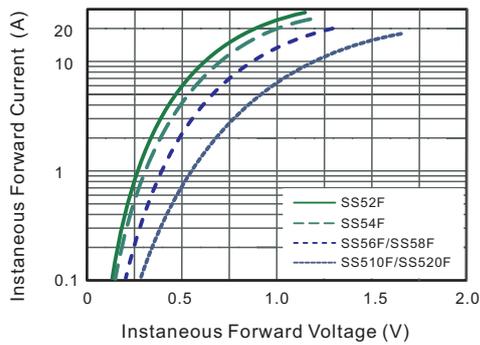


Fig.4 Typical Junction Capacitance

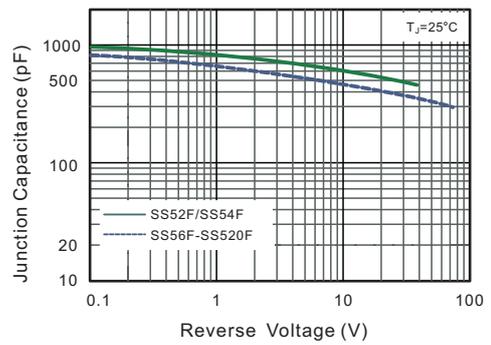


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

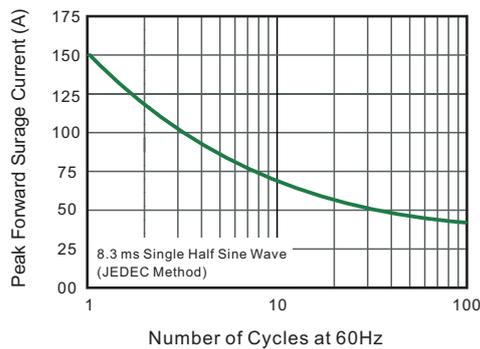
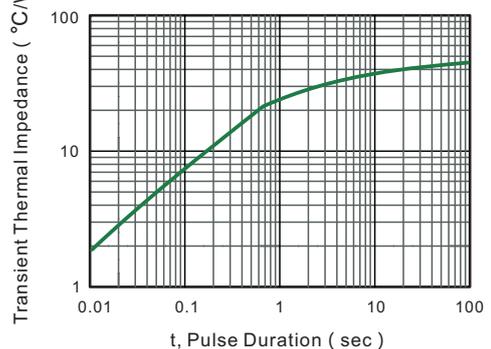


Fig.6- Typical Transient Thermal Impedance

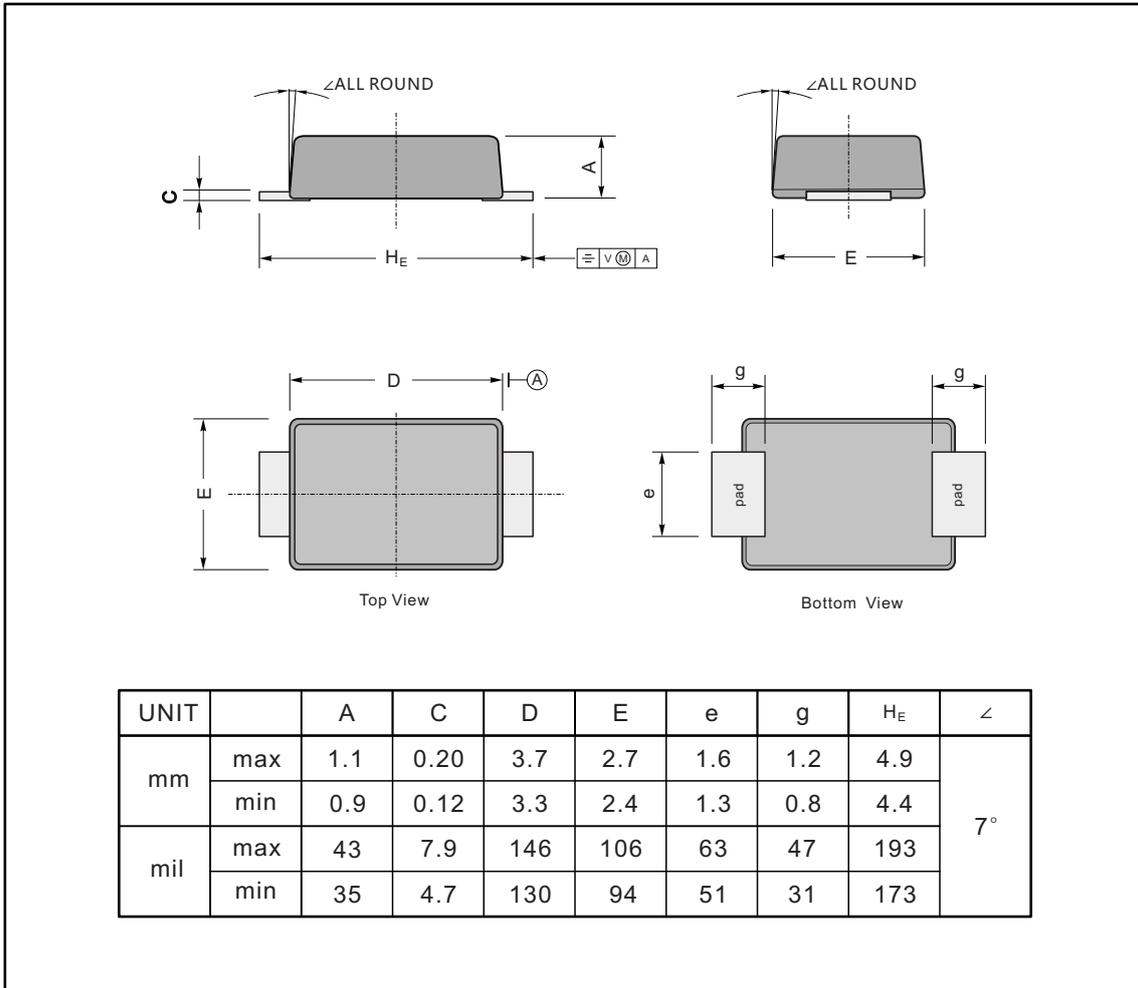




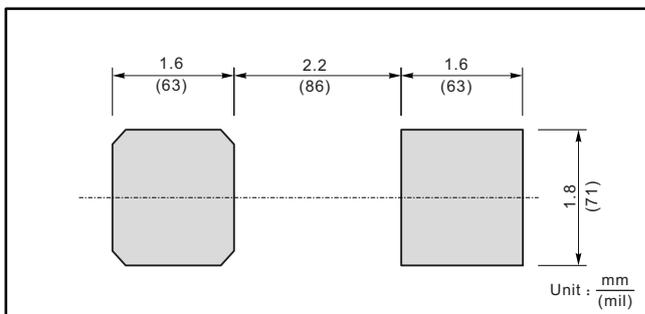
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

SMAF



The recommended mounting pad size



Marking

| Type number | Marking code |
|-------------|--------------|
| SS52F | SS52 |
| SS54F | SS54 |
| SS56F | SS56 |
| SS58F | SS58 |
| SS510F | SS510 |
| SS512F | SS512 |
| SS515F | SS515 |
| SS520F | SS520 |