

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: SMA
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 60mg / 0.0021oz

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 | SS32 | SS34 | SS34A | SS36 | SS38 | SS310 | SS312 | SS315 | SS320 | Units |
|---|-----------------|------------|------|-------|------|----------|-------|-------|-------|-------|---------------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 20 | 40 | 45 | 60 | 80 | 100 | 120 | 150 | 200 | V |
| Maximum RMS voltage | V_{RMS} | 14 | 28 | 31.5 | 42 | 56 | 70 | 84 | 105 | 140 | V |
| Maximum DC Blocking Voltage | V_{DC} | 20 | 40 | 45 | 60 | 80 | 100 | 120 | 150 | 200 | V |
| Maximum Average Forward Rectified Current | $I_{F(AV)}$ | 3.0 | | | | | | | | | A |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I_{FSM} | 80 | | | | | | | | | A |
| Max Instantaneous Forward Voltage at 3A | V_F | 0.55 | 0.70 | | | 0.85 | | 0.95 | | | V |
| Maximum DC Reverse Current $T_a = 25^{\circ}C$ at Rated DC Reverse Voltage $T_a = 100^{\circ}C$ | I_R | 0.5 5 | | | | 0.3 3 | | | | | mA |
| Typical Junction Capacitance ⁽¹⁾ | C_j | 450 | | | | 400 | | | | | pF |
| Typical Thermal Resistance ⁽²⁾ | $R_{\theta JA}$ | 70 | | | | | | | | | $^{\circ}C/W$ |
| Operating Junction Temperature Range | T_j | -55 ~ +150 | | | | | | | | | $^{\circ}C$ |
| Storage Temperature Range | T_{stg} | -55 ~ +150 | | | | | | | | | $^{\circ}C$ |

(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.

PINNING

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

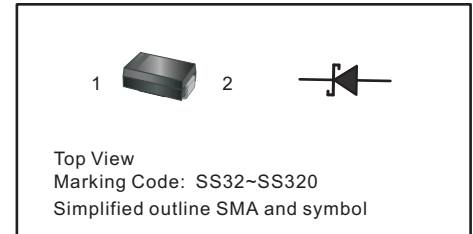


Fig.1 Forward Current Derating Curve

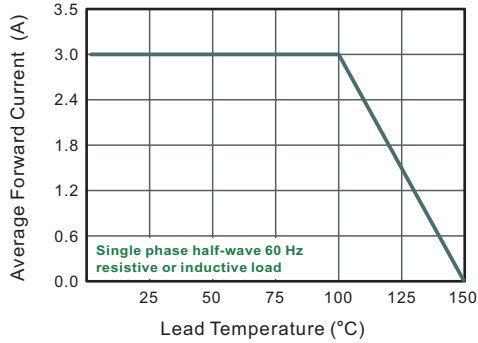


Fig.2 Typical Reverse Characteristics

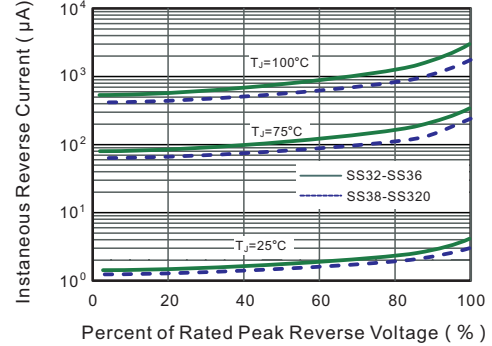


Fig.3 Typical Forward Characteristic

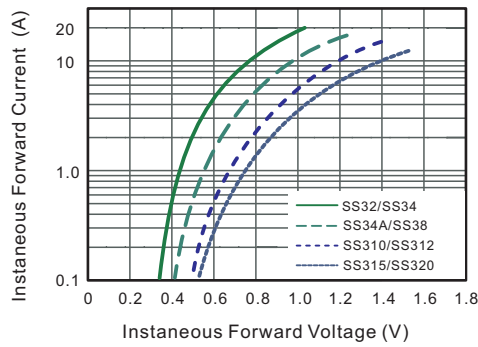


Fig.4 Typical Junction Capacitance

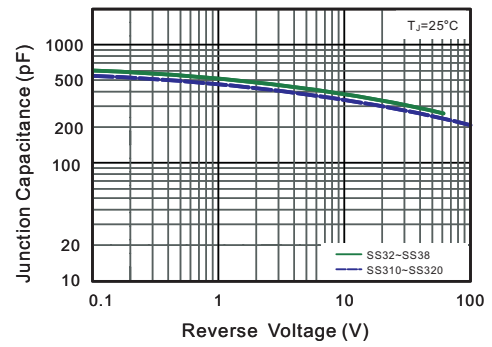


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

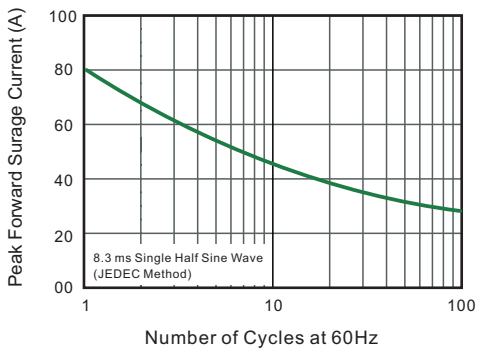
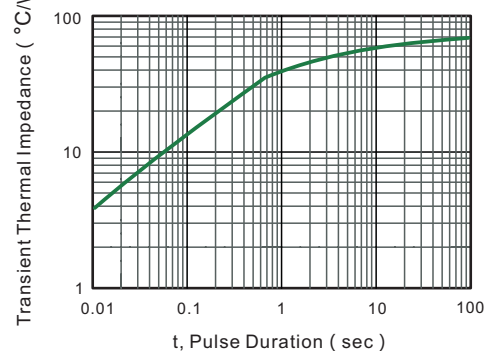
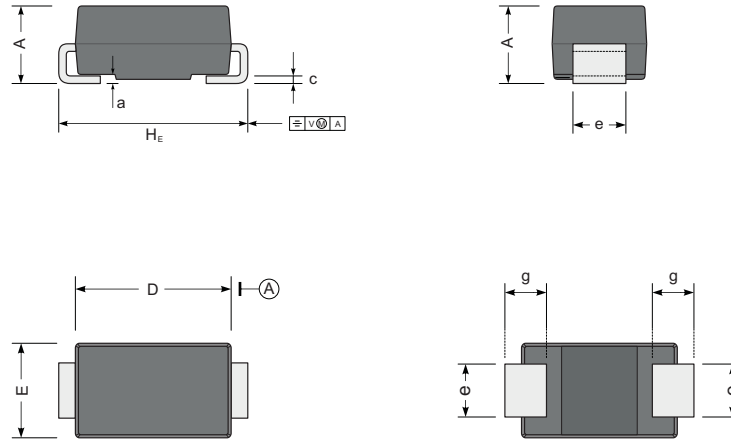


Fig.5- Typical Transient Thermal Impedance



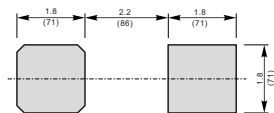
PACKAGE OUTLINE

Plastic surface mounted package; 2 leads



| UNIT | | A | D | E | H_E | c | e | g | a |
|------|-----|-----|-----|-----|-------|------|-----|-----|-----|
| mm | max | 2.2 | 4.5 | 2.7 | 5.2 | 0.31 | 1.6 | 1.5 | 0.3 |
| | min | 1.9 | 4.0 | 2.3 | 4.7 | 0.15 | 1.3 | 0.9 | |
| mil | max | 87 | 181 | 106 | 205 | 12 | 63 | 59 | 12 |
| | min | 75 | 157 | 91 | 185 | 6 | 51 | 35 | |

The recommended mounting pad size



Unit : $\frac{\text{mm}}{\text{(mil)}}$

Marking

| Type number | Marking code |
|-------------|--------------|
| SS32 | SS32 |
| SS34 | SS34 |
| SS34A | SS34A |
| SS36 | SS36 |
| SS38 | SS38 |
| SS310 | SS310 |
| SS312 | SS312 |
| SS315 | SS315 |
| SS320 | SS320 |