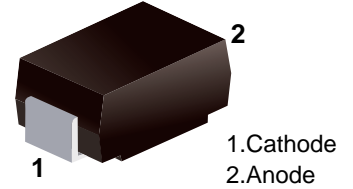


SS12 - SS120

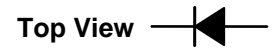
Schottky Diodes

Features

- Reverse Voltage - 20 to 200 V
- Forward Current - 1.0 A
- 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



Simplified outline(SMA)



Absolute Maximum Ratings and Electrical characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

| Parameter | Symbols | SS12 | SS14 | SS16 | SS18 | SS110 | SS112 | SS115 | SS120 | Unit | |
|---|-----------------|------------|------|------|------|-------|-------|-------|-------|------|------|
| 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 | | |
| Maximum DC Blocking Voltage | V_{DC} | 20 | 40 | 60 | 80 | 100 | 120 | 150 | 200 | | |
| Maximum Instantaneous Forward Voltage at 1A | V_F | 0.55 | | 0.70 | | 0.85 | | 0.90 | | A | |
| Maximum Averaged Forward Rectified Current | $I_{F(AV)}$ | 1 | | | | | | | | | |
| Peak Forward Surge Current, 8.3 ms Single Half Sine Wave Superimposed on Rated Load | I_{FSM} | 30 | | | | | | | | | |
| Maximum DC Reverse Current $T_a=25^\circ\text{C}$ at rated DC blocking voltage $T_a=100^\circ\text{C}$ | I_R | 0.3 | | 0.2 | | 0.1 | | 0.1 | | mA | |
| | | 10 | | 5 | | 2 | | | | | |
| Typical Junction Capacitance *1 | C_j | 110 | | 80 | | | | | | pF | |
| Typical Thermal Resistance *2 | $R_{\theta JA}$ | 90 | | | | | | | | | °C/W |
| Operating Junction Temperature Range | T_j | -55 ~ +125 | | | | | | | | | °C |
| Storage Temperature Range | T_{stg} | -55 ~ +150 | | | | | | | | | |

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

* 2 P.C.B. mounted with 2.0" x2.0" (5x5 cm) copper pad areas.

Marking

| NO. | SS12 | SS14 | SS16 | SS18 | SS110 | SS112 | SS115 | SS120 |
|---------|------|------|------|------|-------|-------|-------|-------|
| Marking | SS12 | SS14 | SS16 | SS18 | SS110 | SS112 | SS115 | SS120 |

■ Typical Characteristics

Fig.1 Forward Current Derating Curve

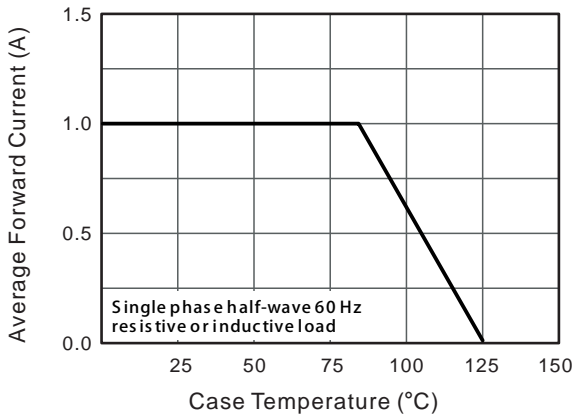


Fig.2 Typical Reverse Characteristics

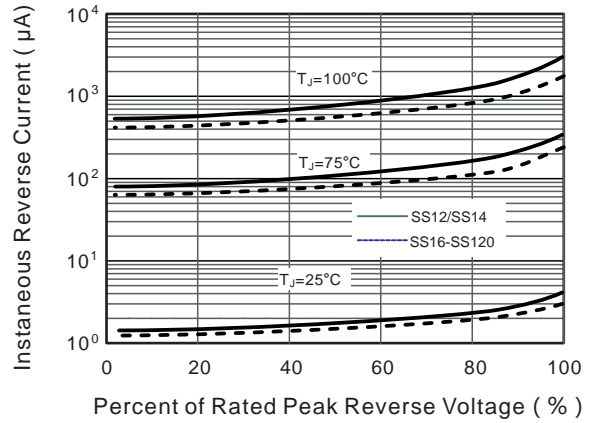


Fig.3 Typical Forward Characteristic

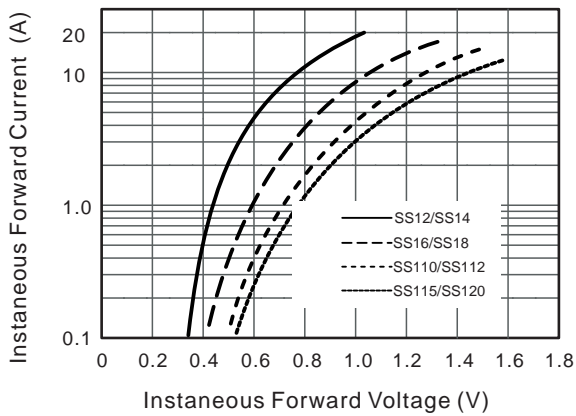


Fig.4 Typical Junction Capacitance

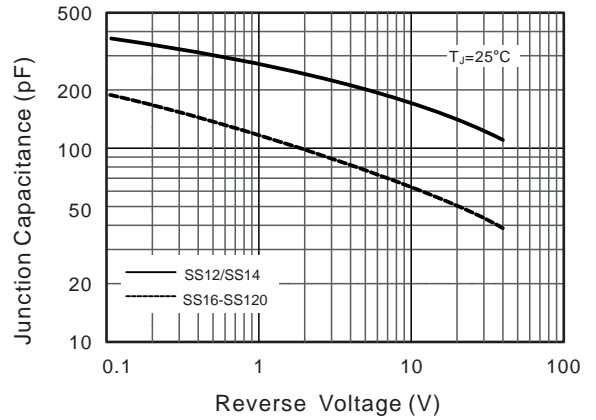


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

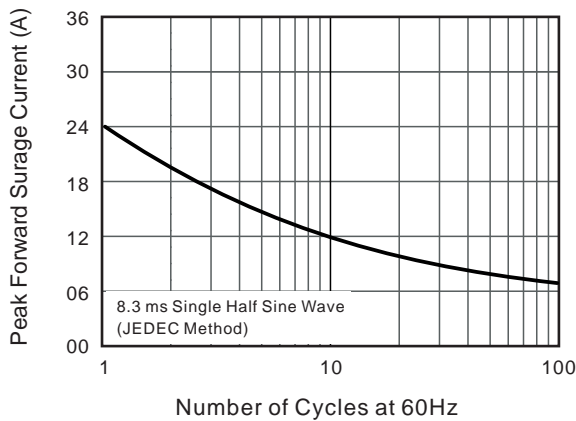
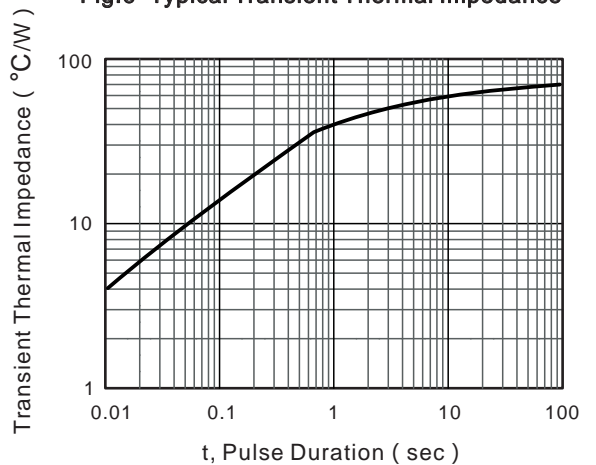
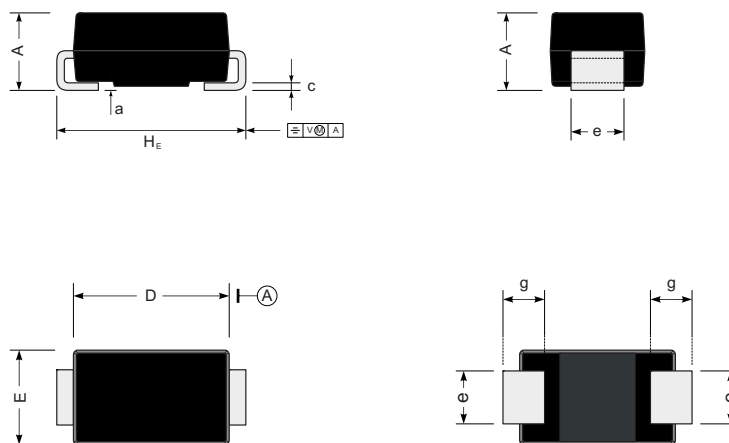


Fig.6- Typical Transient Thermal Impedance



■ SMA



| 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

