

## 1 Ampere Surface Mount Schottky Barrier Rectifier



## SS12-SS120

## Features:

- ☐ Metal silicon junction, majority carrier conduction
- ☐ For surface mounted applications
- ☐ Low power loss, high efficiency
- ☐ Fast switching for high efficiency
- ☐ High forward surge current capability
- ☐ For use in low voltage, high frequency inverters

DO-214AC  
(SMA)

1. Cathode 2. Anode

**Absolute Maximum Ratings\*** (TA=25°C Unless otherwise noted)

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            | SS12       | SS14 | SS16 | SS18       | SS110 | SS112 | SS115    | SS120 | Units |
|--------------------------------------------------------------------------------------------------------|--------------------|------------|------|------|------------|-------|-------|----------|-------|-------|
| Maximum Repetitive Peak Reverse Voltage                                                                | V <sub>RRM</sub>   | 20         | 40   | 60   | 80         | 100   | 120   | 150      | 200   | V     |
| Maximum RMS voltage                                                                                    | V <sub>RMS</sub>   | 14         | 28   | 42   | 56         | 70    | 84    | 105      | 140   | V     |
| Maximum DC Blocking Voltage                                                                            | V <sub>DC</sub>    | 20         | 40   | 60   | 80         | 100   | 120   | 150      | 200   | V     |
| Maximum Average Forward Rectified Current                                                              | I <sub>F(AV)</sub> | 1.0        |      |      |            |       |       |          |       | A     |
| Peak Forward Surge Current,8.3ms<br>Single Half Sine-wave Superimposed<br>on Rated Load (JEDEC method) | I <sub>FSM</sub>   | 30         |      |      |            |       |       |          |       | A     |
| Max Instantaneous Forward Voltage at 1A                                                                | 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>     | 0.3<br>10  |      |      | 0.2<br>5   |       |       | 0.1<br>2 |       | mA    |
| Typical Junction Capacitance <sup>(1)</sup>                                                            | C <sub>j</sub>     | 110        |      | 80   |            |       |       |          |       | pF    |
| Typical Thermal Resistance <sup>(2)</sup>                                                              | R <sub>θJA</sub>   | 90         |      |      |            |       |       |          |       | °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 VDC

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

## Typical Characteristics

FIG. 1- FORWARD CURRENT DERATING CURVE

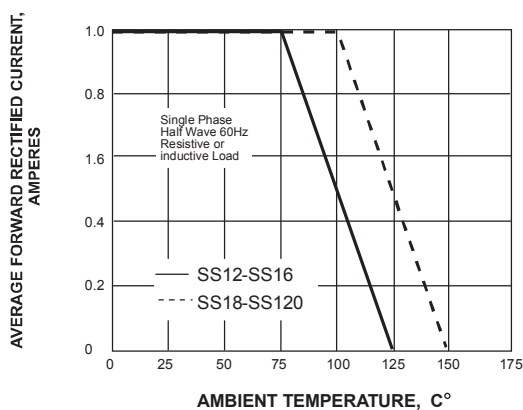


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

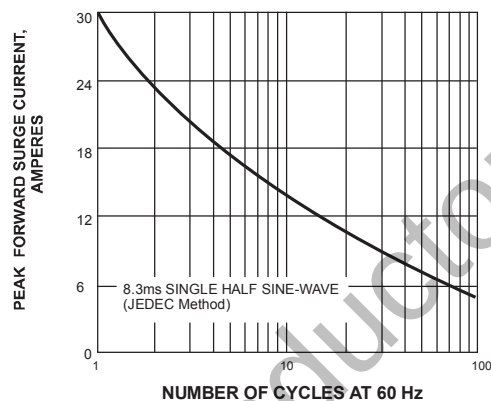


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

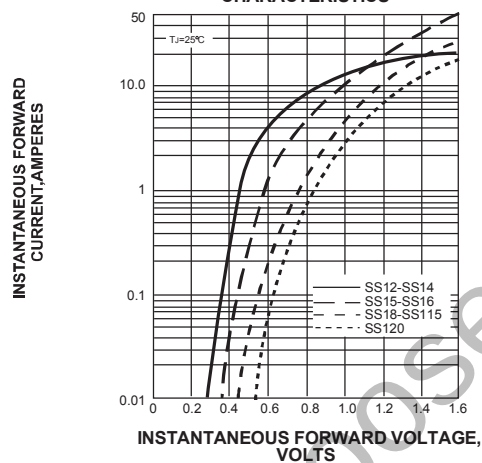


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

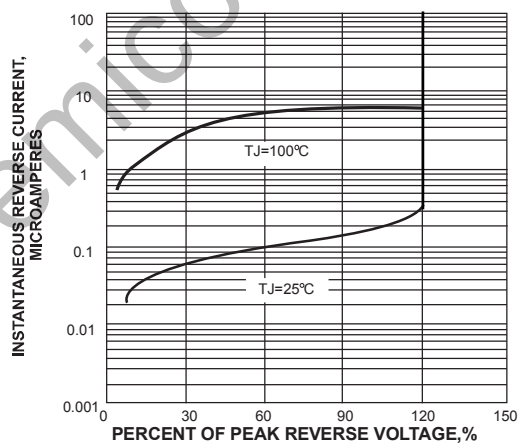


FIG. 5-TYPICAL JUNCTION CAPACITANCE

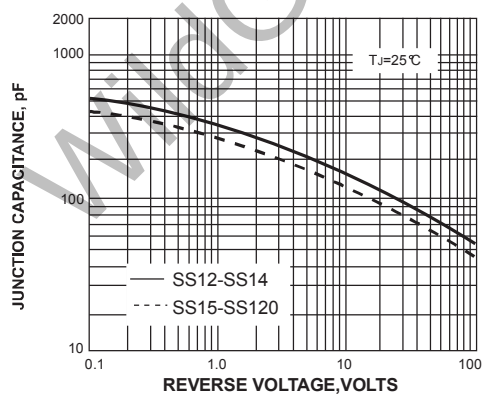
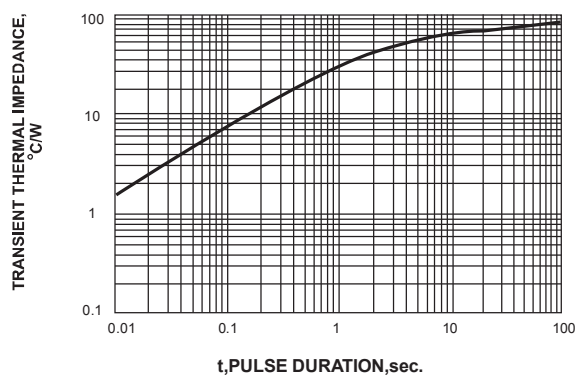


FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



**Package Dimension****SMA**

Unit: mm

