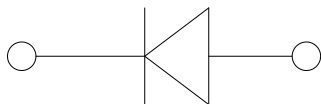
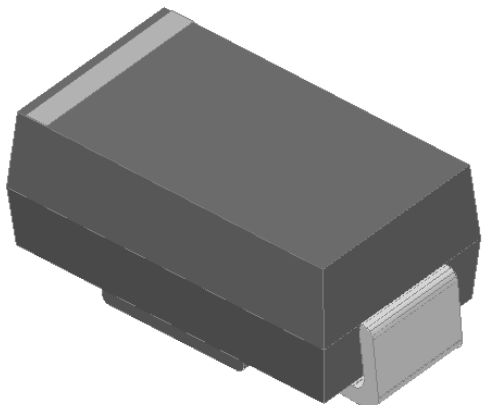


## Surface Mount Schottky Rectifier



## Features

- Low profile package
- Ideal for automated placement
- Guardring for overvoltage protection
- Low power losses, high efficiency
- High forward surge capability
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260 °C

## Typical Applications

For use in low voltage high frequency inverters, freewheeling, DC/DC converters, and polarity protection applications.

## Mechanical Data

- **Package:** DO-214AC (S MA)  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant, halogen-free
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end

## 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            | SS12       | SS14 | SS16 | SS18     | SS110 | SS112 | SS1150   | 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 at T <sub>c</sub> = 100 °C                                         | I <sub>F(AV)</sub> | 1.0        |      |      |          |       |       |          |       | A     |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)            | I <sub>FSM</sub>   | 25         |      |      |          |       |       |          |       | A     |
| Max Instantaneous Forward Voltage at 1 A                                                                     | V <sub>F</sub>     | 0.55       |      | 0.70 |          | 0.85  |       | 0.90     |       | 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 ~ +150 |      |      |          |       |       |          |       | °C    |
| Storage Temperature Range                                                                                    | T <sub>stg</sub>   | -55 ~ +150 |      |      |          |       |       |          |       | °C    |

( 1 ) Measured at 1MHz 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.

# SS12 THRU SS120

## ■ Characteristics (Typical)

Fig.1 Forward Current Derating Curve

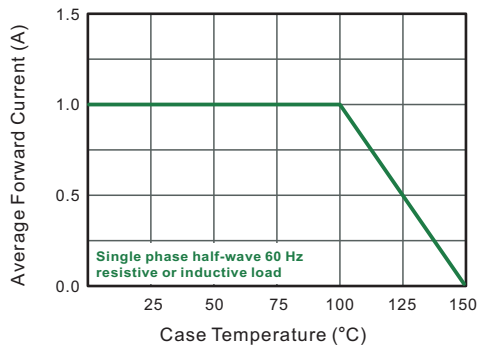


Fig.2 Typical Reverse Characteristics

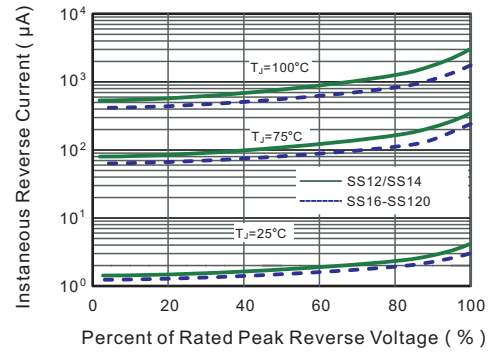


Fig.3 Typical Forward Characteristic

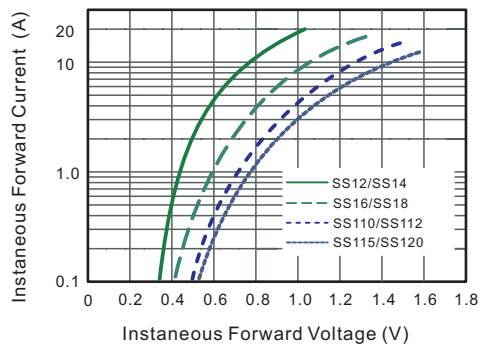


Fig.4 Typical Junction Capacitance

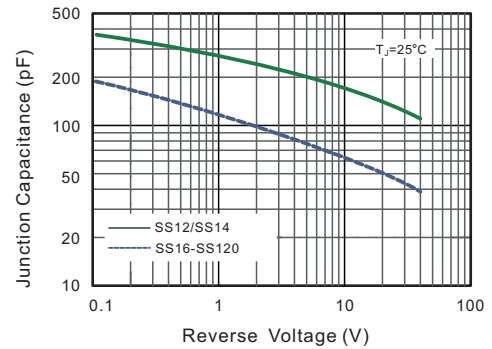


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

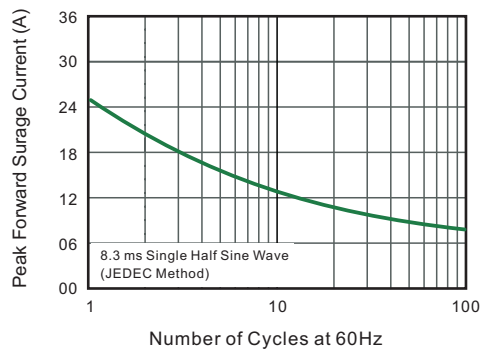
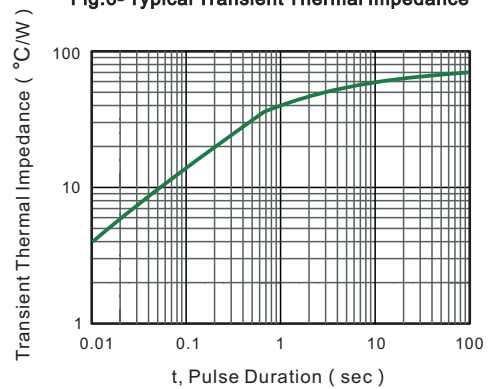


Fig.6- Typical Transient Thermal Impedance

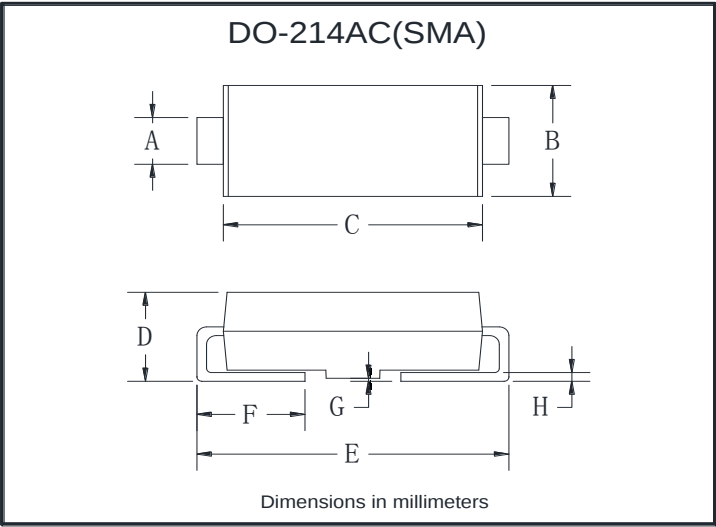


# SS12 THRU SS120

## ■ Ordering Information (Example)

| P/N        | PKG           | QTY  |
|------------|---------------|------|
| SS12-SS120 | SMA(DO-214AC) | 2000 |

## ■ Outline Dimensions



| DO-214AC(SMA) |      |      |
|---------------|------|------|
| Dim           | Min  | Max  |
| A             | 1.25 | 1.58 |
| B             | 2.40 | 2.83 |
| C             | 4.25 | 4.75 |
| D             | 1.90 | 2.30 |
| E             | 4.93 | 5.28 |
| F             | 0.76 | 1.41 |
| G             | 0.08 | 0.20 |
| H             | 0.15 | 0.31 |