

# SS12~SS16

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER

**Voltage**

**20~60 V**

**Current**

**1 A**

### Features

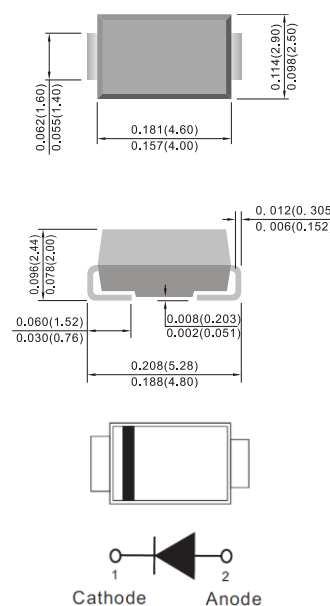
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O.
- For surface mounted applications in order to optimize board space
- Low power loss, High efficiency
- High surge capacity
- High current capacity, low  $V_F$
- Lead free in compliance with EU RoHS2.0 (2011/65/EU & 2015/865/EU directive).
- Green molding compound as per IEC61249 Std..(Halogen Free)

### Mechanical Data

- Case: SMA molded plastic
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Standard packaging : 12mm tape (EIA-481)
- Approx. Weight: 0.0023 ounces, 0.0679 grams

**SMA**

**Unit: inch(mm)**



### Maximum Ratings ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)

| PARAMETER                                                                           |                        | SYMBOL             | SS12        | SS13 | SS14        | SS15 | SS16 | UNIT |
|-------------------------------------------------------------------------------------|------------------------|--------------------|-------------|------|-------------|------|------|------|
| Maximum repetitive peak reverse voltage                                             |                        | V <sub>RRM</sub>   | 20          | 30   | 40          | 50   | 60   | V    |
| Maximum rms voltage                                                                 |                        | V <sub>RMS</sub>   | 14          | 21   | 28          | 35   | 42   | V    |
| Maximum dc blocking voltage                                                         |                        | V <sub>R</sub>     | 20          | 30   | 40          | 50   | 60   | V    |
| Maximum average forward current                                                     |                        | I <sub>F(AV)</sub> | 1           |      |             |      |      | A    |
| Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load |                        | I <sub>FSM</sub>   | 30          |      |             |      |      | A    |
| Maximum forward voltage at 1A                                                       |                        | V <sub>F</sub>     | 0.5         |      |             | 0.7  |      | V    |
| Maximum dc reverse current at rated dc blocking voltage (Note 1)                    | T <sub>J</sub> =25 °C  | I <sub>R</sub>     | 0.2         |      |             | 0.1  |      | mA   |
|                                                                                     | T <sub>J</sub> =100 °C |                    | 6           |      |             | 5    |      |      |
| Typical Junction Capacitance (V <sub>R</sub> =4V f=1MHZ)                            |                        | C <sub>J</sub>     | 70          |      |             | 50   |      | pF   |
| Typical thermal resistance                                                          | (Note 2)               | R <sub>θJL</sub>   | 28          |      |             |      |      | °C/W |
|                                                                                     | (Note 2)               | R <sub>θJA</sub>   | 88          |      |             |      |      |      |
|                                                                                     | (Note 3)               | R <sub>θJA</sub>   | 150         |      |             |      |      |      |
| Operating junction temperature range                                                |                        | T <sub>J</sub>     | -55 to +125 |      | -55 to +150 |      |      | °C   |
| Storage temperature range                                                           |                        | T <sub>STG</sub>   | -55 to +150 |      |             |      |      | °C   |

Note : 1. Short duration pulse test used to minimize self-heating effect.

2. Mounted on a FR4 PCB, single-sided copper, with 100cm<sup>2</sup> copper pad area

3. Mounted on a FR4 PCB, single-sided copper, mini pad.

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### TYPICAL CHARACTERISTIC CURVES

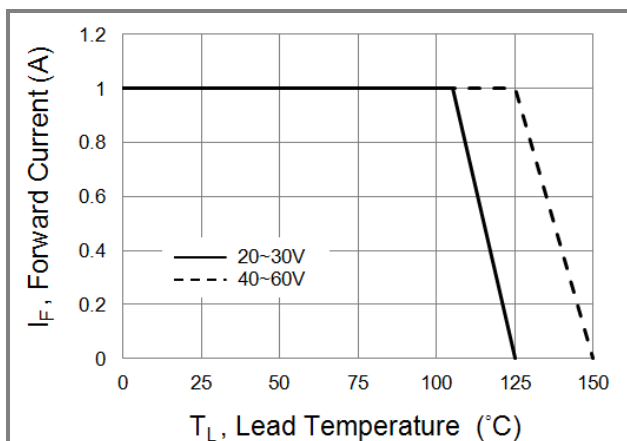


Fig.1 Forward Current Derating Curve

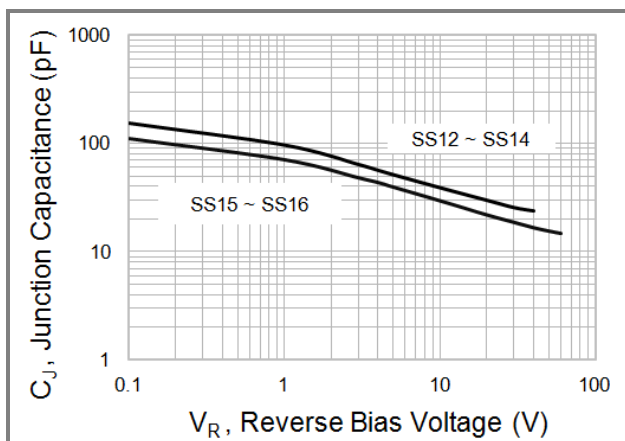


Fig.2 Typical Junction Capacitance

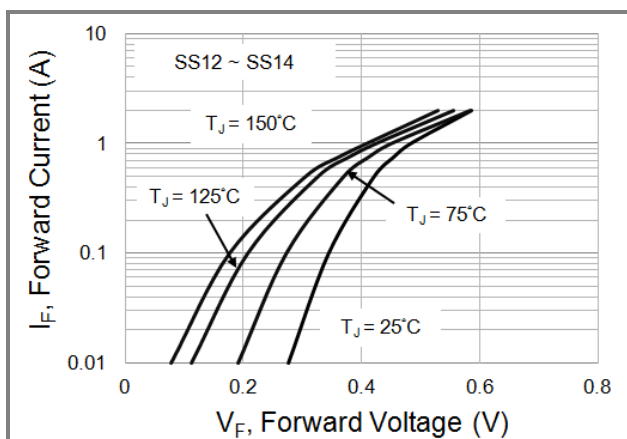


Fig.3 Typical Forward Characteristics

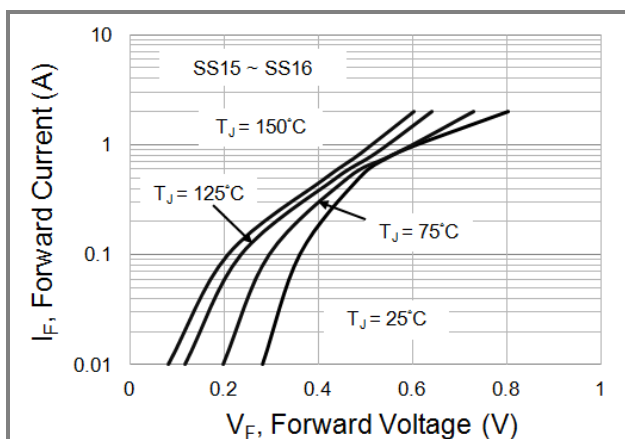


Fig.4 Typical Forward Characteristics

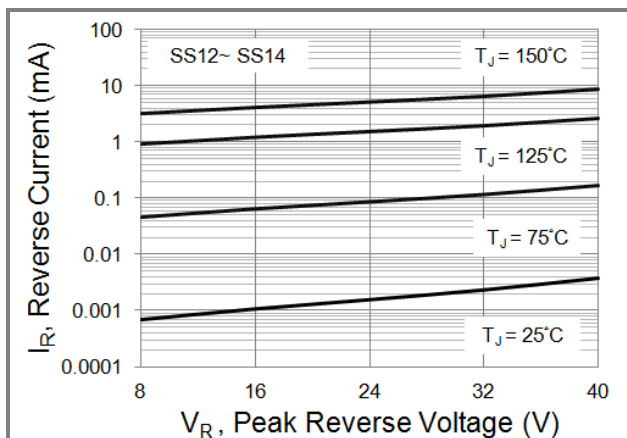


Fig.5 Typical Reverse Characteristics

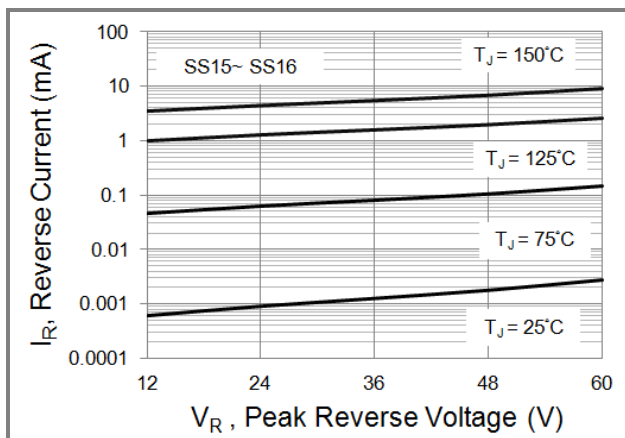


Fig.6 Typical Reverse Characteristics

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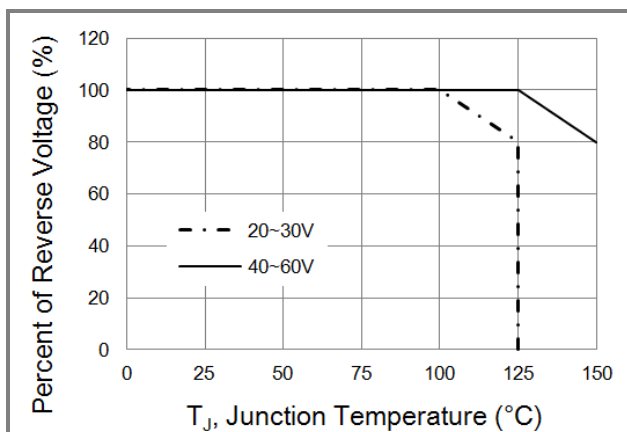


Fig.7 Operating Temperature Derating Curve

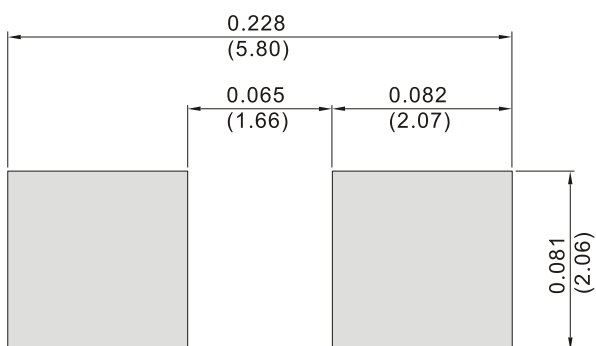
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### Part No Packing Code Version

| Part No Packing Code | Package Type | Packing Type        | Marking | Version      |
|----------------------|--------------|---------------------|---------|--------------|
| SS12_R1_00001        | SMA          | 1,800pcs / 7" reel  | SS12    | Halogen free |
| SS12_R2_00001        | SMA          | 7,500pcs / 13" reel | SS12    | Halogen free |

### Mounting Pad Layout

**SMA / DO-214AC** Unit : inch(mm)





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