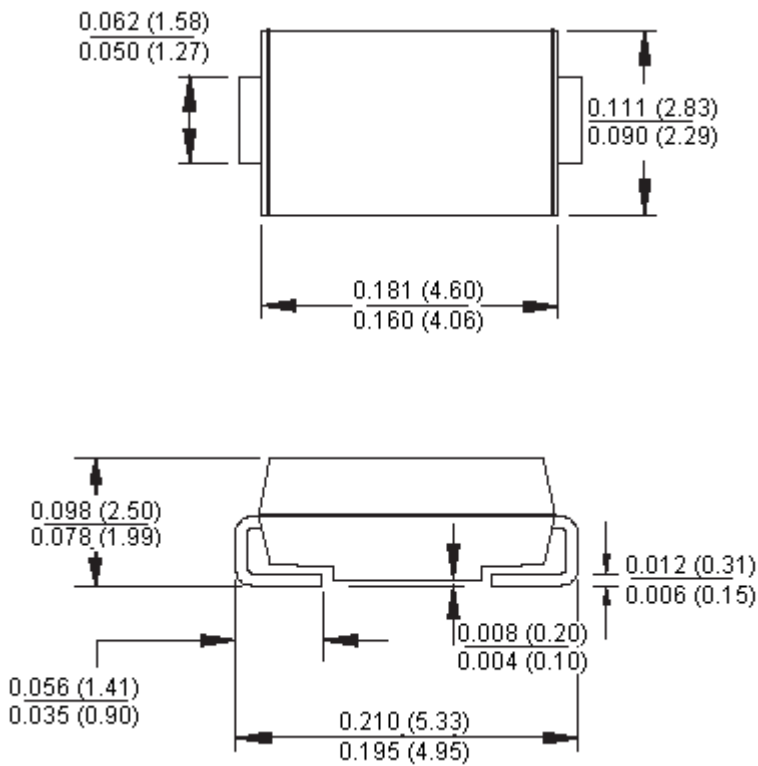




## Features:

- For surface mounted application.
- Easy pick and place.
- Metal to silicon rectifier, majority carrier conduction.
- Low power loss, high efficiency.
- High current capability, low  $V_F$ .
- High surge current capability.
- Plastic material.
- Epitaxial construction.
- High temperature soldering: 260°C/10 seconds at terminals.

## SMA/DO-214AC



Dimensions : Inches (Millimetres)

## Mechanical Data:

|           |                                       |
|-----------|---------------------------------------|
| Cases     | : JEDEC SMA/DO-214AC moulded plastic. |
| Terminals | : Pure tin plated, lead free.         |
| Polarity  | : Indicated by cathode band.          |
| Packing   | : 12mm tape per EIA STD RS-481.       |
| Weight    | : 0.066 gram.                         |

## Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

| Type Number                                                                                                   | Symbol            | SS12        | SS13 | SS15         | SS19         | SS115        | Units    |
|---------------------------------------------------------------------------------------------------------------|-------------------|-------------|------|--------------|--------------|--------------|----------|
| Maximum Recurrent Peak Reverse Voltage                                                                        | V <sub>RRM</sub>  | 20          | 30   | 50           | 90           | 150          | V        |
| Maximum RMS Voltage                                                                                           | V <sub>RMS</sub>  | 14          | 21   | 35           | 63           | 105          |          |
| Maximum DC Blocking Voltage                                                                                   | V <sub>DC</sub>   | 20          | 30   | 50           | 90           | 150          |          |
| Maximum Average Forward Rectified Current at T <sub>L</sub>                                                   | I <sub>(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>  | 30          |      |              |              |              |          |
| Maximum Instantaneous Forward Voltage (Note 1)<br>I <sub>F</sub> = 1.0A at 25°C<br>at 100°C                   | V <sub>F</sub>    | 0.5<br>0.4  |      | 0.75<br>0.65 | 0.80<br>0.70 | 0.95<br>0.85 | V        |
| Maximum DC Reverse Current at T <sub>A</sub> = 25°C<br>at Rated DC Blocking Voltage at T <sub>A</sub> = 125°C | I <sub>R</sub>    | 0.4         |      |              | 0.1          |              | μA<br>μA |
|                                                                                                               |                   | 10          |      | 5.0          | 2.0          |              |          |
| Maximum DC Reverse Current at V <sub>R</sub> = 33V<br>and T <sub>A</sub> = 50°C                               | HT <sub>IR</sub>  | -           |      |              | 5.0          |              | μA       |
| Typical Junction Capacitance (Note 3)                                                                         | C <sub>j</sub>    | 50          |      |              |              |              | pF       |
| Typical Thermal Resistance (Note 2)                                                                           | R <sub>θJL</sub>  | 28          |      |              |              |              | °C/W     |
|                                                                                                               | R <sub>θJA</sub>  | 88          |      |              |              |              |          |
| Operating Temperature Range                                                                                   | T <sub>J</sub>    | -65 to +125 |      | -65 to +150  |              |              | °C       |
| Storage Temperature Range                                                                                     | T <sub>STG</sub>  | -65 to +150 |      |              |              |              |          |

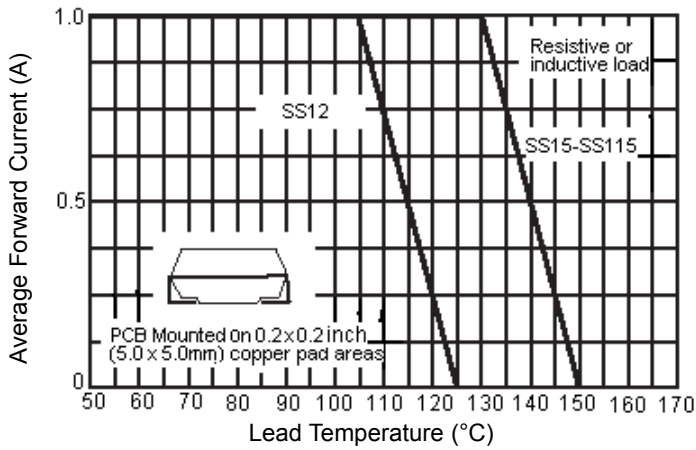
Notes: 1. Pulse Test with PW = 300  $\mu$ seconds, 1% Duty Cycle.

2. Measured on PC Board with 0.2 x 0.2 inches (5.0mm x 5.0mm) Copper Pad Areas.

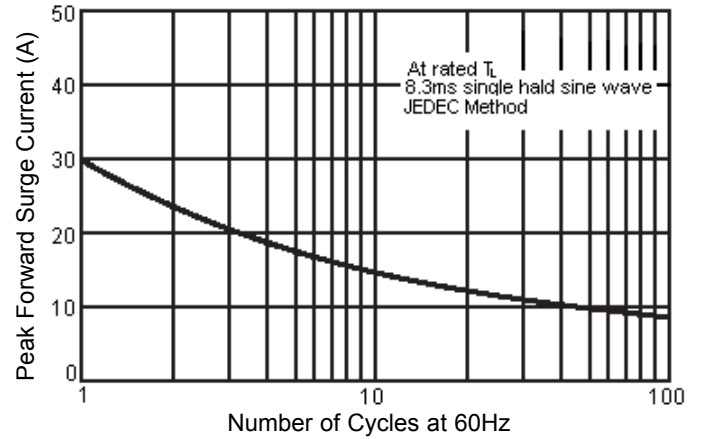
3. Measured at 1MHz and Applied Reverse Voltage of 4.0V dc.

## Ratings and Characteristic Curves (SS115, SS12, SS13, SS15, SS19)

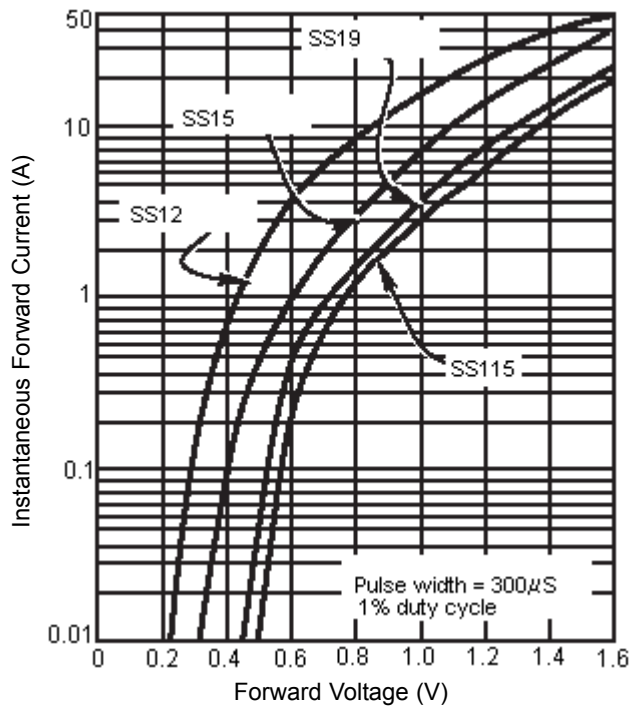
Maximum Forward Current Derating Curve



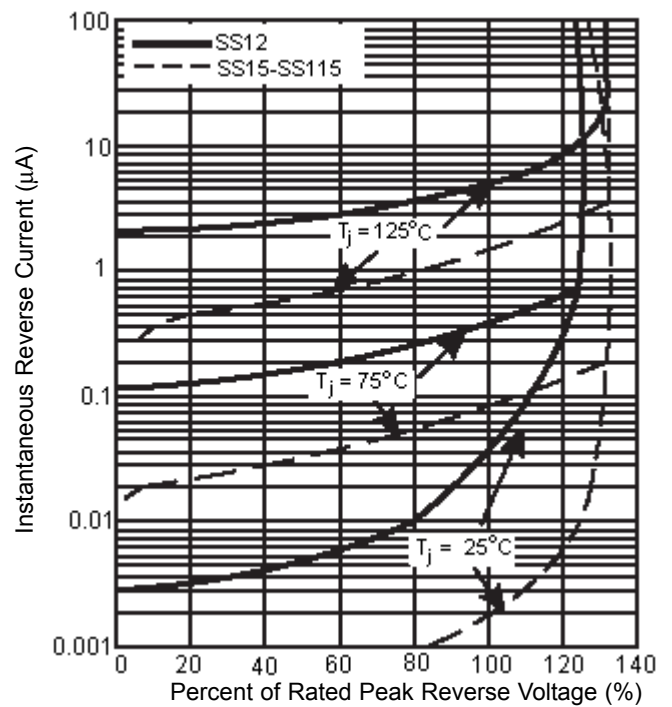
Maximum Non-Repetitive Forward Surge Current



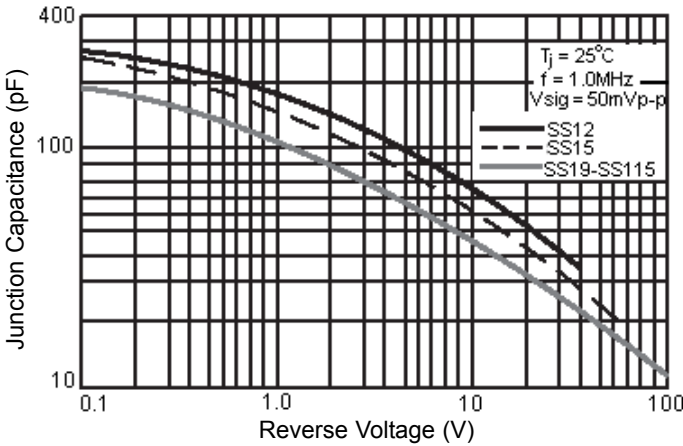
Typical Forward Characteristics



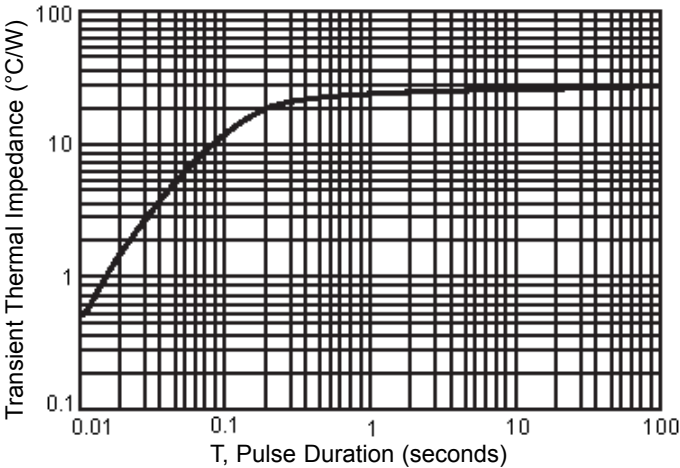
Typical Reverse Characteristics



Typical Junction Capacitance



Typical Transient Thermal Characteristics



## Part Number Table

| Description               | Part Number |
|---------------------------|-------------|
| Diode, Schottky, 1A, 150V | SS115       |
| Diode, Schottky, 1A, 20V  | SS12        |
| Diode, Schottky, 1A, 300V | SS13        |
| Diode, Schottky, 1A, 50V  | SS15        |
| Diode, Schottky, 1A, 90V  | SS19        |

## Notes:

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