



## 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

## Specifications:

### Mechanical Data:

|           |                                |
|-----------|--------------------------------|
| Cases     | : Moulded plastic              |
| Terminals | : Pure tin plated, lead free   |
| Polarity  | : Indicated by cathode band    |
| Packing   | : 12mm tape per EIA STD RS-481 |
| Weight    | : 0.093g                       |

## 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%.

| Parameters                                                                                        | Symbol            | SS22 | SS23 | SS25 | SS29 | Units |
|---------------------------------------------------------------------------------------------------|-------------------|------|------|------|------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                            | V <sub>RRM</sub>  | 20   | 30   | 50   | 90   | V     |
| Maximum RMS Voltage                                                                               | V <sub>RMS</sub>  | 14   | 21   | 35   | 63   |       |
| Maximum DC Blocking Voltage                                                                       | V <sub>DC</sub>   | 20   | 30   | 50   | 90   |       |
| Maximum Average Forward Rectified Current at T <sub>L</sub>                                       | I <sub>(AV)</sub> | 2    |      |      |      | A     |
| Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) | I <sub>FSM</sub>  | 50   |      |      |      |       |

# Schottky Diode



| Parameters                                                                                                    | Symbol           | SS22        | SS23 | SS25        | SS29        | Units    |
|---------------------------------------------------------------------------------------------------------------|------------------|-------------|------|-------------|-------------|----------|
| Maximum Instantaneous Forward Voltage<br>(Note 1)<br><div>I<sub>F</sub> = 2A at 25°C<br/>at 100°C</div>       | V <sub>F</sub>   | 0.5<br>0.4  |      | 0.7<br>0.65 | 0.85<br>0.7 | 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           |             |          |
| Typical Junction Capacitance (Note 3)                                                                         | C <sub>j</sub>   | 130         |      |             |             | pF       |
| Typical Thermal Resistance (Note 2)                                                                           | R <sub>θJL</sub> | 17          |      |             |             | °C/W     |
|                                                                                                               | R <sub>θJA</sub> | 75          |      |             |             |          |
| Operating Temperature Range                                                                                   | T <sub>J</sub>   | -65 to +125 |      | -65 to +150 |             | °C       |
| Storage Temperature Range                                                                                     | T <sub>STG</sub> | -65 to +150 |      |             |             |          |

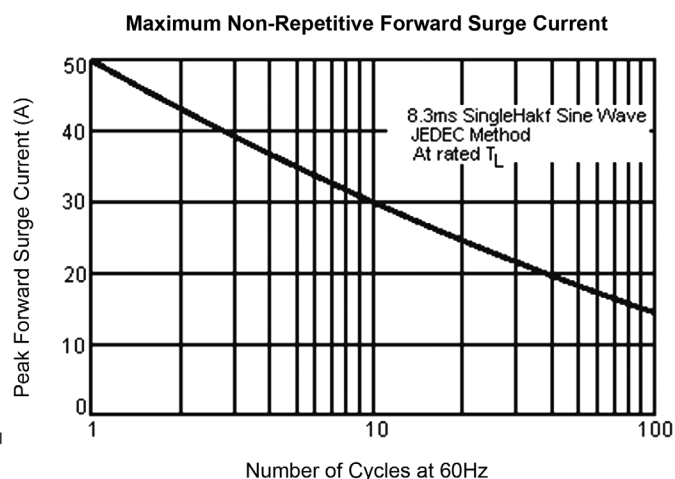
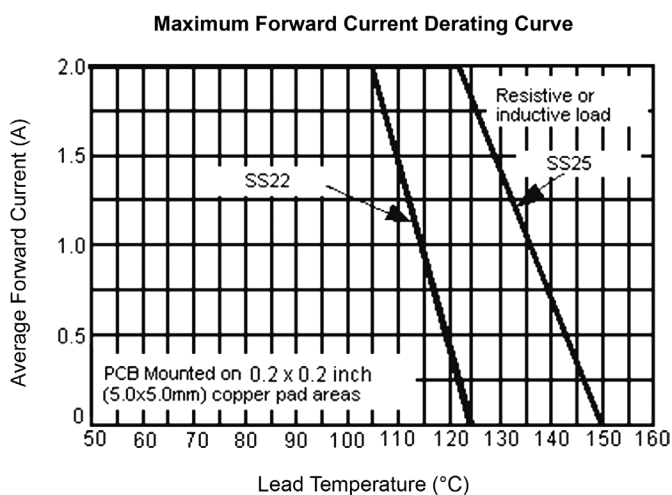
## Notes:

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

2. Measured on PC Board with  $0.4" \times 0.4"$  (10mm  $\times$  10mm) Copper Pad Areas.

3. Measured at 1MHz and Applied Reverse Voltage of 4V DC.

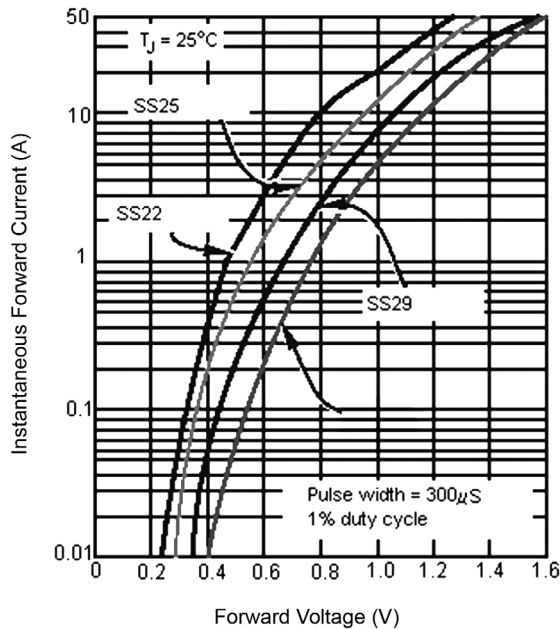
## Ratings and Characteristic Curves



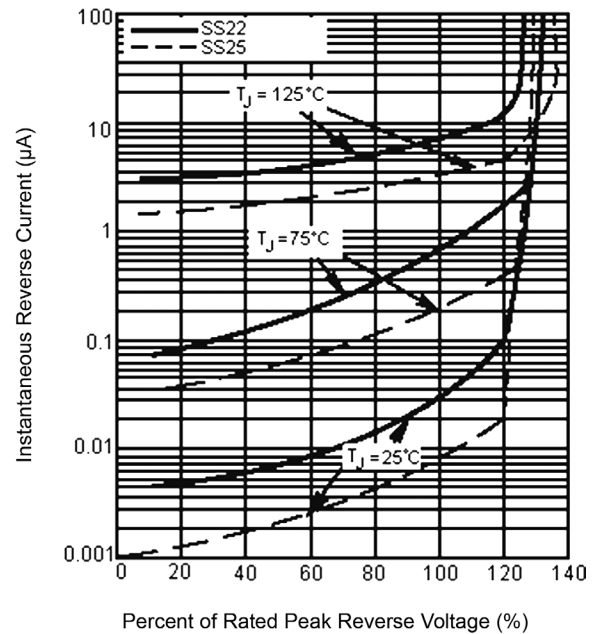
# Schottky Diode



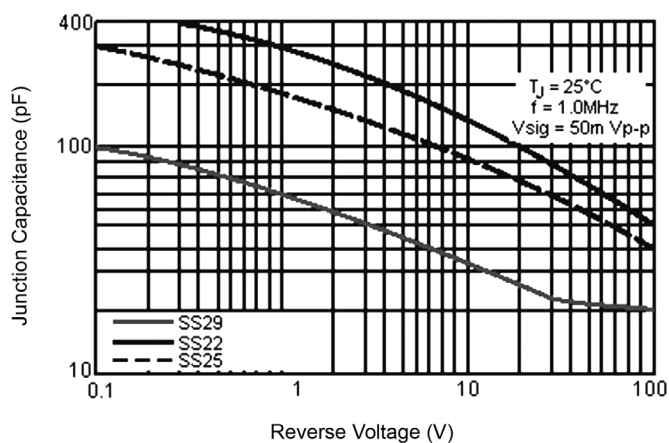
Typical Forward Characteristics



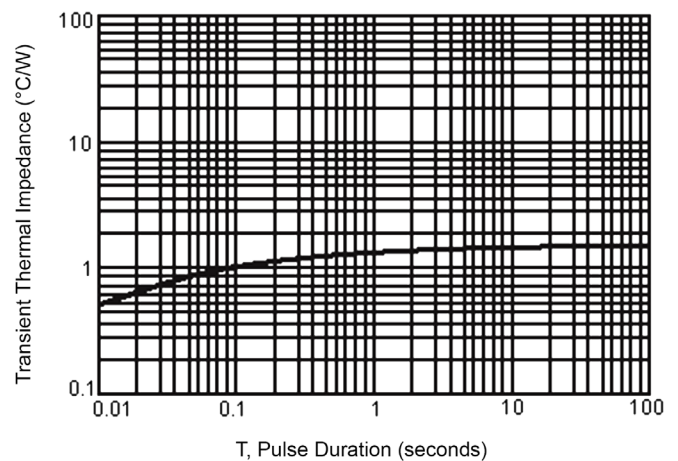
Typical Reverse Characteristics



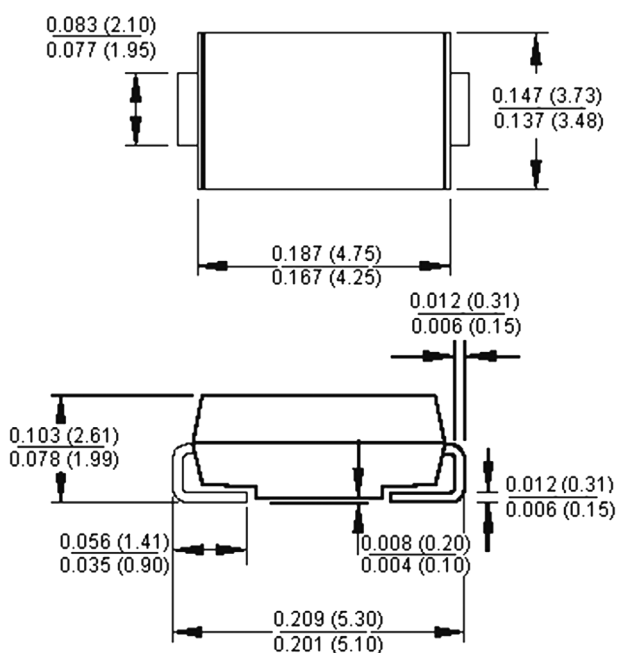
Typical Junction Capacitance



Typical Transient Thermal Characteristics



## SMB/DO-214AA



Dimensions : Inches (Millimetres)

## Part Number Table

| Description              | Part Number |
|--------------------------|-------------|
| Diode, Schottky, 2A, 20V | SS22        |
| Diode, Schottky, 2A, 30V | SS23        |
| Diode, Schottky, 2A, 50V | SS25        |
| Diode, Schottky, 2A, 90V | SS29        |

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