

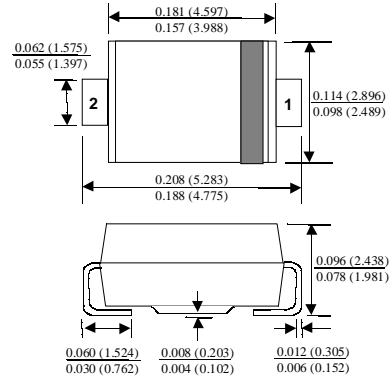
SS12 - S100

Features

- Glass passivated junctions.
- High current capability, low V_F .
- For use in low voltage, high frequency inverters free wheeling, and polarity protection applications.



SMA/DO-214AC
COLOR BAND DENOTES CATHODE



1.0 Ampere Schottky Barrier Rectifiers

Absolute Maximum Ratings* $T_A = 25^\circ\text{C}$ unless otherwise noted

| Symbol | Parameter | Value | Units |
|---------------------|---|-------------|---------------------------|
| I_O | Average Rectified Current .375 " lead length @ $T_A = 75^\circ\text{C}$ | 1.0 | A |
| $i_f(\text{surge})$ | Peak Forward Surge Current 8.3 ms single half-sine-wave Superimposed on rated load (JEDEC method) | 40 | A |
| P_D | Total Device Dissipation Derate above 25°C | 1.1 11 | W mW/ $^\circ\text{C}$ |
| $R_{\theta JA}$ | Thermal Resistance, Junction to Ambient ** | 88 | $^\circ\text{C}/\text{W}$ |
| T_{stg} | Storage Temperature Range | -65 to +150 | $^\circ\text{C}$ |
| T_J | Operating Junction Temperature | -65 to +125 | $^\circ\text{C}$ |

*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

** Device mounted on FR-4 PCB 0.013 mm.

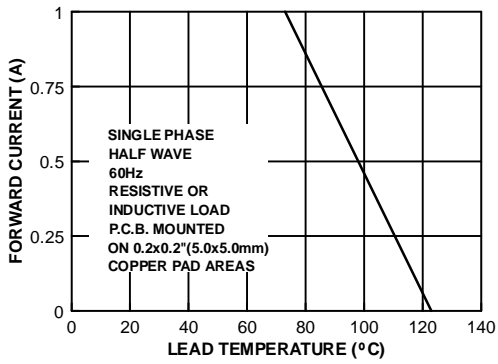
Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise noted

| Parameter | Device | | | | | | | | Units |
|--|--------|----|-----|----|-----|----|----|-----|-------|
| | 12 | 13 | 14 | 15 | 16 | 18 | 19 | 100 | |
| Peak Repetitive Reverse Voltage | 20 | 30 | 40 | 50 | 60 | 80 | 90 | 100 | V |
| Maximum RMS Voltage | 14 | 21 | 28 | 35 | 42 | 56 | 64 | 71 | V |
| DC Reverse Voltage (Rated V_R) | 20 | 30 | 40 | 50 | 60 | 80 | 90 | 100 | V |
| Maximum Reverse Current $T_A = 25^\circ\text{C}$ | 0.2 | | | | | | | | mA |
| (Note 1) @ rated V_R $T_A = 100^\circ\text{C}$ | 10 | | | | | | | | mA |
| Maximum Forward Voltage @ 1.0 A | 500 | | 700 | | 850 | | | | mV |

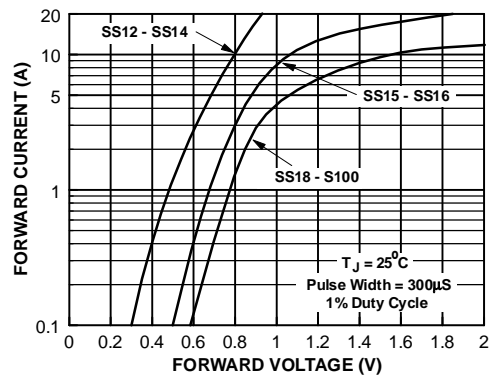
Note: Pulse Test: Pulse Width $\leq 300 \mu\text{s}$, Duty Cycle $\leq 2.0\%$

Typical Characteristics

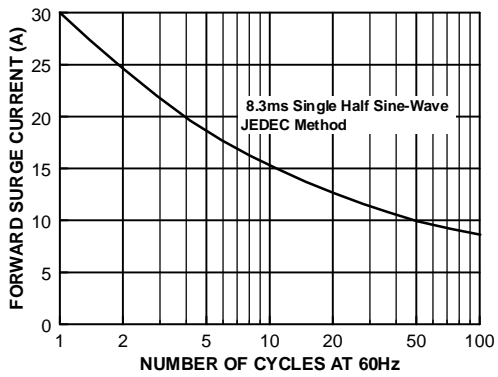
Forward Current Derating Curve



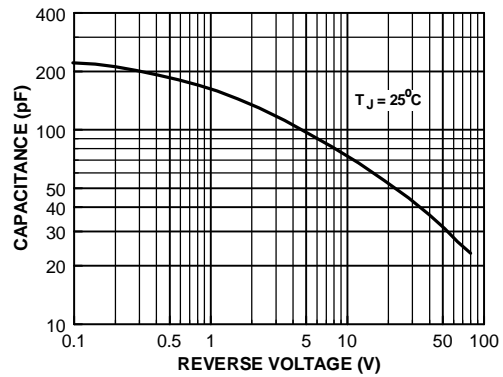
Forward Characteristics



Non-Repetitive Surge Current



Junction Capacitance



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| FACT™ | QS™ |
| FACT Quiet Series™ | Quiet Series™ |
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|--------------------------|------------------------|---|
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