

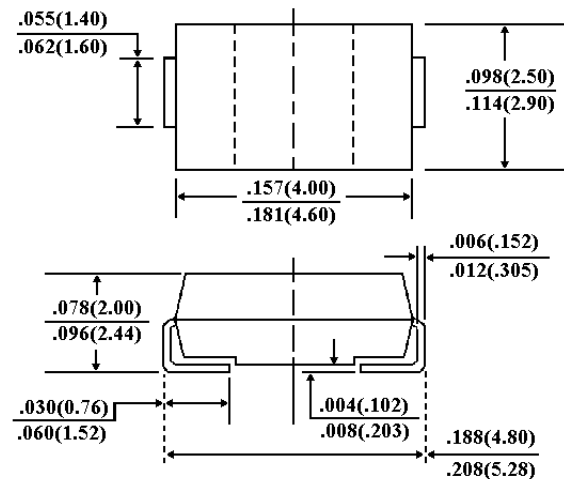
# SS12 THRU S100

## SURFACE MOUNT SCHOTTKY BARRIER RECTIFIER VOLTAGE - 20 to 100 Volts CURRENT - 1.0 Ampere

### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Metal to silicon rectifier majority carrier conduction
- Low power loss, High efficiency
- High current capability, low  $V_F$
- High surge capacity
- For use in low voltage high frequency inverters, free wheeling, and polarity protection applications
- High temperature soldering:  
260 °C/10 seconds at terminals

### SMA/DO-214AC



Dimensions in inches and (millimeters)

### MECHANICAL DATA

Case: JEDEC DO-214AC molded plastic  
 Terminals: Solder plated, solderable per MIL-STD-750, Method 2026  
 Polarity: Color band denotes cathode  
 Standard packaging: 12mm tape (EIA-481)  
 Weight: 0.002 ounce, 0.064 gram

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

Resistive or inductive load.

|   | SYMBOLS                              | SS12        | SS13 | SS14 | SS15 | SS16 | SS18 | SS19 | S100  | UNITS |
|---|--------------------------------------|-------------|------|------|------|------|------|------|-------|-------|
| Maximum Recurrent Peak Reverse Voltage  | $V_{RRM}$                            | 20          | 30   | 40   | 50   | 60   | 80   | 90   | 100   | Volts |
| Maximum RMS Voltage   | $V_{RMS}$                            | 14          | 21   | 28   | 35   | 42   | 56   | 64   | 71    | Volts |
| Maximum DC Blocking Voltage   | $V_{DC}$                             | 20          | 30   | 40   | 50   | 60   | 80   | 90   | 100   | Volts |
| Maximum Average Forward Rectified Current at $T_L$ (See Figure 1)                               | $I_{(AV)}$                           | 1.0         |      |      |      |      |      |      |       | Amps  |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load(JEDEC method) | $I_{FSM}$                            | 30.0        |      |      |      |      |      |      |       | Amps  |
| Maximum Instantaneous Forward Voltage at 1.0A (Note 1)  | $V_F$                                | 0.5         |      | 0.70 |      | 0.85 |      |      | Volts |       |
| Maximum DC Reverse Current $T_A=25$ °C (Note 1)<br>At Rated DC Blocking Voltage $T_A=100$ °C    | $I_R$                                | 0.5         |      |      |      | 20.0 |      |      |       | mA    |
| Maximum Thermal Resistance (Note 2)   | R $\theta_{KJL}$<br>R $\theta_{KJA}$ | 28          |      |      |      | 88   |      |      |       | °C/W  |
| Operating Junction Temperature Range  | $T_J$                                | -50 to +125 |      |      |      |      |      |      |       | °C    |
| Storage Temperature Range   | $T_{STG}$                            | -50 to +150 |      |      |      |      |      |      |       | °C    |

### NOTES:

1. Pulse Test with PW=300  $\mu$ sec, 2% Duty Cycle.
2. Mounted on P.C.Board with 5.0mm<sup>2</sup> (.013mm thick) copper pad areas.

# RATING AND CHARACTERISTIC CURVES

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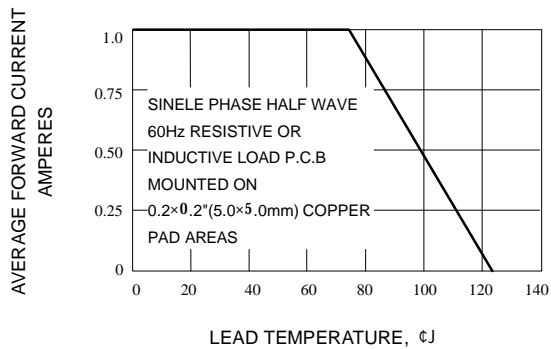


Fig. 1-FORWARD CURRENT DERATING CURVEE

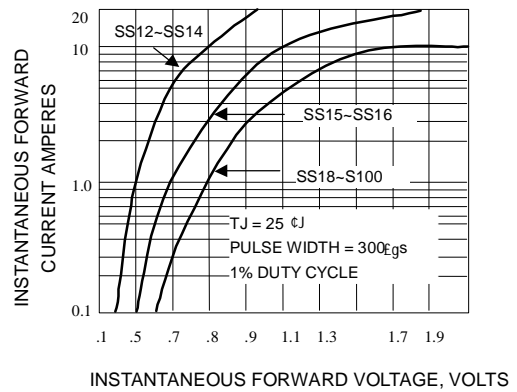


Fig. 2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

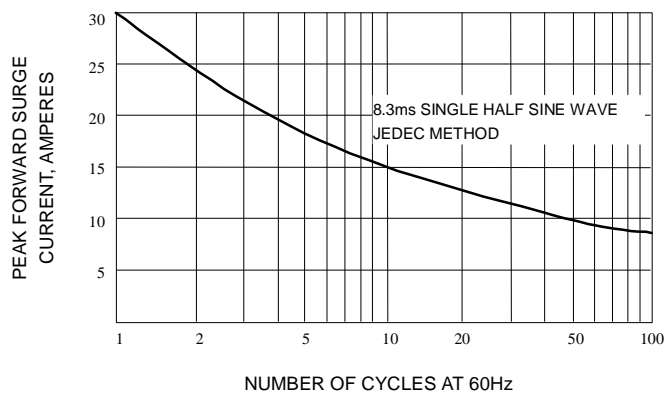


Fig. 3-MAXIMUM NON-REPETITIVE SURGE CURRENT

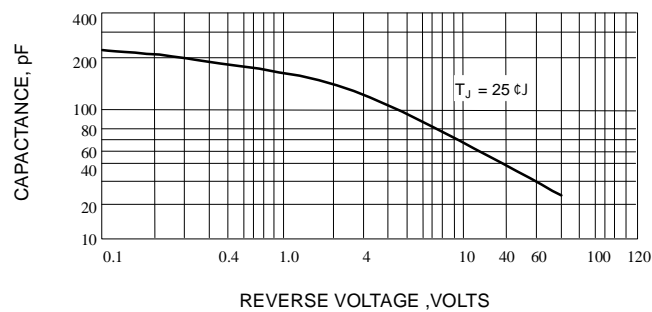


Fig. 4-TYPICAL JUNCTION CAPACITANCE