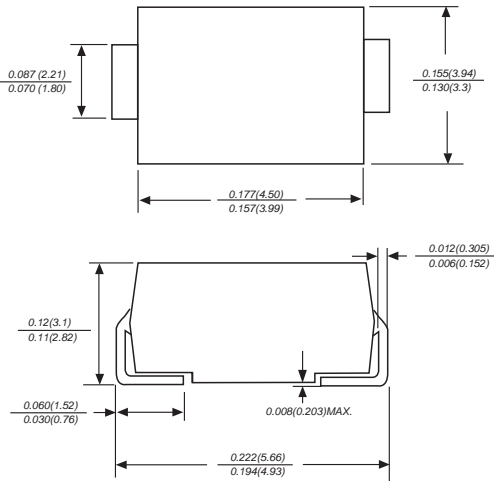


**SMB**
**DO-214AA**


Dimensions in inches and (millimeters)

**FEATURES**

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Metal silicon junction, majority carrier conduction
- ◆ Low power loss, high efficiency
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250°C/10 seconds at terminals

**MECHANICAL DATA**

**Case:** JEDEC DO-214AA molded plastic body  
**Terminals:** leads solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.005 ounce, 0.138 grams

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.  
 Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

|   | SYMBOLS    | SS52        | SS53 | SS54 | SS55        | SS56 | SS58 | SS510 | SS515 | SS520 | UNITS |
|---|------------|-------------|------|------|-------------|------|------|-------|-------|-------|-------|
| Maximum repetitive peak reverse voltage   | $V_{RRM}$  | 20          | 30   | 40   | 50          | 60   | 80   | 100   | 150   | 200   | VOLTS |
| Maximum RMS voltage   | $V_{RMS}$  | 14          | 21   | 28   | 35          | 42   | 56   | 70    | 105   | 140   | VOLTS |
| Maximum DC blocking voltage   | $V_{DC}$   | 20          | 30   | 40   | 50          | 60   | 80   | 100   | 150   | 200   | VOLTS |
| Maximum average forward rectified current at $T_L$ (see fig.1)  | $I_{(AV)}$ | 5.0         |      |      |             |      |      |       |       |       | Amps  |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on rated load (JEDEC Method)             | $I_{FSM}$  | 150.0       |      |      |             |      |      |       |       |       | Amps  |
| Maximum instantaneous forward voltage at 5.0A   | $V_F$      | 0.45        | 0.55 | 0.70 |             | 0.85 |      |       |       | Volts |       |
| Maximum DC reverse current<br>$T_A=25^\circ\text{C}$<br>at rated DC blocking voltage<br>$T_A=100^\circ\text{C}$ | $I_R$      | 0.5         |      |      |             |      |      |       |       |       | mA    |
|   |            | 20          |      |      | 10          |      |      |       |       |       |       |
| Typical junction capacitance (NOTE 1)   | $C_J$      | 800         |      |      | 500         |      |      |       |       | pF    |       |
| Typical thermal resistance (NOTE 2)   | $R_{qJA}$  | 55.0        |      |      |             |      |      |       |       |       | °C/W  |
| Operating junction temperature range  | $T_J$      | -65 to +125 |      |      | -65 to +150 |      |      |       |       | °C    |       |
| Storage temperature range   | $T_{STG}$  | -65 to +150 |      |      |             |      |      |       |       |       | °C    |

**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
 2. P.C.B. mounted with 0.4x0.4" (10x10mm) copper pad areas

