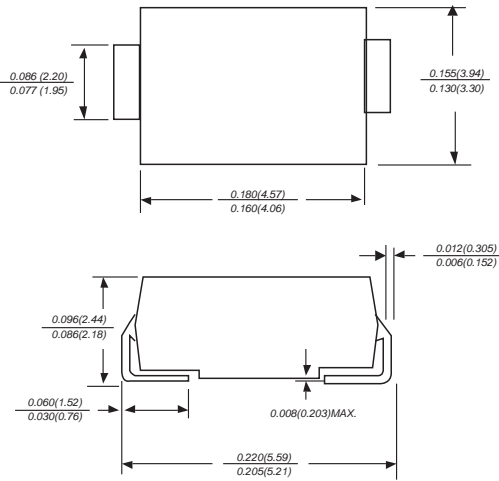


DO-214AA/SMB



Dimensions in inches and (millimeters)

FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Low reverse leakage
- ◆ 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: Solder plated, 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

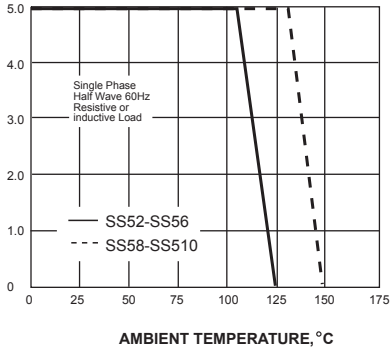
Ratings at 25°C ambient temperature unless otherwise specified.
 Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| | SYMBOLS | SS52 | SS53 | SS54 | SS55 | SS56 | SS58 | SS510 | UNITS |
|---|-----------------|-------------|------|------|------|------|-------------|-------|-------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | VOLTS |
| Maximum RMS voltage | V_{RMS} | 14 | 21 | 28 | 35 | 42 | 56 | 70 | VOLTS |
| Maximum DC blocking voltage | V_{DC} | 20 | 30 | 40 | 50 | 60 | 80 | 100 | VOLTS |
| Maximum average forward rectified current at T_L (see fig. 1) | $I_{(AV)}$ | 5.0 | | | | | | | Amps |
| Peak forward surge current 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 | 0.55 | | 0.70 | | 0.85 | | Volts | |
| Maximum DC reverse current at rated DC blocking voltage | I_R | 0.5 | | | | | | | mA |
| $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$ | | 20 | | | | 10 | | | |
| Typical junction capacitance (NOTE 1) | C_J | 200 | | | | | | | pF |
| Typical thermal resistance (NOTE 2) | $R_{\theta JA}$ | 50.0 | | | | | | | °C/W |
| Operating junction temperature range | T_J | -65 to +150 | | | | | -65 to +175 | | °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 0.2x0.2" (5.0x5.0mm) copper pad areas

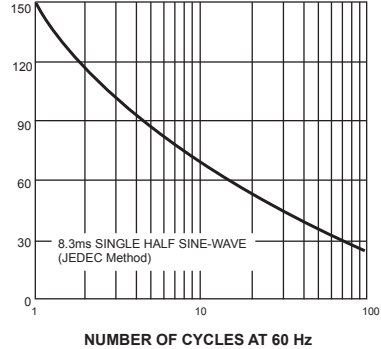
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



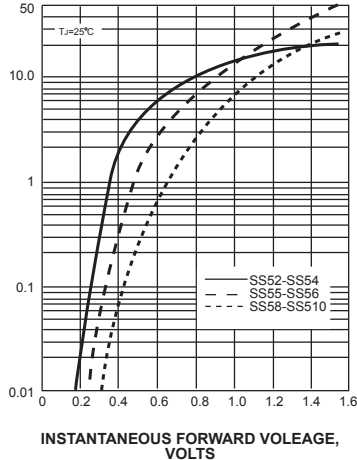
PEAK FORWARD SURGE CURRENT, AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



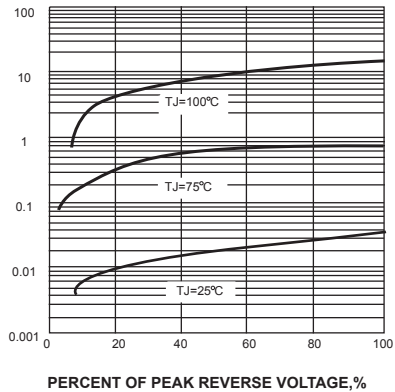
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



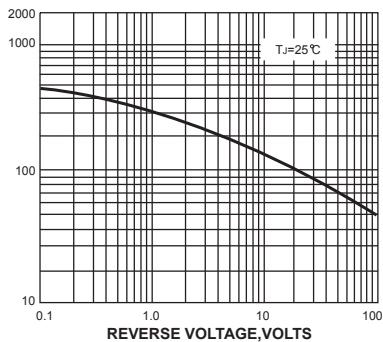
INSTANTANEOUS REVERSE CURRENT, MILLIAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



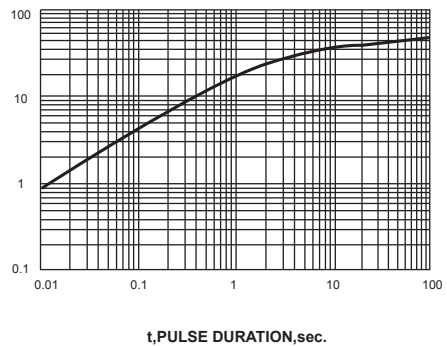
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE

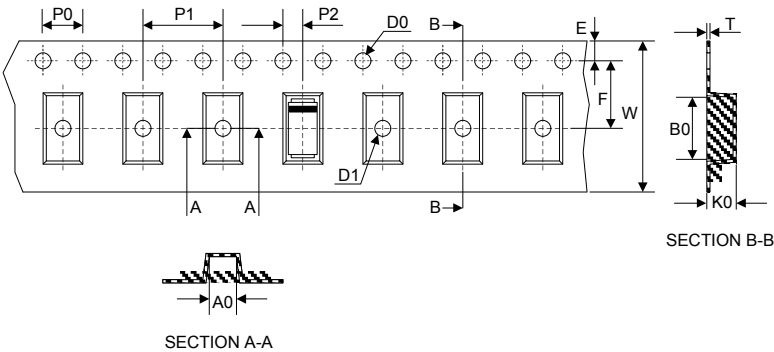
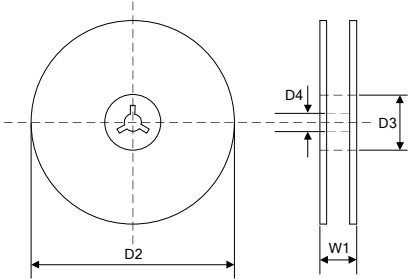
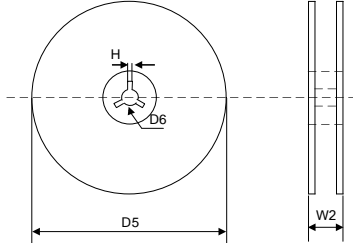


TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



Packaging

| Tape | Symbol Dimension (mm) | |
|---|----------------------------|------------|
|  | W | 12.00±0.20 |
| | P0 | 4.00±0.10 |
| | P1 | 8.00±0.10 |
| | P2 | 2.00±0.10 |
| | D0 | Φ1.55±0.10 |
| | D1 | Φ1.5±0.10 |
| | E | 1.75±0.10 |
| | F | 5.50±0.10 |
| | A0 | 3.86±0.15 |
| | B0 | 5.65±0.10 |
| K0 | 2.75±0.15 | |
| T | 0.25±0.05 | |
| 7" Reel | D2 | Φ178.0±2.0 |
|  | D3 | Φ50.0Min. |
| | D4 | Φ13.0±0.5 |
| | W1 | 16.0±2.0 |
| | Quantity: 500PCS | |
| 13" Reel | D5 | Φ330.0±2.0 |
|  | D6 | Φ13.5±0.5 |
| | H | 2.5±1.0 |
| | W2 | 16.0±2.0 |
| | Quantity: 3000PCS | |