



## AXIAL SILASTIC GUARD JUNCTION STANDARD RECTIFIER

**1N5391 THRU 1N5399**

**VOLTAGE RANGE  
CURRENT**

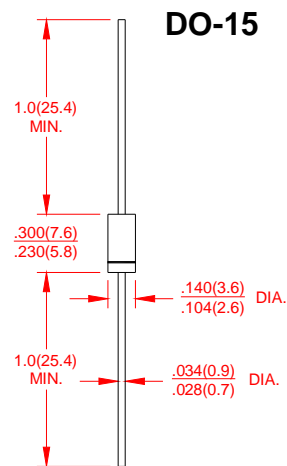
**50 to 1000 Volts  
1.5 Amperes**

### FEATURES

- Low coat construction
- Low forward voltage drop
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed:  
260°C/10 secods/.375”(9.5mm)lead length at 5 lbs(2.3kg) tension

### MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-O rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any
- Weight: 0.012 ounce, 0.33 grams



Dimensions in inches and (millimeters)

### 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 derate current by 20%

|   | SYMBOLS                   | 1N<br>5391  | 1N<br>5392 | 1N<br>5393 | 1N<br>5394 | 1N<br>5395 | 1N<br>5396 | 1N<br>5397 | 1N<br>5398 | 1N<br>5399 | UNIT                      |
|---|---------------------------|-------------|------------|------------|------------|------------|------------|------------|------------|------------|---------------------------|
| Maximum Repetitive Peak Reverse Voltage   | $V_{RRM}$                 | 50          | 100        | 200        | 300        | 400        | 500        | 600        | 800        | 1000       | Volts                     |
| Maximum RMS Voltage   | $V_{RMS}$                 | 35          | 70         | 140        | 210        | 280        | 350        | 420        | 560        | 700        | Volts                     |
| Maximum DC Blocking Voltage   | $V_{DC}$                  | 50          | 100        | 200        | 300        | 400        | 500        | 600        | 800        | 100        | Volts                     |
| Maximum Average Forward Rectified Current<br>0.375”(9.5mm) lead length at $T_A=70^\circ\text{C}$            | $I_{(AV)}$                | 1.5         |            |            |            |            |            |            |            |            | Amps                      |
| Peak Forward Surge Current<br>8.3mS single half sine wave superimposed on<br>rated load (JEDEC method)      | $I_{FSM}$                 | 30          |            |            |            |            |            |            |            |            | Amps                      |
| Maximum Instantaneous Forward Voltage @ 1.0A  | $V_F$                     | 1.1         |            |            |            |            |            |            |            |            | Volts                     |
| Maximum DC Reverse Current at Rated<br>DC Blocking Voltage per element                                      | $T_A = 25^\circ\text{C}$  | $I_R$       |            |            |            |            |            |            |            |            | $\mu\text{A}$             |
|   | $T_A = 100^\circ\text{C}$ | 50          |            |            |            |            |            |            |            |            |                           |
| Maximum Full Load Reverse Current, full cycle average<br>0.375”(9.5mm)lead length at $T_L=75^\circ\text{C}$ | $I_{R(AV)}$               | 30          |            |            |            |            |            |            |            |            | $\mu\text{A}$             |
| Typical Junction Capacitance (Note 1)   | $C_J$                     | 13          |            |            |            |            |            |            |            |            | pF                        |
| Typical Thermal Resistance (Note 2)   | $R_{\theta JA}$           | 50          |            |            |            |            |            |            |            |            | $^\circ\text{C}/\text{W}$ |
| Operating Junction Temperature Range  | $T_J$                     | -55 to +150 |            |            |            |            |            |            |            |            | $^\circ\text{C}$          |
| Storage Temperature Range   | $T_{STG}$                 | -55 to +150 |            |            |            |            |            |            |            |            | $^\circ\text{C}$          |

#### Notes:

1. Measured at 1.0MHz and Applied Reverse Voltage of 4.0V DC.
2. Thermal Resistance from junction to ambient at 0.375”(9.5mm) lead length, P.C.board mounted with 0.2” × 0.2” (5.0 × 5.0mm) copper pads.



**AXIAL SILASTIC GUARD JUNCTION STANDARD RECTIFIER**

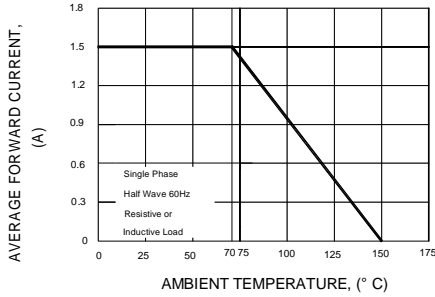
**1N5391 THRU 1N5399**

**VOLTAGE RANGE  
CURRENT**

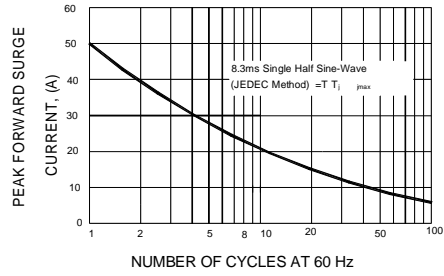
**50 to 1000 Volts  
1.5 Amperes**

**RATING AND CHARACTERISTIC CURVES 1N5391 Thru 1N5399**

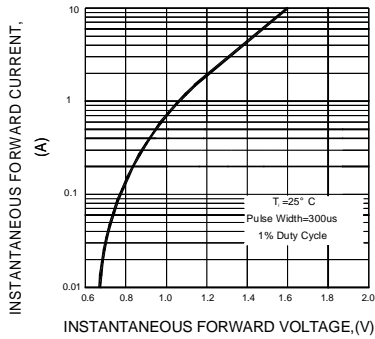
**FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE**



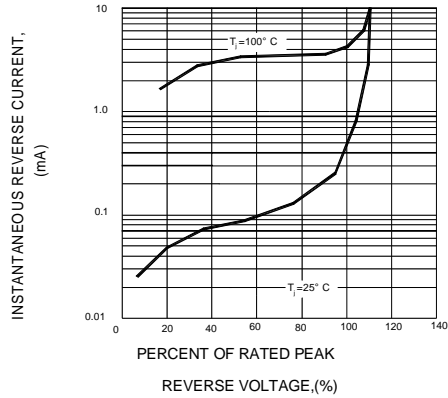
**FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.4-TYPICAL REVERSE CHARACTERISTICS**



**FIG.5-TYPICAL JUNCTION CAPACITANCE**

