## AXIAL SILASTIC GUARD JUNCTION STANDARD RECTIFIER

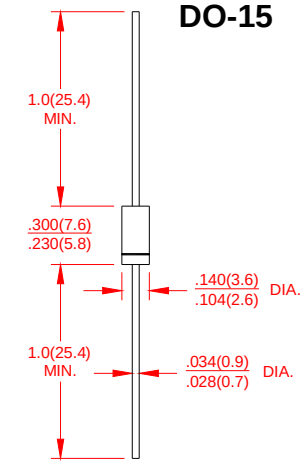
# 1N5391 THRU 1N5399

**VOLTAGE RANGE** **50 to 1000 Volts**
**CURRENT** **1.5 Amperes**

## FEATURES

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

**DO-15**




Dimensions in inches and (millimeters)

## 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

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25$^{O}$C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

| | SYMBOLS | 1N 5391 | 1N 5392 | 1N 5393 | 1N 5394 | 1N 5395 | 1N 5396 | 1N 5397 | 1N 5398 | 1N 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 0.375”(9.5mm) lead length at $T_A$= 70℃ | $I_{(AV)}$ | 1.5 | | | | | | | | | Amps |
| Peak Forward Surge Current 8.3mS single half sine wave superimposed on 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 DC Blocking Voltage per element $T_A$ = 25℃ | $I_R$ | 5.0 | | | | | | | | | μA |
| Maximum DC Reverse Current at Rated DC Blocking Voltage per element $T_A$ = 100℃ | $I_R$ | 50 | | | | | | | | | μA |
| Maximum Full Load Reverse Current, full cycle average 0.375”(9.5mm)lead length at $T_L$=75℃ | $I_{R(AV)}$ | 30 | | | | | | | | | μA |
| Typical Junction Capacitance (Note 1) | $C_J$ | 13 | | | | | | | | | pF |
| Typical Thermal Resistance (Note 2) | $R_{\theta JA}$ | 50 | | | | | | | | | ℃/W |
| Operating Junction Temperature Range | $T_J$ | -55 to +150 | | | | | | | | | ℃ |
| Storage Temperature Range | $T_{STG}$ | -55 to +150 | | | | | | | | | ℃ |

**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 | 50 to 1000 Volts |
|---|---|---|
| | CURRENT | 1.5 Amperes |

# RATING AND CHRACTERISTIC CURVES 1N539 Thur 1N5399

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

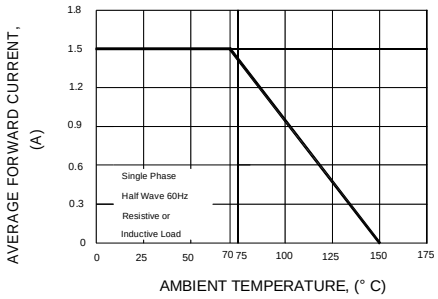



FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

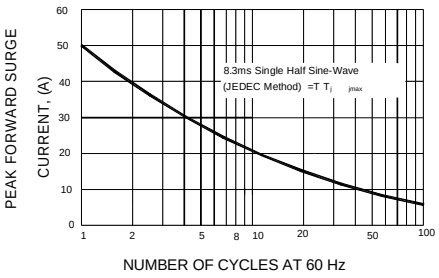



FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

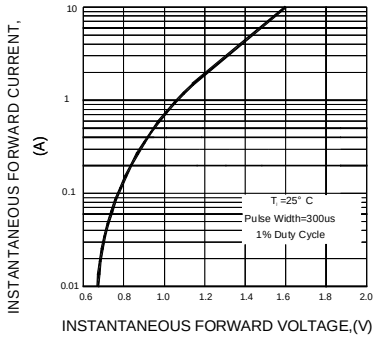



FIG.4-TYPICAL REVERSE CHARACTERISTICS

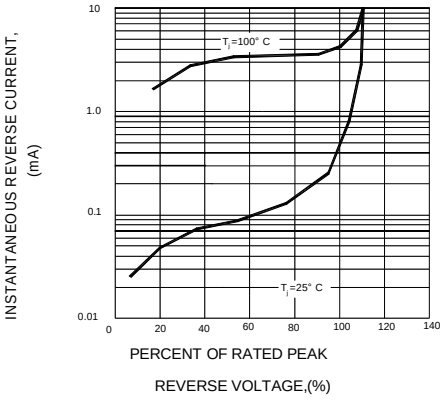



FIG.5-TYPICAL JUNCTION CAPACITANCE