



# 1N5391 THRU 1N5399

## GENERAL PURPOSE SILICON RECTIFIER

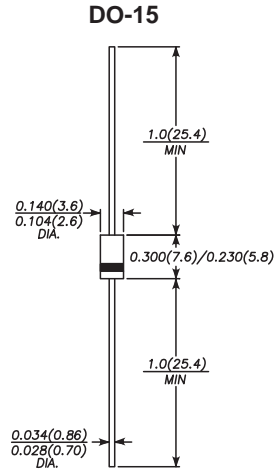
Reverse Voltage - 50 to 1000 Volts Forward Current - 1.5Amperes

### FEATURES

The plastic package carries Underwriters Laboratory  
 Flammability Classification 94V-0  
 Construction utilizes void-free  
 molded plastic technique  
 Low reverse leakage  
 High forward surge current capability  
 High temperature soldering guaranteed:  
 260°C/10 seconds, 0.375" (9.5mm) lead length,  
 5 lbs. (2.3kg) tension

### MECHANICAL DATA

**Case:** JEDEC DO-15 molded plastic body  
**Terminals:** Plated axial leads, solderable per MIL-STD-750,  
 Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.014 ounce, 0.40 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 current derate 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 | UNITS              |
|---|-----------------|--------------|------------|------------|------------|------------|------------|------------|------------|------------|--------------------|
| Maximum repetitive peak reverse voltage   | $V_{RRM}$       | 50           | 100        | 200        | 300        | 400        | 500        | 600        | 800        | 1000       | V                  |
| Maximum RMS voltage   | $V_{RMS}$       | 35           | 70         | 140        | 210        | 280        | 350        | 420        | 560        | 700        | V                  |
| Maximum DC blocking voltage   | $V_{DC}$        | 50           | 100        | 200        | 300        | 400        | 500        | 600        | 800        | 1000       | V                  |
| Maximum average forward rectified current<br>0.375" (9.5mm) lead length at $T_A=75^\circ\text{C}$         | $I_{AV}$        | 1.5          |            |            |            |            |            |            |            |            | A                  |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on<br>rated load (JEDEC Method)    | $I_{FSM}$       | 50.0         |            |            |            |            |            |            |            |            | A                  |
| Maximum instantaneous forward voltage at 1.5A   | $V_F$           | 1.0          |            |            |            |            |            |            |            |            | V                  |
| Maximum DC reverse current $T_A=25^\circ\text{C}$<br>at rated DC blocking voltage $T_A=100^\circ\text{C}$ | $I_R$           | 5.0<br>100.0 |            |            |            |            |            |            |            |            | $\mu\text{A}$      |
| Typical junction capacitance (NOTE 1)   | $C_J$           | 20.0         |            |            |            |            |            |            |            |            | pF                 |
| Typical thermal resistance (NOTE 2)   | $R_{\theta JA}$ | 50.0         |            |            |            |            |            |            |            |            | $^\circ\text{C/W}$ |
| Operating junction and storage temperature range  | $T_J, T_{STG}$  | -55 to +150  |            |            |            |            |            |            |            |            | $^\circ\text{C}$   |

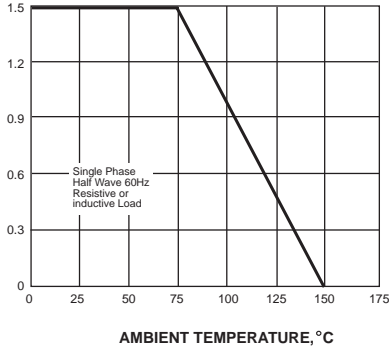
**Note:** 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.  
 2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted



# RATINGS AND CHARACTERISTIC CURVES 1N5391 THRU 1N5399

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

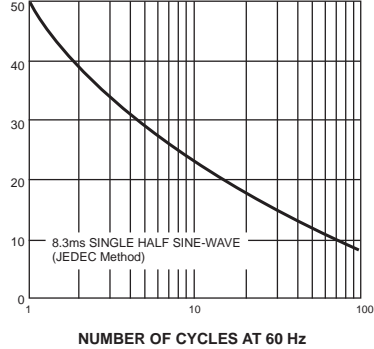


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

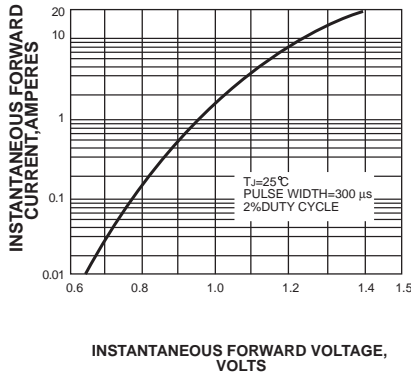


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

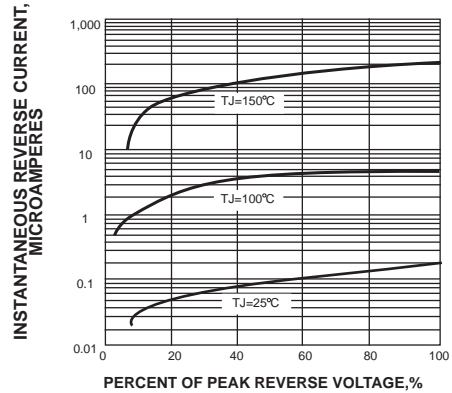
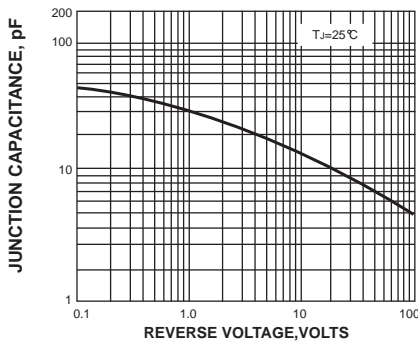
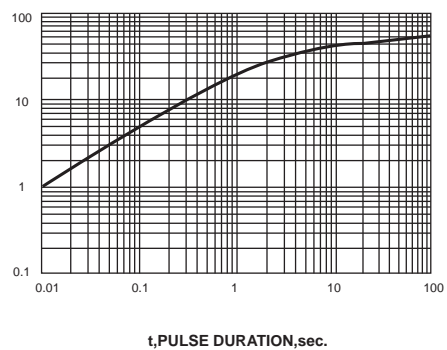


FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,  $^\circ\text{C}/\text{W}$

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



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[>>ZG\(中鑫半导体\)](#)