

1N5391 THRU 1N5399

PLASTIC SILICON RECTIFIER

VOLTAGE - 50 to 1000 Volts CURRENT - 1.5 Amperes

FEATURES

- Low cost
- High current capability
- High reliability
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound
- 1.5 ampere operation at $T_L=70\text{ }^{\circ}\text{C}$ with no thermal runaway
- Exceeds environmental standards of MIL-S-19500/228
- Low leakage

MECHANICAL DATA

Case: Molded plastic , DO-15

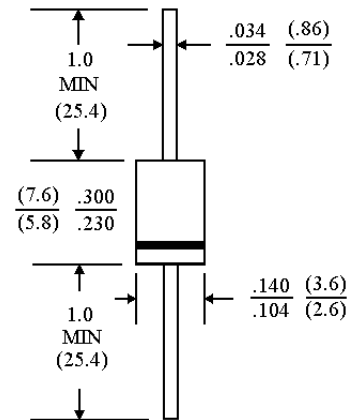
Terminals: Plated axial leads, solderable per MIL-STD-202,
Method 208

Polarity: Color band denotes cathode

Mounting Position: Any

Weight: 0.015 ounce, 0.4 gram

DO-15



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 $^{\circ}\text{C}$ ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

| | 1N5391 | 1N5392 | 1N5393 | 1N5394 | 1N5395 | 1N5396 | 1N5397 | 1N5398 | 1N5399 | UNITS |
|--|-------------|--------|--------|--------|--------|--------|--------|--------|--------|----------------------|
| Maximum Recurrent Peak Reverse Voltage | 50 | 100 | 200 | 300 | 400 | 500 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | 35 | 70 | 140 | 210 | 280 | 350 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | 50 | 100 | 200 | 300 | 400 | 500 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at $T_A=60\text{ }^{\circ}\text{C}$ | 1.5 | | | | | | | | | A |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | 50 | | | | | | | | | A |
| Maximum Forward Voltage at 1.5A | 1.4 | | | | | | | | | V |
| Maximum Reverse Current Rated $T_A=25\text{ }^{\circ}\text{C}$ | 5.0 | | | | | | | | | $\mu\text{g A}$ |
| DC Blocking Voltage $T_A=100\text{ }^{\circ}\text{C}$ | 500 | | | | | | | | | $\mu\text{g A}$ |
| Typical Junction capacitance (Note 1) | 25 | | | | | | | | | pF |
| Typical Thermal Resistance (Note 2) | 26.0 | | | | | | | | | $^{\circ}\text{C/W}$ |
| Operating and Storage Temperature Range T_J, T_{STG} | -55 TO +150 | | | | | | | | | $^{\circ}\text{C}$ |

NOTES:

1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
2. Thermal Resistance Junction to Ambient and from junction to lead at 0.375"(9.5mm) lead length P.C.Board mounted.

RATING AND CHARACTERISTIC CURVES

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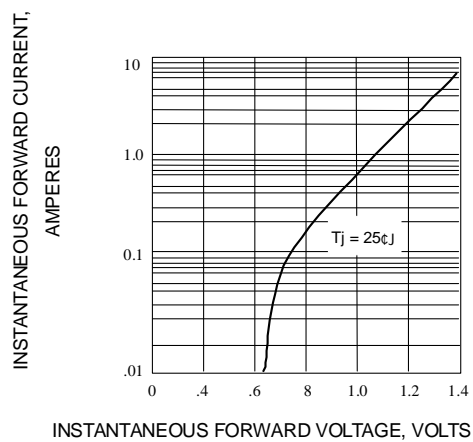


Fig. 1-TYPICAL FORWARD CHARACTERISTICS

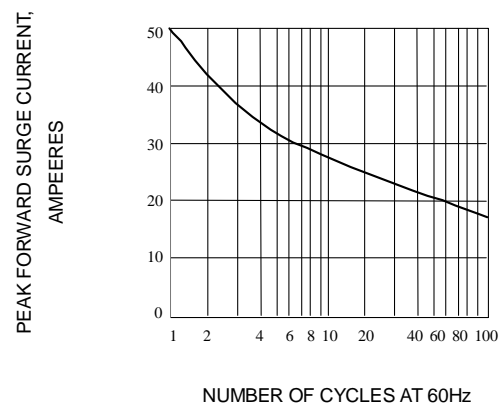


Fig. 2-PEAK FORWARD SURGE CURRENT

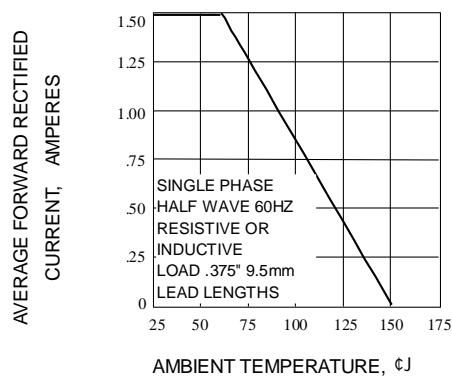


Fig. 3-FORWARD CURRENT DERATING CURVE

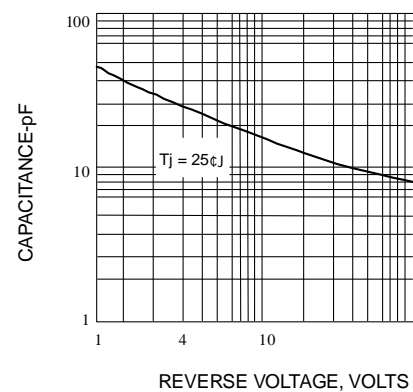


Fig. 4-TYPICAL JUNCTION CAPACITANCE