# 1N5391GP THRU 1N5399GP

## SINTERED GLASS JUNCTION PLASTIC RECTIFIER

**VOLTAGE:50 TO 1000V** **CURRENT: 1.5A**

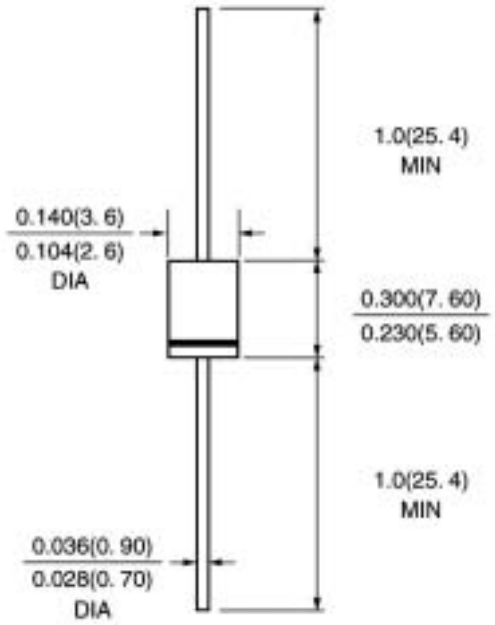
## FEATURE

High temperature metallurgically bonded construction
Sintered glass cavity free junction
Capability of meeting environmental standard of MIL-S-19500
High temperature soldering guaranteed
350°C /10sec/0.375"lead length at 5 lbs tension
Operate at Ta =55°C with no thermal run away
Typical Ir<0.1μA

## MECHANICAL DATA

Terminal: Plated axial leads solderable per MIL-STD 202E, method 208C
Case: Molded with UL-94 Class V-0 recognized Flame Retardant Epoxy
Polarity: color band denotes cathode
Mounting position: any

**DO-15**




Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(single-phase, half-wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated, for capacitive load, derate current by 20%)

| | SYMBOL | 1N5391 GP | 1N5392 GP | 1N5393 GP | 1N5394 GP | 1N5395 GP | 1N5396 GP | 1N5397 GP | 1N5398 GP | 1N5399 GP | units |
|---|---|---|---|---|---|---|---|---|---|---|---|
| * Maximum Recurrent Peak Reverse Voltage | Vrrm | 50 | 100 | 200 | 300 | 400 | 500 | 600 | 800 | 1000 | V |
| * Maximum RMS Voltage | Vrms | 35 | 70 | 140 | 210 | 280 | 350 | 420 | 560 | 700 | V |
| * Maximum DC blocking Voltage | Vdc | 50 | 100 | 200 | 300 | 400 | 500 | 600 | 800 | 1000 | V |
| * Maximum Average Forward Rectified Current 3/8"lead length at Ta =60°C | If(av) | 1.5 | | | | | | | | | A |
| * Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load | Ifsm | 50.0 | | | | | | | | | A |
| * Maximum Instantaneous Forward Voltage at 1.5A | Vf | 1.4 | | | | | | | | | V |
| * Maximum full load reverse current full cycle Average at 70°C | Ir(av) | 300.0 | | | | | | | | | μA |
| * Maximum DC Reverse Current Ta =25°C<br>at rated DC blocking voltage Ta =150°C | Ir | 5.0<br>300.0 | | | | | | | | | μA<br>μA |
| Typical Reverse Recovery Time (Note 1) | Trr | 2.0 | | | | | | | | | μS |
| Typical Junction Capacitance (Note 2) | Cj | 15.0 | | | | | | | | | pF |
| Typical Thermal Resistance (Note 3) | R(ja) | 45.0 | | | | | | | | | °C /W |
| * Storage and Operating Junction Temperature | Tstg, Tj | -65 to +175 | | | | | | | | | °C |

Note:

1. Reverse Recovery Condition If =0.5A, Ir =1.0A, Irr =0.25A
2. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
3. Thermal Resistance from Junction to Ambient at 3/8"lead length, P.C. Board Mounted

* JEDEC Registered value

FIG. 1 - FORWARD CURRENT DERATING CURVE

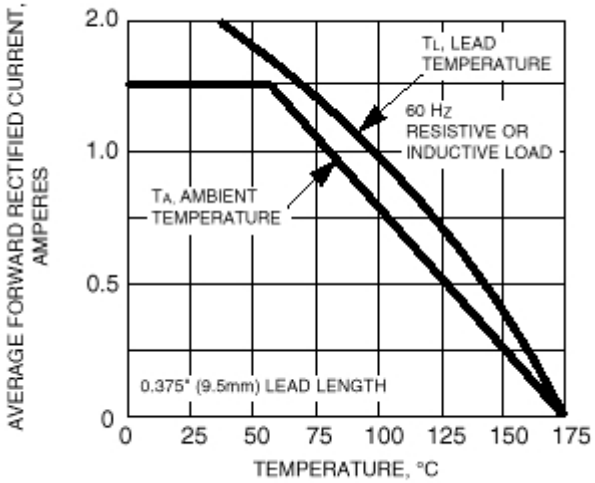



FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

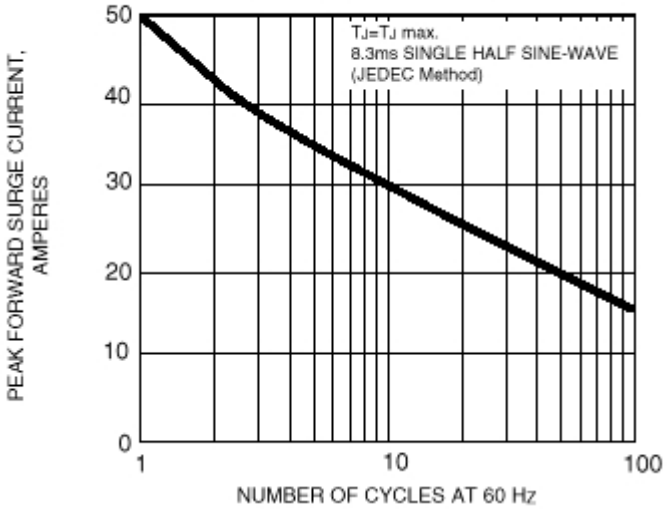



FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

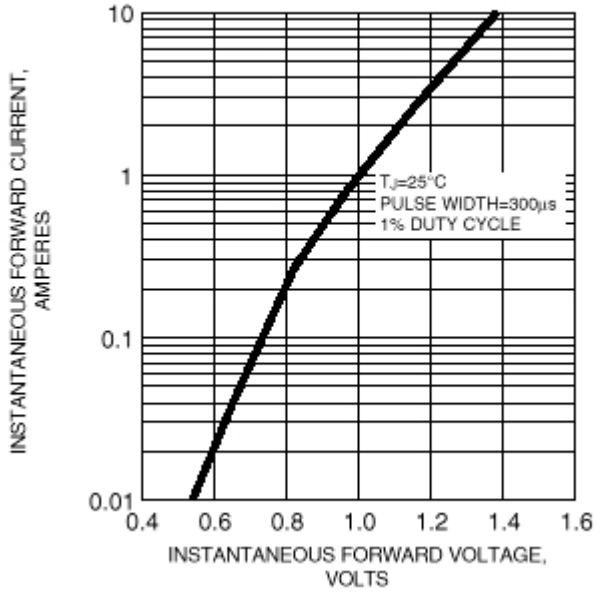



FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

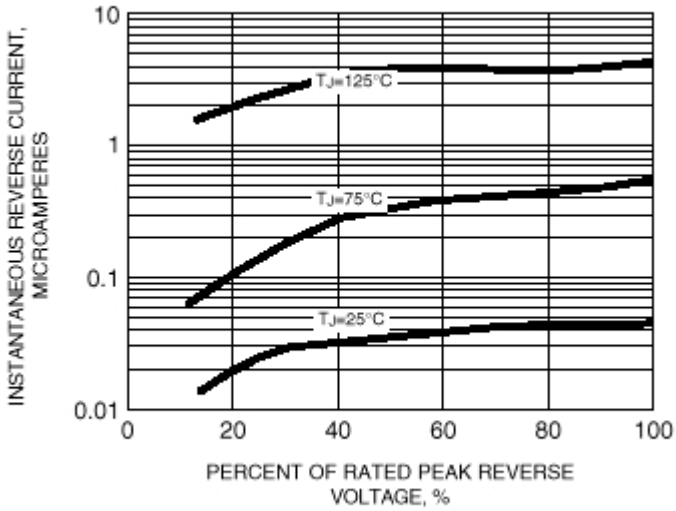



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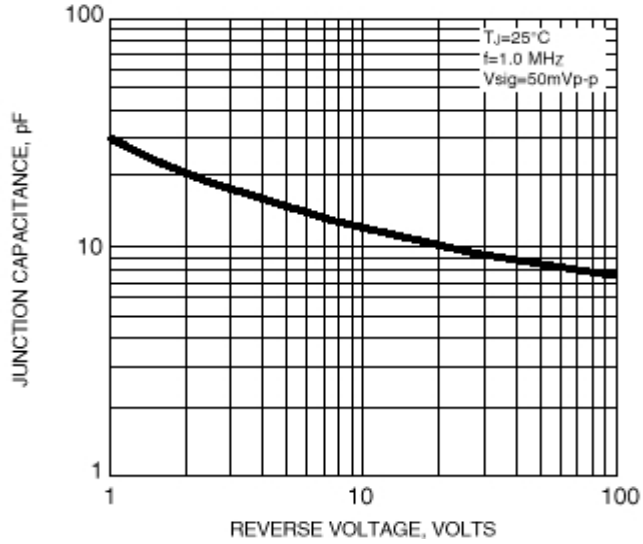
FIG. 5 - TYPICAL JUNCTION CAPACITANCE



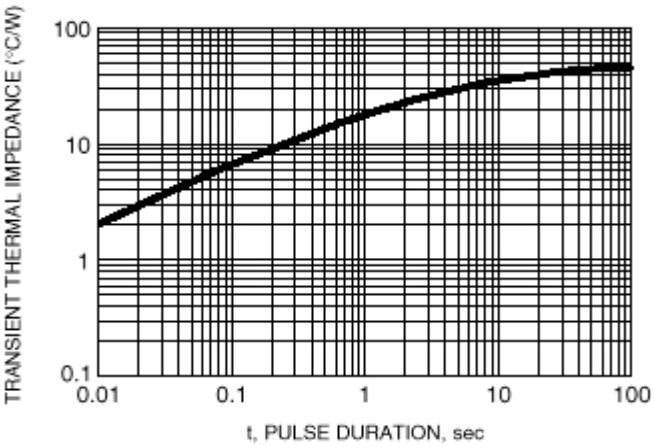


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE