

# 1N5391G - 1N5399G

## GLASS PASSIVATED JUNCTION SILICON RECTIFIERS

**PRV : 50 - 1000 Volts**

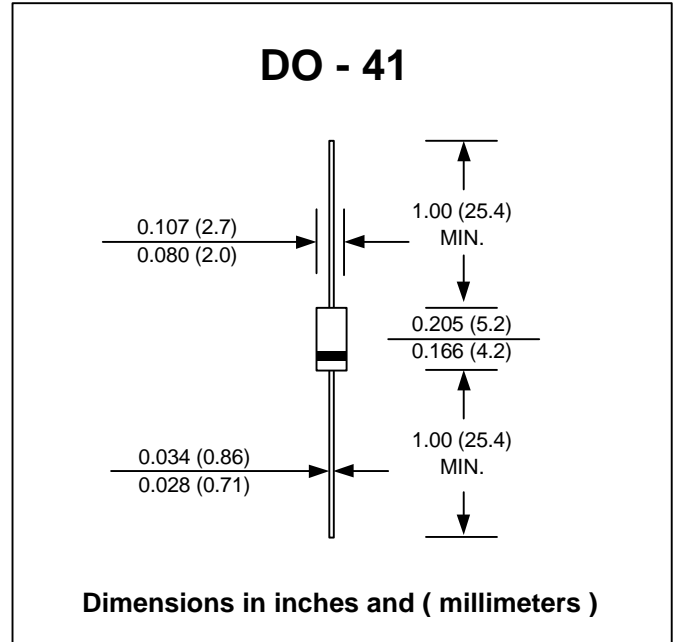
**Io : 1.5 Amperes**

### FEATURES :

- \* Glass passivated chip
- \* High current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* **Pb / RoHS Free**

### MECHANICAL DATA :

- \* Case : DO-41 Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 0.34 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25 °C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%.

| RATING  | SYMBOL          | 1N5391G       | 1N5392G | 1N5393G | 1N5394G | 1N5395G | 1N5396G | 1N5397G | 1N5398G | 1N5399G | UNIT               |
|---|-----------------|---------------|---------|---------|---------|---------|---------|---------|---------|---------|--------------------|
| 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 Current<br>0.375" (9.5mm) Lead Length $T_a = 75^\circ\text{C}$                        | $I_{F(AV)}$     | 1.5           |         |         |         |         |         |         |         |         | A                  |
| Peak Forward Surge Current<br>8.3ms Single half sine wave Superimposed<br>on rated load (JEDEC Method)        | $I_{FSM}$       | 50            |         |         |         |         |         |         |         |         | A                  |
| Maximum Forward Voltage at $I_F = 1.5$ Amps.  | $V_F$           | 1.1           |         |         |         |         |         |         |         |         | 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           |         |         |         |         |         |         |         |         | $\mu\text{A}$      |
|   | $I_{R(H)}$      | 50            |         |         |         |         |         |         |         |         | $\mu\text{A}$      |
| Typical Junction Capacitance (Note1)  | $C_J$           | 15            |         |         |         |         |         |         |         |         | pF                 |
| Typical Thermal Resistance (Note2)  | $R_{\theta JA}$ | 30            |         |         |         |         |         |         |         |         | $^\circ\text{C/W}$ |
| Junction Temperature Range  | $T_J$           | - 65 to + 175 |         |         |         |         |         |         |         |         | $^\circ\text{C}$   |
| Storage Temperature Range   | $T_{STG}$       | - 65 to + 175 |         |         |         |         |         |         |         |         | $^\circ\text{C}$   |

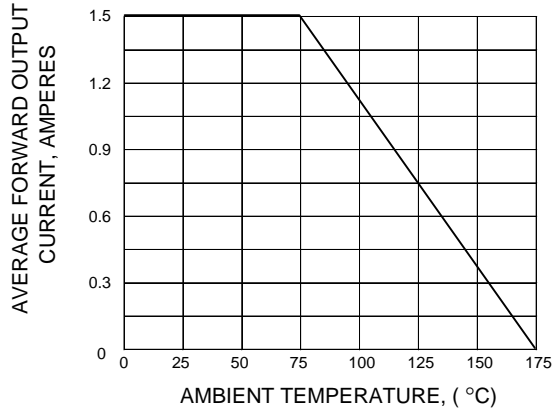
### Notes :

(1) Measured at 1.0 MHz and applied reverse voltage of 4.0V<sub>DC</sub>

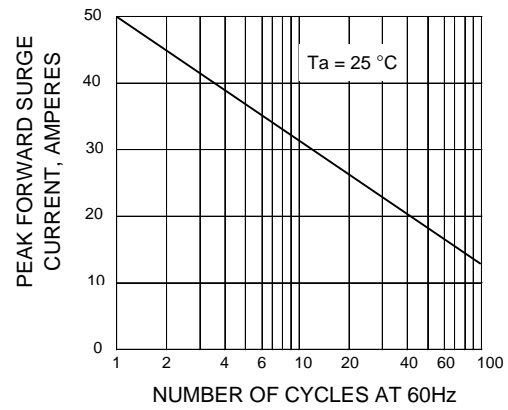
(2) Thermal resistance from Junction to Ambient at 0.375" (9.5mm) Lead Lengths, P.C. Board Mounted.

## RATING AND CHARACTERISTIC CURVES ( 1N5391G - 1N5399G )

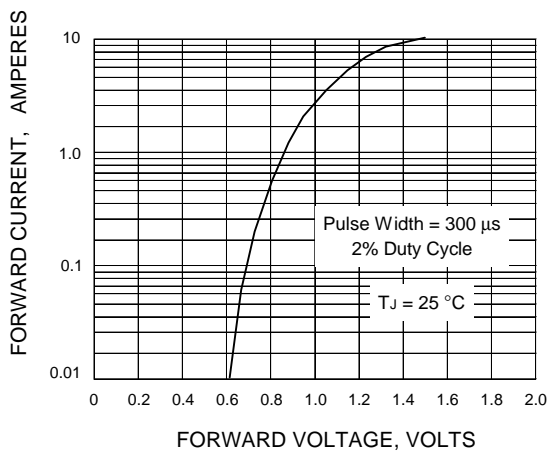
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**

