



1N5391G THRU 1N5399G

GLASS PASSIVATED JUNCTION RECTIFIER

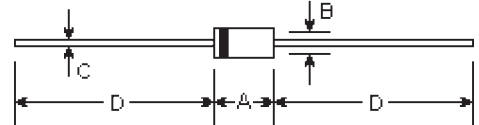
Reverse Voltage - 50 to 1000 Volts

Forward Current - 1.5 Amperes

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High temperature metallurgically bonded construction
- Glass passivated cavity-free junction
- Capable of meeting environmental standards of MIL-S-19500
- 1.5 ampere operation at $T_A = 70^\circ\text{C}$ with no thermal runaway
- Typical I_R less than $0.1 \mu\text{A}$
- High temperature soldering guaranteed: $350^\circ\text{C}/10$ seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

DO-15



Mechanical Data

- **Case:** DO-15 molded plastic over glass 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, 0.395 gram

DIMENSIONS					
DIM	inches		mm		Note
	Min.	Max.	Min.	Max.	
A	0.228	0.299	5.8	7.6	
B	0.102	0.142	2.6	3.6	φ
C	0.028	0.034	0.71	0.86	φ
D	1.000	-	25.40	-	

Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	Symbols	1N53 91G	1N53 92G	1N53 93G	1N53 94G	1N53 95G	1N53 96G	1N53 97G	1N53 98G	1N53 99G	Units
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	1000	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A = 70^\circ\text{C}$	$I_{(AV)}$	1.5									Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (MIL-STD-750D 4066 method)	I_{FSM}	50.0									Amps
Maximum instantaneous forward voltage at 1.5A, $T_A = 70^\circ\text{C}$	V_F	1.4									Volts
Maximum DC reverse current at rated DC blocking voltage $T_A = 25^\circ\text{C}$ $T_A = 150^\circ\text{C}$	I_R	5.0 300.0									μA
Typical reverse recovery time (Note 1)	T_{rr}	2.0									μs
Typical junction capacitance (Note 2)	C_J	15.0									pF
Typical thermal resistance (Note 3)	$R_{\theta JA}$	45.0									$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J, T_{STG}	-65 to +175									$^\circ\text{C}$

Notes:

- (1) Reverse recovery test conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{rr} = 0.25\text{A}$
- (2) Measured at 1.0MHz and applied reverse voltage of 4.0 volts
- (3) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

RATINGS AND CHARACTERISTIC CURVES

FIG. 1 - FORWARD CURRENT DERATING CURVE

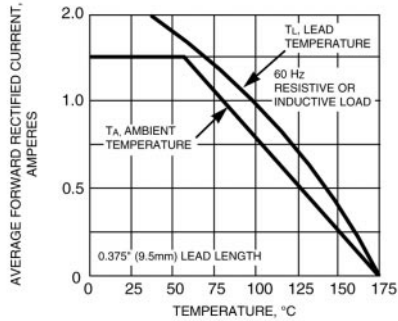


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

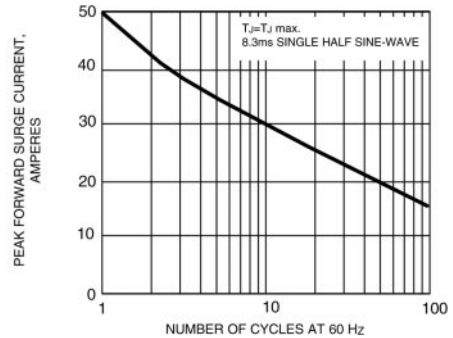


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

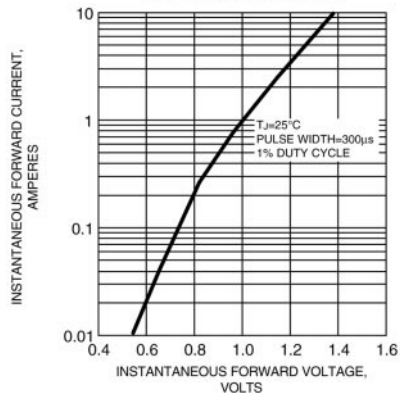


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

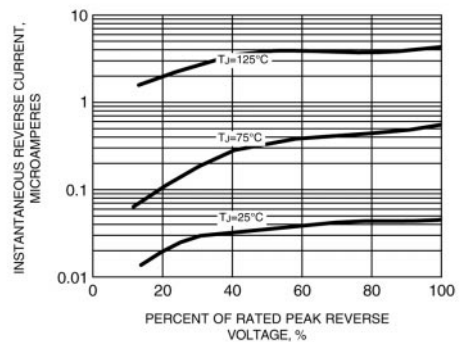


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

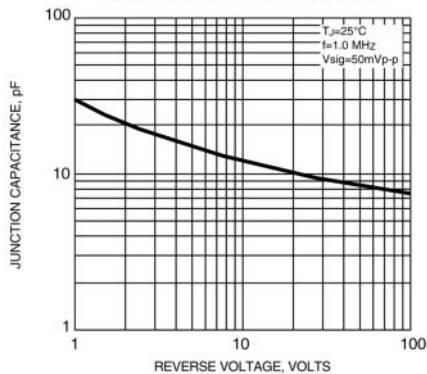


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

