



1N5391 THRU 1N5399

GENERAL PURPOSE PLASTIC RECTIFIER

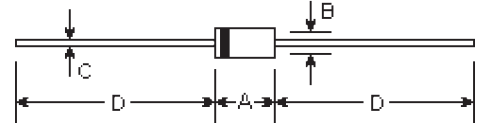
Reverse Voltage - 50 to 1000 Volts

Forward Current - 1.5 Amperes

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High surge current capability
- 1.5 ampere operation at $T_A=70^\circ\text{C}$ with no thermal runaway
- Low reverse leakage
- Construction utilizes void-free molded plastic technique
- High temperature soldering guaranteed:
250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3Kg) tension

DO-15



Mechanical Data

- **Case:** 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, 0.39 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	1N 5391	1N 5392	1N 5393	1N 5394	1N 5395	1N 5396	1N 5397	1N 5398	1N 5399	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 0.500" (12.7mm) 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) at $T_A=75^\circ\text{C}$	I_{FSM}	50.0									Amps
Maximum instantaneous forward voltage at 1.5A $T_A=70^\circ\text{C}$	V_F	1.40									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									μ A
Typical reverse recovery time (Note 1)	T_{rr}	2.0									μ S
Typical junction capacitance (Note 2)	C_J	15.0									p F
Typical thermal resistance (Note 3)	R_{JA} R_{JL}	50.0 25.0									°C/W
Maximum DC blocking voltage temperature	T_A	+150									°C
Operating junction temperature range	T_J	-50 to +170									°C
Storage temperature range	T_{STG}	-50 to +175									°C

Notes:

(1) Measured with $I_F=0.5A$, $I_R=1.0A$, $I_F=0.25A$

(2) Measured at 1.0MHz and applied reverse voltage of 4.0 volts

(3) Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5mm) lead length, P.C.B. mounted

RATINGS AND CHARACTERISTIC CURVES

FIG. 1 - FORWARD CURRENT DERATING CURVE

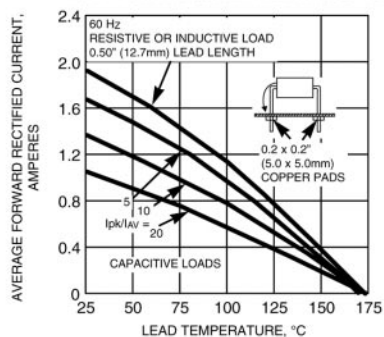


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

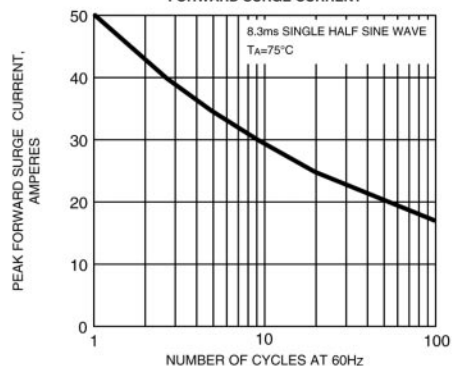


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

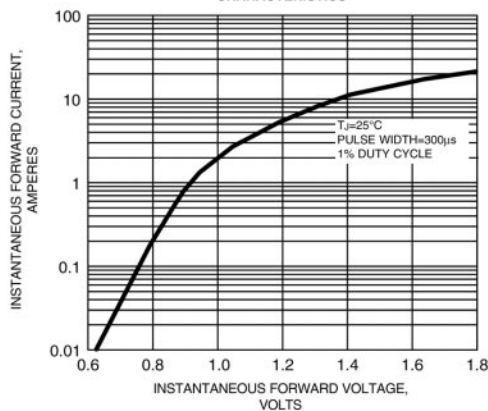


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

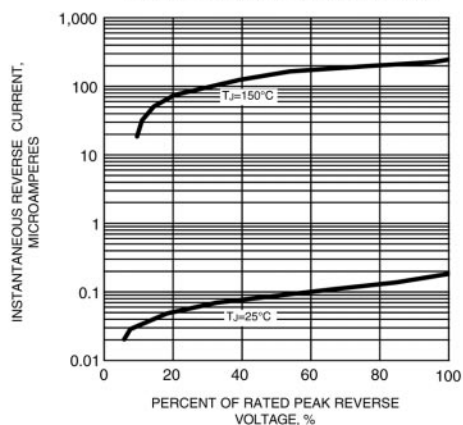


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

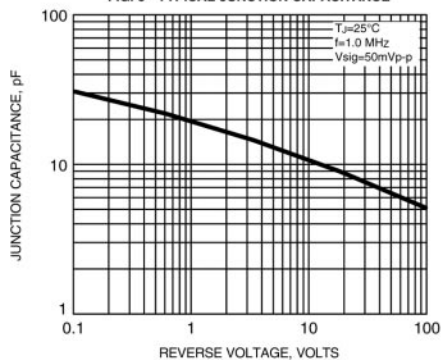


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

