



SEMICONDUCTOR

1N5391 THRU 1N5399

GENERAL PURPOSE PLASTIC RECTIFIER

Reverse Voltage - 50 to 1000 Volts

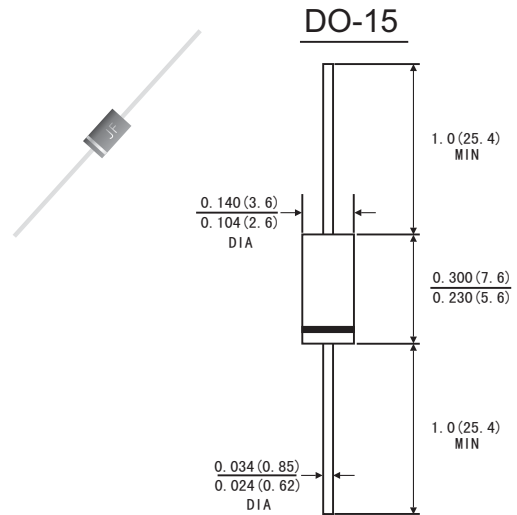
Forward Current -1.5Amperes

FEATURES

- The plastic package carries Underwrites Laboratory Flammability Classification 94V-0
- Construction utilizes void-free molded plastic technique
- High surge current capability
- 1.5A operation at $T_L=70^{\circ}\text{C}$ with no thermal runaway
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed: $260^{\circ}\text{C}/10$ seconds at terminals
- 0.375"(9.5mm) lead length, 5lbs.(2.3kg)tension
- Component in accordance to RoHs 2002/95/EC and WEEE 2002/96/EC

MECHANICAL DATA

- *Case:* JEDEC DO-15 molded plastic body
- *Terminals:* Lead solderable per MIL-STD-750,method 2026
- *Polarity:* Color band denotes cathode end
- *Mounting Position:* Any
- *Weight:* 0.014ounce, 0.33 gram



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at 25°C ambient temperature unless otherwise specified ,Single phase ,half wave 60Hz.,resistive or inductive load. For capacitive load, derate by 20%.)

	Symbols	1N 5391	1N 5392	1N 5393	1N 5394	1N 5395	1N 5396	1N 5397	1N 5398	1N 5399	Units
Maximum Recurrent 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 $T_A=75^{\circ}\text{C}$	$I_{(AV)}$	1.5									Amps
Peak Forward Surge Current (8.3ms half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	50.0									Amps
Maximum Instantaneous Forward Voltage at 1.5 A	V_F	1.1									Volts
Maximum Reverse current at rated DC Blocking Voltage	I_R	$T_c = 25^{\circ}\text{C}$									μA
		$T_c = 100^{\circ}\text{C}$									
Typical Thermal Resistance(Note 2)	$R_{\theta JA}$	60.0									$^{\circ}\text{C}/\text{W}$
Typical Junction Capacitance(Note 1)	C_J	50.0									pF
Operating and Storage Temperature Range	T_J T_{STG}	-65 to +150									$^{\circ}\text{C}$

Note: 1.Measured at 1MHz and applied reverse voltage of 4.0V DC.

2.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 1N5391 THRU 1N5399

FIG.1-FORWARD CURRENT DERATING CURVE

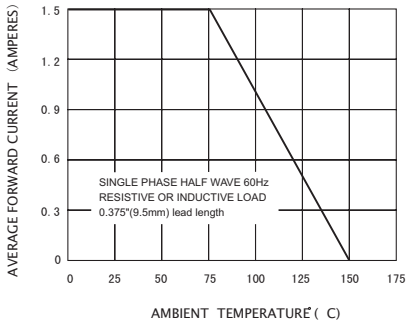


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

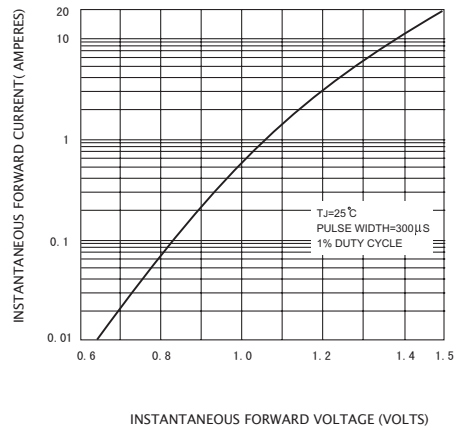


FIG.3-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

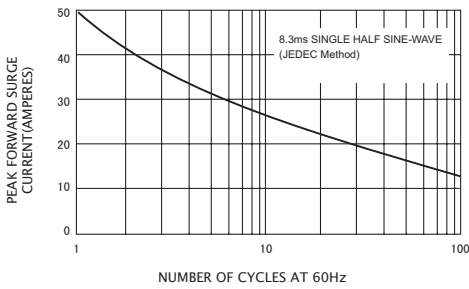


FIG.4-TYPICAL REVERSE CHARACTERISTICS

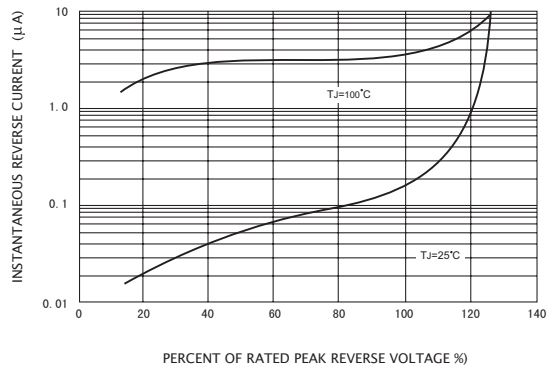


FIG.5-TYPICAL JUNCTION CAPACITANCE

