



SEMICONDUCTOR

1N5391 THRU 1N5399

GENERAL PURPOSE PLASTIC RECTIFIER

Reverse Voltage - 50 to 1000 Volts

Forward Current - 1.5Amperes

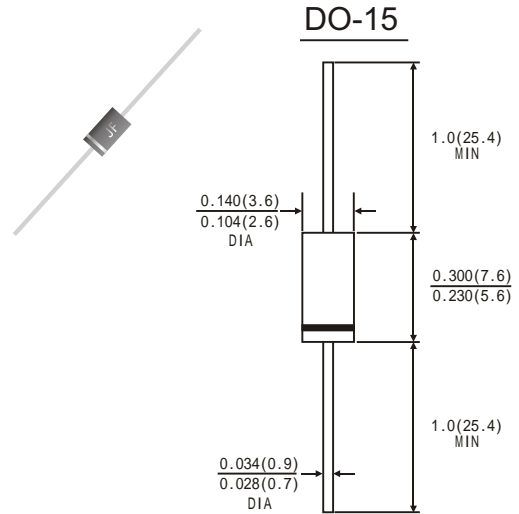
SILICON RECTIFIER

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: 250 C/10 seconds, 0.375"(9.5mm) lead length, 5lbs. (2.3kg) tension

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 $T_A=70^\circ\text{C}$)	$I(AV)$	1.5									Amps
Peak Forward Surge Current (8.3ms half sine-wave superimposed on rated load (JEDEC method) at $T_A=70^\circ\text{C}$)	I_{FSM}	50.0									Amps
Maximum Instantaneous Forward Voltage at 1.5 A	V_F	1.4									Volts
Maximum Reverse current at rated DC Blocking Voltage	I_R	$T_A=25^\circ\text{C}$									μA
		$T_A=100^\circ\text{C}$									
Typical Thermal Resistance(Note 2)	$R_{\theta JA}$ $R_{\theta JL}$	50.0									$^\circ\text{C/W}$
		25.0									
Typical Junction Capacitance(Note 1)	C_J	20.0									pF
Maximum DC Blocking Voltage Temperature	T_A	+150.0									$^\circ\text{C}$
Operating and Storage Temperature Range	T_J	-65 to +175									$^\circ\text{C}$
	T_{STG}										

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

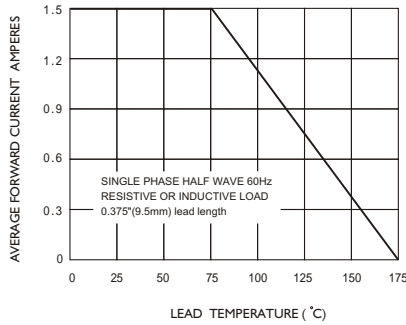


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

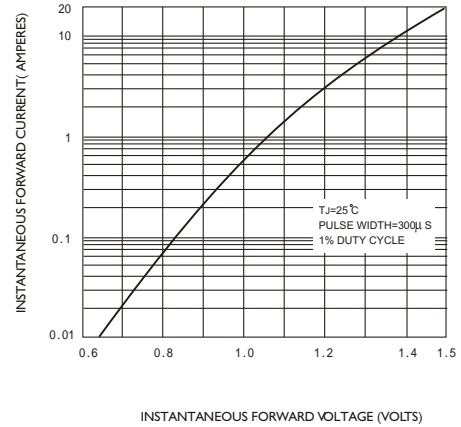


FIG.3-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

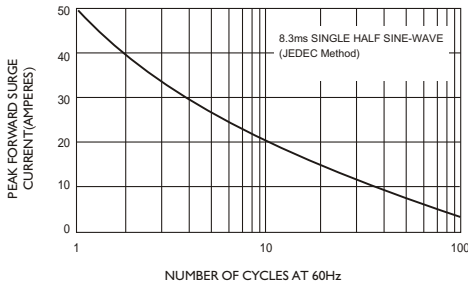


FIG.4-TYPICAL REVERSE CHARACTERISTICS

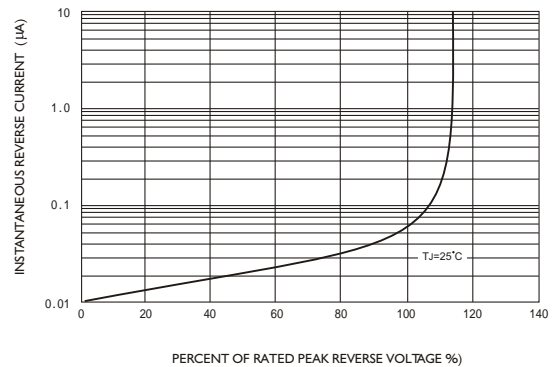


FIG.5-TYPICAL JUNCTION CAPACITANCE

