



# 1N5391 - 1N5399

# SILICON RECTIFIER

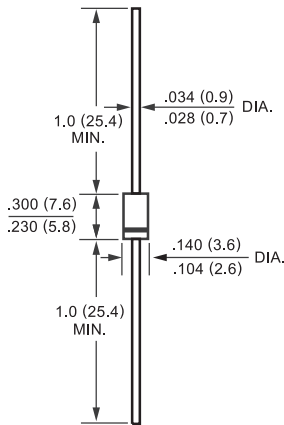
**VOLTAGE RANGE - 50 to 1000 Volts    CURRENT - 1.5 Amperes**

### MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: MIL-STD-202E, Method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 0.38 gram

### FEATURES

- \* Low cost
- \* Low leakage
- \* Low forward voltage drop
- \* High current capability



DO-15



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings 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%.

PARAMETER	SYMBOL	1N5391	1N5392	1N5393	1N5395	1N5397	1N5398	1N5399	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current .375*(9.5mm) lead length at $T_L = 70^\circ C$	$I_o$	1.5							Amps
Peak Forward Surge Current: 8.3 ms single half sine-wave Superimposed on rated load (JEDEC Method)	$I_{FSM}$	50							Amps
Maximum Instantaneous Forward Voltage at 1.5A DC	$V_F$	1.4							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ $T_A = 25^\circ C$	5.0							uAmps
	@ $T_A = 100^\circ C$	500							
Maximum Full Load Reverse Current Average. Full Cycle .375*(9.5mm) lead length at $T_L = 75^\circ C$	$I_R$	30							uAmps
Typical Junction Capacitance ( Note )	$C_J$	20							pF
Typical Thermal Resistance	$R_{\theta_{JL}}$	50							$^\circ C/W$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +175							$^\circ C$

Notes: 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts



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## RATING AND CHARACTERISTIC CURVES

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

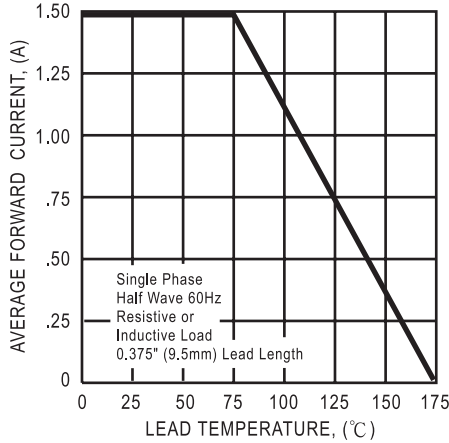


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

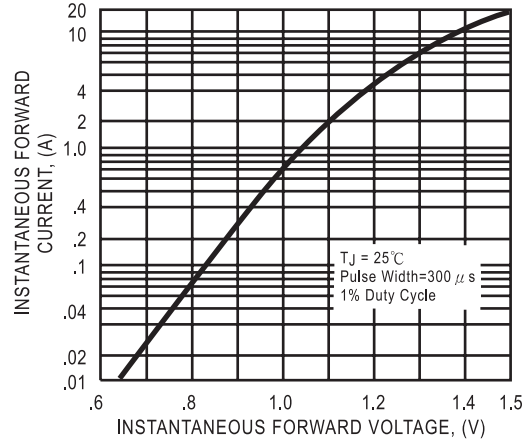


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

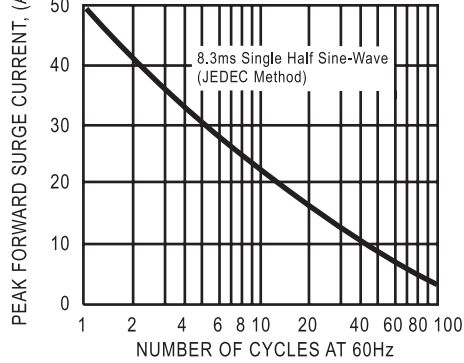


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

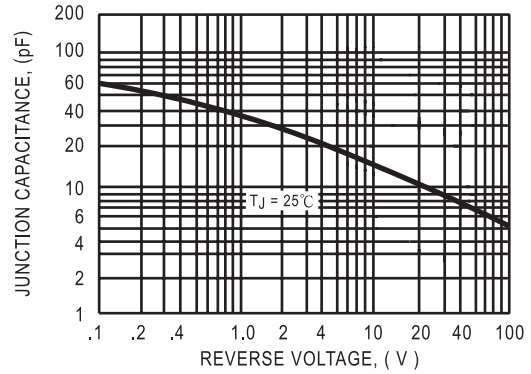


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

