

**SILICON RECTIFIER**

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

**FEATURES**

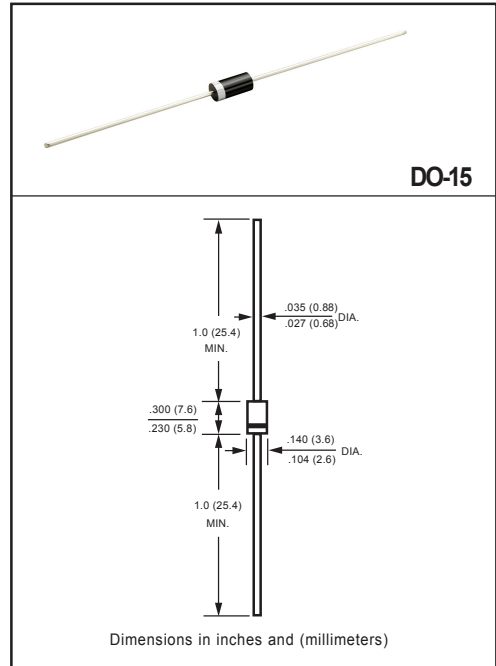
- \* Low cost
- \* Low leakage
- \* Low forward voltage drop
- \* High current capability

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: Device has UL flammability classification 94V-0
- \* Lead: MIL-STD-202E method 208C guaranteed
- \* Mounting position: Any
- \* Weight: 0.40 gram

**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%.



**MAXIMUM RATINGS** (At TA = 25°C unless otherwise noted)

RATINGS	SYMBOL	1N5391	1N5392	1N5393	1N5394	1N5395	1N5396	1N5397	1N5398	1N5399	UNITS
Maximum Recurrent Peak Reverse Voltage	VRRM	50	100	200	300	400	500	600	800	1000	Volts
Maximum RMS Voltage	VRMS	35	70	140	210	280	350	420	560	700	Volts
Maximum DC Blocking Voltage	Vdc	50	100	200	300	400	500	600	800	1000	Volts
Maximum Average Forward Rectified Current .375" (9.5mm) lead length at TL = 70°C	Io	1.5									Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	IFSM	50									Amps
Typical Current Squared Time	I <sup>2</sup> T	10.37									A <sup>2</sup> S
Typical Junction Capacitance (Note)	CJ	20									pF
Typical Thermal Resistance	R θ JA	50									°C/W
Operating and Storage Temperature Range	TJ, TSTG	-65 to + 175									°C

**ELECTRICAL CHARACTERISTICS** (At TA = 25°C unless otherwise noted)

CHARACTERISTICS	SYMBOL	1N5391	1N5392	1N5393	1N5394	1N5395	1N5396	1N5397	1N5398	1N5399	UNITS
Maximum Instantaneous Forward Voltage at 1.5A DC	VF	1.1									Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage	@ TA = 25°C	5.0									uAmps
	@ TA = 150 °C	5.0									mAmps
Maximum Full Load Reverse Current Average, Full Cycle .375" (9.5mm) lead length at TL = 75°C	IR	30									uAmps

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

# RATING AND CHARACTERISTIC CURVES( 1N5391 THRU 1N5399 )

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

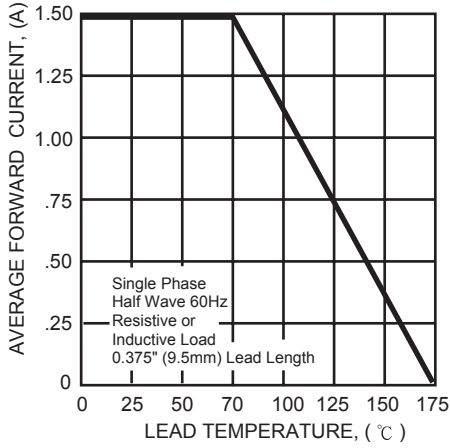


FIG. 2 - MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

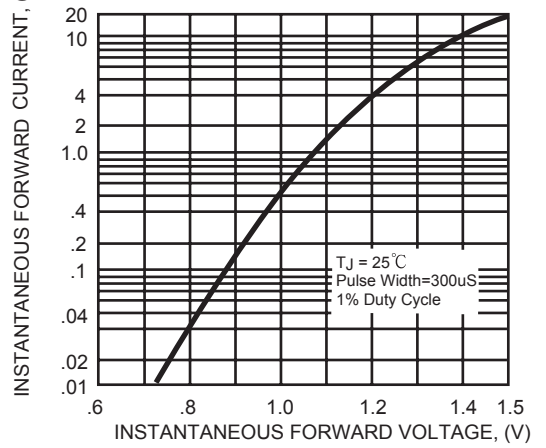


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

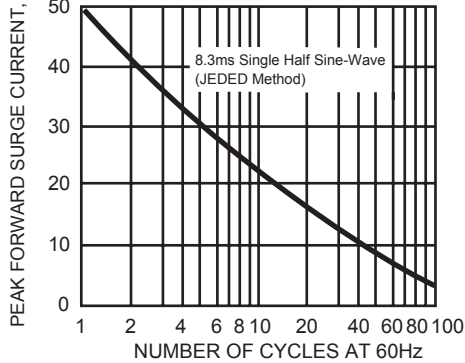


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

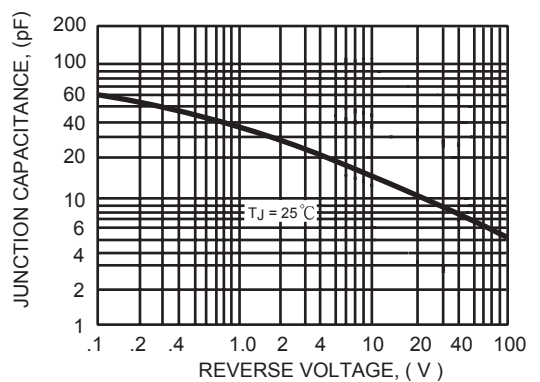
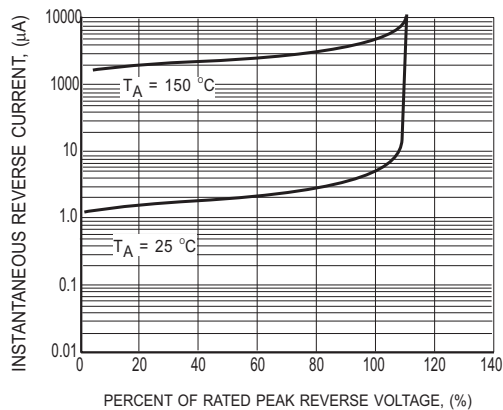


FIG.5 MAXIMUM REVERSE CHARACTERISTICS



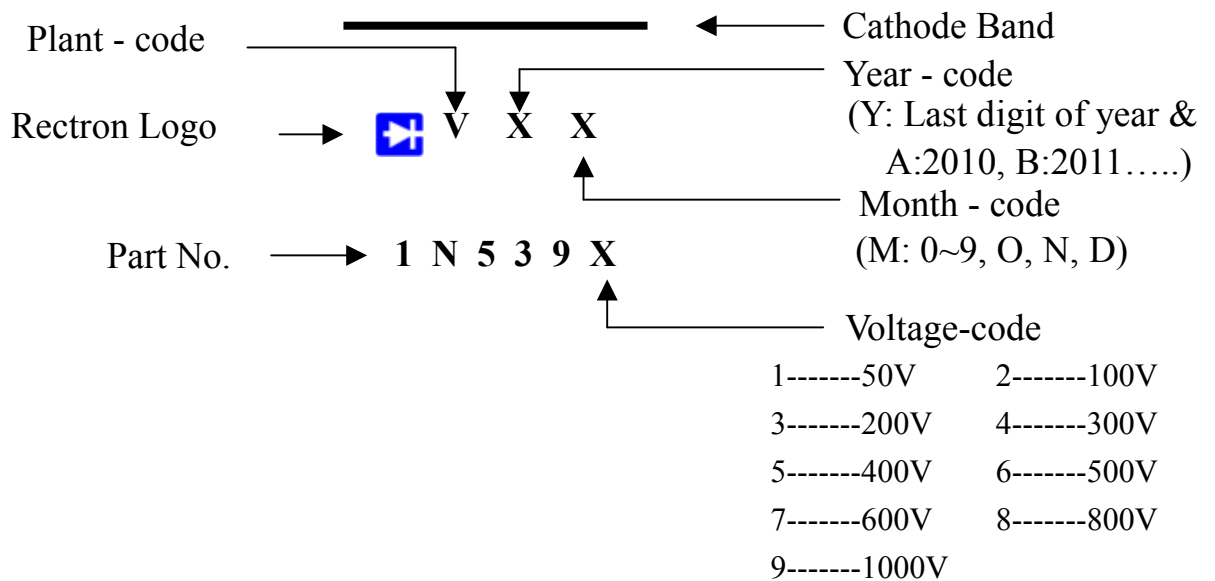


## Attachment information about 1N539X

### 1. Internal Circuit



### 2. Marking on the body



## PACKAGING OF DIODE AND BRIDGE RECTIFIERS

### BULK PACK

PACKAGE	PACKING CODE	EA PER BOX	INNER BOX SIZE (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
DO-15	-B	500	194*84*21	415*220*255	25,000	12.74

### REEL PACK

PACKAGE	PACKING CODE	EA PER REEL	EA PER INNER BOX	COMPONENT SPACE (mm)	TAPE SPACE (mm)	REEL DIA (mm)	CARTON SIZE (mm)	EA PER CARTON	GROSS WEIGHT(Kg)
DO-15	-T	4,000	4,000	5.0	52	330	355*350*335	16,000	10.05

### AMMO PACK

PACKAGE	PACKING CODE	REEL ( EA )	COMPONENT SPACE(mm)	TAPE SPACE (mm)	BOX SIZE (mm)	CARTON SIZE(mm)	CARTON ( EA )	GROSS WEIGHT (Kg)
DO-15	-F	1,500	5.0	52	255*73*100	400*268*225	15,000	8.8

## DISCLAIMER NOTICE

Rectron Inc reserves the right to make changes without notice to any product specification herein, to make corrections, modifications, enhancements or other changes. Rectron Inc or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies. Data sheet specifications and its information contained are intended to provide a product description only. "Typical" parameters which may be included on RECTRON data sheets and/ or specifications can and do vary in different applications and actual performance may vary over time. Rectron Inc does not assume any liability arising out of the application or use of any product or circuit.

Rectron products are not designed, intended or authorized for use in medical, life-saving implant or other applications intended for life-sustaining or other related applications where a failure or malfunction of component or circuitry may directly or indirectly cause injury or threaten a life without expressed written approval of Rectron Inc. Customers using or selling Rectron components for use in such applications do so at their own risk and shall agree to fully indemnify Rectron Inc and its subsidiaries harmless against all claims, damages and expenditures.