

SILICON RECTIFIER

VOLTAGE RANGE 50 to 1000 Volts CURRENT 1.5 Amperes

FEATURES

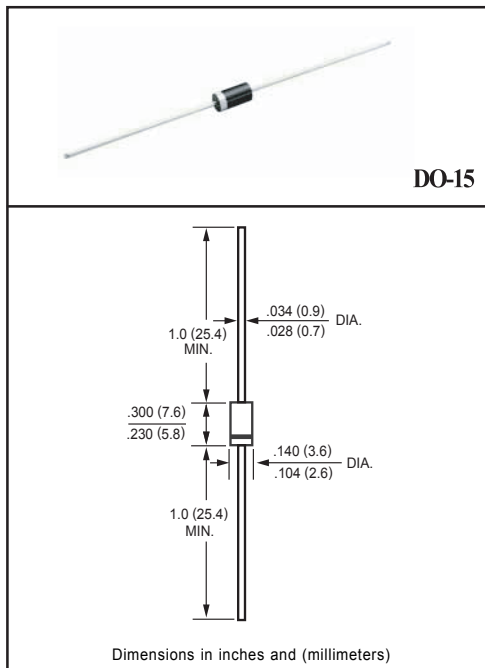
- * Low cost
- * Low leakage
- * Low forward voltage drop
- * High current capability

MECHANICAL DATA

- * Case: Molded plastic
- * Epoxy: Device has UL flammability classification 94V-0
- * Lead: MIL-STD-202E method 208C guaranteed
- * Mounting position: Any
- * Weight: 0.38 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 ² T | 10.37 | | | | | | | | | A ² 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

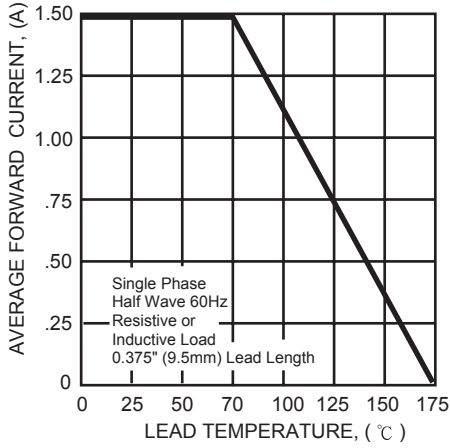


FIG. 2 - MAXIMUM INSTANTANEOUS FORWARD CHARACTERISTICS

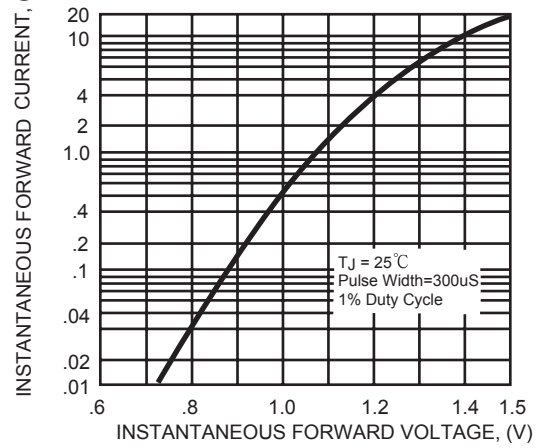


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

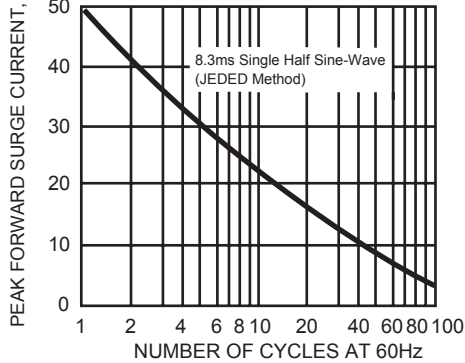


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

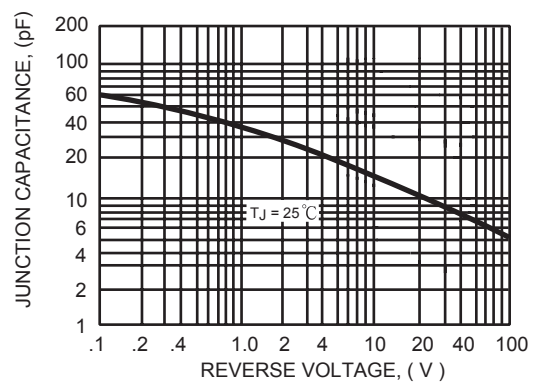
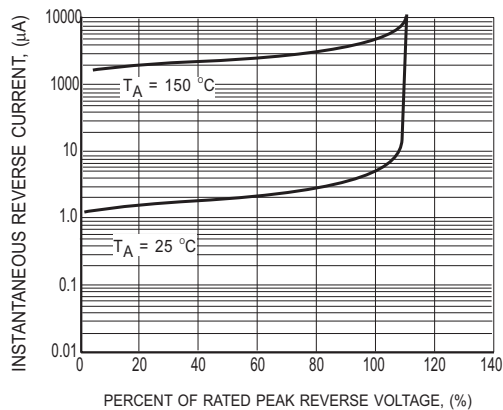


FIG.5 MAXIMUM REVERSE CHARACTERISTICS



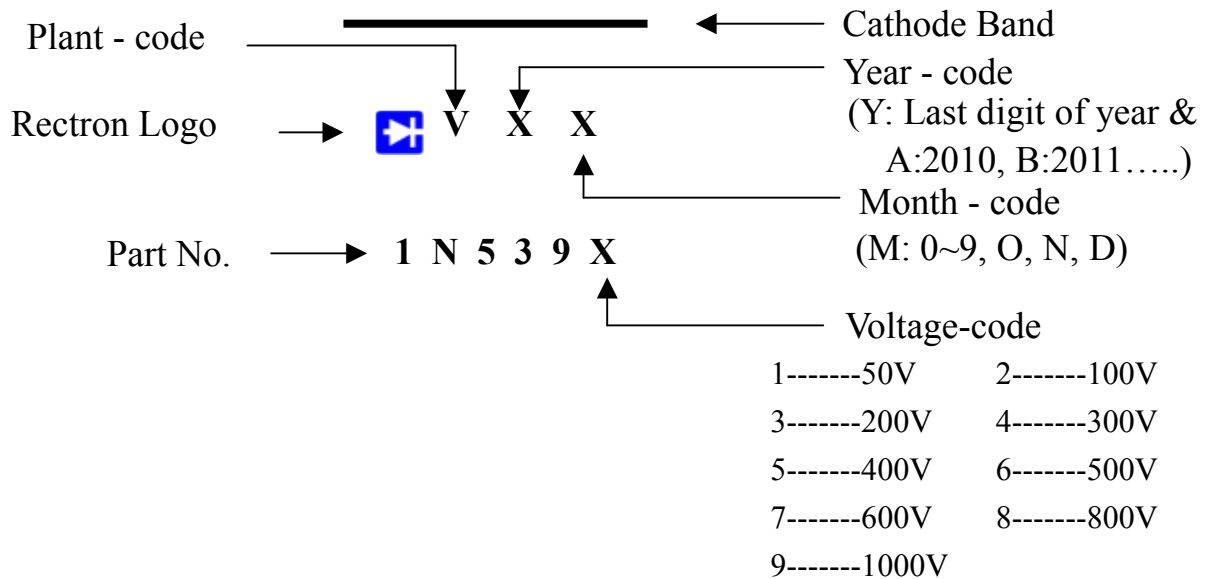


Attachment information about 1N539X

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 |