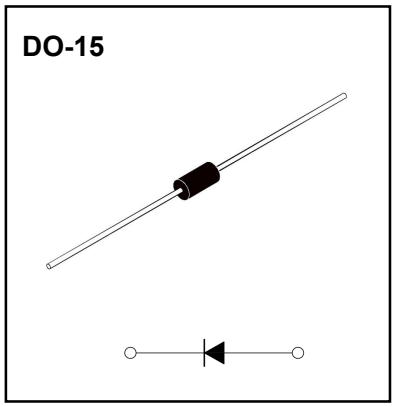
SZCJ Shenzhen Changji Semiconductor Co., LTD.

# DO-15 Plastic-Encapsulate Diodes

## 1N5391 THRU 1N5399 General Purpose Rectifier Diodes

### Features

- $I_{F(AV)}$ 1.5A
- $V_{RRM}$ 50V-1000V
- High surge current capability
- Polarity: Color band denotes cathode




### Applications

- Rectifier

### Marking

- 1N539X

  X：From 1 To 9

### Limiting Values(Absolute Maximum Rating)

| Item | Symbol | Unit | Test Conditions | 1N53 | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 91 | 92 | 93 | 95 | 97 | 98 | 99 |
| Repetitive Peak Reverse Voltage | $V_{RRM}$ | V | | 50 | 100 | 200 | 400 | 600 | 800 | 1000 |
| Maximum RMS Voltage | $V_{RMS}$ | V | | 35 | 70 | 140 | 280 | 420 | 560 | 700 |
| Maximum DC Blocking Voltage | $V_{DC}$ | V | | 50 | 100 | 200 | 400 | 600 | 800 | 1000 |
| Average Forward Current | $I_{F(AV)}$ | A | 60Hz Half-sine wave, Resistance load, $T_L$=75℃ | 1.5 | | | | | | |
| Surge(Non-repetitive)Forward Current | $I_{FSM}$ | A | 60Hz Half-sine wave, 1 cycle, Ta=25℃ | 50 | | | | | | |
| Junction Temperature | $T_J$ | ℃ | | -55 ~ +150 | | | | | | |
| Storage Temperature | $T_{STG}$ | ℃ | | -55 ~ +150 | | | | | | |

### Electrical Characteristics (T=25℃ Unless otherwise specified)

| Item | Symbol | Unit | Test Condition | | Value |
|---|---|---|---|---|---|
| Maximum Peak Forward Voltage | $V_{FM}$ | V | $I_{FM}$=1.5A | | 1.1 |
| Maximum Peak Reverse Current | $I_{RRM1}$ | μA | $V_{RM}=V_{RRM}$ | $T_a$=25℃ | 5 |
| | $I_{RRM2}$ | | | $T_a$=100℃ | 50 |
| Typical junction capacitance | $C_J$ | pF | Measured at 1MHz and applied reverse voltage of 4.0V D.C. | | 20 |
| Typical Thermal Resistance | $R_{\theta J-A}$ | ℃/W | Between junction and ambient | | 50 |
| | $R_{\theta J-L}$ | | Between junction and Lead | | 25 |

### Notes:

Thermal resistance from junction to ambient at 0.375”(9.5mm)lead length,P.C.B. mounted

## Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

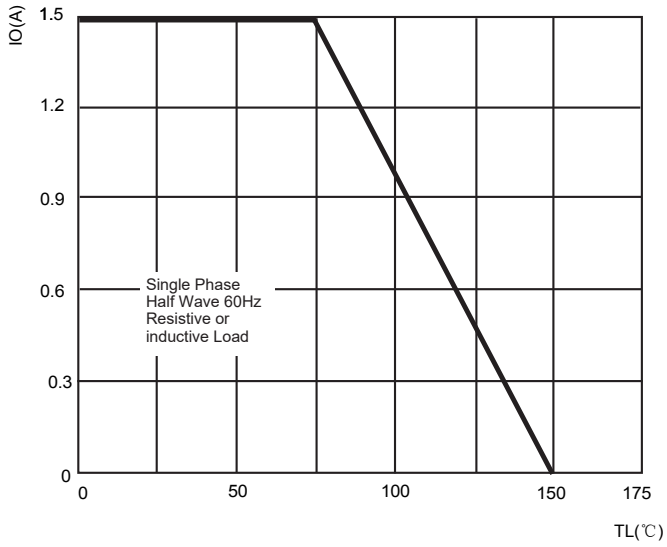



FIG.2: MAXIMUM NON-REPETITIVE FORWARD URGE CURRENT

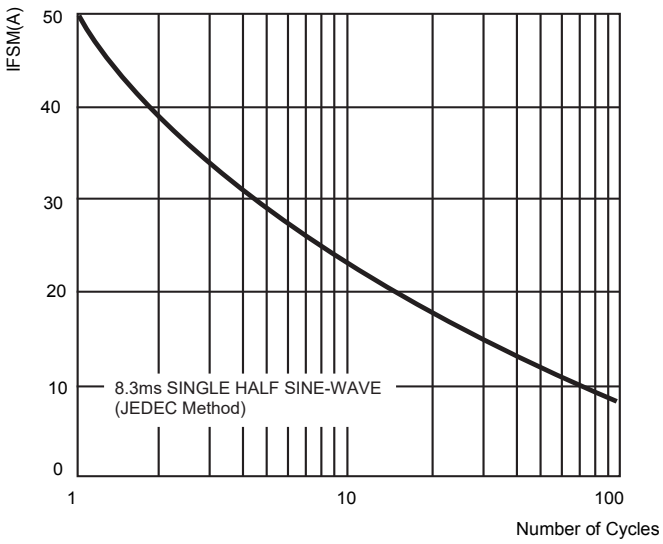



FIG.3: TYPICAL FORWARD CHARACTERISTICS

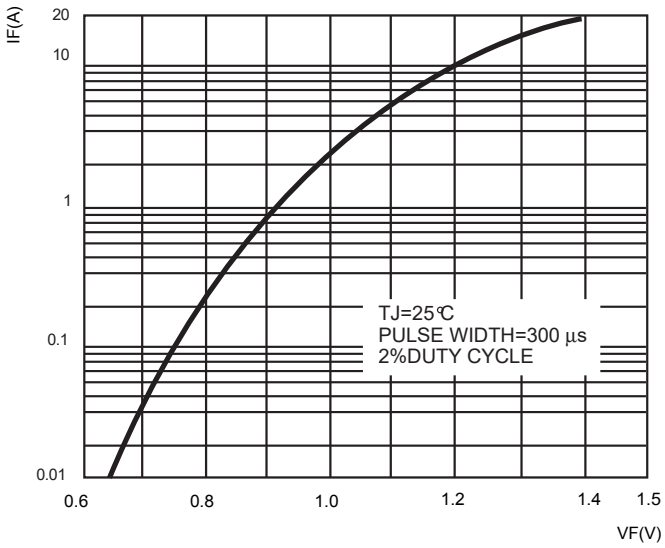
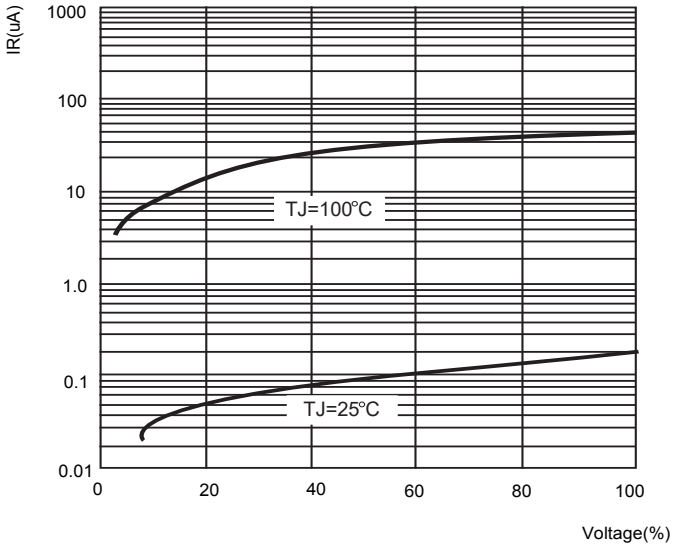
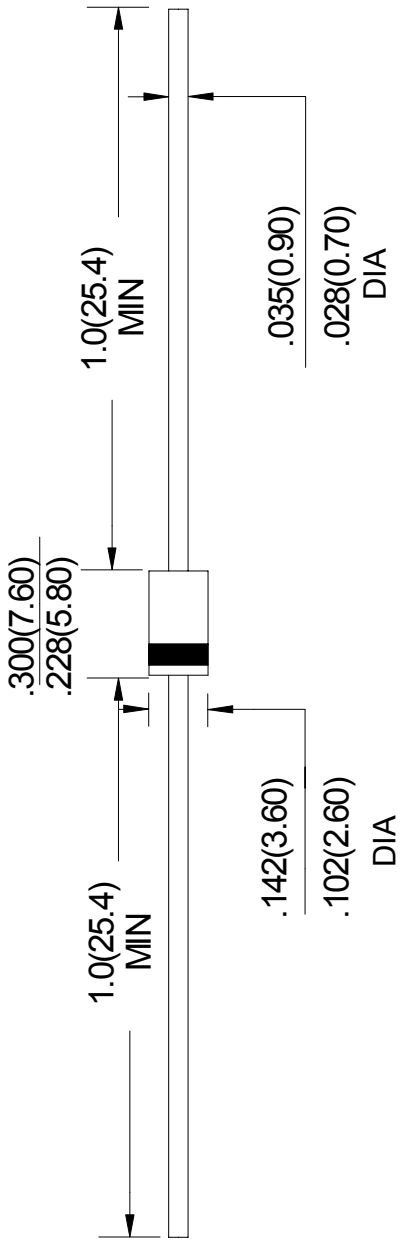



FIG.4：TYPICAL REVERSE CHARACTERISTICS



## DO-15 Package Outline Dimensions




Unit: in inches (millimeters)

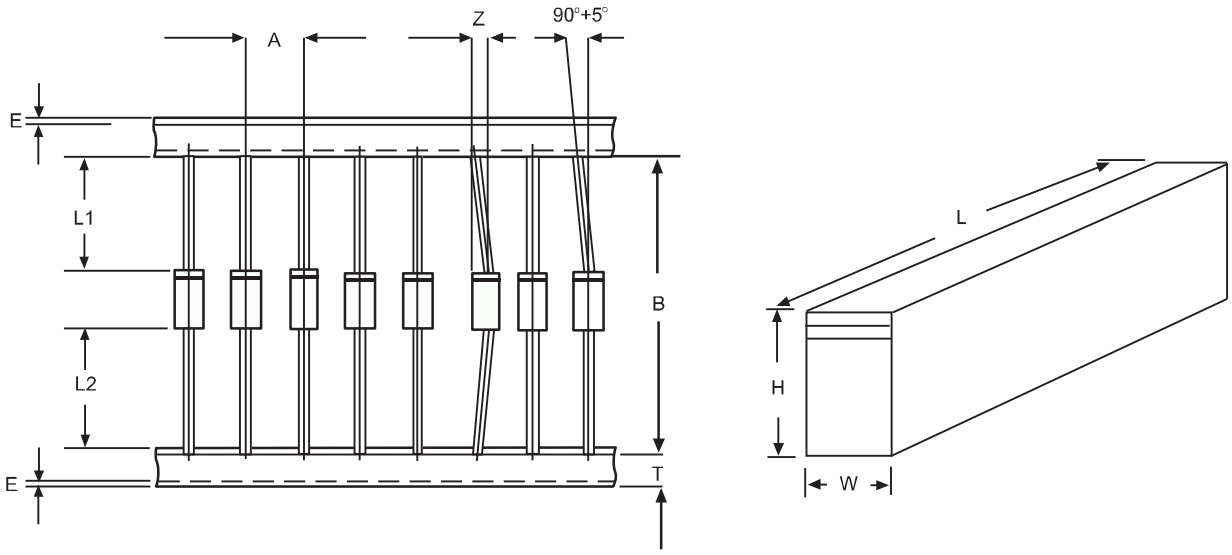
NOTICE

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# Ammo Box Packaging Specifications For Axial Lead Rectifiers

**Axial lead devices are packed in accordance with EIA standard RS-296-D and specifications given below**

| COMPONENT OUTLINE | COMPONENT PITCH A | INNER TAPE PITCH B | CUMULATIVE PITCH TOLERANCE |
|---|---|---|---|
| | ±0.5mm(.020``) | +0.5mm(.020``) | |
| R-1 | 5.0mm | 26.0mm | 2.0mm/20pitch |
| R-1 | 5.0mm | 52.4mm | 2.0mm/10pitch |
| A-405 | 5.0mm | 26.0mm | 2.0mm/20pitch |
| A-405 | 5.0mm | 52.4mm | 2.0mm/10pitch |
| DO-34/DO-35 | 5.0mm | 26.0mm | 2.0mm/20pitch |
| DO-34/DO-35 | 5.0mm | 52.4mm | 2.0mm/10pitch |
| DO-41 | 5.0mm | 26.0mm | 2.0mm/20pitch |
| DO-41 | 5.0mm | 52.4mm | 2.0mm/10pitch |
| DO-15 | 5.0mm | 52.4mm | 2.0mm/10pitch |
| DO-27 | 10.0mm | 52.4mm | 2.0mm/10pitch |
| R-6 | 10.0mm | 52.4mm | 2.0mm/10pitch |




| ITEM | SYMBOL | SPECIFICATIONS(mm) | SPECIFICATIONS(inch) |
|---|---|---|---|
| Component alignment | Z | 1.2max | 0.048max |
| Tape width | T | 6.0±0.4 | 0.236±0.016 |
| Exposed adhesive | E | 0.8max | 0.032max |
| Body eccentricity | \|L1-L2\| | 1.0max | 0.040max |
| Box length | L | 255.0±5.0 | 10.04±0.197 |
| Box width | W | 78.0±5.0 | 3.07±0.197 |
| Box height | H | 150.0±5.0 | 5.91±0.197 |

NOTE:Each component lead shall be sandwiched between tapes for A minimum of 3.2mm(0.126``)