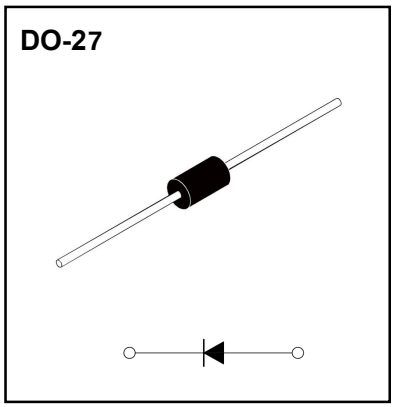
DONGGUAN NANJING ELECTRONICS LTD.,

# DO-27 Plastic-Encapsulate Diodes

## SR520L THRU SR5100L Schottky Rectifier Diode

### Features

- $I_{F(AV)}$ 5A
- $V_{RRM}$ 20V~100V
- High surge current capability
- Polarity: Color band denotes cathode
- Low peak forward voltage




### Applications

- Rectifier

### Marking

- SR5XXL
  XX:From 20 To 100

### Limiting Values(Absolute Maximum Rating)

| Item | Symbol | Unit | Test Conditions | SR5 20L | SR5 30L | SR5 40L | SR5 50L | SR5 60L | SR5 80L | SR5 100L |
|---|---|---|---|---|---|---|---|---|---|---|
| Repetitive Peak Reverse Voltage | $V_{RRM}$ | V | | 20 | 30 | 40 | 50 | 60 | 80 | 100 |
| Maximum RMS Voltage | $V_{RMS}$ | V | | 14 | 21 | 28 | 35 | 42 | 56 | 70 |
| Maximum DC Blocking Voltage | $V_{DC}$ | V | | 20 | 30 | 40 | 50 | 60 | 80 | 100 |
| Average Forward Current | $I_{F(AV)}$ | A | 60Hz Half-sine wave, Resistance load, Ta=100℃ | 5.0 | | | | | | |
| Surge(Non-repetitive)Forward Current | $I_{FSM}$ | A | 60Hz Half-sine wave, 1 cycle, Ta=25℃ | 150 | | | | | | |
| Junction Temperature | $T_J$ | ℃ | | -55 ~ +125 | | | -55 ~ +150 | | | |
| Storage Temperature | $T_{STG}$ | ℃ | | -55 ~ +150 | | | | | | |

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

| Item | Symbol | Unit | Test Condition | | SR5 20L | SR5 30L | SR5 40L | SR5 50L | SR5 60L | SR5 80L | SR5 100L |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Maximum Peak Forward Voltage | $V_F$ | V | $I_F$=5.0A | Ta=25℃ | 0.45 | | | 0.55 | | 0.70 | |
| Maximum Peak Reverse Current | $I_{RRM1}$ | mA | $V_{RM}=V_{RRM}$ | Ta=25℃ | 0.3 | | | | | 0.02 | |
| | $I_{RRM2}$ | | | Ta=125℃ | 50 | | | | | 20 | |
| Typical junction capacitance | $C_J$ | pF | Measured at 1MHz and applied reverse voltage of 4.0V D.C. | | 500 | | | 400 | | | |
| Typical Thermal Resistance | $R_{\theta J-A}$ | ℃/W | Between junction and ambient | | 25 | | | | | | |
| | $R_{\theta J-L}$ | | Between junction and lead | | 5 | | | | | | |

### 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**

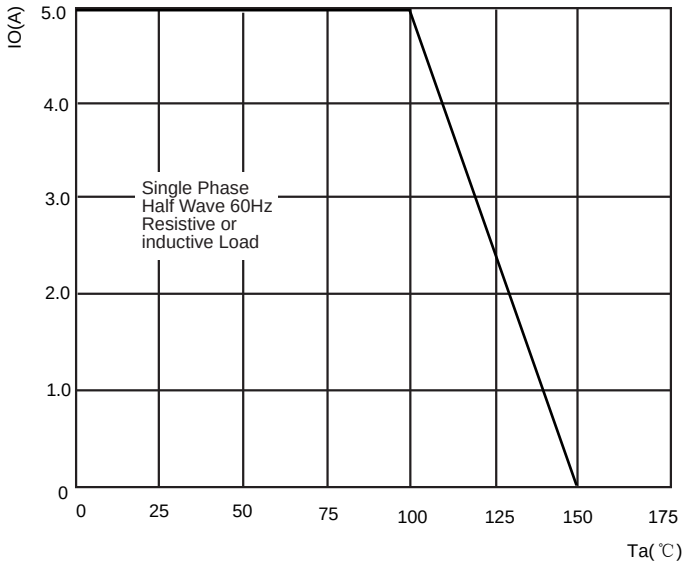



**FIG.2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**

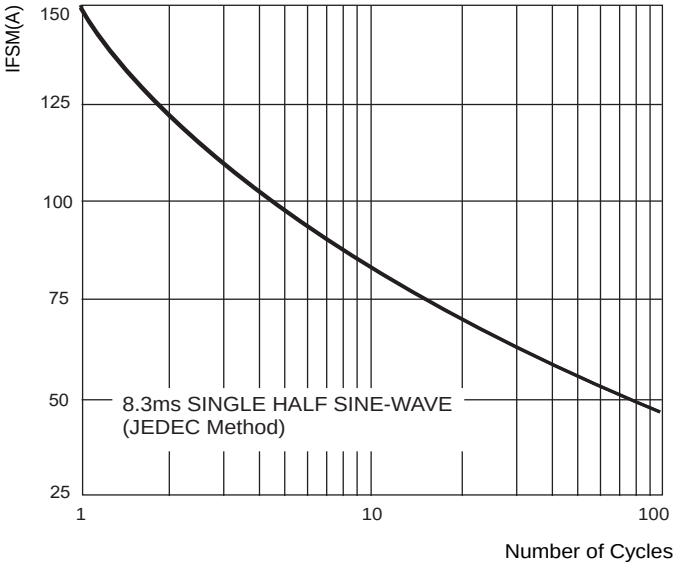



**FIG.3: TYPICAL FORWARD CHARACTERISTICS**

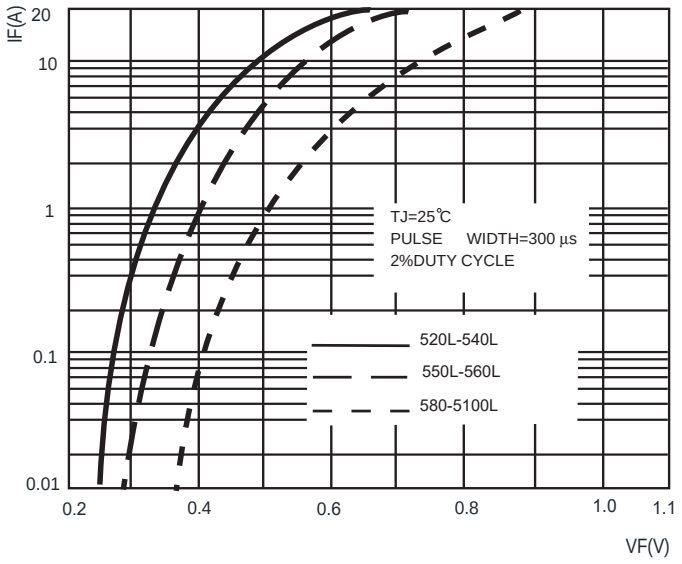
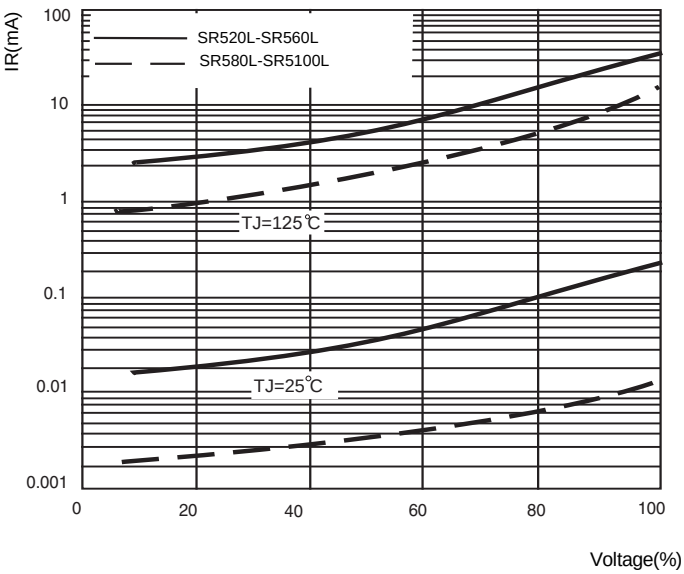
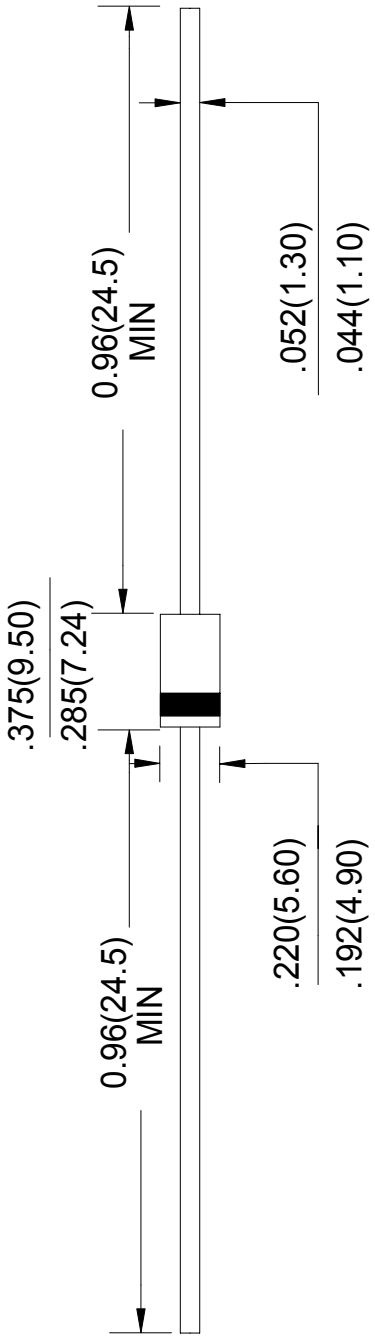



**FIG.4：TYPICAL REVERSE CHARACTERISTICS**



## DO-27 Package Outline Dimensions

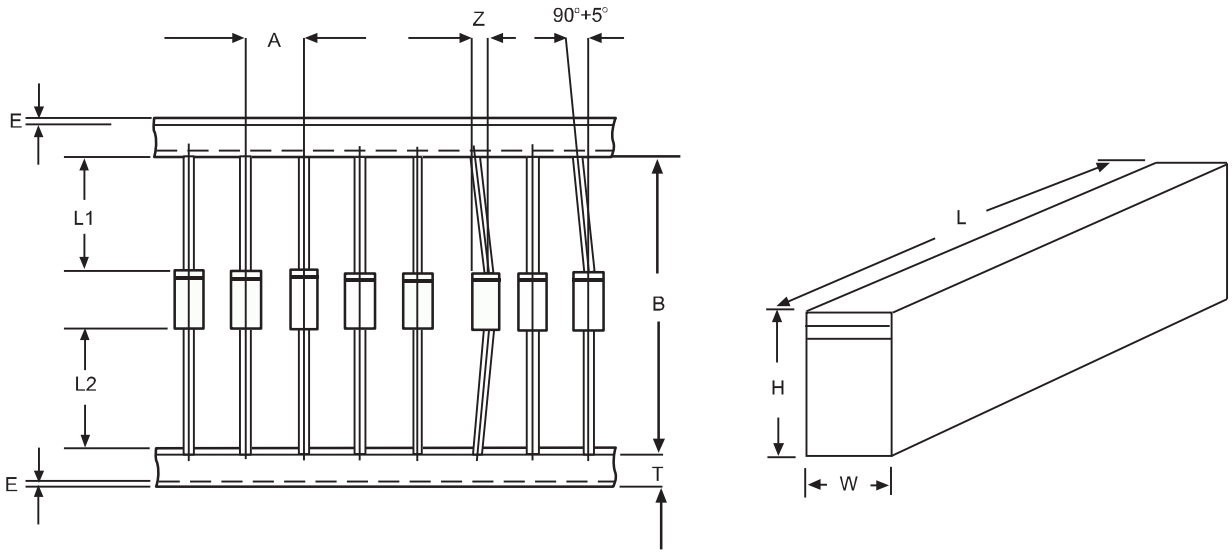



Unit: in inches (millimeters)

# 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``)