

## DO-41 Pstic-Encapsulate Diodes

### SB1150 Schottky Rectifier Diode

#### Features

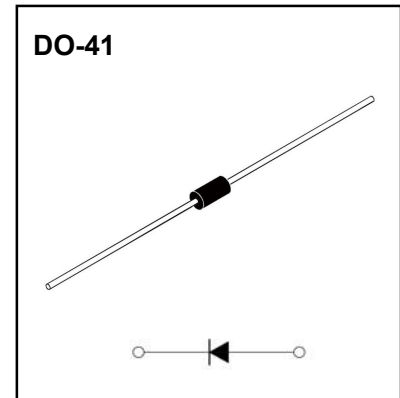
- $I_{F(AV)}$  1A
- $V_{RRM}$  150V
- High surge current capability
- Polarity: Color band denotes cathode
- Low peak forward voltage

#### Applications

- Rectifier

#### Marking

- SB1150



#### Limiting Values(Absolute Maximum Rating)

| Item                                 | Symbol      | Unit             | Test Conditions   | SB1150     |
|--------------------------------------|-------------|------------------|---|------------|
| Repetitive Peak Reverse Voltage      | $V_{RRM}$   | V                |   | 150        |
| Maximum RMS Voltage                  | $V_{RMS}$   | V                |   | 105        |
| Maximum DC Blocking Voltage          | $V_{DC}$    | V                |   | 150        |
| Average Forward Current              | $I_{F(AV)}$ | A                | 60Hz Half-sine wave, Resistance load, $T_L=100^\circ\text{C}$ | 1.0        |
| Surge(Non-repetitive)Forward Current | $I_{FSM}$   | A                | 60Hz Half-sine wave ,1 cycle ,<br>$T_a=25^\circ\text{C}$      | 40         |
| Junction Temperature                 | $T_J$       | $^\circ\text{C}$ |   | -55 ~ +150 |
| Storage Temperature                  | $T_{STG}$   | $^\circ\text{C}$ |   | -55 ~ +150 |

#### Electrical Characteristics (T=25 $^\circ\text{C}$ Unless otherwise specified)

| Item                         | Symbol           | Unit                      | Test Condition  | SB1150                  |     |
|------------------------------|------------------|---------------------------|---|-------------------------|-----|
| Maximum Peak Forward Voltage | $V_{FM}$         | V                         | $I_{FM}=1.0\text{A}$                                      | 0.85                    |     |
| Maximum Peak Reverse Current | $I_{RRM1}$       | mA                        | $V_{RM}=V_{RRM}$  | $T_a=25^\circ\text{C}$  | 0.2 |
|                              | $I_{RRM2}$       |                           |   | $T_a=100^\circ\text{C}$ | 2.0 |
| Typical junction capacitance | $C_J$            | pF                        | Measured at 1MHz and applied reverse voltage of 4.0V D.C. | 80                      |     |
| Typical Thermal Resistance   | $R_{\theta J-A}$ | $^\circ\text{C}/\text{W}$ | Between junction and ambient                              | 50                      |     |
|                              | $R_{\theta J-L}$ |                           | Between junction and lead                                 | 10                      |     |

# Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

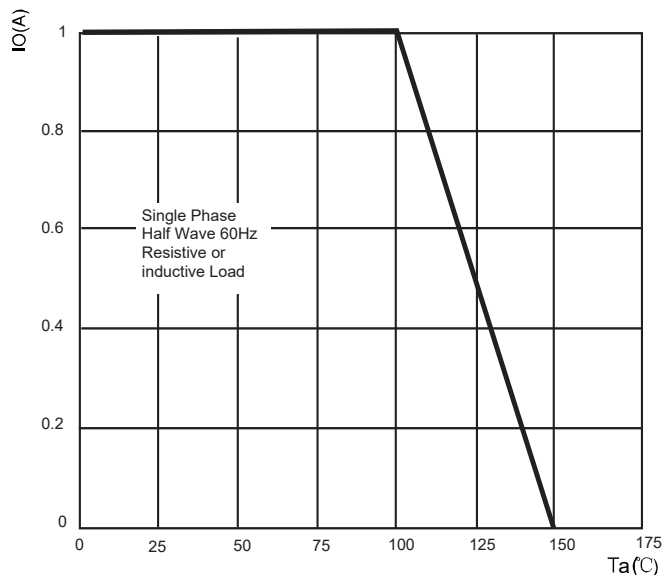


FIG.2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

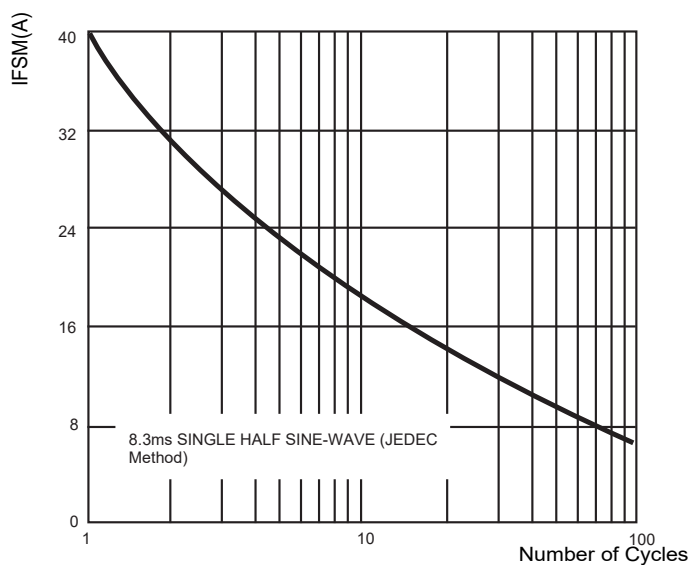


FIG.3: TYPICAL FORWARD CHARACTERISTICS

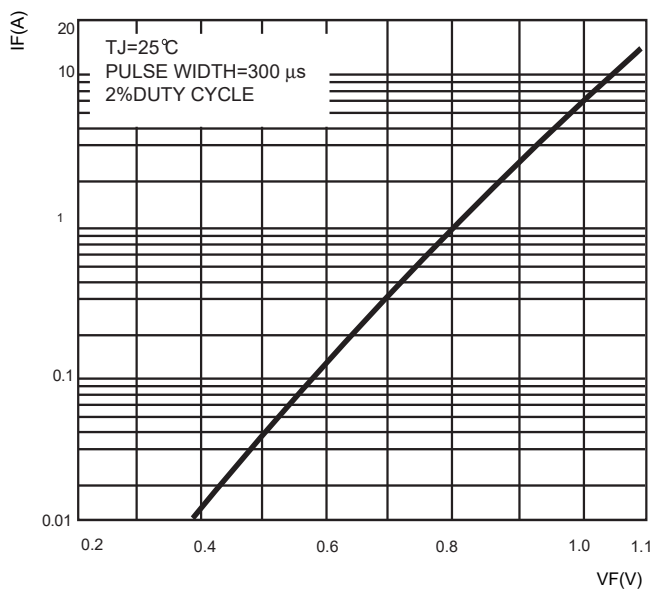
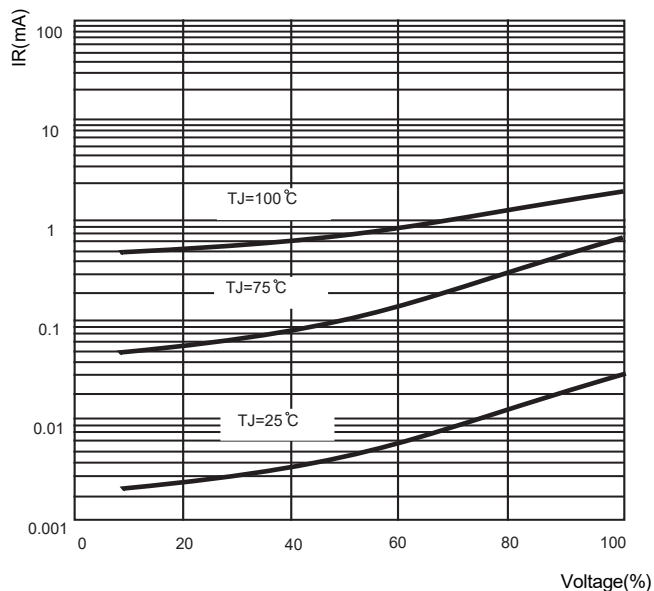
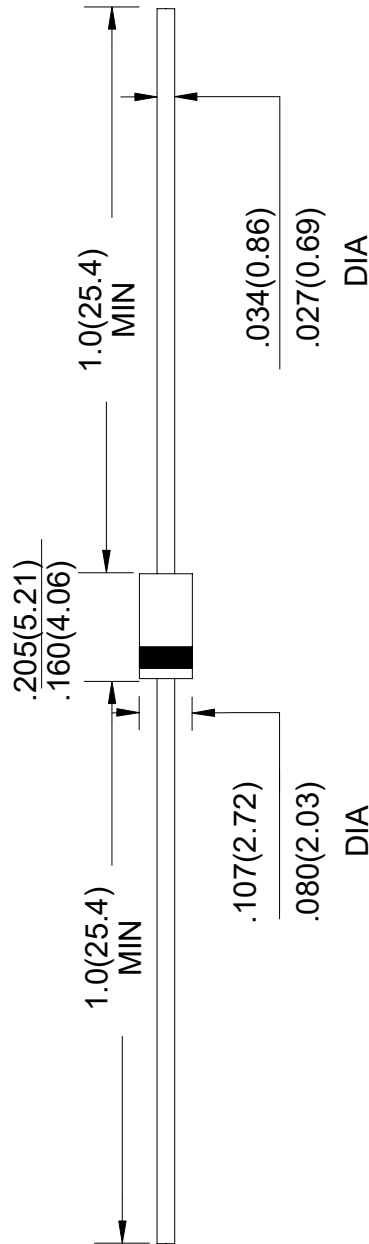


FIG.4: TYPICAL REVERSE CHARACTERISTICS





Unit: in inches (millimeters)

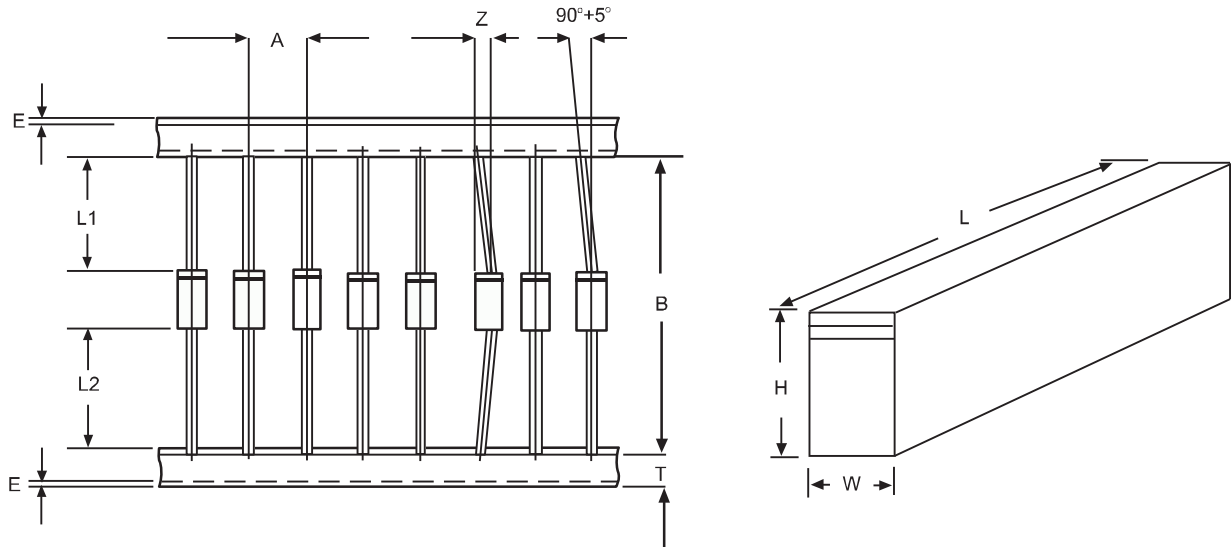
NOTICE

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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 |
|-------------------|----------------------------|-------------------------|----------------------------|
|                   | $\pm 0.5\text{mm}(.020'')$ | $+0.5\text{mm}(.020'')$ |                            |
| 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         | $6.0\pm 0.4$       | $0.236\pm 0.016$     |
| Exposed adhesive    | E         | 0.8max             | 0.032max             |
| Body eccentricity   | $ L1-L2 $ | 1.0max             | 0.040max             |
| Box length          | L         | $255.0\pm 5.0$     | $10.04\pm 0.197$     |
| Box width           | W         | $78.0\pm 5.0$      | $3.07\pm 0.197$      |
| Box height          | H         | $150.0\pm 5.0$     | $5.91\pm 0.197$      |

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