

**DO-41**


### Features

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Guardring for overvoltage protection
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed  
250°C/10 seconds at terminals

### Mechanical Data

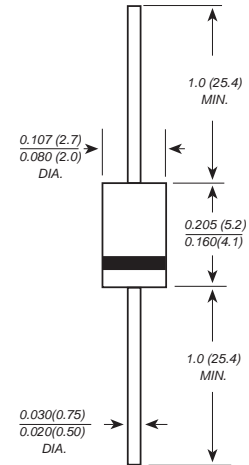
**Case** : Molded plastic body

**Terminals** : Solder plated, solderable per MIL-STD-750, Method 2026

**Polarity** : Polarity symbol marking on body

**Mounting Position** : Any

**Weight** : 0.0088 ounce, 0.25 grams



Dimensions in inches and (millimeters)

### Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| Parameter   | SYMBOLS    | SR120       | SR140 | SR160      | SR180       | SR1100 | SR1150 | SR1200 | UNITS              |
|---|------------|-------------|-------|------------|-------------|--------|--------|--------|--------------------|
| Maximum repetitive peak reverse voltage   | $V_{RRM}$  | 20          | 40    | 60         | 80          | 100    | 150    | 200    | V                  |
| Maximum RMS voltage   | $V_{RMS}$  | 14          | 28    | 42         | 56          | 70     | 105    | 140    | V                  |
| Maximum DC blocking voltage   | $V_{DC}$   | 20          | 40    | 60         | 80          | 100    | 150    | 200    | V                  |
| Maximum average forward rectified current at $T_L=100^\circ\text{C}$  | $I_{(AV)}$ | 1.0         |       |            |             |        |        |        | A                  |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load                              | $I_{FSM}$  | 30.0        |       |            |             |        |        |        | A                  |
| Maximum instantaneous forward voltage at 1.0A   | $V_F$      | 0.55        | 0.70  | 0.85       |             | 0.95   |        | V      |                    |
| Maximum DC reverse current<br>$T_A=25^\circ\text{C}$<br>at rated DC blocking voltage<br>$T_A=125^\circ\text{C}$ | $I_R$      | 0.5<br>50   |       | 0.05<br>10 |             | mA     |        |        |                    |
| Typical thermal resistance  | $R_{qJA}$  | 65.0        |       |            |             |        |        |        | $^\circ\text{C/W}$ |
| Operating junction temperature range  | $T_J$      | -55 to +125 |       |            | -55 to +150 |        |        |        | $^\circ\text{C}$   |
| Storage temperature range   | $T_{STG}$  | -55 to +150 |       |            |             |        |        |        | $^\circ\text{C}$   |

**Ratings And Characteristic Curves**

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

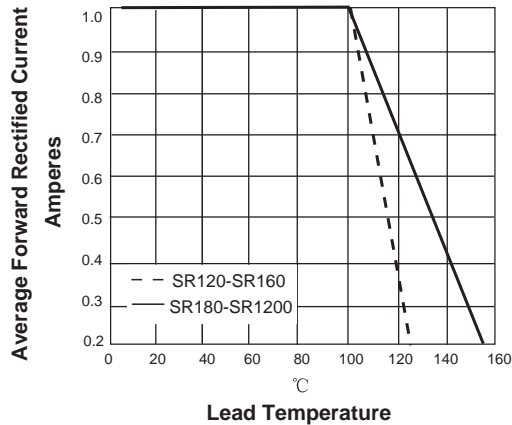


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

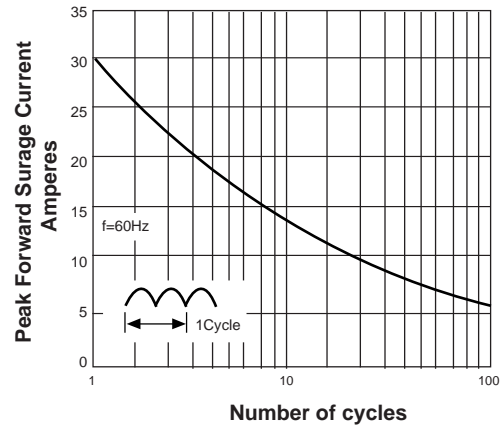


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

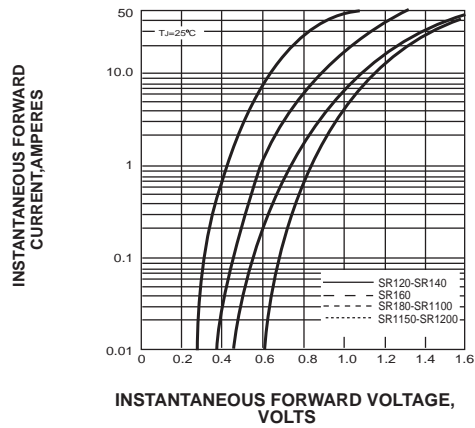
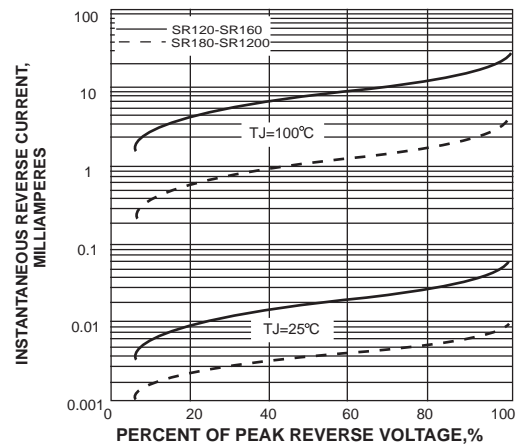
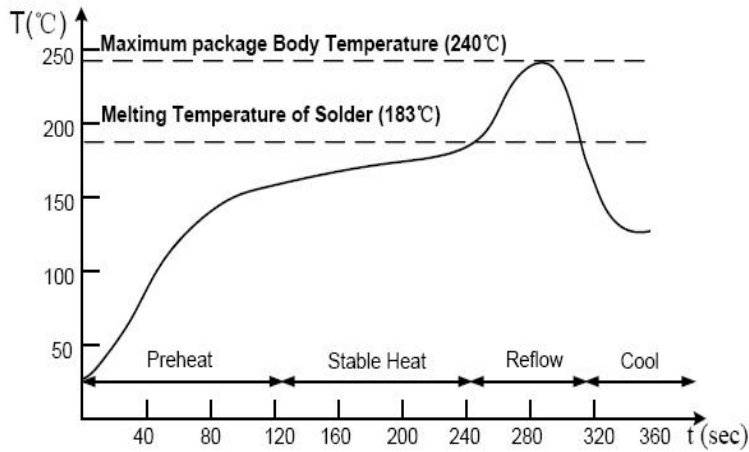


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



### Suggested Soldering Temperature Profile

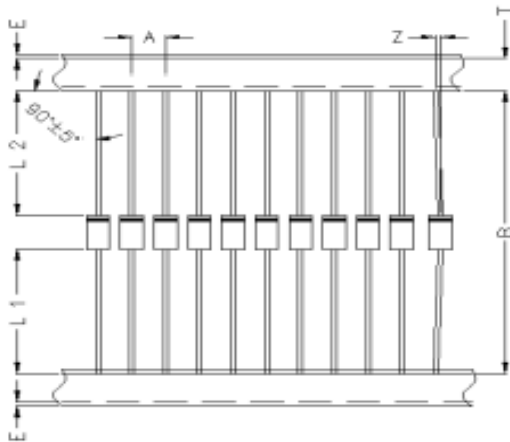


#### Note

- ◆ Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- ◆ The device can be exposed to a maximum temperature of 265°C for 10 seconds.
- ◆ Devices can be cleaned using standard industry methods and solvents.
- ◆ If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

### Package Information

#### Taping Specifications



| Item                | Symbol | Specifications(mm) |
|---------------------|--------|--------------------|
| Component Pitch     | A      | 5.0±0.5            |
| Inner Tape Pitch    | B      | 52.4±1.5           |
| Component alignment | Z      | 1.2 Max            |
| Tape width          | T      | 6.0±0.5            |
| Exposed adhesive    | E      | 0.8 Max            |
| Body eccentricity   | L1-L2  | 1.0 Max            |

#### Ammunition Package Specifications

| Package | Inner Box Size (mm) | QTY/Box (Kpcs) | Carton Size (mm) | Q'TY/Carton (Kpcs) |
|---------|---------------------|----------------|------------------|--------------------|
| DO - 41 | 255*150*75          | 5              | 420*276*312      | 50                 |