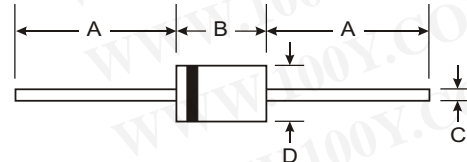


**Features**

- Glass Passivated Die Construction
- Super-Fast Recovery Time For High Efficiency
- Low Forward Voltage Drop and High Current Capability
- Surge Overload Rating to 35A Peak
- **Lead Free Finish, RoHS Compliant (Note 3)**



**Mechanical Data**

- Case: DO-41
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish - Bright Tin. Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Ordering Information: See Last Page
- Marking: R120
- Weight: 0.34 grams (approximate)

| DO-41 Plastic        |       |       |
|----------------------|-------|-------|
| Dim                  | Min   | Max   |
| A                    | 25.40 | —     |
| B                    | 4.06  | 5.21  |
| C                    | 0.71  | 0.864 |
| D                    | 2.00  | 2.72  |
| All Dimensions in mm |       |       |

**Maximum Ratings and Electrical Characteristics**

@ T<sub>A</sub> = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

| Characteristic   | Symbol                            | Value          | Unit |
|--|-----------------------------------|----------------|------|
| Peak Repetitive Reverse Voltage  | V <sub>RRM</sub>                  | 200            | V    |
| Working Peak Reverse Voltage   | V <sub>RWM</sub>                  |                |      |
| DC Blocking Voltage  | V <sub>R</sub>                    |                |      |
| RMS Reverse Voltage  | V <sub>R(RMS)</sub>               | 140            | V    |
| Average Rectified Output Current @ T <sub>L</sub> = 130°C  | I <sub>O</sub>                    | 1.0            | A    |
| Non-Repetitive Peak Forward Surge Current<br>8.3ms Single half sine-wave Superimposed on Rated Load (JEDEC Method) | I <sub>FSM</sub>                  | 35             | A    |
| Forward Voltage @ I <sub>F</sub> = 1.0A, T <sub>J</sub> = 25°C<br>@ I <sub>F</sub> = 1.0A, T <sub>J</sub> = 150°C  | V <sub>FM</sub>                   | 0.875<br>0.710 | V    |
| Peak Reverse Current at Rated DC Blocking Voltage @ T <sub>J</sub> = 25°C<br>@ T <sub>J</sub> = 150°C              | I <sub>RM</sub>                   | 2.0<br>50      | μA   |
| Reverse Recovery Time (Note 2)   | t <sub>rr</sub>                   | 25             | ns   |
| Typical Junction Capacitance (Note 1)  | C <sub>j</sub>                    | 27             | pF   |
| Typical Thermal Resistance, Junction to Lead   | R <sub>θJL</sub>                  | 50             | K/W  |
| Operating and Storage Temperature Range  | T <sub>j</sub> , T <sub>STG</sub> | -55 to +150    | °C   |

- Notes:
1. Measured at 1.0MHz and applied reverse voltage of 4V DC.
  2. Measured with I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>rr</sub> = 0.25A. See Figure 6.
  3. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see *EU Directive Annex Notes 5 and 7*.

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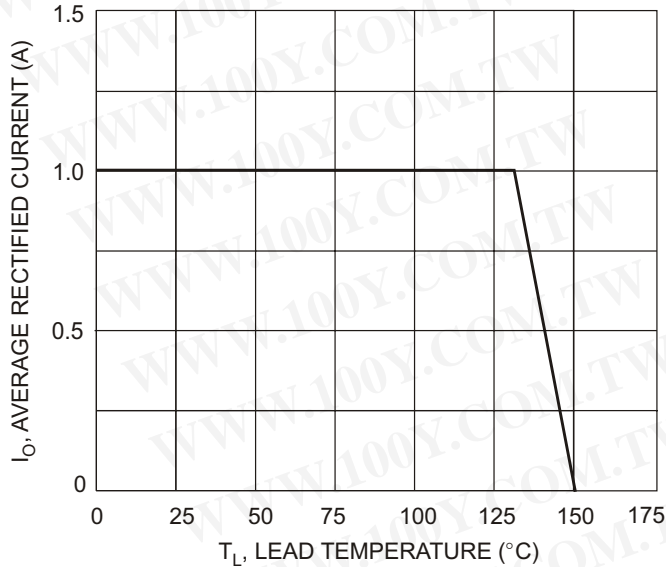


Fig. 1 Forward Current Derating Curve

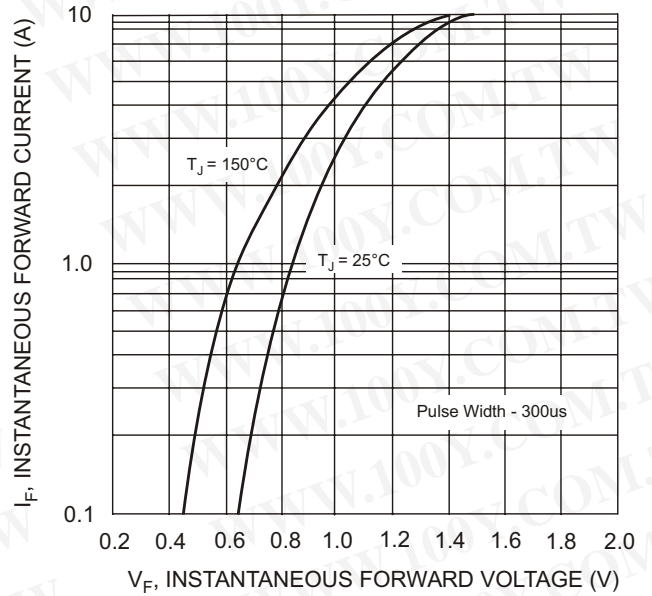


Fig. 2 Typical Forward Characteristics

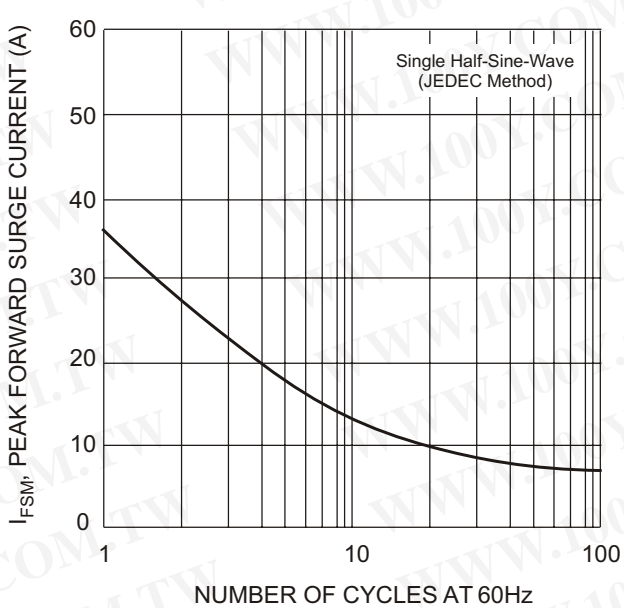


Fig. 3 Surge Current Derating Curve

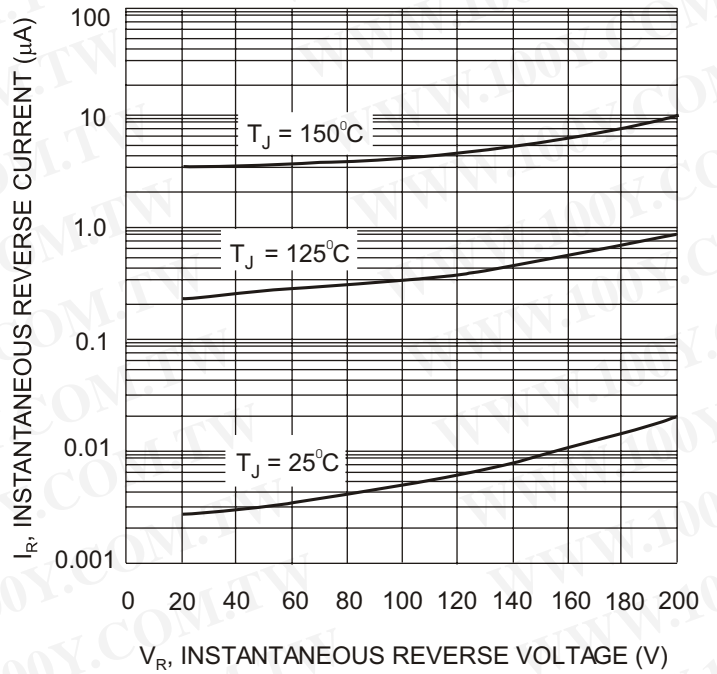


Fig. 4 Typical Reverse Characteristics

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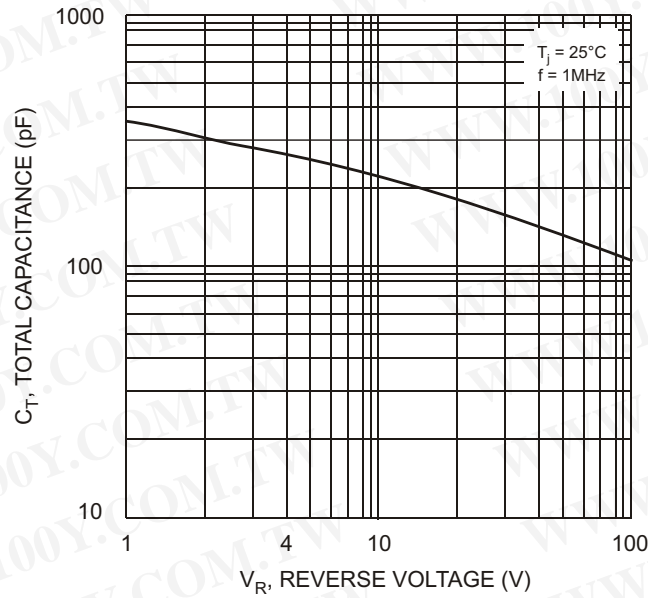


Fig. 5 Typical Total Capacitance

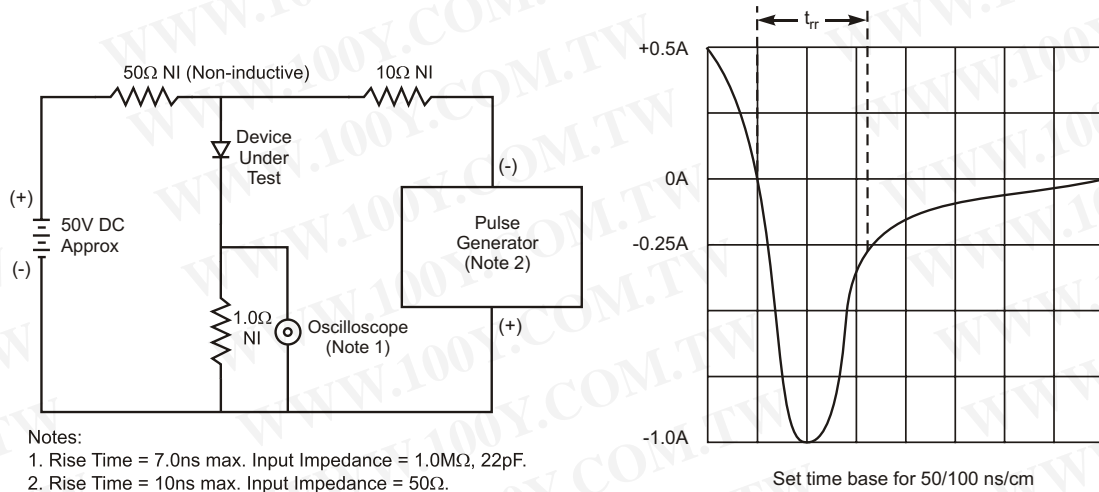


Fig. 6 Reverse Recovery Time Characteristic and Test Circuit

**Ordering Information** (Note 4)

| Device   | Packaging | Shipping                |
|----------|-----------|-------------------------|
| MUR120-A | DO-41     | 5K/Ammo Pack            |
| MUR120-B | DO-41     | 1K/Bulk                 |
| MUR120-T | DO-41     | 5K/Tape & Reel, 13-inch |

Notes: 4. For packaging details, visit our website at <http://www.diodes.com/datasheets/ap02008.pdf>

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