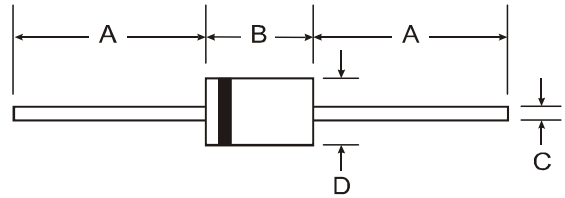



Features

- Diffused Junction
- Fast Switching for High Efficiency
- High Current Capability and Low Forward Voltage Drop
- Surge Overload Rating to 30A Peak
- Low Reverse Leakage Current
- **Lead Free Finish, RoHS compliant (Note 4)**



Mechanical Data

- Case: DO-41
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020D
- Terminals: Finish - Tin. Plated Leads Solderable per MIL-STD-202, Method 208 
- Polarity: Cathode Band
- Marking: Type Number
- Ordering Information: See Page 3
- Weight: 0.35 grams (approximate)

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

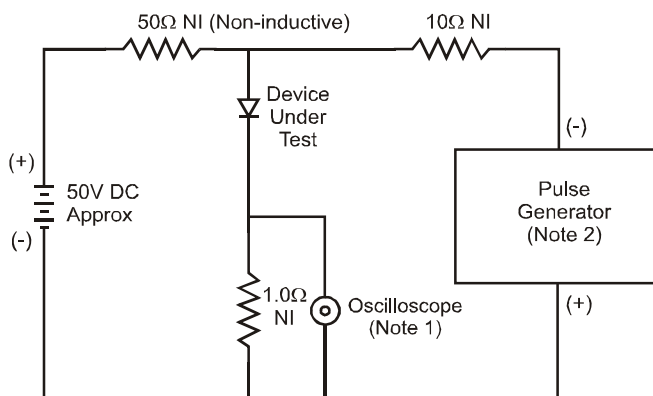
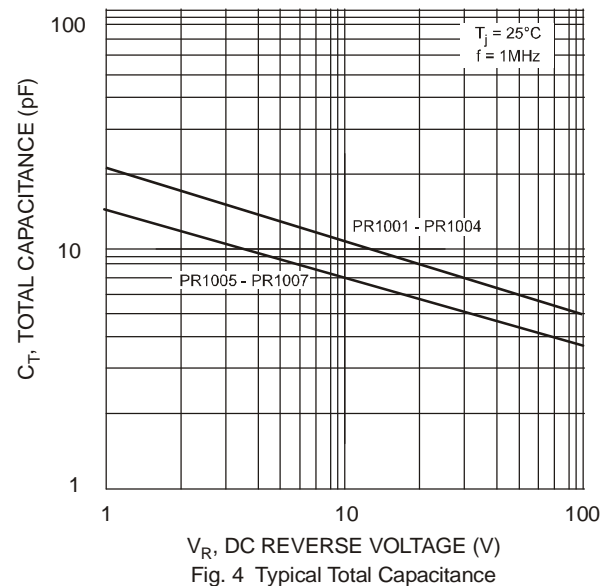
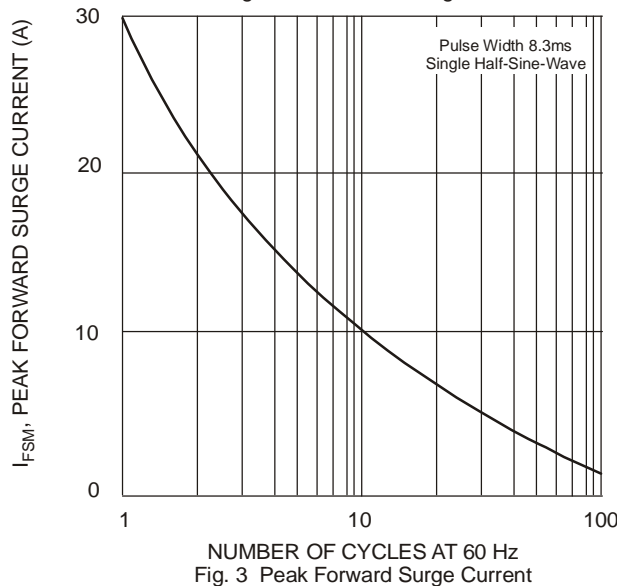
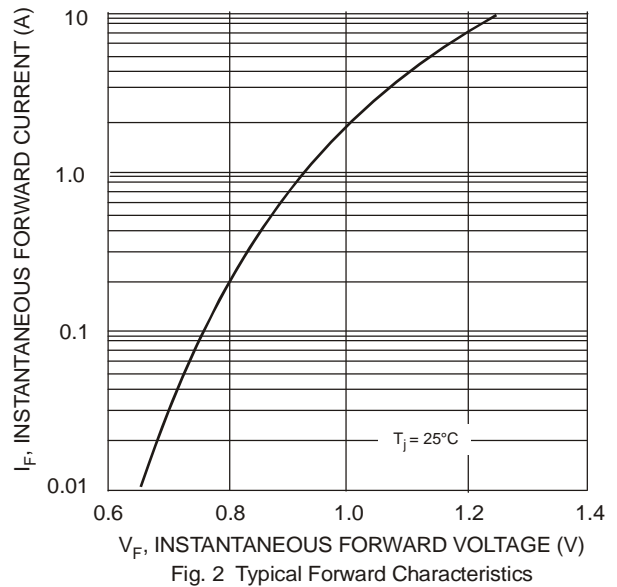
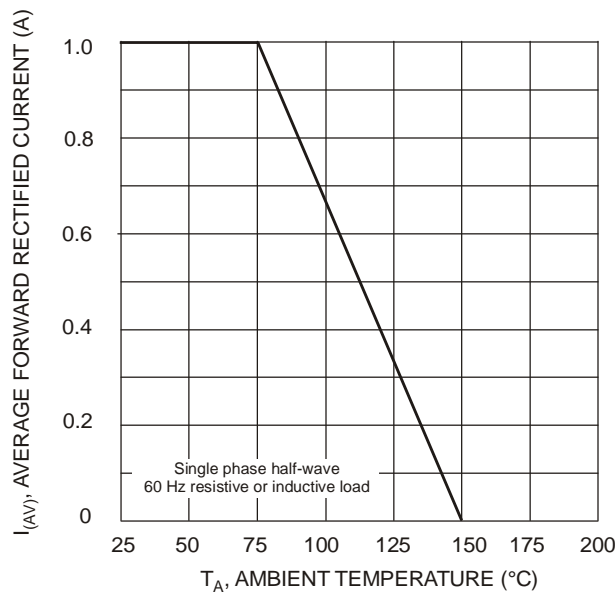
Maximum Ratings and Electrical Characteristics

@T_A = 25°C unless otherwise specified

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

| Characteristic | Symbol | PR1001 | PR1002 | PR1003 | PR1004 | PR1005 | Unit |
|--|-----------------------------------|-------------|--------|--------|--------|--------|------|
| Peak Repetitive Reverse Voltage | V _{RRM} | 50 | 100 | 200 | 400 | 600 | V |
| Working Peak Reverse Voltage | V _{RWM} | | | | | | |
| DC Blocking Voltage (Note 5) | V _R | | | | | | |
| RMS Reverse Voltage | V _{R(RMS)} | 35 | 70 | 140 | 280 | 420 | V |
| Average Rectified Output Current (Note 1) @ T _A = 75°C | I _O | 1.0 | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load | I _{FSM} | 30 | | | | | A |
| Forward Voltage Drop @ I _F = 1.0A | V _{FM} | 1.2 | | | | | V |
| Peak Reverse Current @ T _A = 25°C at Rated DC Blocking Voltage (Note 5) @ T _A = 100°C | I _{RM} | 5.0 100 | | | | | μA |
| Reverse Recovery Time (Note 3) | t _{rr} | 150 | | | | 250 | ns |
| Typical Total Capacitance (Note 2) | C _T | 15 | | | | 8.0 | pF |
| Typical Thermal Resistance Junction to Ambient | R _{θJA} | 75 | | | | | °C/W |
| Operating and Storage Temperature Range | T _J , T _{STG} | -65 to +150 | | | | | °C |

- Notes:
1. Valid provided that leads are maintained at ambient temperature at a distance of 9.5mm from the case.
 2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
 3. Measured with I_F = 0.5A, I_R = 1A, I_{rr} = 0.25A. See figure 5.
 4. EU Directive 2002/95/EC (RoHS). All applicable RoHS exemptions applied, see EU Directive 2002/95/EC Annex Notes.
 5. Short duration pulse test used to minimize self-heating effect.



- Notes:
1. Rise Time = 7.0ns max. Input Impedance = 1.0MW, 22pF.
 2. Rise Time = 10ns max. Input Impedance = 50W.

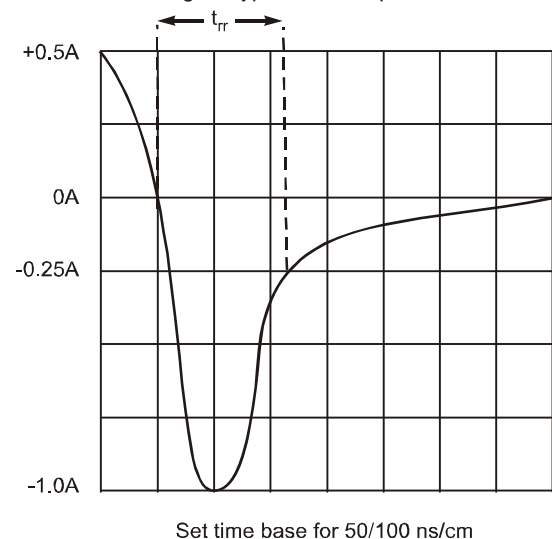


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

Ordering Information (Note 6)

| Device | Packaging | Shipping |
|----------|-----------|-------------------------|
| PR1001-T | DO-41 | 5K/Tape & Reel, 13-inch |
| PR1002-T | DO-41 | 5K/Tape & Reel, 13-inch |
| PR1003-T | DO-41 | 5K/Tape & Reel, 13-inch |
| PR1004-T | DO-41 | 5K/Tape & Reel, 13-inch |
| PR1005-T | DO-41 | 5K/Tape & Reel, 13-inch |

Notes: 6. For packaging details, visit our website at <http://www.diodes.com/datasheets/ap02008.pdf>.

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