

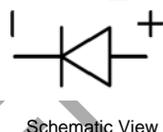
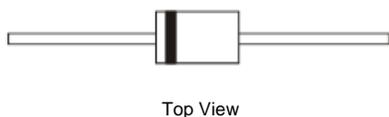
1.0A FAST RECOVERY GLASS PASSIVATED RECTIFIER

Features

- Glass Passivated Die Construction
- Fast Switching for High Efficiency
- Surge Overload Rating to 30A Peak
- Low Reverse Leakage Current
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**

Mechanical Data

- Case: DO-41 Plastic
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish—Tin. Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.35 grams (Approximate)



Ordering Information (Note 3)

| Part Number | Case | Packaging |
|-------------|-------|-------------------------|
| PR1001G-T | DO-41 | 5K/Tape & Reel, 13-inch |
| PR1002G-T | DO-41 | 5K/Tape & Reel, 13-inch |
| PR1003G-T | DO-41 | 5K/Tape & Reel, 13-inch |
| PR1004G-T | DO-41 | 5K/Tape & Reel, 13-inch |
| PR1005G-T | DO-41 | 5K/Tape & Reel, 13-inch |
| PR1006G-T | DO-41 | 5K/Tape & Reel, 13-inch |
| PR1007G-T | DO-41 | 5K/Tape & Reel, 13-inch |

- Notes:
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3).compliant. All applicable RoHS exemptions applied.
 2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
 3. For packaging details, go to our website at <http://www.diodes.com/products/packages.html>.

Marking Information



PR100XG = Product Type Marking Code
X = 1, 2, 3, 4, 5, 6, 7
 = Manufacturers' Code Marking
YWW = Date Code Marking
Y = Last Digit of Year (ex: 4 for 2014)
WW = Week Code (01 to 53)

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 G | PR1002 G | PR1003 G | PR1004 G | PR1005 G | PR1006 G | PR1007 G | Unit |
|--|--|-----------|----------|----------|----------|----------|----------|----------|------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage (Note 7) | V _{RRM} V _{RWM} V _R | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| RMS Reverse Voltage | V _{R(RMS)} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Average Rectified Output Current (Note 4) @ T _A = +55°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} | 1.3 | | | | | | | V |
| Peak Reverse Current @ T _A = +25°C at Rated DC Blocking Voltage (Note 7) @ T _A = +100°C | I _{RM} | 5.0 50 | | | | | | | μA |
| Reverse Recovery Time (Note 6) | t _{RR} | 150 | | | | 250 | 500 | | ns |
| Typical Total Capacitance (Note 5) | C _T | 15 | | | | 8 | | | pF |

Thermal Characteristics

| Characteristic | Symbol | Value | Unit |
|---|-----------------------------------|-------------|------|
| Typical Thermal Resistance Junction to Ambient (Note 4) | R _{θJA} | 95 | °C/W |
| Operating and Storage Temperature Range | T _J , T _{STG} | -65 to +150 | °C |

- Notes:
4. Valid provided that leads are maintained at ambient temperature at a distance of 9.5mm from the case.
 5. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
 6. Measured with I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A. See Figure 5.
 7. Short duration pulse test used to minimize self-heating effect.

NOT RECOMMENDED FOR NEW DESIGN

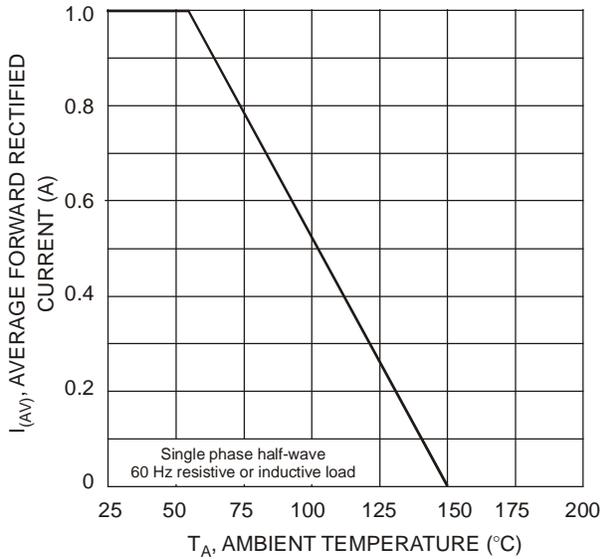


Fig. 1 Forward Derating Curve

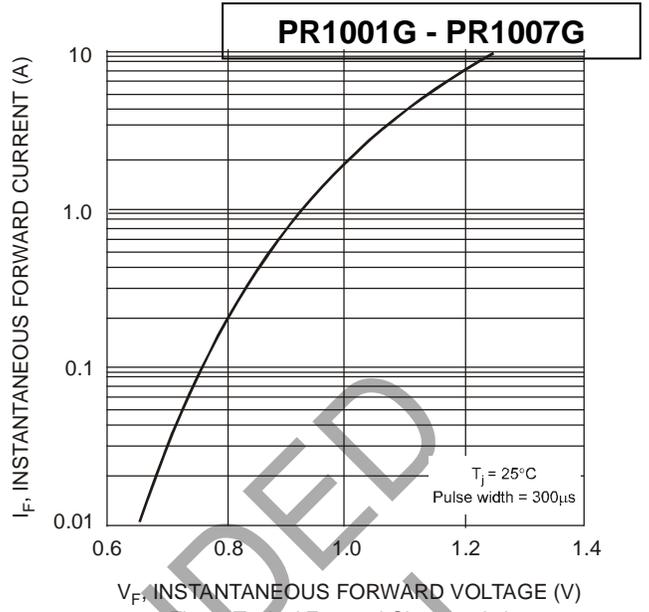


Fig. 2 Typical Forward Characteristics

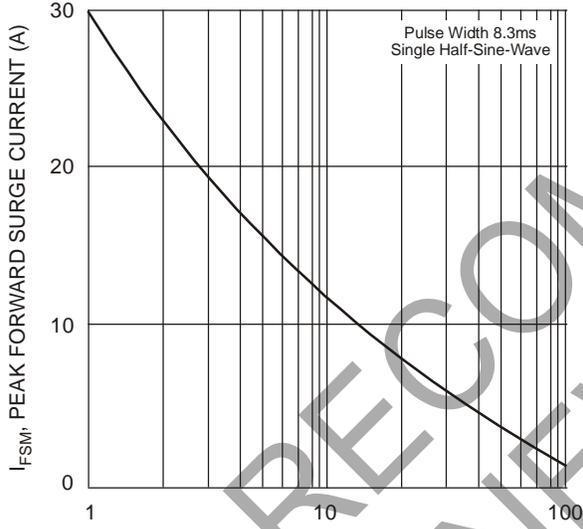


Fig. 3 Peak Forward Surge Current

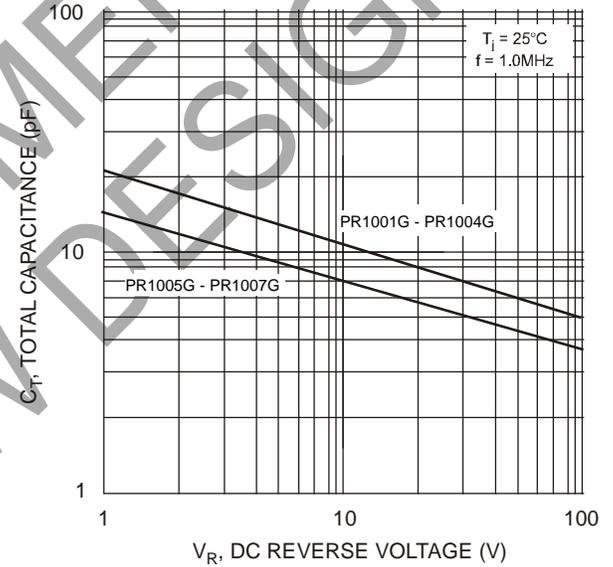
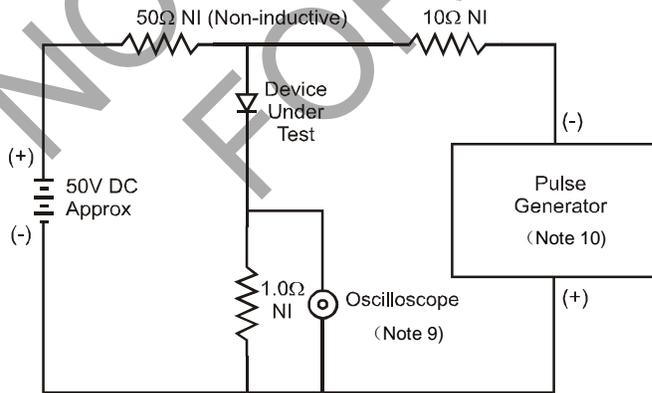
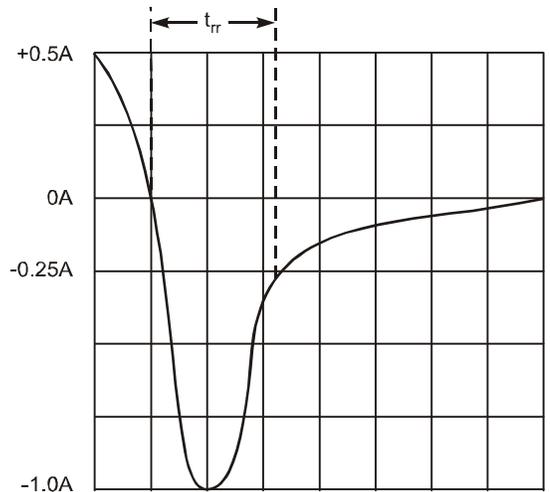


Fig. 4 Typical Total Capacitance



Notes:
9. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF
10. Rise Time = 10ns max. Input Impedance = 50Ω



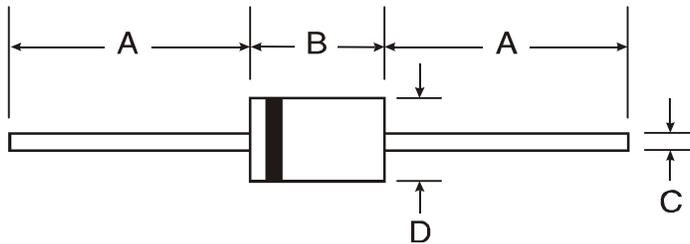
Set time base for 50/100 ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

Package Outline Dimensions

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

DO-41 (Plastic)



| 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 | | |

NOT RECOMMENDED FOR NEW DESIGN

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