


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)



Top View



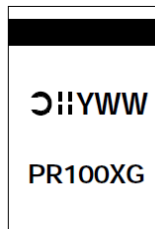
Schematic View


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) compliant. All applicable RoHS exemptions applied.
 2. See http://www.diodes.com/quality/lead_free.html 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:
- Valid provided that leads are maintained at ambient temperature at a distance of 9.5mm from the case.
 - Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
 - Measured with I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A. See Figure 5.
 - Short duration pulse test used to minimize self-heating effect.

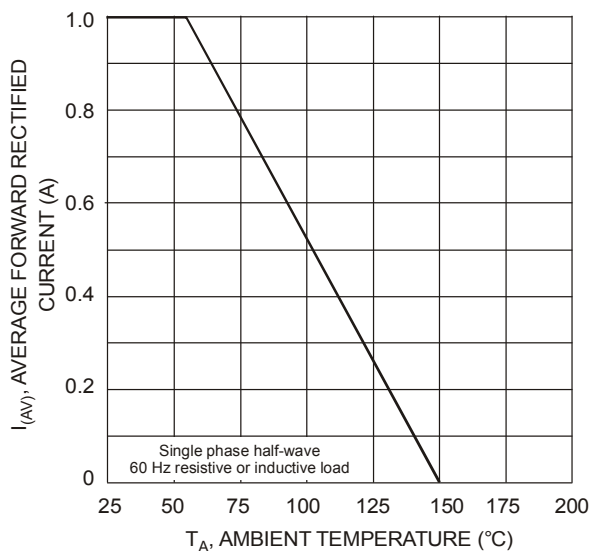


Fig. 1 Forward Derating Curve

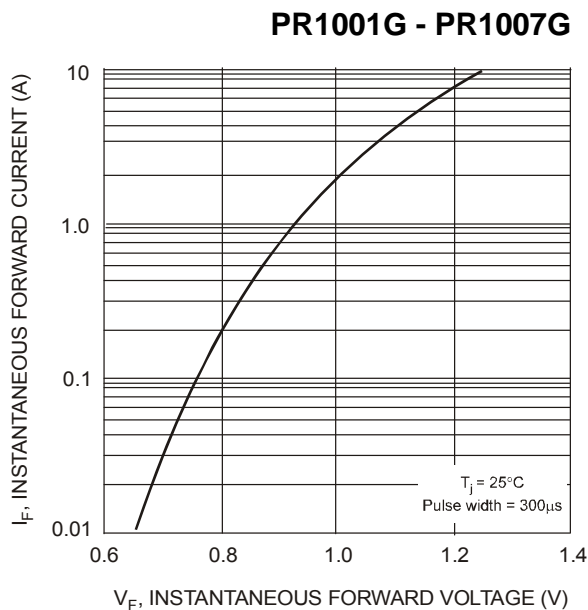


Fig. 2 Typical Forward Characteristics

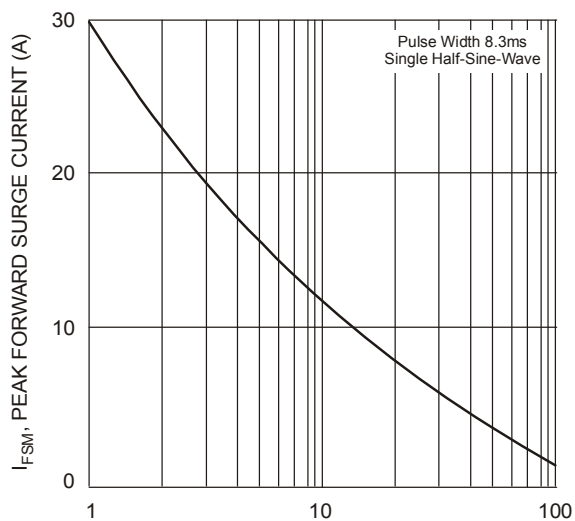


Fig. 3 Peak Forward Surge Current

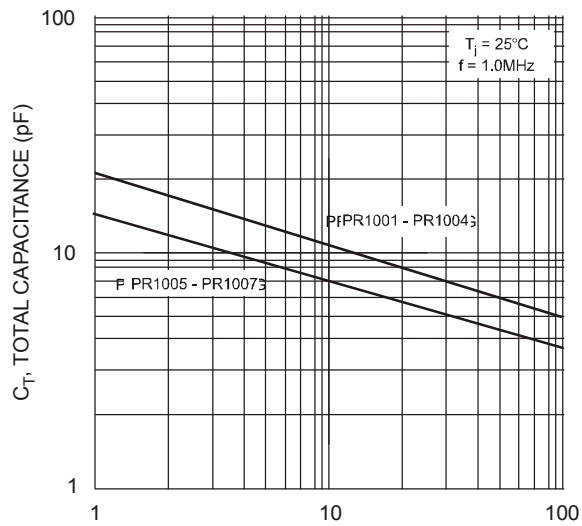


Fig. 4 Typical Total Capacitance

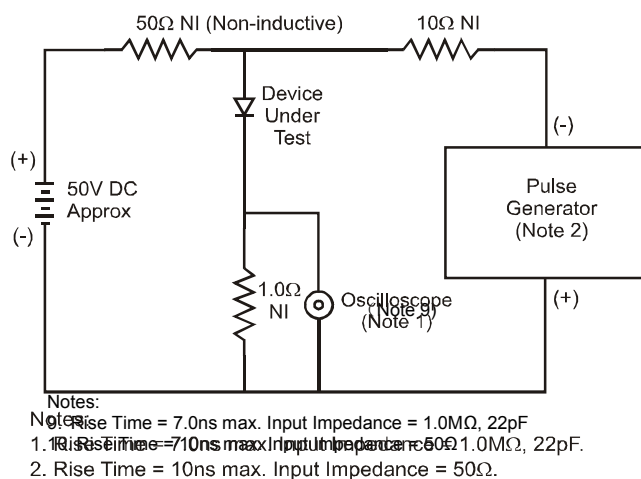
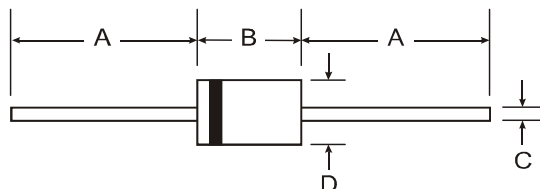


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

Package Outline Dimensions

Please see AP02002 at <http://www.diodes.com/datasheets/ap02002.pdf> for the latest version.



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		

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