



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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### 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



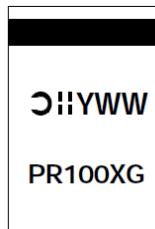
Schematic View

### 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](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** @ $T_A = +25^\circ\text{C}$ , 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) @ $T_A = +55^\circ\text{C}$	$I_O$	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 @ $I_F = 1.0\text{A}$	$V_{FM}$	1.3							V
Peak Reverse Current @ $T_A = +25^\circ\text{C}$ at Rated DC Blocking Voltage (Note 7) @ $T_A = +100^\circ\text{C}$	$I_{RM}$	5.0 50							$\mu\text{A}$
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)	$R_{\theta JA}$	95	$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-65 to +150	$^\circ\text{C}$

- 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  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$ ,  $I_{RR} = 0.25\text{A}$ . See Figure 5.
  7. Short duration pulse test used to minimize self-heating effect.

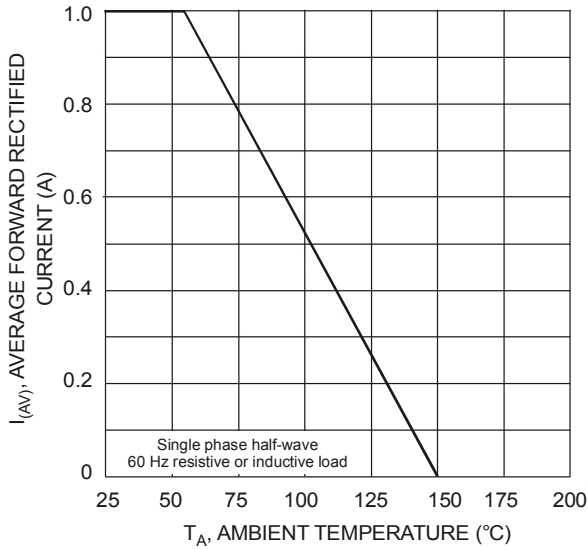


Fig. 1 Forward Derating Curve

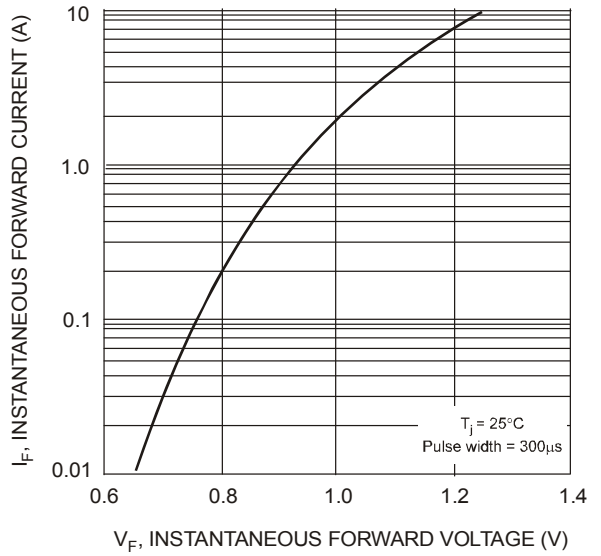


Fig. 2 Typical Forward Characteristics

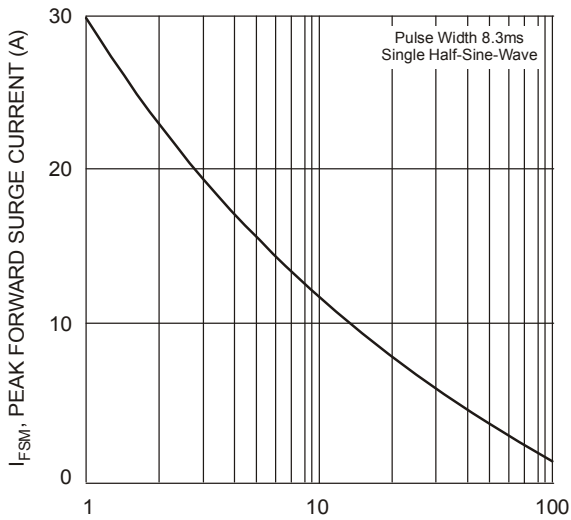


Fig. 3 Peak Forward Surge Current

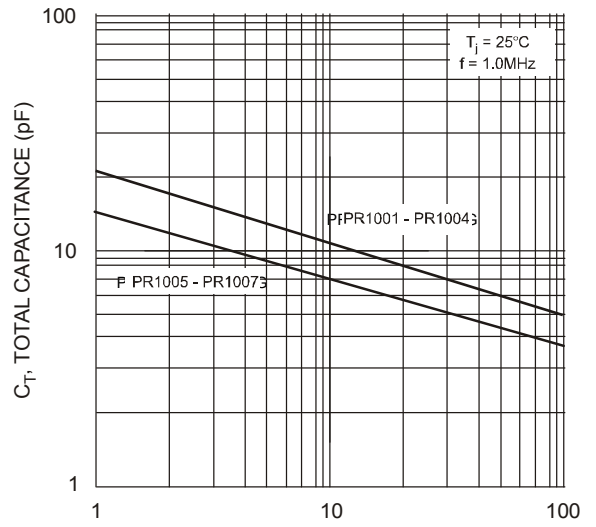
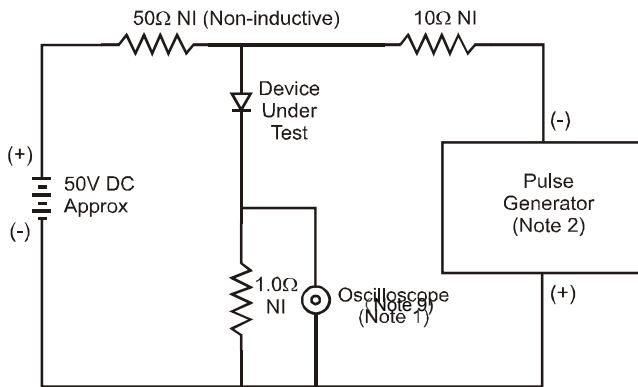
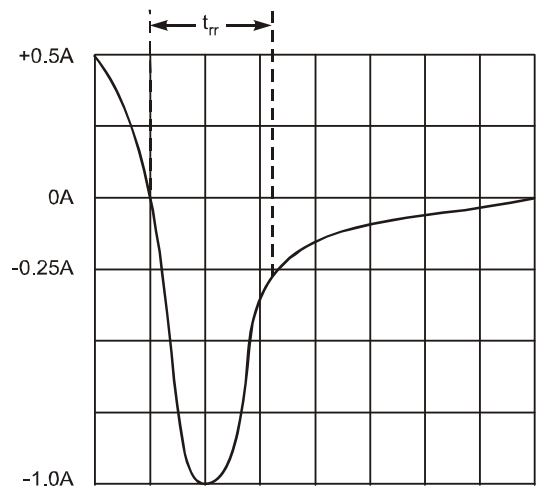


Fig. 4 Typical Total Capacitance



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

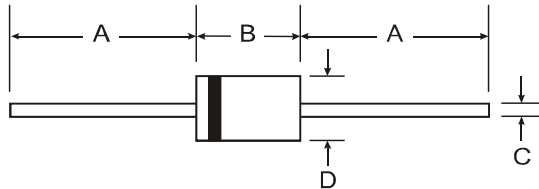


Set time base for 50/100 ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

## Package Outline Dimensions

Please see 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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