



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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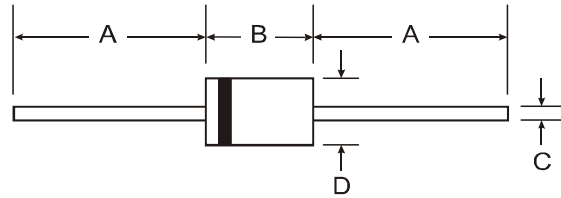
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Features

- 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}						V
Working Peak Reverse Voltage	V _{RWM}	50	100	200	400	600	V
DC Blocking Voltage (Note 5)	V _R						V
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.

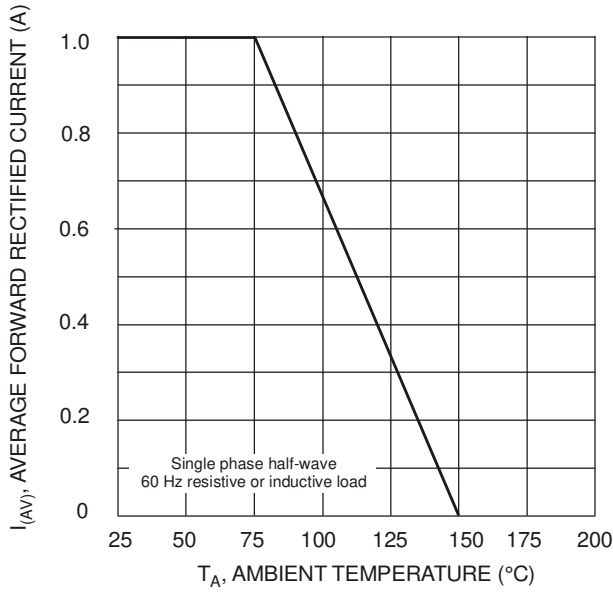


Fig. 1 Forward Derating Curve

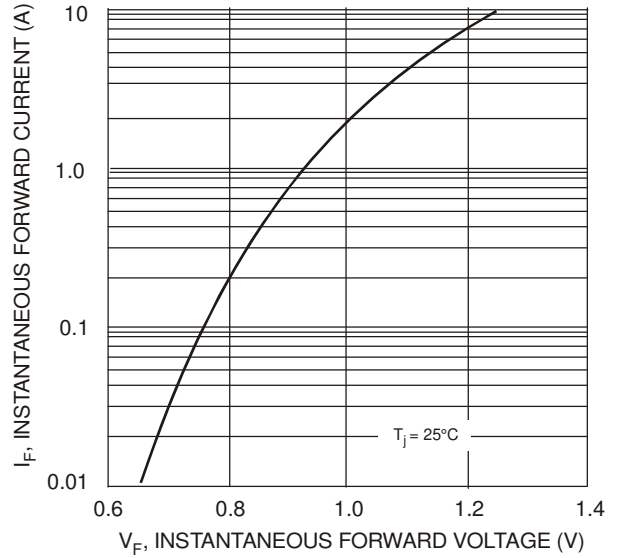


Fig. 2 Typical Forward Characteristics

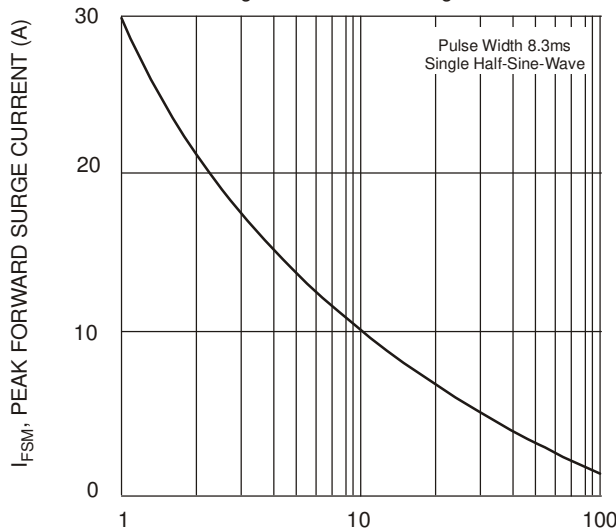


Fig. 3 Peak Forward Surge Current

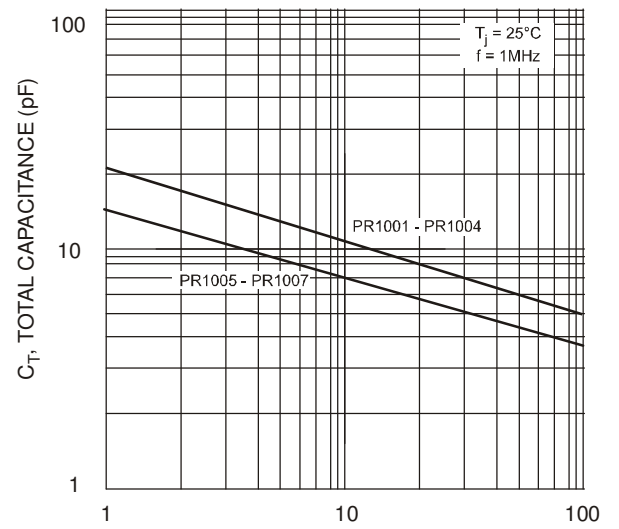
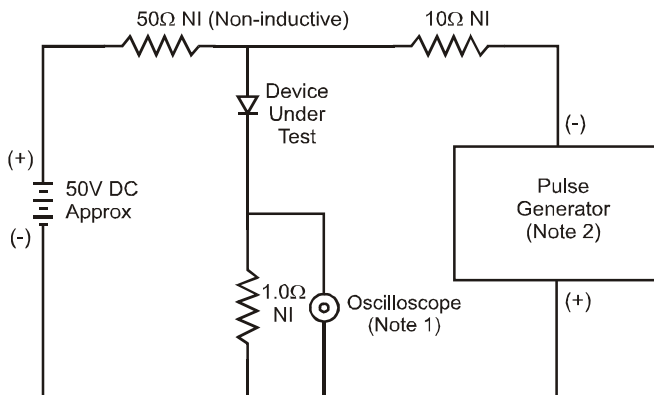
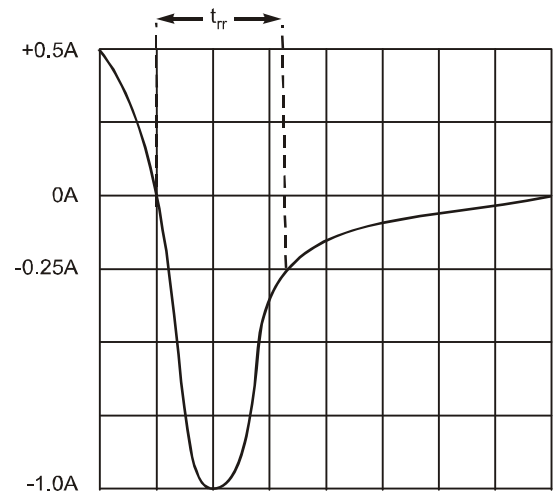


Fig. 4 Typical Total Capacitance



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



Set time base for 50/100 ns/cm

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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