



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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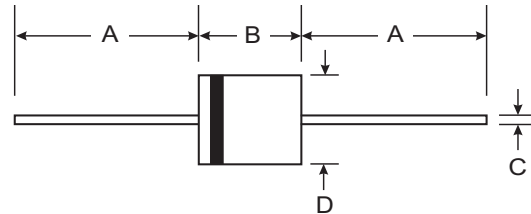


Features

- Diffused Junction
- Fast Switching for High Efficiency
- High Current Capability and Low Forward Voltage Drop
- Surge Overload Rating to 300A Peak
- Low Reverse Leakage Current
- **Lead Free Finish, RoHS Compliant (Note 4)**

Mechanical Data

- Case: R-6
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish - Bright Tin. Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Ordering Information: See Last Page
- Marking: Type Number
- Weight: 2.1 grams (approximate)



R-6		
Dim	Min	Max
A	25.40	—
B	8.60	9.10
C	1.20	1.30
D	8.60	9.10
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	PR 6001	PR 6002	PR 6003	PR 6004	PR 6005	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	50	100	200	400	600	V
Working Peak Reverse Voltage	V _{RWM}						
DC Blocking Voltage	V _R						
RMS Reverse Voltage	V _{R(RMS)}	35	70	140	280	420	V
Average Rectified Output Current (Note 1)	I _O	6.0					A
@ T _A = 60°C							
Non-Repetitive Peak Forward Surge Current	I _{FSM}	300					A
8.3ms Single half sine-wave Superimposed on Rated Load (JEDEC Method)							
Forward Voltage	V _{FM}	1.2					V
@ I _F = 6.0A							
Peak Reverse Current	I _{RM}	10					μA
@ T _A = 25°C							
at Rated DC Blocking Voltage		150					
@ T _A = 125°C							
Reverse Recovery Time (Note 3)	t _{rr}	150				250	ns
Typical Junction Capacitance (Note 2)	C _j	140				70	pF
Typical Thermal Resistance Junction to Ambient	R _{θJA}	32					K/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 4.0 V DC.
 3. Measured with I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25 A. See figure 5.
 4. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see EU Directive Annex Notes 5 and 7.

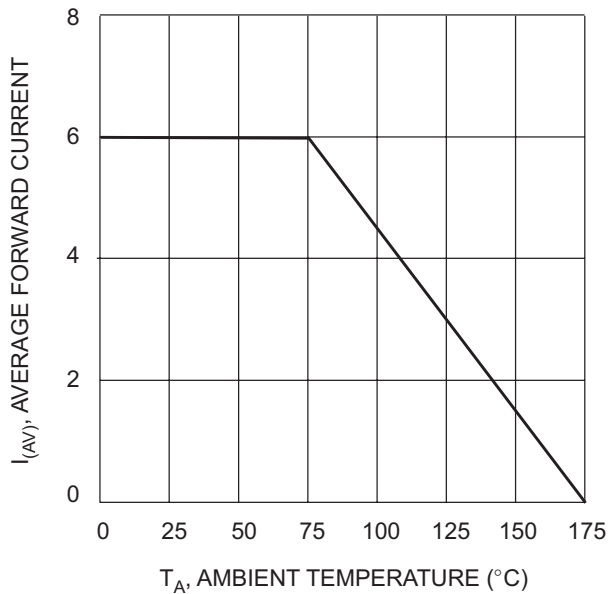


Fig. 1, Typical Forward Current Derating Curve

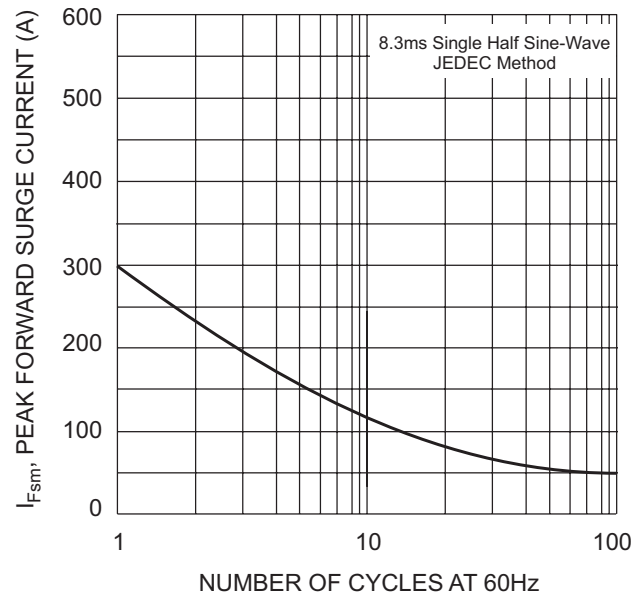


Fig. 2 Max Non-Repetitive Peak Surge Current

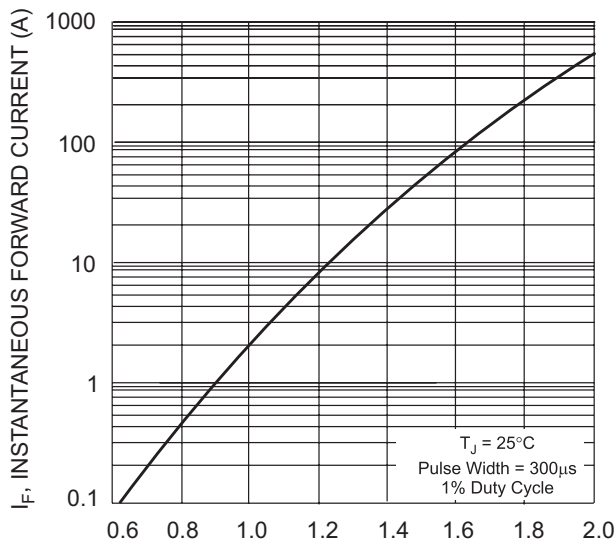


Fig. 3, Typical Instantaneous Forward Characteristics

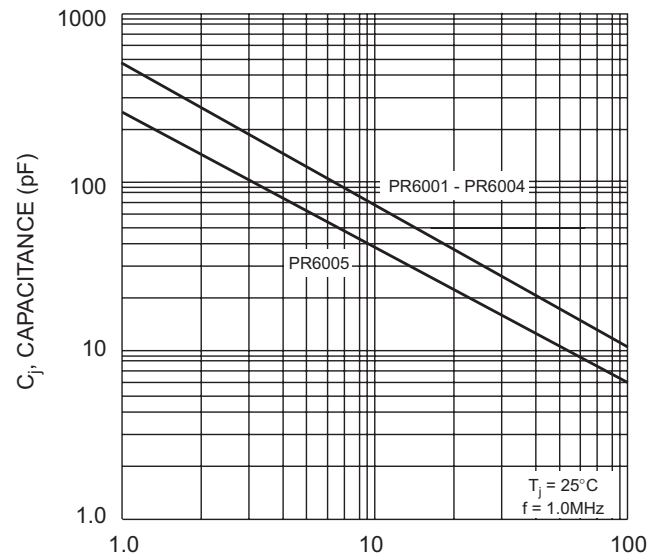
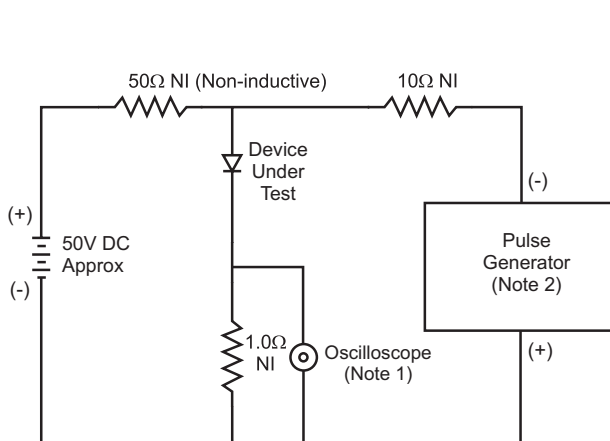
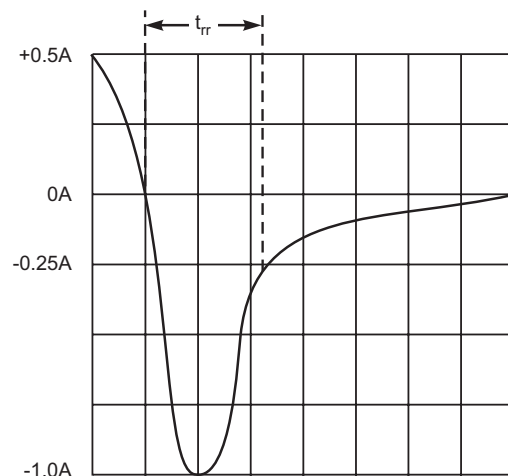


Fig. 4 Typical Junction Capacitance



- 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

Ordering Information (Note 5)

Device	Packaging	Shipping
PR6001-T	R-6	500/Tape & Reel, 13-inch
PR6002-T	R-6	500/Tape & Reel, 13-inch
PR6003-T	R-6	500/Tape & Reel, 13-inch
PR6004-T	R-6	500/Tape & Reel, 13-inch
PR6005-T	R-6	500/Tape & Reel, 13-inch

Notes: 5. For packaging details, visit our website at <http://www.diodes.com/datasheets/ap02008.pdf>.