

PR3001 - PR3005

3.0A FAST RECOVERY RECTIFIER

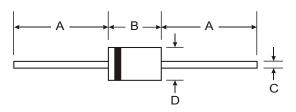
Features

Diffused Junction Fast Switching for High Efficiency Surge Overload Rating to 150 A Peak Low Reverse Leakage Current Lead Free Finish, RoHS Compliant (Note 4)

Mechanical Data

Case: DO-201AD	

Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0 Moisture Sensitivity: Level 1 per J-STD-020C Terminals: Finish - Tin. Plated Leads Solderable per MIL-STD-202, Method 208 (3) Polarity: Cathode Band Marking: Type Number Ordering Information: See Page 3 Weight: 1.12 grams (approximate)



DO-201AD					
Dim	Min Max				
Α	25.40				
В	7.20	9.50			
С	1.20	1.30			
D	4.80	5.30			
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 3001	PR 3002	PR 3003	PR 3004	PR 3005	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage (Note 5)		V _{RRM} V _{RWM} V _R	50	100	200	400	600	v
RMS Reverse Voltage		V _{R(RMS)}	35	70	140	280	420	V
Average Rectified Output Current (Note 1)	@ T _A = 90 C	lo			3.0			А
Non-Repetitive Peak Forward Surge Curre 8.3ms Single half sine-wave Superimpose	ent d on Rated Load	I _{FSM}			150			А
Forward Voltage	@ I _F = 3.0A	V _{FM}			1.2			V
Peak Reverse Current at Rated DC Blocking Voltage (Note 5)	$@ T_A = 25 C \\ @ T_A = 100 C \\ end{tabular}$	I _{RM}			5.0 100			А
Reverse Recovery Time (Note 3)		t _{rr}		1:	50		250	ns
Typical Total Capacitance (Note 2)		Ст			50			pF
Typical Thermal Resistance Junction to A	nbient	R _{JA}			15			°C/W
Operating and Storage Temperature Rang	e	T _{j,} T _{STG}			-65 to +150			С

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 IF =0.5A, IR = 1.0A, Irr = 0.25A. See figure 5.

4. RoHS revision 13.2.2003. High temperature solder exemption applied, see EU Directive Annex Note 7.

5. Short duration pulse test used to minimize self-heating effect.

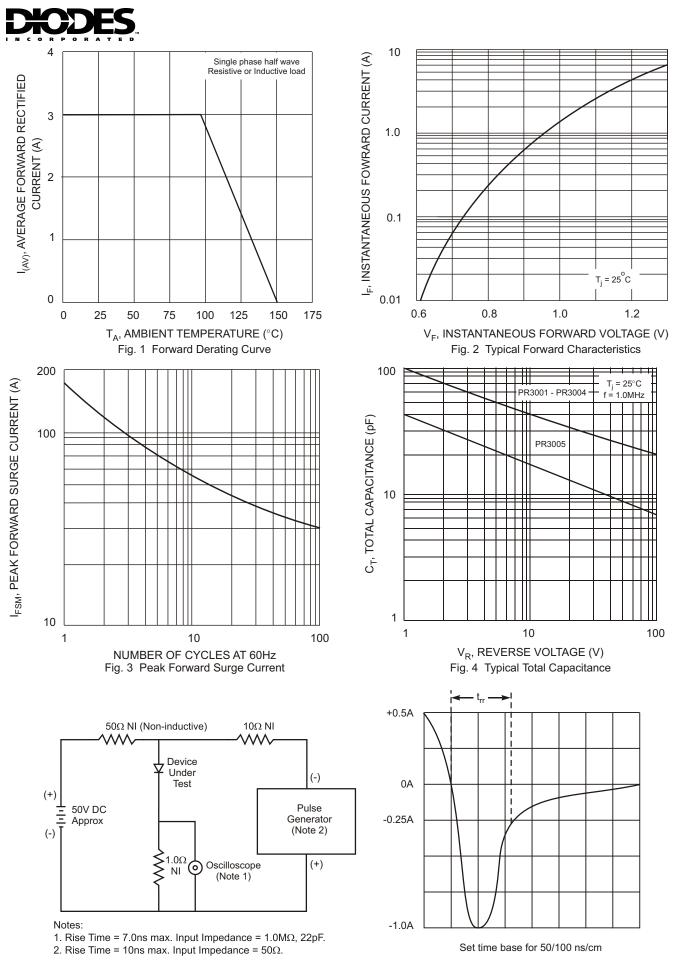


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit



Ordering Information (Note 6)

Device	Packaging	Chinning		
Device	Packaging	Shipping		
PR3001-B	DO-201AD	500/Bulk		
PR3001-T	DO-201AD	1.2K/Tape & Reel, 13-inch		
PR3002-B	DO-201AD	500/Bulk		
PR3002-T	DO-201AD	1.2K/Tape & Reel, 13-inch		
PR3003-B	DO-201AD	500/Bulk		
PR3003-T	DO-201AD	1.2K/Tape & Reel, 13-inch		
PR3004-B	DO-201AD	500/Bulk		
PR3004-T	DO-201AD	1.2K/Tape & Reel, 13-inch		
PR3005-B	DO-201AD	500/Bulk		
PR3005-T	DO-201AD	1.2K/Tape & Reel, 13-inch		

Notes: 6. For packaging details, visit our website at http://www.diodes.com/datasheets/ap02008.pdf.

IMPORTANT NOTICE

Diodes Incorporated and its subsidiaries reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. Diodes Incorporated does not assume any liability arising out of the application or use of any product described herein; neither does it convey any license under its patent rights, nor the rights of others. The user of products in such applications shall assume all risks of such use and will agree to hold Diodes Incorporated and all the companies whose products are represented on our website, harmless against all damages.

LIFE SUPPORT

Diodes Incorporated products are not authorized for use as critical components in life support devices or systems without the expressed written approval of the President of Diodes Incorporated.