

PR1501/S - PR1505/S

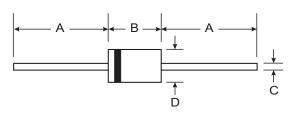
1.5A FAST RECOVERY RECTIFIER

Features

- Diffused Junction
- Fast Switching for High Efficiency
- High Current Capability and Low Forward Voltage Drop
- Surge Overload Rating to 50A Peak
- Low Reverse Leakage Current
- Lead Free Finish, RoHS Compliant (Note 4)

Mechanical Data

- Case: DO-41, DO-15
- 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
- DO-41 Weight: 0.3 grams (approximate)
- DO-15 Weight: 0.4 grams (approximate)



Dim	DO-41	Plastic	DO-15			
	Min	Max	Min	Max		
Α	25.40		25.40			
В	4.06	5.21	5.50	7.62		
С	0.71	0.864	0.686	0.889		
D	2.00	2.72	2.60	3.60		
All Dimensions in mm						

"S" Suffix Designates DO-41 Package No Suffix Designates DO-15 Package

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 1501/S	PR 1502/S	PR 1503/S	PR 1504/S	PR 1505/S	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage		V _{RRM} V _{RWM} VR	50	100	200	400	600	V
RMS Reverse Voltage		V _{R(RMS)}	35	70	140	280	420	V
Average Rectified Output Current (Note 1) $@ T_A = 50^{\circ}C$		lo	1.5					A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load (JEDEC Method)		I _{FSM}	50				A	
Forward Voltage @ I _F = 1.5A		V _{FM}	1.2					V
Peak Reverse Current@ $T_A = 25^{\circ}C$ at Rated DC Blocking Voltage@ $T_A = 100^{\circ}C$		I _{RM}	5.0 100					μA
Reverse Recovery Time (Note 3)		t _{rr}	150 250			250	ns	
Typical Junction Capacitance (Note 2)		Cj	20 10			10	pF	
Typical Thermal Resistance Junction to Ambient		R _{0JA}	35					K/W
Operating and Storage Temperature Range		Tj, TSTG	-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 $I_F = 0.5A$, $I_R = 1.0A$, $I_{rr} = 0.25A$. See figure 5.

4. RoHS revision 13.2.2003. Glass and High Temperature Solder Exemptions Applied, see EU Directive Annex Notes 5 and 7.



NOT RECOMMENDED FOR NEW DESIGN

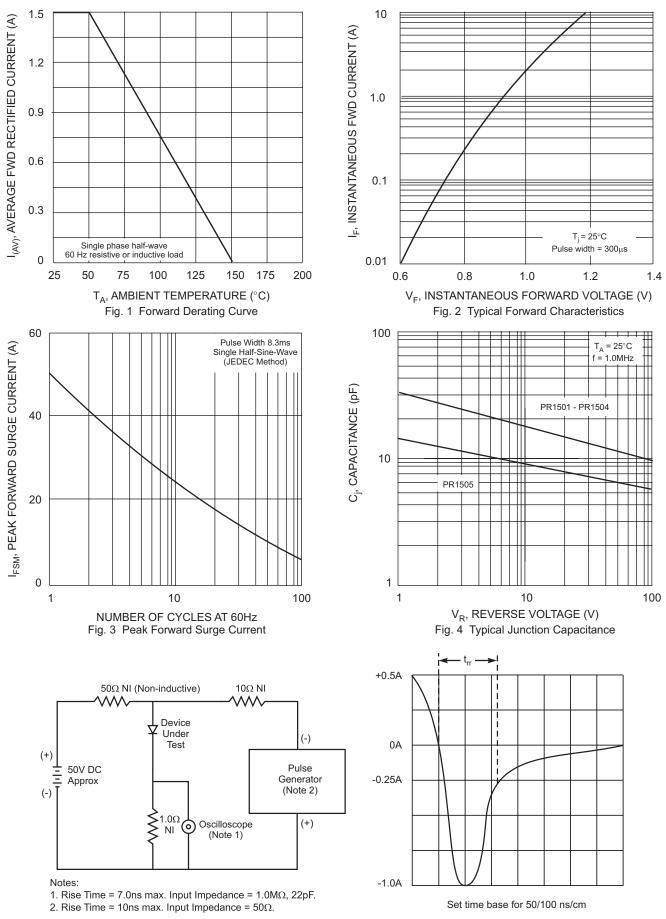


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit



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Ordering Information (Note 5)

Device	Packaging	Shipping	
PR1501S-A	DO-41	5K/Ammo Pack	
PR1501S-B	DO-41	1K/Bulk	
PR1501S-T	DO-41	5K/Tape & Reel, 13-inch	
PR1502S-A	DO-41	5K/Ammo Pack	
PR1502S-B	DO-41	1K/Bulk	
PR1502S-T	DO-41	5K/Tape & Reel, 13-inch	
PR1503S-A	DO-41	5K/Ammo Pack	
PR1503S-B	DO-41	1K/Bulk	
PR1503S-T	DO-41	5K/Tape & Reel, 13-inch	
PR1504S-A	DO-41	5K/Ammo Pack	
PR1504S-B	DO-41	1K/Bulk	
PR1504S-T	DO-41	5K/Tape & Reel, 13-inch	
PR1505S-A	DO-41	5K/Ammo Pack	
PR1505S-B	DO-41	1K/Bulk	
PR1505S-T	DO-41	5K/Tape & Reel, 13-inch	
PR1501-B	DO-15	1K/Bulk	
PR1501-T	DO-15	4K/Tape & Reel, 13-inch	
PR1502-B	DO-15	1K/Bulk	
PR1502-T	DO-15	4K/Tape & Reel, 13-inch	
PR1503-B	DO-15	1K/Bulk	
PR1503-T	DO-15	4K/Tape & Reel, 13-inch	
PR1504-B	DO-15	1K/Bulk	
PR1504-T	DO-15	DO-15 4K/Tape & Reel, 13-inch	
PR1505-B	DO-15	1K/Bulk	
PR1505-T	DO-15	4K/Tape & Reel, 13-inch	

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

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