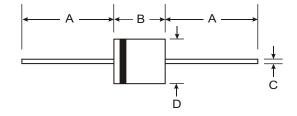


PR6001 - PR6005

6.0A FAST RECOVERY RECTIFIER

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
- Plastic Material: UL Flammability Classification Rating 94V-0



Mechanical Data

Case: Molded Plastic

 Terminals: Plated Leads Solderable per MIL-STD-202, Method 208

Polarity: Cathode Band
Marking: Type Number

Weight: 2.1 grams (approx.)

R-6						
Dim	Min	Max				
Α	25.40	_				
В	8.60	9.10				
С	1.20	1.30				
D	8.60	9.10				
All Dimensions in mm						

Maximum Ratings and Electrical Characteristics @ TA = 25°C unless otherwise specified

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Characteristic	5	Symbol	PR 6001	PR 6002	PR 6003	PR 6004	PR 6005	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage		V _{RRM} V _{RWM} V _R	50	100	200	400	600	٧
RMS Reverse Voltage	\	V _{R(RMS)}	35	70	140	280	420	V
Average Rectified Output Current (Note 1) @ T	A = 60°C	lo			6.0			А
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Ra (JEDEC Method)	ated Load	I _{FSM}			300			А
Forward Voltage @	I _F = 6.0A	V_{FM}			1.2			٧
	= 25°C = 125°C	I _{RM}			10 150			μА
Reverse Recovery Time (Note 3)		t _{rr}		15	50		250	ns
Typical Junction Capacitance (Note 2)		Cj		14	40		70	pF
Typical Thermal Resistance Junction to Ambient		$R_{\theta JA}$	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.



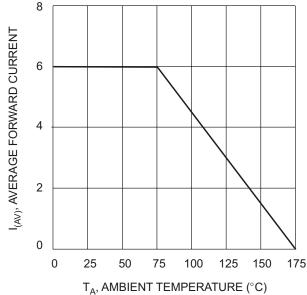
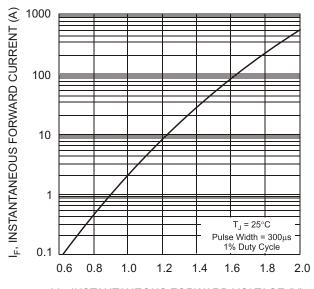
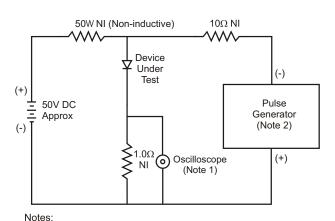


Fig. 1, Typical Forward Current Derating Curve

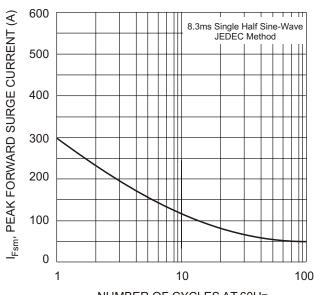


V_F, INSTANTANEOUS FORWARD VOLTAGE (V) Fig. 3, Typical Instantaneous Forward Characteristics



1. Rise Time = 7.0ns max. Input Impedance = 1.0M Ω , 22pF.

2. Rise Time = 10ns max. Input Impedance = 50Ω .



NUMBER OF CYCLES AT 60Hz Fig. 2 Max Non-Repetitive Peak Surge Current

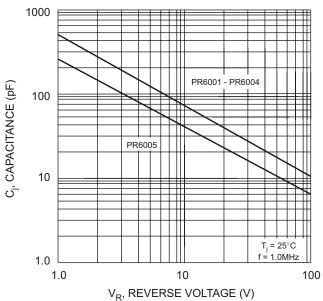
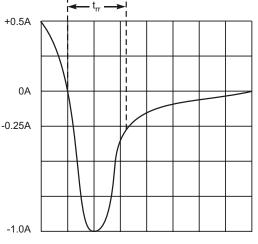


Fig. 4 Typical Junction Capacitance



Set time base for 50/100 ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit