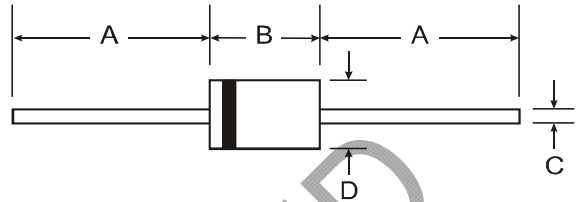




THE DATASHEET OF PR3005G-T

Features

- Glass Passivated Die Construction
- Fast Switching for High Efficiency
- Surge Overload Rating to 125A 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 (e3)
- Polarity: Cathode Band
- Marking: Type Number
- Ordering Information: See Page 3
- Weight: 1.12 grams (approximate)

DO-201AD		
Dim	Min	Max
A	25.40	—
B	7.20	9.50
C	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 3001G	PR 3002G	PR 3003G	PR 3004G	PR 3005G	PR 3006G	PR 3007G	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	800	1000	V
RMS Reverse Voltage	V _{R(RMS)}	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1) @ T _A = 55°C	I _O	3.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I _{FSM}	125							A
Forward Voltage @ I _F = 3.0A	V _{FM}	1.3							V
Peak Reverse Current at Rated DC Blocking Voltage (Note 5) @ T _A = 25°C @ T _A = 125°C	I _{RM}	5.0 100							μA
Reverse Recovery Time (Note 3)	t _{rr}	150			250		500		ns
Typical Total Capacitance (Note 2)	C _T	50							pF
Typical Thermal Resistance Junction to Ambient	R _{θJA}	32							°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. RoHS revision 13.2.2003. Glass and high temperature solder exemptions applied, see EU Directive Annex Notes 5 and 7.
 5. Short duration pulse test used to minimize self-heating effect.

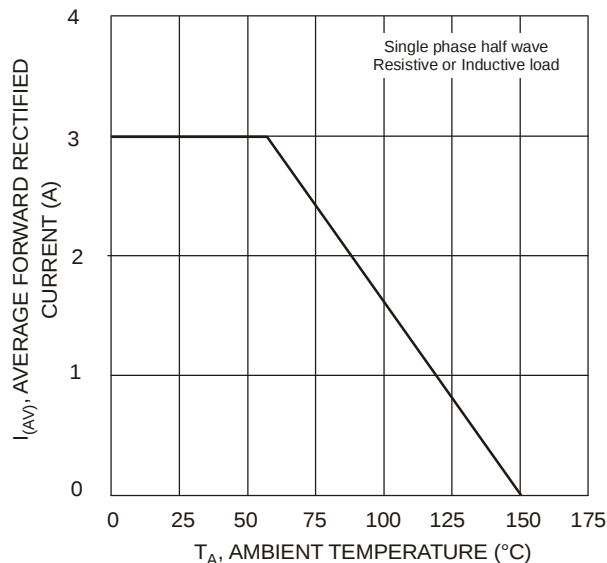


Fig. 1 Forward Derating Curve

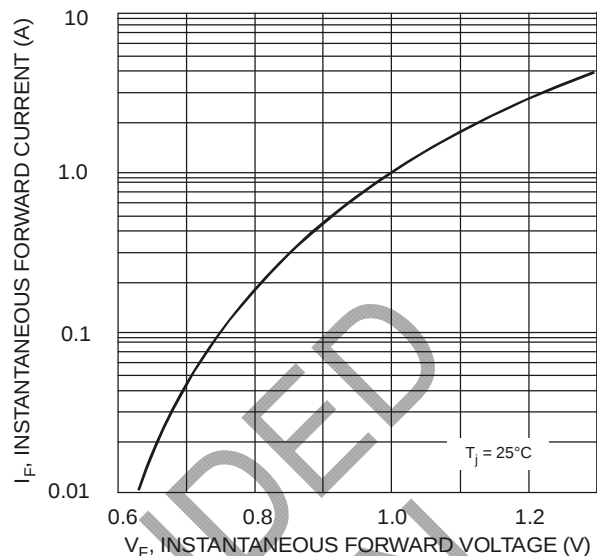


Fig. 2 Typical Forward Characteristics

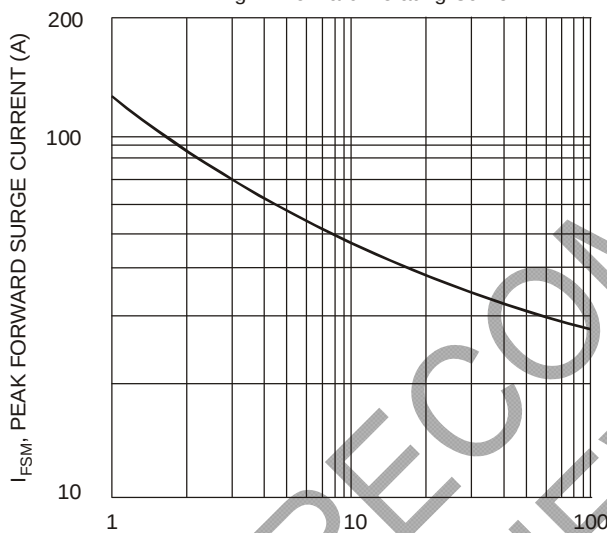


Fig. 3 Peak Forward Surge Current

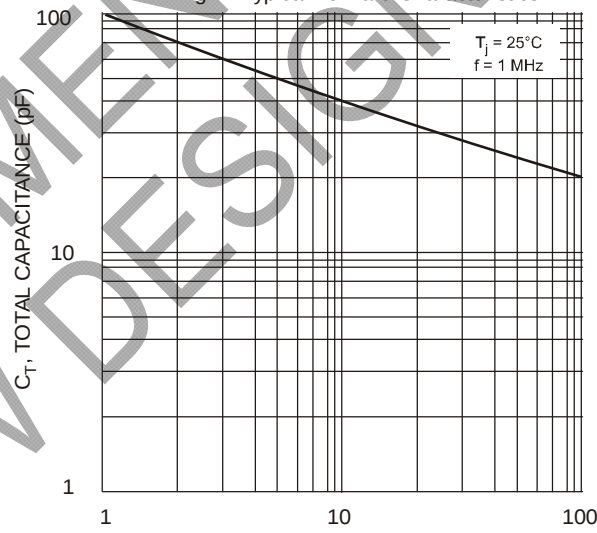
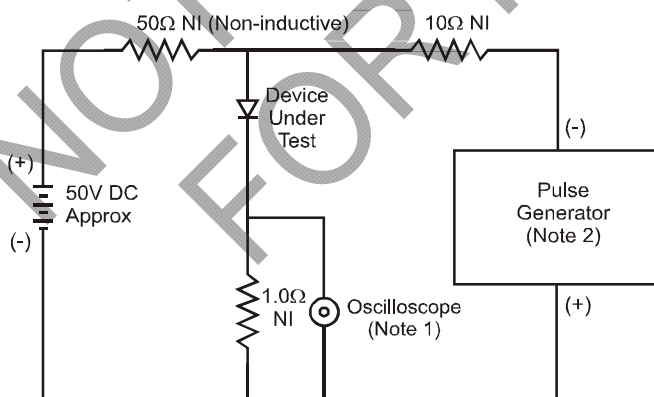
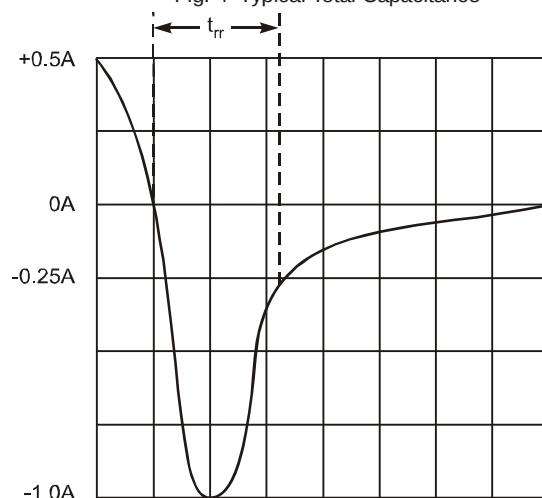


Fig. 4 Typical Total Capacitance



Notes:

1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 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 6)

Device	Packaging	Shipping
PR3001G-B	DO-201AD	500/Bulk
PR3001G-T	DO-201AD	1.2K/Tape & Reel, 13-inch
PR3002G-B	DO-201AD	500/Bulk
PR3002G-T	DO-201AD	1.2K/Tape & Reel, 13-inch
PR3003G-B	DO-201AD	500/Bulk
PR3003G-T	DO-201AD	1.2K/Tape & Reel, 13-inch
PR3004G-B	DO-201AD	500/Bulk
PR3004G-T	DO-201AD	1.2K/Tape & Reel, 13-inch
PR3005G-B	DO-201AD	500/Bulk
PR3005G-T	DO-201AD	1.2K/Tape & Reel, 13-inch
PR3006G-B	DO-201AD	500/Bulk
PR3006G-T	DO-201AD	1.2K/Tape & Reel, 13-inch
PR3007G-B	DO-201AD	500/Bulk
PR3007G-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>.

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