



# P300A thru P300M

General Purpose Plastic Rectifiers  
Reverse Voltage 50 to 1000 Volts Forward Current 3.0 Amperes

## Features

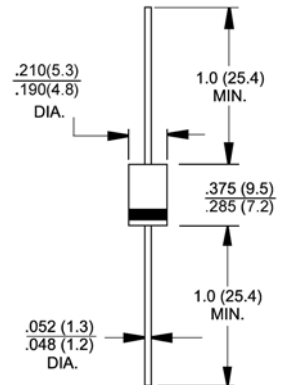
- ◆ Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- ◆ High surge current capability
- ◆ Typical  $I_r$  less than 0.1uA
- ◆ Construction utilizes void-free molded plastic technique
- ◆ 3.0 Amperes operation at  $T_A=90^\circ\text{C}$  with no thermal runaway
- ◆ High temperature soldering guaranteed:  
250°C/10 seconds, 0.375" (9.5mm) lead length,  
5 lbs. (2.3kg) tension
- ◆  $T_J$  is 150°C (Max.) and  $T_{STG}$  is 175°C (Max.) with PI glue



DO-201AD

## Mechanical Data

- ◆ Case: JEDEC DO-201AD, molded plastic body
- ◆ Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
- ◆ Polarity: Color band denotes cathode end
- ◆ Mounting Position: Any
- ◆ Weight: 0.04 ounce, 1.1 grams



Dimensions in inches and (millimeters)

## Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	P300A	P300B	P300D	P300G	P300J	P300K	P300M	Units
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{F(AV)}$	3.0							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	200.0							Amps
Maximum instantaneous forward voltage at 3.0A	$V_F$	1.2							Volts
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	$I_r$	5.0 25							uA
Typical reverse recovery time at $I_r=0.5\text{A}$ , $I_F=1.0\text{A}$ , $I_r=0.25\text{A}$	$t_{rr}$	1.0							us
Typical junction capacitance at 4.0V, 1MHz	$C_J$	30							pF
Typical thermal resistance (Note 1)	$R_{\theta JA}$ $R_{\theta JL}$	20.0 5.0							°C/W
Operating junction temperature range	$T_J$	-55 to +125							°C
Storage temperature range	$T_{STG}$	-55 to +150							°C

**Notes:** 1. Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5mm) lead length, P.C.B. mounted with 0.8" x 0.8" (20 x 20mm) copper heatsinks

# RATINGS AND CHARACTERISTIC CURVES

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

