



P300A thru P300M

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

Features

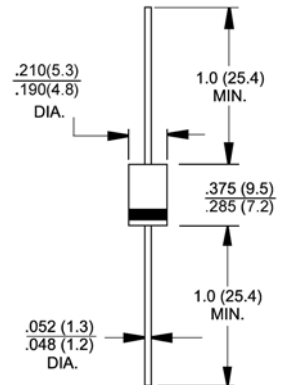
- ◆ Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- ◆ High surge current capability
- ◆ Typical I_r less than 0.1uA
- ◆ Construction utilizes void-free molded plastic technique
- ◆ 3.0 Amperes operation at $T_A=90^\circ\text{C}$ with no thermal runaway
- ◆ High temperature 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



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)

