

Silicon Diode

P300J

600V / 3A

DATASHEET

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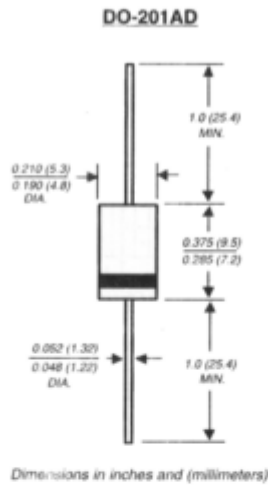
OEM – General Semiconductor

Source: General Semiconductor Databook 1998

P300A THRU P300M

GENERAL PURPOSE PLASTIC RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 3.0 Amperes



FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ High surge current capability
- ◆ Typical I_R less than $0.1\mu A$
- ◆ Construction utilizes void-free molded plastic technique
- ◆ 3.0 Ampere operation at $T_A=90^\circ C$ with no thermal runaway
- ◆ High temperature soldering guaranteed: $250^\circ C/10$ seconds, $0.375"$ (9.5mm) lead length, 5 lbs. (2.3kg) tension

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: 0.4 ounce, 1.1 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at $25^\circ C$ ambient temperature unless otherwise specified.

	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 $T_A=55^\circ C$	$I_{(AV)}$	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 $T_A=25^\circ C$ $T_A=100^\circ C$	I_R	5.0 25.0							μA
Typical junction capacitance (NOTE 1)	C_J	30.0							pF
Typical reverse recovery time (NOTE 2)	t_{rr}	2.0							μs
Typical thermal resistance (NOTE 3)	$R_{\theta JA}$ $R_{\theta JL}$	20.0 5.0							$^\circ C/W$
Operating junction and storage temperature range	T_J, T_{STG}	-50 to +150							$^\circ C$

NOTES:

- (1) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
- (2) Reverse recovery test conditions: $I_R=0.5A$, $I_F=1.0A$, $I_R=0.25A$
- (3) 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 P300A THRU P300M

