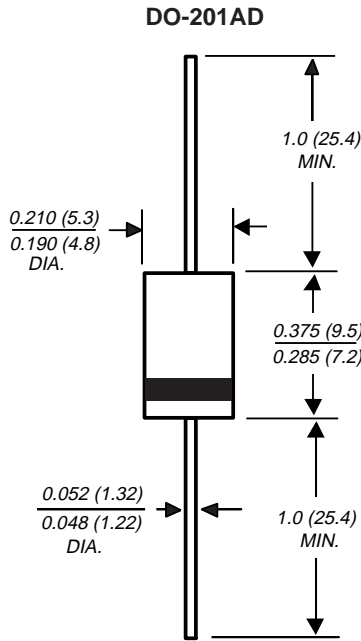


General Purpose Plastic Rectifier

Reverse Voltage 50 to 1000V
Forward Current 3.0A



Dimensions in inches and (millimeters)

Features

- Plastic package has Underwriters Laboratories 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: 0.04 oz., 1.1 g

Maximum Ratings & Thermal Characteristics Ratings at $25^\circ C$ 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	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward rectified current $0.375"$ (9.5mm) lead length at $T_A=55^\circ C$	$I_{F(AV)}$	3.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	200							A
Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$ $R_{\theta JL}$	20 5.0							$^\circ C/W$
Operating junction and storage temperature range	T_J, T_{STG}	-50 to +150							$^\circ C$

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

Maximum instantaneous forward voltage at 3.0A	V_F	1.2	V
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ C$ $T_A=100^\circ C$	I_R	5.0 25	μA
Typical reverse recovery time at $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$	t_{rr}	2.0	μs
Typical junction capacitance at 4.0V, 1MHz	C_J	30	pF

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 $0.8" \times 0.8"$ (20 x 20mm) copper heatsinks

P300A thru P300M

Vishay Semiconductors
formerly General Semiconductor



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

Fig. 1 — Forward Current Derating Curve

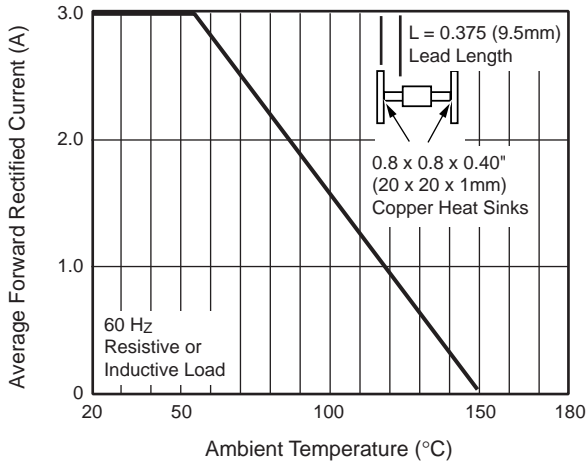


Fig. 2 — Maximum Peak Forward Surge Current

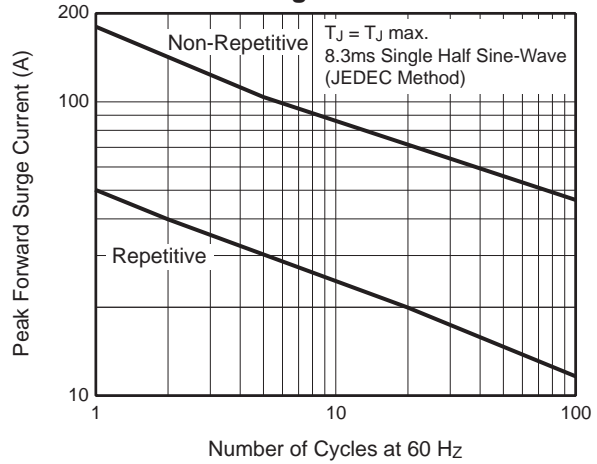


Fig. 3 — Typical Instantaneous Forward Characteristics

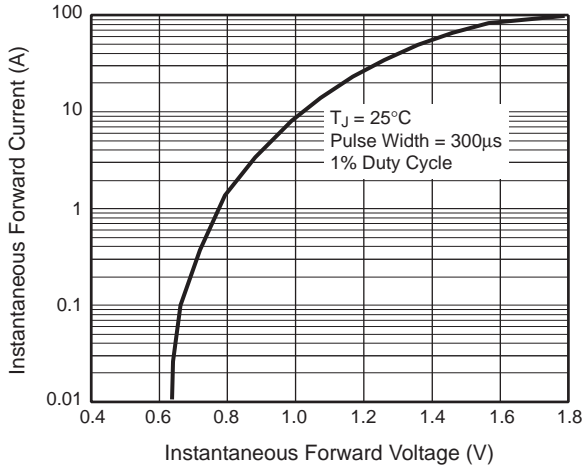


Fig. 4 — Typical Reverse Characteristics

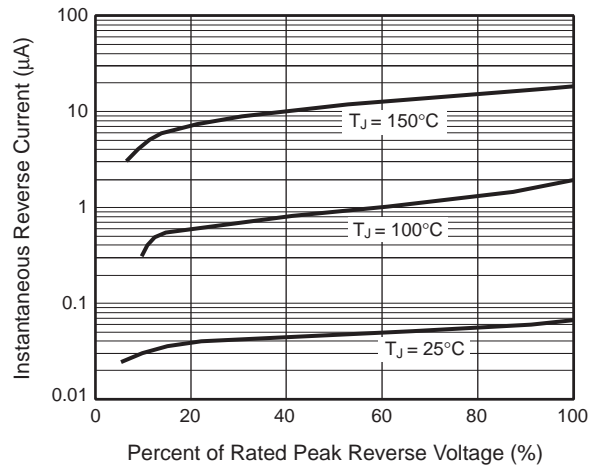


Fig. 5 — Typical Junction Capacitance Per Leg

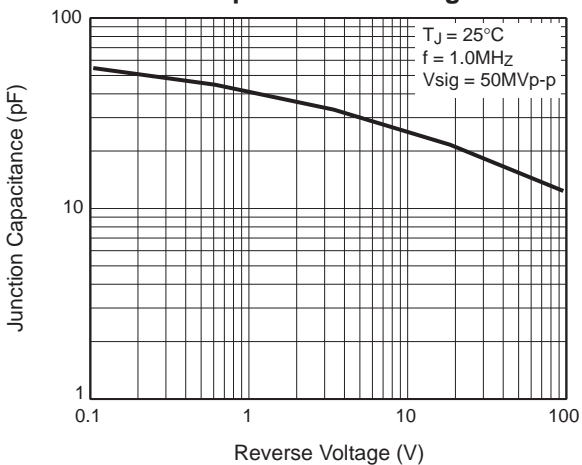


Fig. 6 — Typical Transient Thermal Impedance

