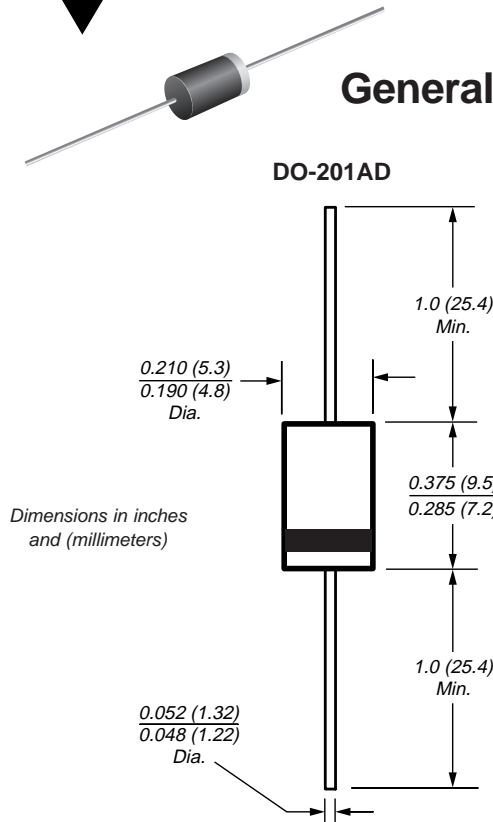




General Purpose Plastic Rectifiers

Reverse Voltage
50 to 1000V
Forward Current 3.0A



Features

- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- High surge current capability
- Construction utilizes void-free molded plastic technique
- 3.0 Ampere operation at $T_L=105^\circ\text{C}$ with no thermal runaway
- Typical I_r less than $0.1\mu\text{A}$
- High temperature soldering guaranteed: $250^\circ\text{C}/10$ 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°C ambient temperature unless otherwise specified.

Parameter	Symb.	1N 5400	1N 5401	1N 5402	1N 5403	1N 5404	1N 5405	1N 5406	1N 5407	1N 5408	Unit
* Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	300	400	500	600	800	1000	V
* Maximum RMS voltage	V_{RMS}	35	70	140	210	280	350	420	560	700	V
* Maximum DC blocking voltage to $T_A = 150^\circ\text{C}$	V_{DC}	50	100	200	300	400	500	600	800	1000	V
* Maximum average forward rectified current $0.5"$ (12.5mm) lead length at $T_L = 105^\circ\text{C}$	$I_{F(AV)}$	3.0									A
* Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at $T_L=105^\circ\text{C}$	I_{FSM}	200									A
* Maximum full load reverse current, full cycle average $0.5"$ (12.5mm) lead length at $T_L = 105^\circ\text{C}$	$I_{R(AV)}$	500									μA
* Typical thermal resistance ⁽¹⁾	$R_{\theta JA}$	20									$^\circ\text{C}/\text{W}$
Maximum DC blocking voltage temperature	T_A	+150									$^\circ\text{C}$
* Operating junction and storage temperature range	T_J, T_{STG}	-50 to +170									$^\circ\text{C}$

Electrical Characteristics Ratings at 25°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	I_R	$T_A = 25^\circ\text{C}$ $T_A = 150^\circ\text{C}$									μA
Typical junction capacitance at 4.0V, 1MHz	C_J	30									pF

Note: (1) Thermal resistance from junction to ambient at $0.375"$ (9.5mm) lead length, P.C.B. mounted with $0.8 \times 0.8"$ (20 x 20mm) copper heatsinks
 *JEDEC registered values

1N5400 thru 1N5408

Vishay Semiconductors
formerly General Semiconductor



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

Fig. 1 — Forward Current Derating Curve

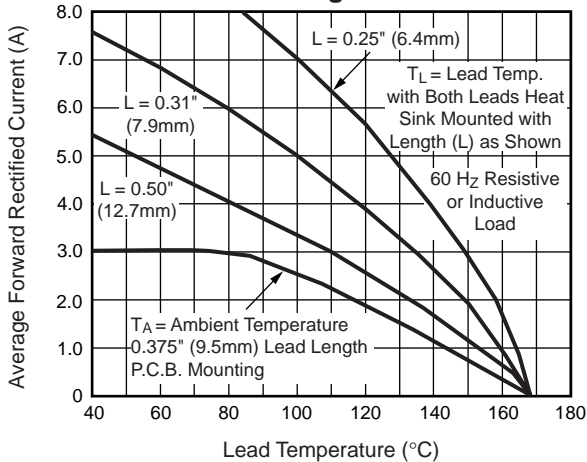


Fig. 2 — Maximum Non-Repetitive Peak Forward Surge Current

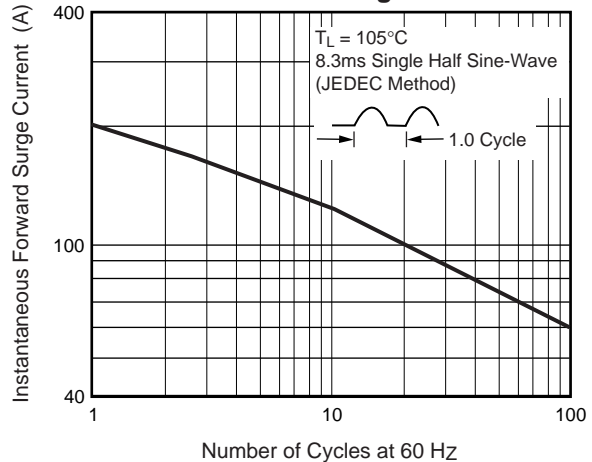


Fig. 3 — Typical Instantaneous Forward Characteristics

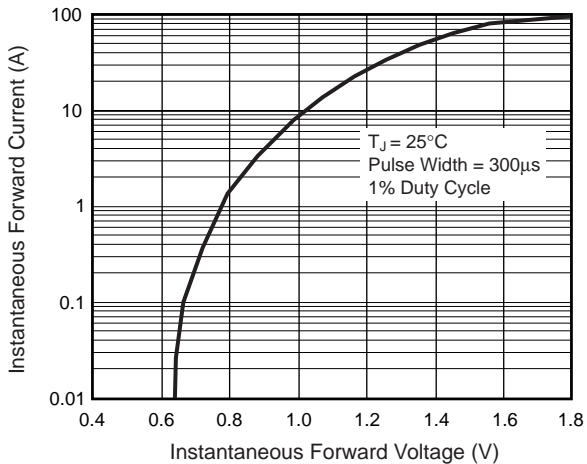


Fig. 4 — Typical Reverse Characteristics

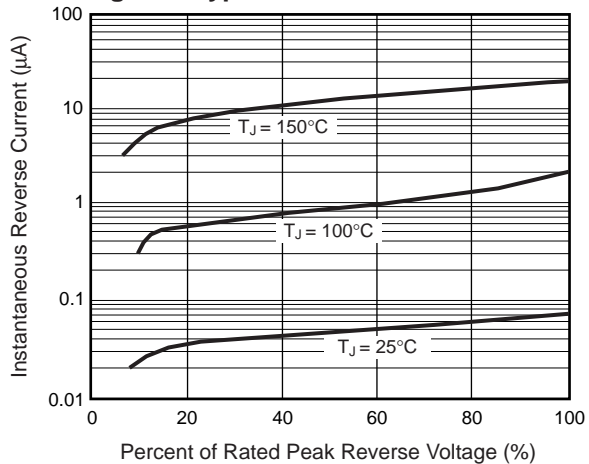


Fig. 5 — Typical Junction Capacitance

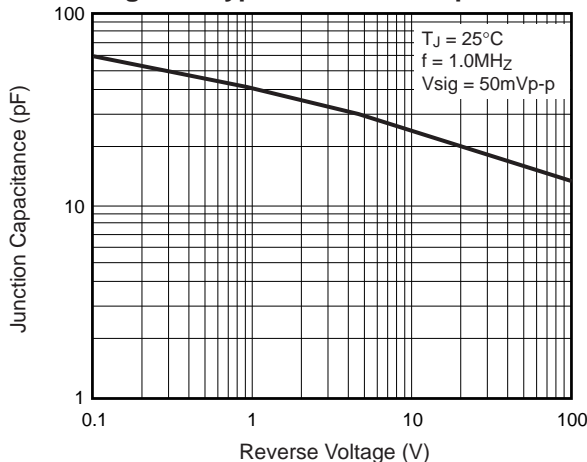


Fig. 6 — Typical Transient Thermal Impedance

