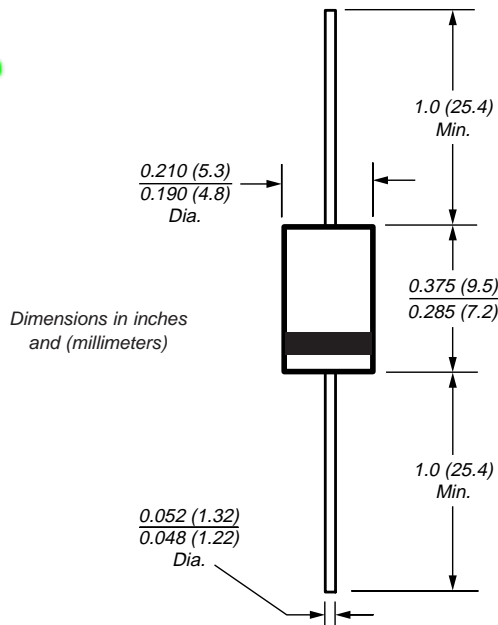


**General Purpose Plastic Rectifiers**
**Reverse Voltage**  
50 to 1000V  
**Forward Current** 3.0A

DO-201AD

**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  $25^\circ\text{C}$  ambient temperature unless otherwise specified.

Parameter	Symb.	1N5400	1N5401	1N5402	1N5403	1N5404	1N5405	1N5406	1N5407	1N5408	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									$\mu\text{A}$
* Typical thermal resistance <sup>(1)</sup>	$R_{\theta JA}$	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  $25^\circ\text{C}$  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	$I_R$	$T_A = 25^\circ\text{C}$ $T_A = 150^\circ\text{C}$									$\mu\text{A}$
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 x 0.8" (20 x 20mm) copper heatsinks  
 \*JEDEC registered values

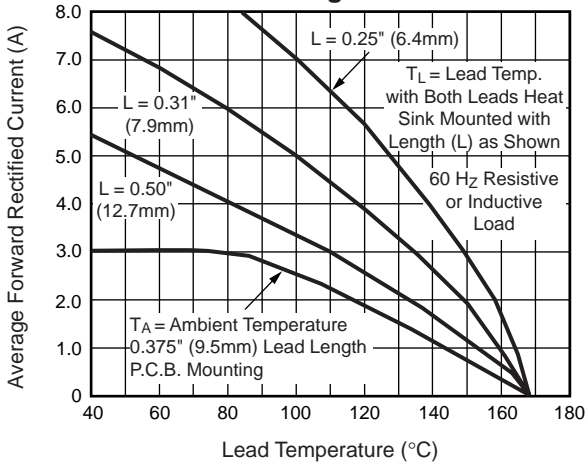
# 1N5400 thru 1N5408

Vishay Semiconductors  
formerly General Semiconductor

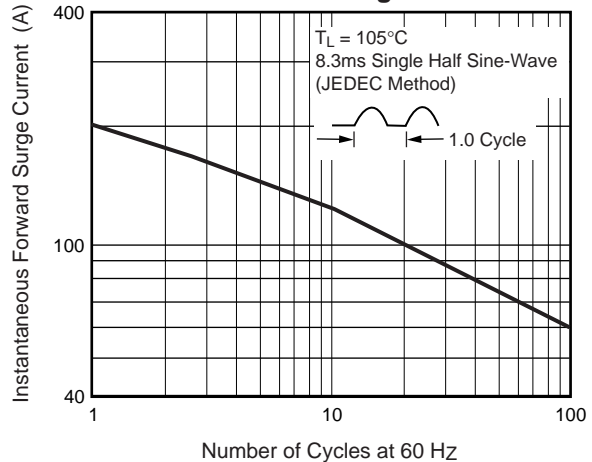


## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

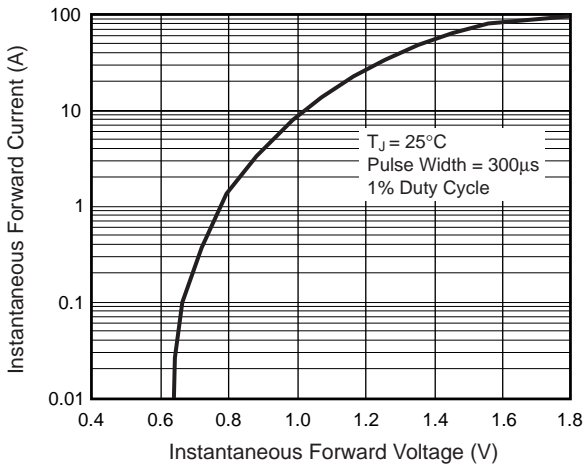
**Fig. 1 — Forward Current Derating Curve**



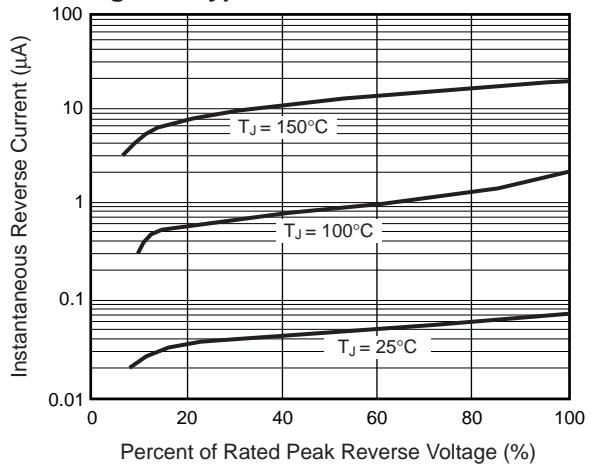
**Fig. 2 — Maximum Non-Repetitive Peak Forward Surge Current**



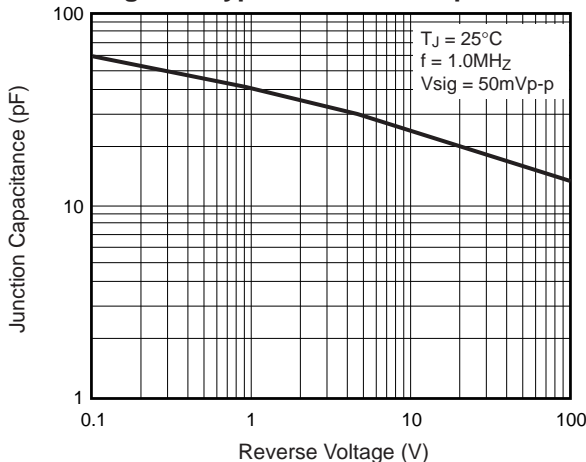
**Fig. 3 — Typical Instantaneous Forward Characteristics**



**Fig. 4 — Typical Reverse Characteristics**



**Fig. 5 — Typical Junction Capacitance**



**Fig. 6 — Typical Transient Thermal Impedance**

