

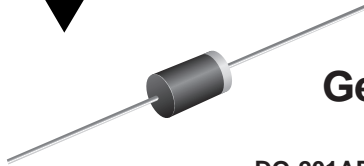
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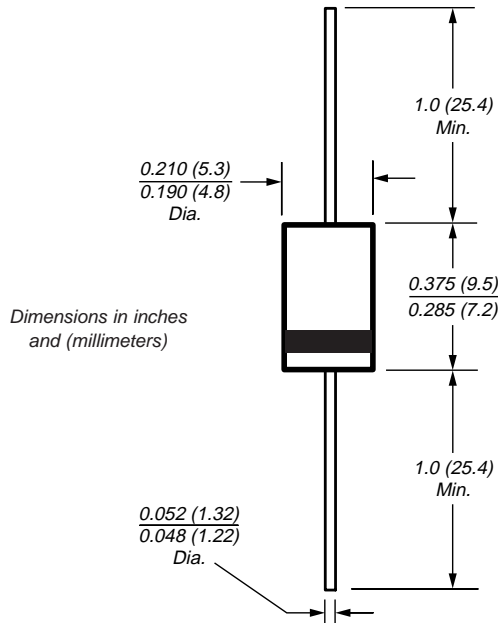
Jameco Part Number 77083VIS



## 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.           | 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         |         |         |         |         |         |         |         |         | $\mu\text{A}$             |
| * 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<br>at rated DC blocking voltage | $I_R$ | $T_A = 25^\circ\text{C}$<br>$T_A = 150^\circ\text{C}$ |  |  |  |  |  |  |  |  | $\mu\text{A}$ |
| 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  $0.8 \times 0.8"$  (20 x 20mm) copper heatsinks  
\*JEDEC registered values

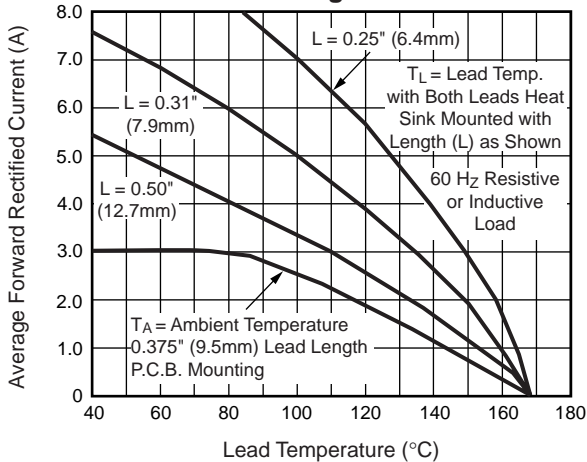
# 1N5400 thru 1N5408

Vishay Semiconductors  
formerly General Semiconductor

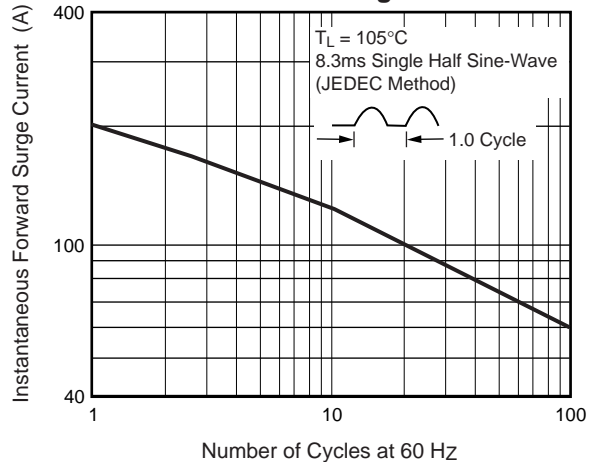


## Ratings and Characteristic Curves ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

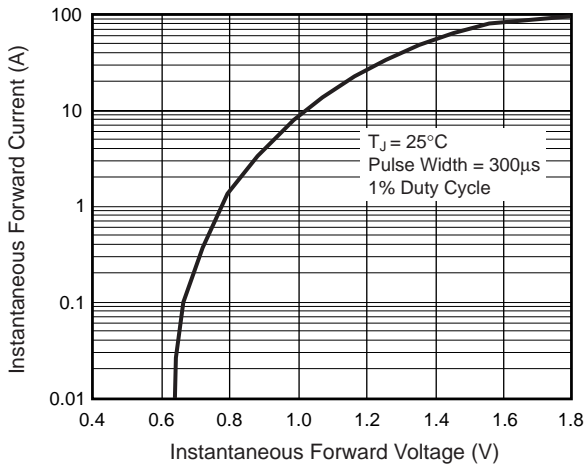
**Fig. 1 — Forward Current Derating Curve**



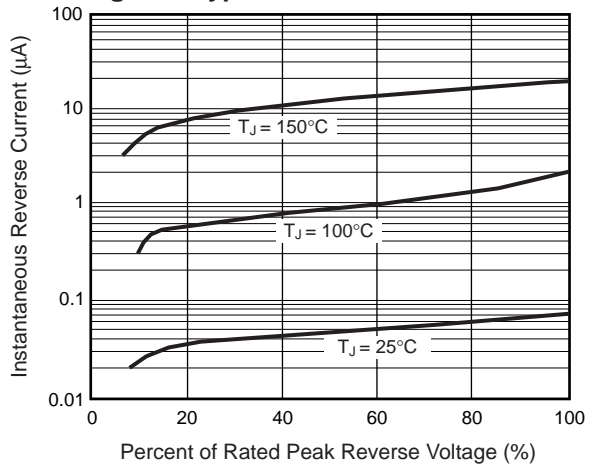
**Fig. 2 — Maximum Non-Repetitive Peak Forward Surge Current**



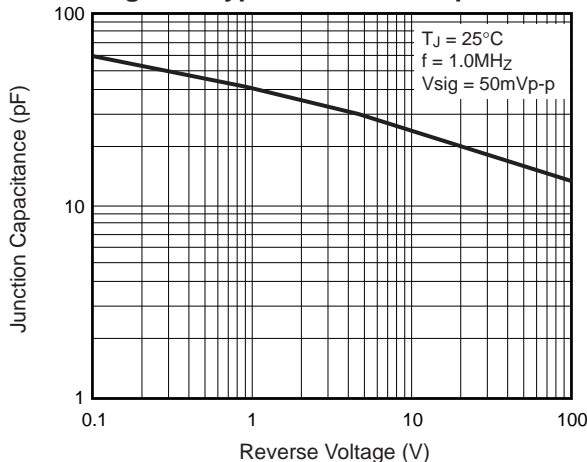
**Fig. 3 — Typical Instantaneous Forward Characteristics**



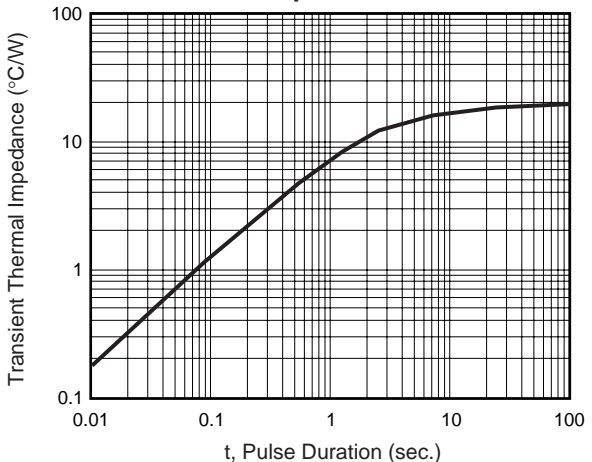
**Fig. 4 — Typical Reverse Characteristics**



**Fig. 5 — Typical Junction Capacitance**



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



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