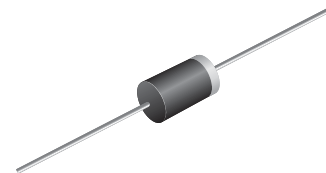




## General Purpose Plastic Rectifier

### Major Ratings and Characteristics

$I_{F(AV)}$	3.0 A
$V_{RRM}$	50 V to 1000 V
$I_{FSM}$	200 A
$I_R$	5.0 $\mu$ A
$V_F$	1.2 V
$T_j$ max.	150 °C



DO-201AD

### Features

- Low forward voltage drop
- Low leakage current
- High forward surge capability
- Solder Dip 260 °C, 40 seconds



### Mechanical Data

**Case:** DO-201AD, molded epoxy body

Epoxy meets UL-94V-0 Flammability rating

**Terminals:** Matte tin plated (E3 Suffix) leads, solderable per J-STD-002B and JESD22-B102D

**Polarity:** Color band denotes cathode end

### Typical Applications

For use in general purpose rectification of power supplies, inverters, converters and freewheeling diodes application.

(Note: These devices are not Q101 qualified. Therefore, the devices specified in this datasheet have not been designed for use in automotive or Hi-Rel applications.)

### Maximum Ratings

( $T_A = 25$  °C unless otherwise noted)

Parameter	Symbol	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	$V_{DC}$	50	100	200	300	400	500	600	800	1000	V
Maximum average forward rectified current 0.5" (12.5 mm) lead length at $T_L = 105$ °C	$I_{F(AV)}$	3.0									A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	200									A
Maximum full load reverse current, full cycle average 0.5" (12.5 mm) lead length at $T_L = 105$ °C	$I_{R(AV)}$	500									$\mu$ A
Operating junction and storage temperature range	$T_J, T_{STG}$	- 50 to + 150									°C

# 1N5400 thru 1N5408



Vishay General Semiconductor

## Electrical Characteristics

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

Parameter	Test condition	Symbol	1N5400	1N5401	1N5402	1N5403	1N5404	1N5405	1N5406	1N5407	1N5408	Unit	
Maximum instantaneous forward voltage	at 3.0 A	$V_F$	1.2									V	
Maximum DC reverse current at rated DC blocking voltage	$T_A = 25\text{ }^\circ\text{C}$ $T_A = 150\text{ }^\circ\text{C}$	$I_R$							5.0	500			$\mu\text{A}$
Typical junction capacitance	at 4.0 V, 1 MHz	$C_J$							30			pF	

## Thermal Characteristics

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

Parameter	Symbol	1N5400	1N5401	1N5402	1N5403	1N5404	1N5405	1N5406	1N5407	1N5408	Unit
Typical thermal resistance <sup>(1)</sup>	$R_{\theta JA}$	20									$^\circ\text{C/W}$

Notes:

(1) Thermal resistance from junction to ambient at 0.375" (9.5 mm) lead length, P.C.B. mounted with 0.8 x 0.8" (20 x 20 mm) copper heatsinks

## Ratings and Characteristics Curves

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

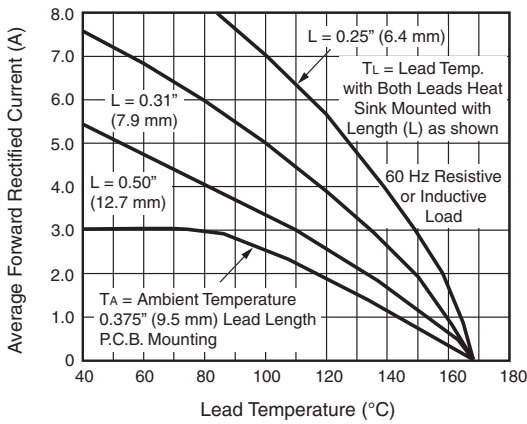


Figure 1. Forward Current Derating Curve

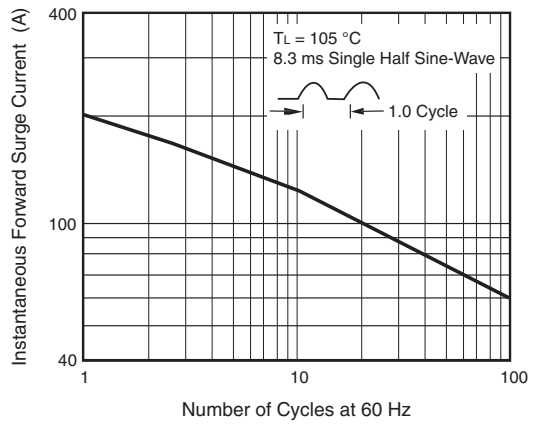


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

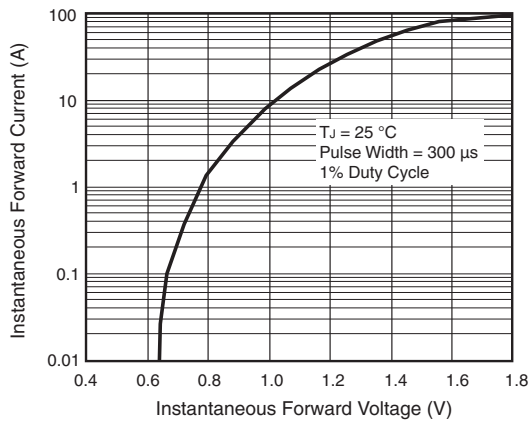


Figure 3. Typical Instantaneous Forward Characteristics

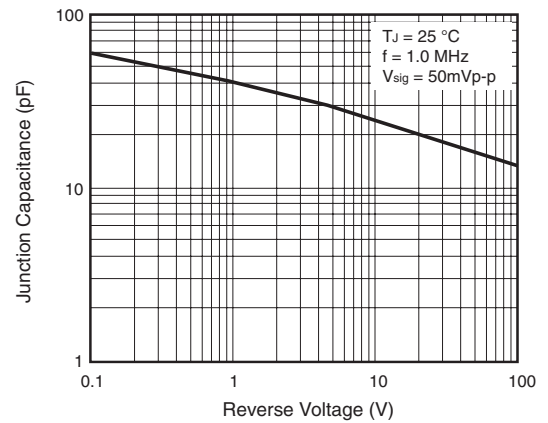


Figure 5. Typical Junction Capacitance

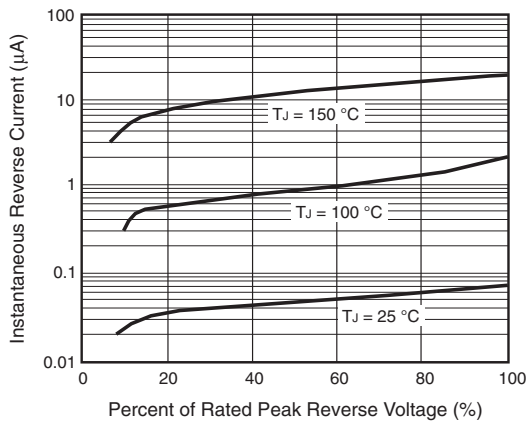


Figure 4. Typical Reverse Characteristics

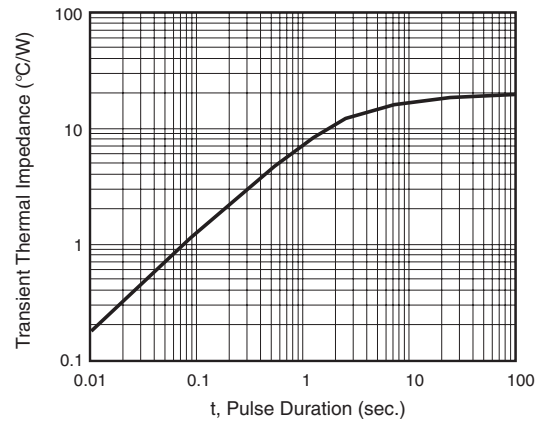
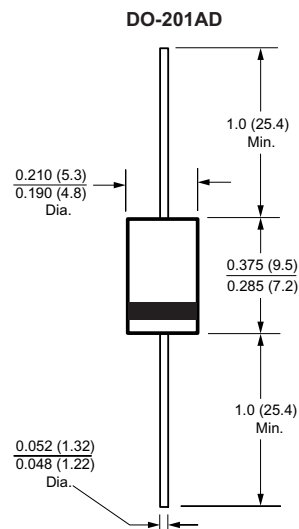


Figure 6. Typical Transient Thermal Impedance

### Package outline dimensions in inches (millimeters)





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