



# 1N5400 thru 1N5408

General Purpose Plastic Rectifiers  
Reverse Voltage 50 to 1000 Volts Forward Current 3.0 Amperes

## Features

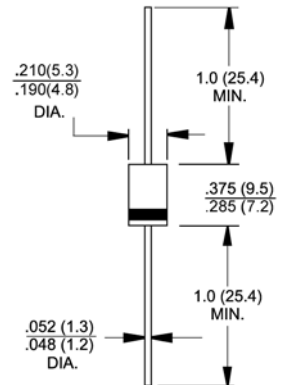
- ◆ Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- ◆ High surge current capability
- ◆ Construction utilizes void-free molded plastic technique
- ◆ 3.0 Amperes operation at  $T_L=90^\circ\text{C}$  with no thermal runaway
- ◆ Typical  $I_{\text{r}}$  less than 0.1 $\mu\text{A}$
- ◆ High temperature soldering guaranteed:  
250°C/10 seconds, 0.375" (9.5mm) lead length,  
5 lbs. (2.3kg) tension
- ◆  $T_J$  is 150°C (Max.) and  $T_{\text{STG}}$  is 175°C (Max.) with PI glue



DO-201AD

## 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: 0.042 ounce, 1.19 grams



## Maximum Ratings and Electrical Characteristics

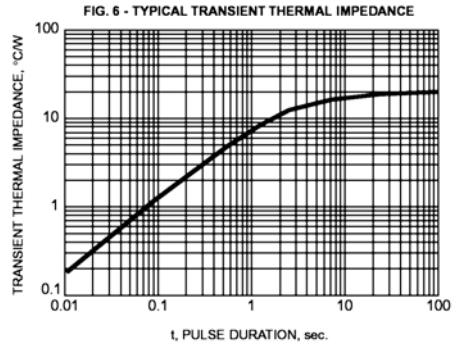
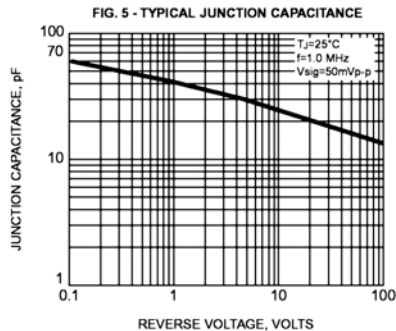
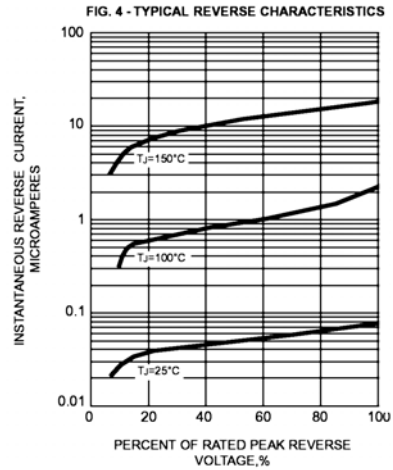
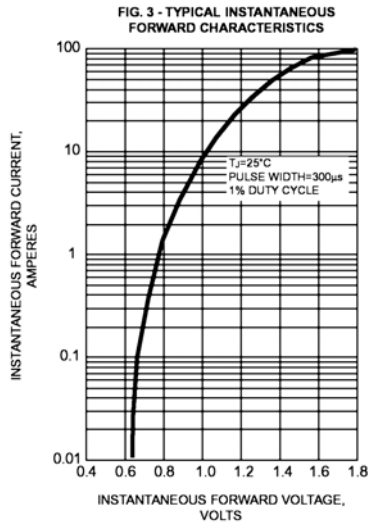
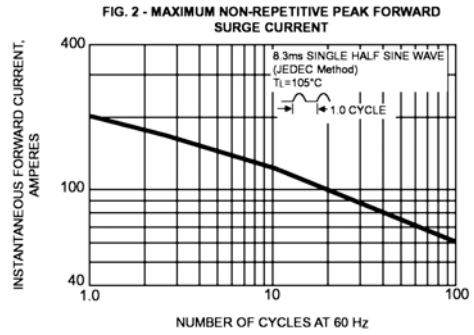
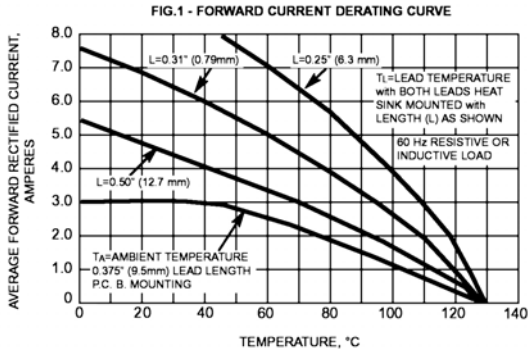
Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	1N 5400	1N 5401	1N 5402	1N 5403	1N 5404	1N 5405	1N 5406	1N 5407	1N 5408	Units
Maximum repetitive peak reverse voltage	$V_{\text{RRM}}$	50	100	200	300	400	500	600	800	1000	Volts
Maximum RMS voltage	$V_{\text{RMS}}$	35	70	140	210	280	350	420	560	700	Volts
Maximum DC blocking voltage to $T_A=150^\circ\text{C}$	$V_{\text{DC}}$	50	100	200	300	400	500	600	800	1000	Volts
Maximum average forward rectified current 0.5" (12.5mm) lead length at $T_L=90^\circ\text{C}$	$I_{\text{F(AV)}}$	3.0									Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) at $T_L=90^\circ\text{C}$	$I_{\text{FSM}}$	200.0									Amps
Maximum full load reverse current full cycle average, 0.5" (12.5mm) lead length at $T_L=90^\circ\text{C}$	$I_{\text{R(AV)}}$	500									$\mu\text{A}$
Maximum instantaneous forward voltage at 3.0A	$V_{\text{F}}$	1.2									Volts
Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$	$I_{\text{r}}$	10.0 500									$\mu\text{A}$
Typical junction capacitance at 4.0V, 1MHz	$C_{\text{J}}$	30									pF
Typical thermal resistance (Note 1)	$R_{\text{thJA}}$	20.0									$^\circ\text{C/W}$
Maximum DC blocking voltage temperature	$T_{\text{A}}$	+125									$^\circ\text{C}$
Operating junction temperature range	$T_{\text{J}}$	-55 to +125									$^\circ\text{C}$
Storage temperature range	$T_{\text{STG}}$	-55 to +150									$^\circ\text{C}$

Notes: 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

# RATINGS AND CHARACTERISTIC CURVES

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



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