



1N5400 thru 1N5408

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

Features

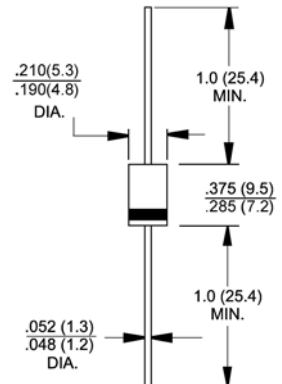
- ◆ Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- ◆ High surge current capability
- ◆ Construction utilizes void-free molded plastic technique
- ◆ 3.0 Amperes operation at $T_L=90^\circ\text{C}$ with no thermal runaway
- ◆ Typical I_r less than 0.1 μA
- ◆ High temperature 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_{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_{RRM}	50	100	200	300	400	500	600	800	1000	Volts
Maximum RMS voltage	V_{RMS}	35	70	140	210	280	350	420	560	700	Volts
Maximum DC blocking voltage to $T_A=150^\circ\text{C}$	V_{DC}	50	100	200	300	400	500	600	800	1000	Volts
Maximum average forward rectified current 0.5" (12.5mm) lead length at $T_L=90^\circ\text{C}$	$I_{F(AV)}$	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_{FSM}	200.0									Amps
Maximum full load reverse current full cycle average, 0.5" (12.5mm) lead length at $T_L=90^\circ\text{C}$	$I_{R(AV)}$	500									μA
Maximum instantaneous forward voltage at 3.0A	V_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_r	10.0 500									μA
Typical junction capacitance at 4.0V, 1MHz	C_J	30									pF
Typical thermal resistance (Note 1)	$R_{\theta JA}$	20.0									$^\circ\text{C/W}$
Maximum DC blocking voltage temperature	T_A	+125									$^\circ\text{C}$
Operating junction temperature range	T_J	-55 to +125									$^\circ\text{C}$
Storage temperature range	T_{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)

