

# 1N5400 thru 1N5408

## General Purpose Plastic Rectifiers

Reverse Voltage 50 to 1000V Forward Current 3.0A

### Feature

- \* Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- \* Construction utilizes void-free molded plastic technique
- \* Low reverse leakage
- \* High forward surge capability
- \* Diffused junction
- \* High temperature soldering guaranteed:  
260°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:** 0.038 oz., 1.03 g

**Handling precaution:** None

### Electrical Characteristic

#### 1. Maximum & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

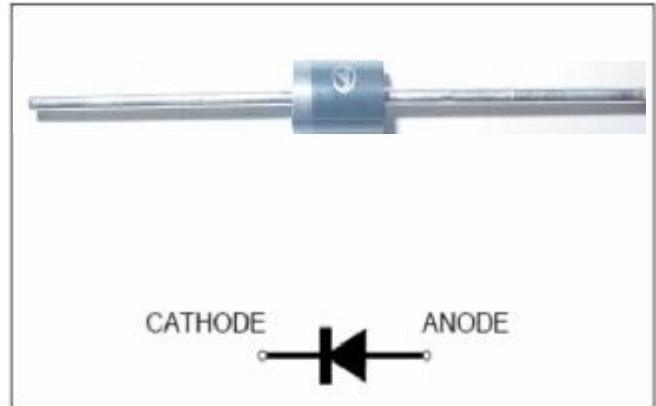
Parameter Symbol	symbol	1N 5400	1N 5401	1N 5402	1N 5403	1N 5404	1N 5405	1N 5406	1N 5407	1N 5408	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	300	400	500	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	210	280	350	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	300	400	500	600	800	1000	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A = 75^\circ\text{C}$	$I_{F(AV)}$	3.0									A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	200									A
Maximum full load reverse current, full cycle average, 0.375" (9.5mm) lead lengths at $T_A = 105^\circ\text{C}$	$I_{R(AV)}$	200									$\mu\text{A}$
Typical thermal resistance (Note 1)	$R\theta_{JA}$	20									$^\circ\text{C/W}$
Maximum DC blocking voltage temperature	$T_A$	150									$^\circ\text{C}$
Operating junction and storage temperature range	$T_J$	-50 to +150									$^\circ\text{C}$

#### Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter Symbol	symbol	1N 5400	1N 5401	1N 5402	1N 5403	1N 5404	1N 5405	1N 5406	1N 5407	1N 5408	Unit
Maximum instantaneous forward voltage at 3.0A	$V_F$	1.10									V
Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 100^\circ\text{C}$	$I_R$	5.0									$\mu\text{A}$
Typical junction capacitance at 4.0V, 1MHz	$C_J$	30									PF

#### NOTES:

1. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted



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## 2. Characteristic Curves (TA = 25°C unless otherwise noted)

Fig. 1 - Forward Current Derating Curve

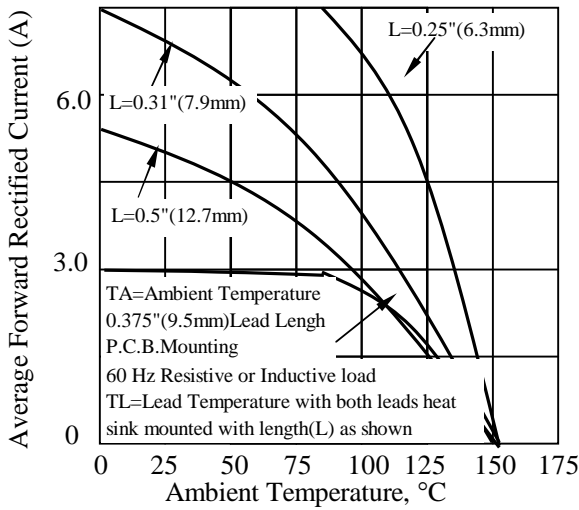


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

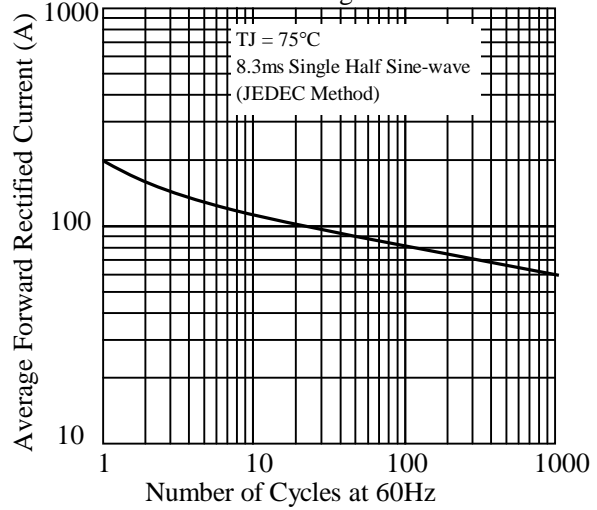


Fig. 3 - Typical Instantaneous Forward Characteristics

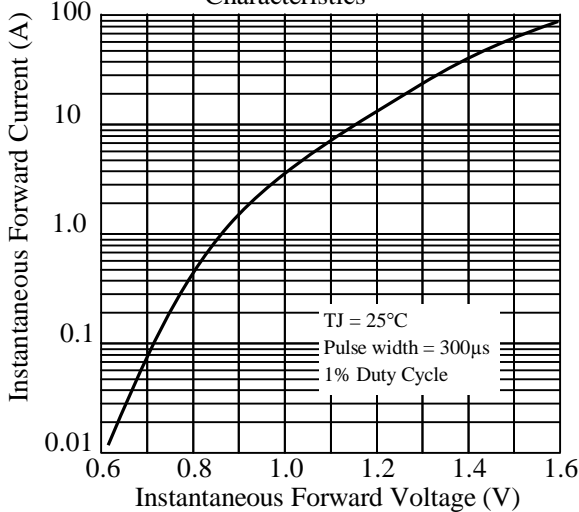


Fig. 4 - Typical Reverse Characteristics

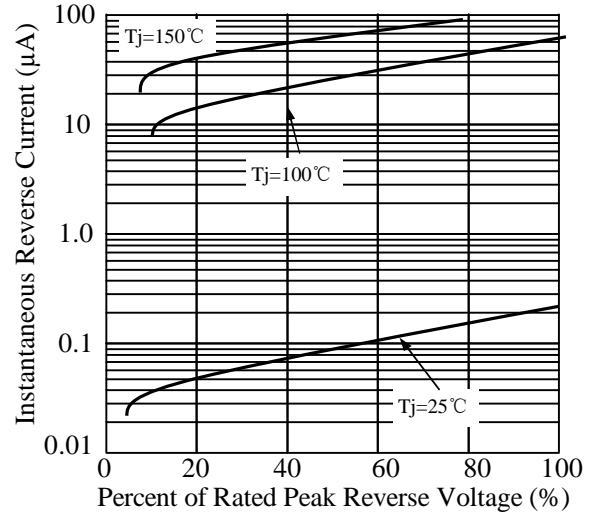


Fig. 5 - typical transient thermal impedance

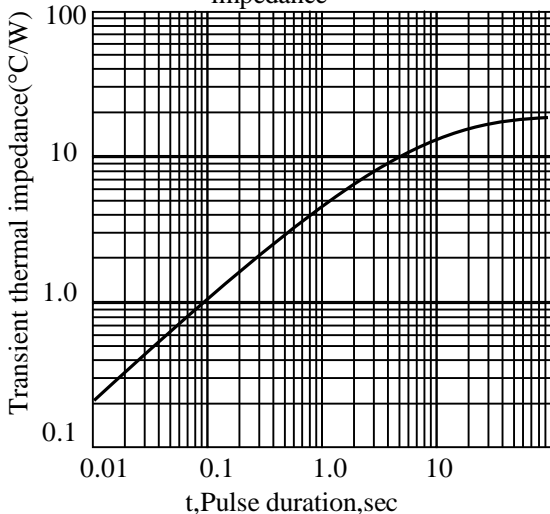
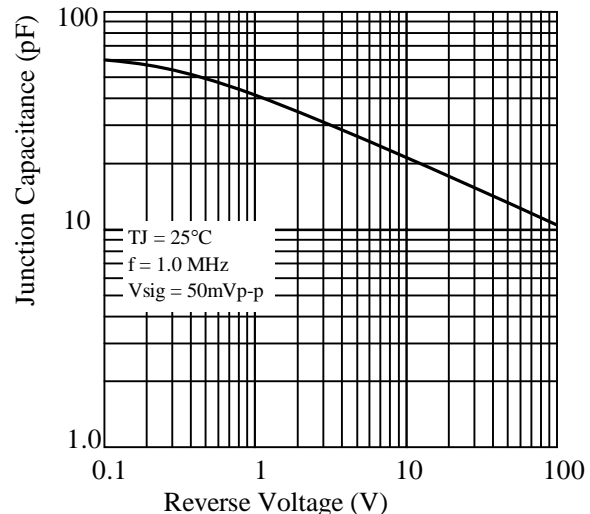
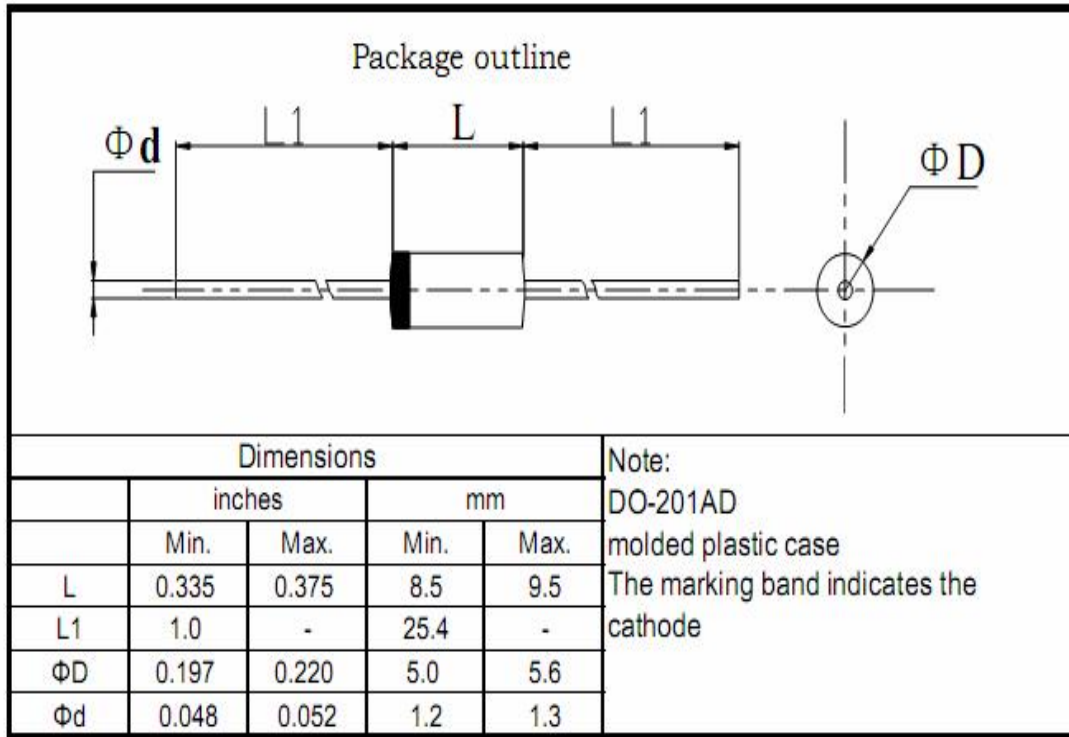


Fig. 6 - Typical Junction Capacitance



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### 3. dimension:



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