

## 1N4001 thru 1N4007

### 1.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

### 2.Mechanical Data

- Case:** JEDEC DO-41, molded plastic body  
**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026  
**Polarity:** Color band denotes cathode end  
**Mounting Position:** Any  
**Weight:** 0.012 oz., 0.34 g  
**Handling precaution:**None

### 3.Electrical Characteristic

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

Parameter Symbol	symbol	1N 4001	1N 4002	1N 4003	1N 4004	1N 4005	1N 4006	1N 4007	Unit
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A = 75^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30							A
Maximum full load reverse current, full cycle average, 0.375"(9.5mm) lead lengths at $T_A = 75^\circ\text{C}$	$I_{R(AV)}$	30							$\mu\text{A}$
Typical thermal resistance (Note 1)	$R_{\theta JA}$	50							$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-50 to +150							$^\circ\text{C}$

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

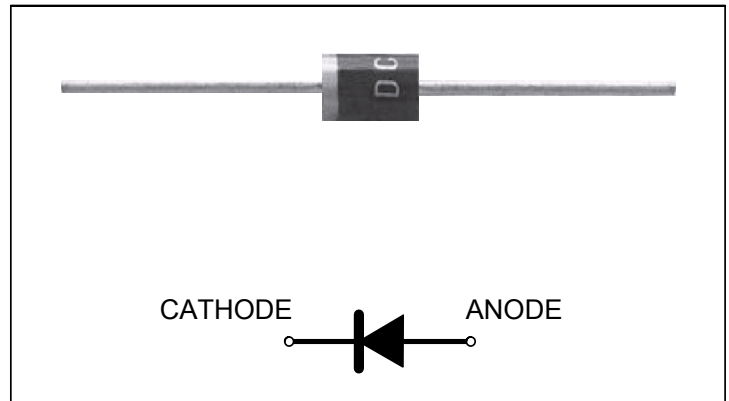
Parameter Symbol	symbol	1N 4001	1N 4002	1N 4003	1N 4004	1N 4005	1N 4006	1N 4007	Unit
Maximum instantaneous forward voltage at 1.0A	$V_F$	1.10							V
Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 100^\circ\text{C}$	$I_R$	5.0							$\mu\text{A}$
Typical junction capacitance at 4.0V, 1MHz	$C_J$	15							PF

#### NOTES:

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

### General Purpose Plastic Rectifiers

Reverse Voltage 50 to 1000V  
Forward Current 1.0A



We declare that the material of product compliance with RoHS requirements.

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

Fig. 1 - Forward Current Derating Curve

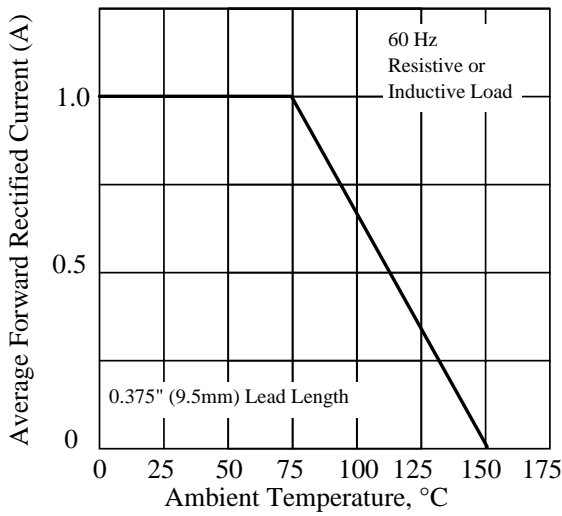


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

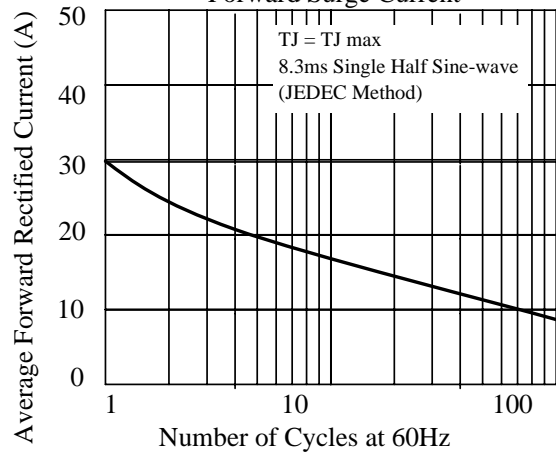


Fig 3. - Typical Instantaneous Forward Characteristics

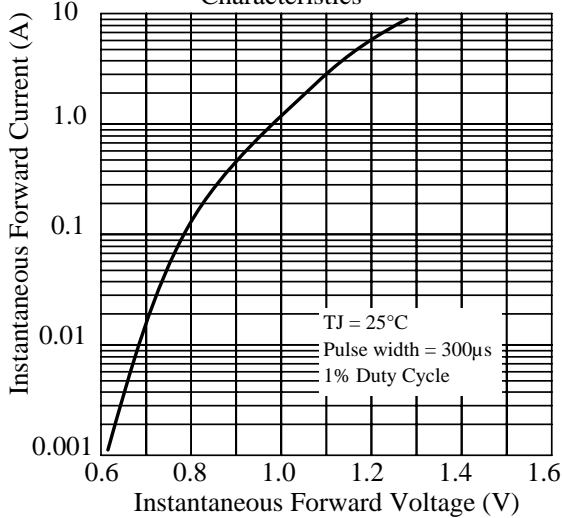


Fig 4. - Typical Reverse Characteristics

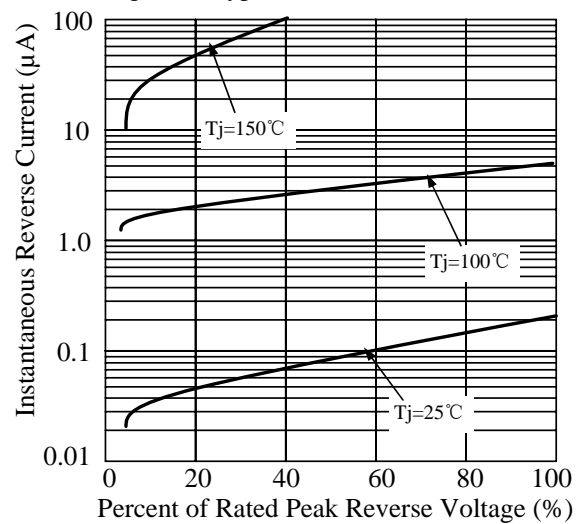


Fig 5. - typical transient thermal impedance

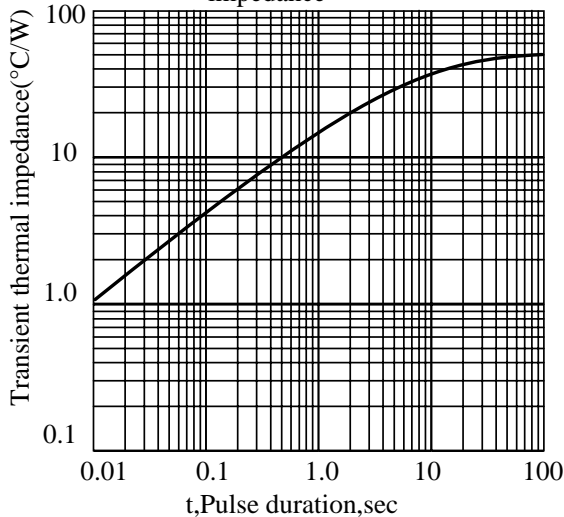
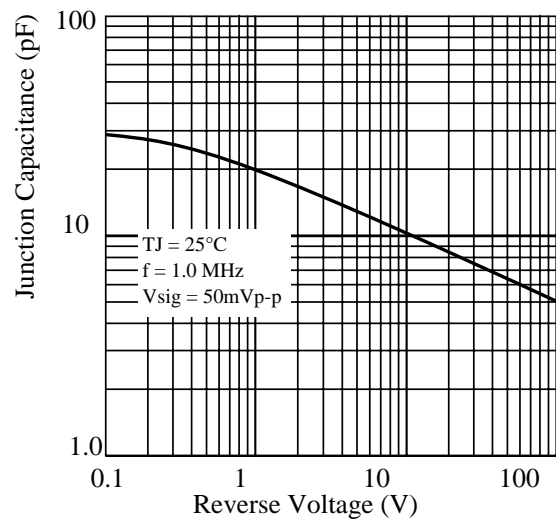


Fig 6. - Typical Junction Capacitance



**5.Package Dimensions in inches and (millimeters)**
