



# 1N4001GP THRU 1N4007GP

## 1.0 AMP. Glass Passivated Junction Plastic Rectifiers



Voltage Range  
50 to 1000 Volts  
Current  
1.0 Ampere

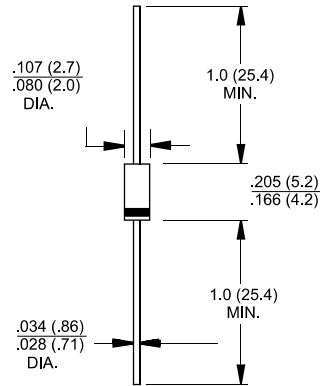
### Features

- ✧ High temperature metallurgically bonded construction
- ✧ Plastic material used carries Underwriters Laboratory Classification 94V-O
- ✧ Glass passivated cavity-free junction
- ✧ Capable of meeting environmental standards of MIL-S-19500
- ✧ 1.0 ampere operation at  $T_A=75^\circ\text{C}$  and  $55^\circ\text{C}$  with no thermal runaway
- ✧ Typical  $I_R$  less than 0.1  $\mu\text{A}$
- ✧ High temperature soldering guaranteed:  $350^\circ\text{C} / 10$  seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

### Mechanical Data

- ✧ Case: JEDEC DO-41 molded plastic over glass body
- ✧ Lead: Plated axial leads, solderable per MIL-STD-750, Method 2026
- ✧ Polarity: Color band denotes cathode end
- ✧ Mounting position: Any
- ✧ Weight: 0.012 ounce, 0.3 gram

### DO-41



**Dimensions in inches and (millimeters)**

## Maximum Ratings and Electrical Characteristics

Rating at  $25^\circ\text{C}$  ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

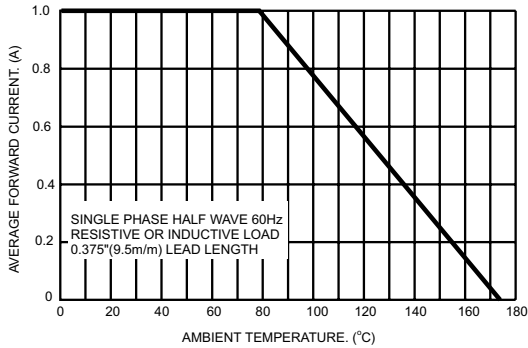
Type Number	1N 4001GP	1N 4002GP	1N 4003GP	1N 4004GP	1N 4005GP	1N 4006GP	1N 4007GP	Units
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375" (9.5mm) Lead Length @ $T_A = 75^\circ\text{C}$	1.0							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	30							A
Maximum Instantaneous Forward Voltage @ 1.0A	1.1							V
Maximum DC Reverse Current @ $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A=125^\circ\text{C}$	5.0 50							uA uA
Maximum Full Load Reverse Current, Full Cycle Average .375" (9.5mm) Lead Length @ $T_A=75^\circ\text{C}$	30							uA
Typical Junction Capacitance ( Note 1 )	8.0							pF
Typical Thermal Resistance $R_{\theta JA}$ ( Note 2 )	55							$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range $T_J, T_{STG}$	-65 to +175							$^\circ\text{C}$

Notes: 1. Measured at 1 MHz and Applied Reverse Voltage of 4.0 Volts D.C.

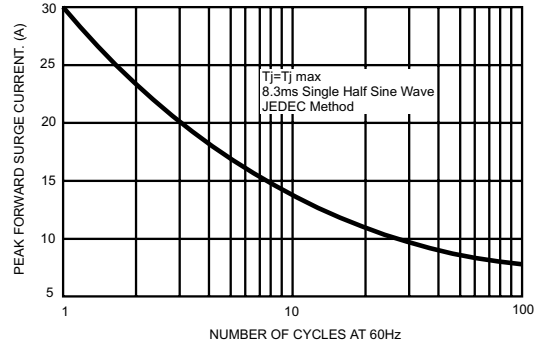
2. Thermal Resistance from Junction to Ambient .375" (9.5mm) Lead Length.

## RATINGS AND CHARACTERISTIC CURVES (1N4001GP THRU 1N4007GP)

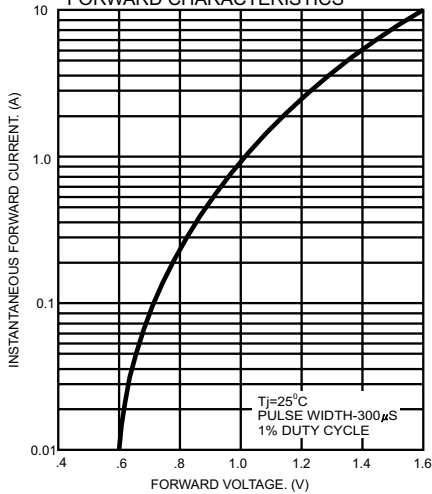
**FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE**



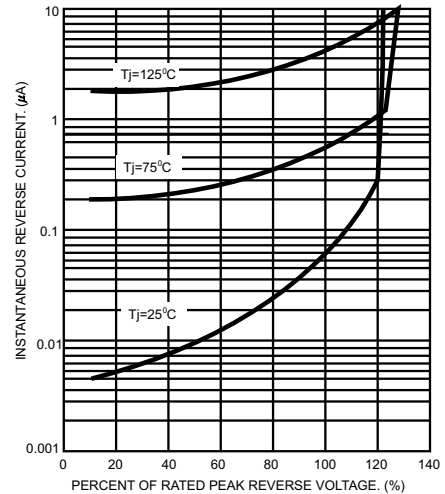
**FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.4- TYPICAL REVERSE CHARACTERISTICS**



**FIG.5- TYPICAL JUNCTION CAPACITANCE**

