



1N4001GP THRU 1N4007GP

1.0 AMP. Glass Passivated Junction Plastic Rectifiers



Voltage Range
50 to 1000 Volts
Current
1.0 Ampere

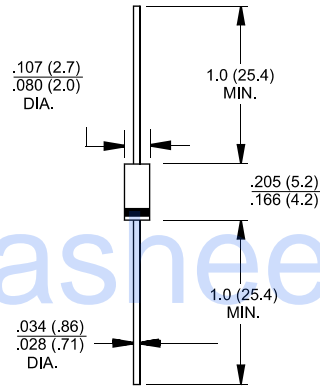
Features

- ✦ High temperature metallurgically bonded construction
- ✦ Plastic material used carries Underwriters Laboratory Classification 94V-0
- ✦ 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°C with no thermal runaway
- ✦ Typical I_R less than 0.1 uA
- ✦ 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°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

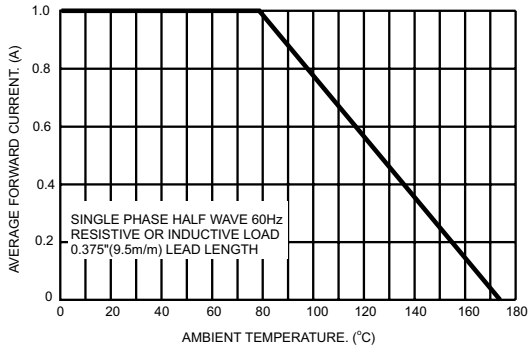


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

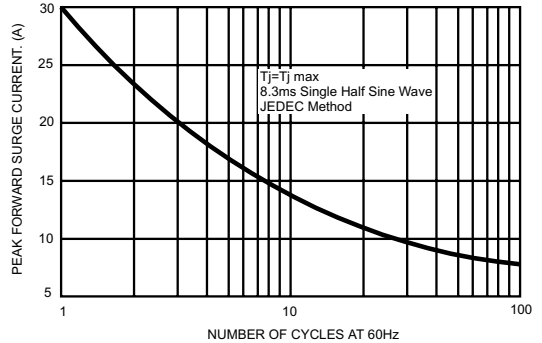


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

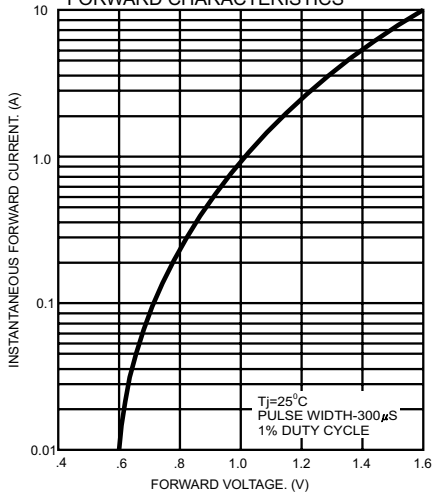


FIG.4- TYPICAL REVERSE CHARACTERISTICS

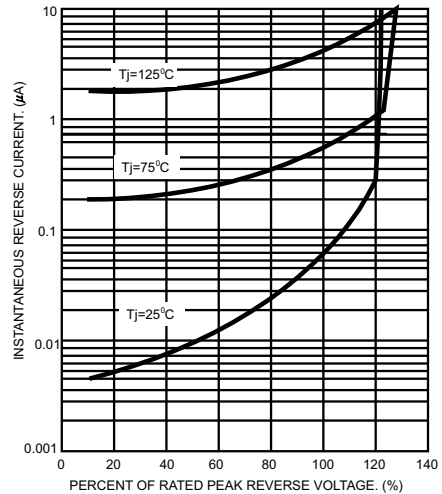


FIG.5- TYPICAL JUNCTION CAPACITANCE

