

# 1N4001G THRU 1N4007G

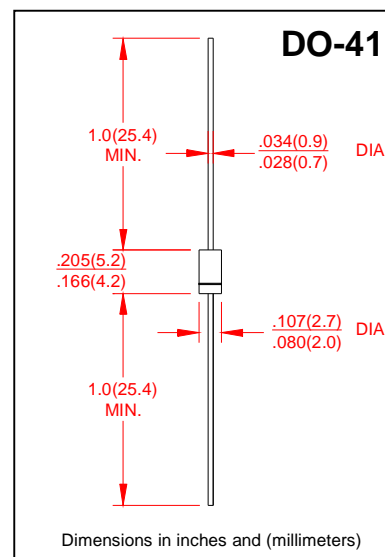
VOLTAGE RANGE 50 to 1000 Volts  
CURRENT 1.0 Ampere

## FEATURES

- Glass passivated chip junction
- Low forward voltage drop
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed  
260°C/10 seconds, 0.375" (9.5mm) lead length at 5 lbs (2.3kg) tension

## MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any
- Weight: 0.012ounce, 0.33 grams



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

|                                                                                                              | SYMBOLS                   | 1N<br>4001G | 1N<br>4002G | 1N<br>4003G | 1N<br>4004G | 1N<br>4005G | 1N<br>4006G | 1N<br>4007G | UNITS                     |               |
|--------------------------------------------------------------------------------------------------------------|---------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------------------|---------------|
| Maximum Repetitive Peak Reverse Voltage                                                                      | $V_{RRM}$                 | 50          | 100         | 200         | 400         | 600         | 800         | 1000        | Volts                     |               |
| Maximum RMS Voltage                                                                                          | $V_{RMS}$                 | 35          | 70          | 140         | 280         | 420         | 560         | 700         | Volts                     |               |
| Maximum DC Blocking Voltage                                                                                  | $V_{DC}$                  | 50          | 100         | 200         | 400         | 600         | 800         | 1000        | Volts                     |               |
| Maximum Average Forward Rectified Current (FIG. 1)<br>0.375" (9.5mm) lead length at $T_A=75^\circ\text{C}$   | $I_{(AV)}$                | 1.0         |             |             |             |             |             |             | Amp                       |               |
| Peak Forward Surge Current<br>8.3mS single half sine wave superimposed on<br>rated load (JEDEC method)       | $I_{FSM}$                 | 30          |             |             |             |             |             |             | Amps                      |               |
| Maximum Instantaneous Forward Voltage at 1.0A                                                                | $V_F$                     | 1.1         |             |             |             |             |             |             | Volts                     |               |
| Maximum DC Reverse Current<br>at Rated DC Blocking Voltage at                                                | $T_A = 25^\circ\text{C}$  | $I_R$       |             |             |             |             |             |             | 5.0                       | $\mu\text{A}$ |
|                                                                                                              | $T_A = 125^\circ\text{C}$ |             |             |             |             |             |             |             |                           |               |
| Maximum Full Load Reverse Current, full cycle<br>Average 0.375 (9.5mm) lead length at $T_L=75^\circ\text{C}$ | $I_{R(AV)}$               | 30          |             |             |             |             |             |             | $\mu\text{A}$             |               |
| Typical Junction Capacitance (NOTE 1)                                                                        | $C_J$                     | 15          |             |             |             |             |             |             | pF                        |               |
| Typical Thermal Resistance (NOTE 2)                                                                          | $R_{\theta JA}$           | 50          |             |             |             |             |             |             | $^\circ\text{C}/\text{W}$ |               |
| Operating and Storage Temperature Range                                                                      | $T_J, T_{STG}$            | -55 to +150 |             |             |             |             |             |             | $^\circ\text{C}$          |               |

### Notes:

1. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts.
2. Thermal Resistance from Junction to Ambient at .375" (9.5mm) lead length, P.C. board mounted.

RATING AND CHARACTERISTIC CURVES 1N4001G THRU 1N4007G

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

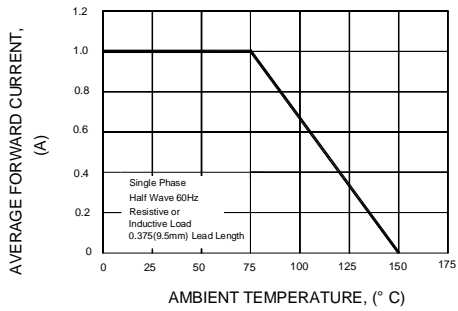


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

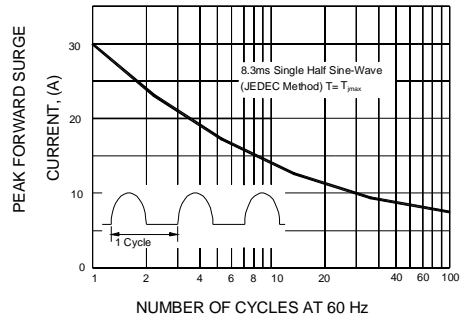


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

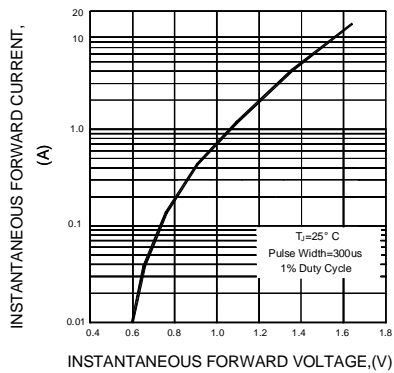


FIG.4-TYPICAL REVERSE CHARACTERISTICS

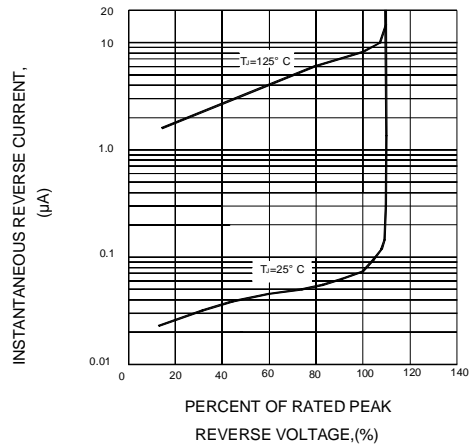


FIG.5-TYPICAL JUNCTION CAPACITANCE

