

## 1N4001-G Thru. 1N4007-G

Voltage: 50 to 1000 V

Current: 1.0 A

RoHS Device

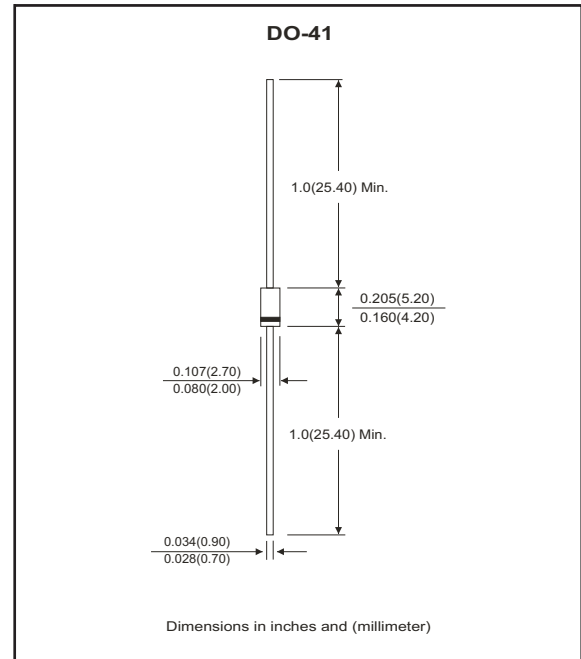


### Features

- Low cost construction.
- Fast forward voltage drop.
- Low reverse leakage.
- High forward surge current capability.
- High soldering temperature guarantee: 260 °C/10 seconds, 0.375"(9.5mm) lead length at 5lbs(2.3kg) tension.

### Mechanical data

- Case: transfer molded plastic, DO-41
- Epoxy: UL 94V-0 rate flame retardant
- Polarity: Indicated by cathode band
- Lead: Plated axial lead, solderable per MIL-STD-202E, method 208C
- Mounting position: Any
- Weight: 0.012ounce, 0.33 grams



### Electrical Characteristics (at T<sub>A</sub>=25 °C unless otherwise noted)

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%.

| Parameter                                                                                                 |                        | Symbol             | 1N4001<br>-G | 1N4002<br>-G | 1N4003<br>-G | 1N4004<br>-G | 1N4005<br>-G | 1N4006<br>-G | 1N4007<br>-G | Unit |
|-----------------------------------------------------------------------------------------------------------|------------------------|--------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------|
| Maximum Repetitive Peak Reverse Voltage                                                                   |                        | V <sub>RRM</sub>   | 50           | 100          | 200          | 400          | 600          | 800          | 1000         | V    |
| Maximum RMS Voltage                                                                                       |                        | V <sub>RMS</sub>   | 35           | 70           | 140          | 280          | 420          | 560          | 700          | V    |
| Maximum DC Blocking Voltage                                                                               |                        | V <sub>DC</sub>    | 50           | 100          | 200          | 400          | 600          | 800          | 1000         | V    |
| Maximum Average Forward Rectified Current<br>0.375"(9.5mm) Lead Length @T <sub>A</sub> =55 °C             |                        | I <sub>(AV)</sub>  | 1.0          |              |              |              |              |              |              | A    |
| Peak Forward Surge Current,<br>8.3mS single half sine-wave superimposed on<br>rated load (JEDEC method)   |                        | I <sub>FSM</sub>   | 30           |              |              |              |              |              |              | A    |
| Maximum Instantaneous Forward Voltage @1.0A                                                               |                        | V <sub>F</sub>     | 1.1          |              |              |              |              |              |              | V    |
| Maximum DC Reverse Current at Rated<br>DC Blocking voltage per element                                    | T <sub>A</sub> =25 °C  | I <sub>R</sub>     | 5.0          |              |              |              |              |              |              | μA   |
|                                                                                                           | T <sub>A</sub> =100 °C |                    | 50           |              |              |              |              |              |              |      |
| Maximum Full Load Reverse Current,full cycle<br>average 0.375"(9.5mm)lead length at T <sub>L</sub> =75 °C |                        | I <sub>R(AV)</sub> | 30           |              |              |              |              |              |              | μA   |
| Typical Junction Capacitance (Note 1)                                                                     |                        | C <sub>J</sub>     | 15           |              |              |              |              |              |              | pF   |
| Typical Thermal Resistance (Note 2)                                                                       |                        | R <sub>θJA</sub>   | 60           |              |              |              |              |              |              | °C/W |
| Operating Temperature Range                                                                               |                        | T <sub>J</sub>     | -55 ~ +150   |              |              |              |              |              |              | °C   |
| Storage Ttemperature Range                                                                                |                        | T <sub>STG</sub>   | -55 ~ +150   |              |              |              |              |              |              | °C   |

#### NOTES:

1. Measured at 1.0MHz and Applied Reverse Voltage of 4.0V DC.
2. Thermal Resistance from junction to terminal 6.0mm<sup>2</sup> copper pads to each terminal.

## Rating and Characteristic Curves ( 1N4001-G Thru. 1N4007-G )

Fig.1 Typical Forward Current Derating Curve

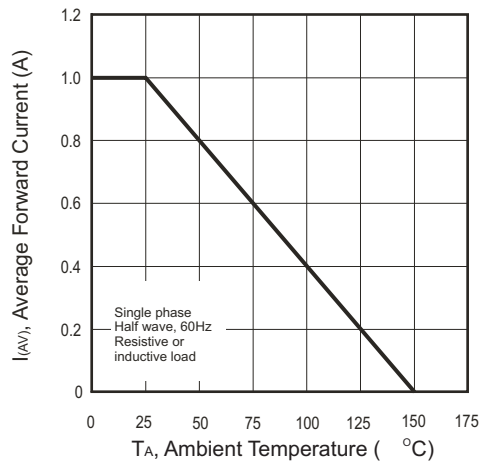


Fig.2 Maximum. Non-Repetitive Peak Forward Surge Current

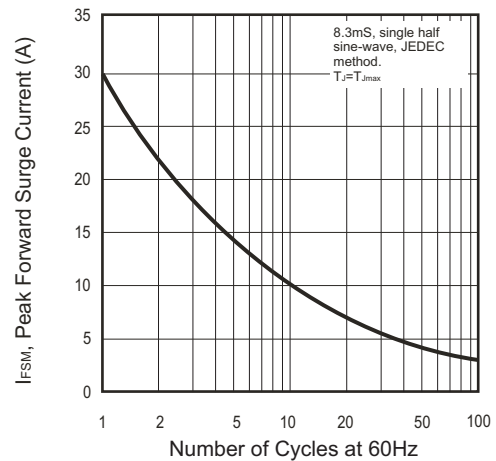


Fig.3 Typical Instantaneous Forward Characteristics

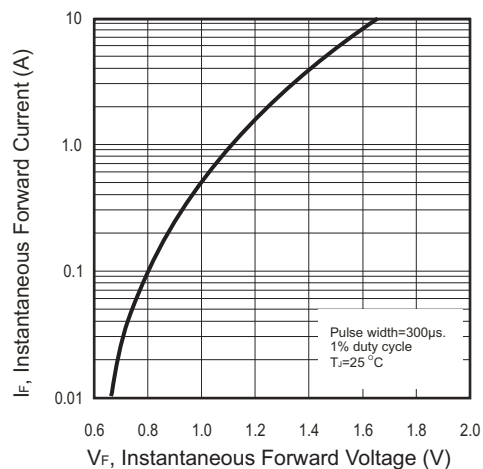


Fig.4 Typical Reverse Characteristics

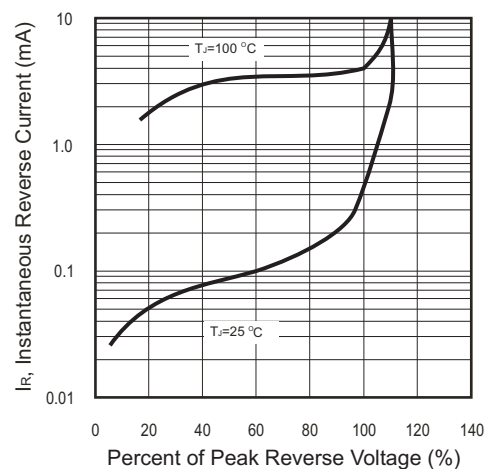


Fig.5 Typical Junction Capacitance

