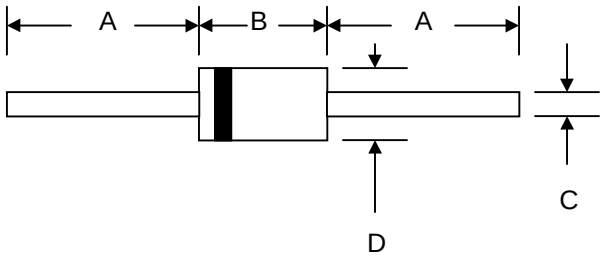
# 1N4001 – 1N4007

## 1.0A SILICON RECTIFIER

## Features

- Diffused Junction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability




| DO-41 | | |
|---|---|---|
| **Dim** | **Min** | **Max** |
| **A** | 25.4 | — |
| **B** | 4.06 | 5.21 |
| **C** | 0.71 | 0.864 |
| **D** | 2.00 | 2.72 |
| **All Dimensions in mm** | | |

## Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: 0.35 grams (approx.)
- Mounting Position: Any
- Marking: Type Number

## Maximum Ratings and Electrical Characteristics @$T_A$=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| Characteristic | Symbol | 1N 4001 | 1N 4002 | 1N 4003 | 1N 4004 | 1N 4005 | 1N 4006 | 1N 4007 | Unit |
|---|---|---|---|---|---|---|---|---|---|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Average Rectified Output Current (Note 1) @$T_A$ = 75°C | $I_O$ | 1.0 | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 30 | | | | | | | A |
| Forward Voltage @$I_F$ = 1.0A | $V_{FM}$ | 1.0 | | | | | | | V |
| Peak Reverse Current @$T_A$ = 25°C<br>At Rated DC Blocking Voltage @$T_A$ = 100°C | $I_{RM}$ | 5.0<br>50 | | | | | | | µA |
| Typical Junction Capacitance (Note 2) | $C_j$ | 15 | | | | | | | pF |
| Typical Thermal Resistance Junction to Ambient (Note 1) | $R_{\theta JA}$ | 50 | | | | | | | K/W |
| Operating Temperature Range | $T_j$ | -65 to +125 | | | | | | | °C |
| Storage Temperature Range | $T_{STG}$ | -65 to +150 | | | | | | | °C |

***Glass passivated forms are available upon request**

Note: 1. Leads maintained at ambient temperature at a distance of 9.5mm from the case
2. Measured at 1.0 MHz and Applied Reverse Voltage of 4.0V D.C.

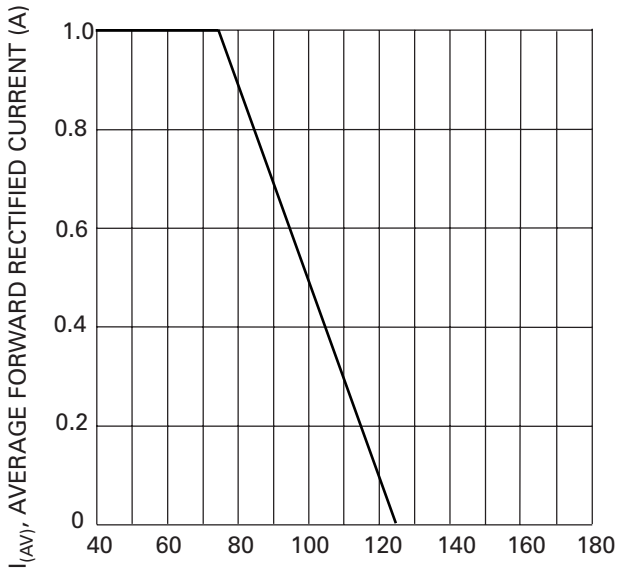



Fig. 1 Forward Current Derating Curve

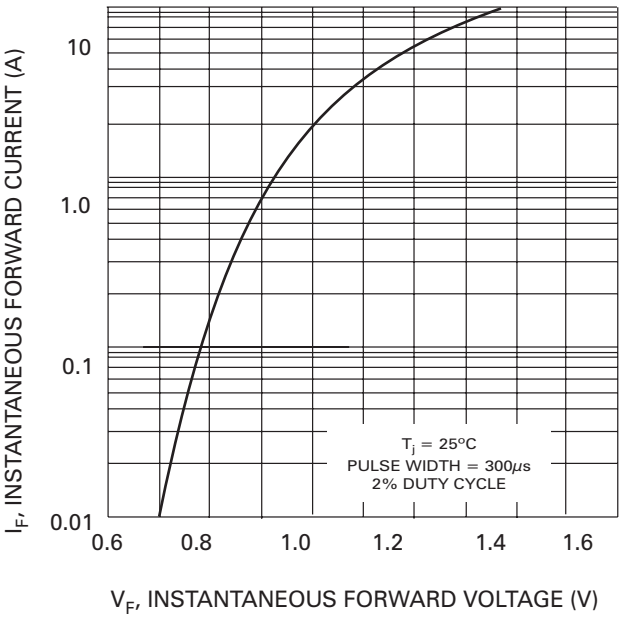



Fig. 2 Typical Forward Characteristics

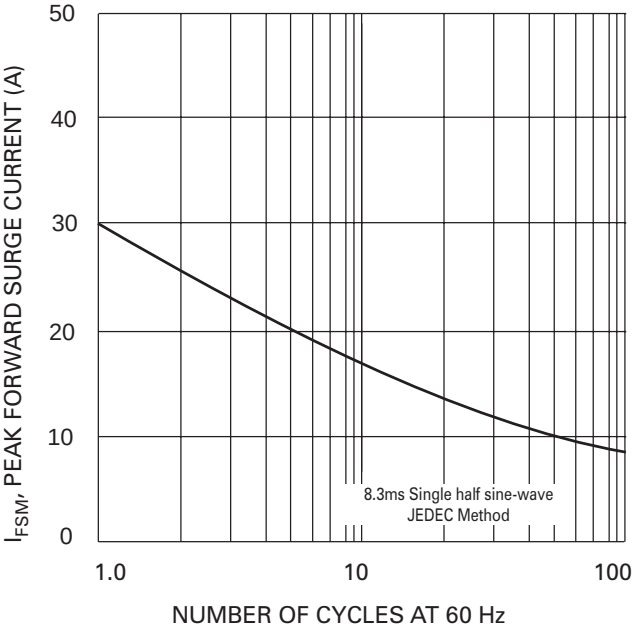



Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

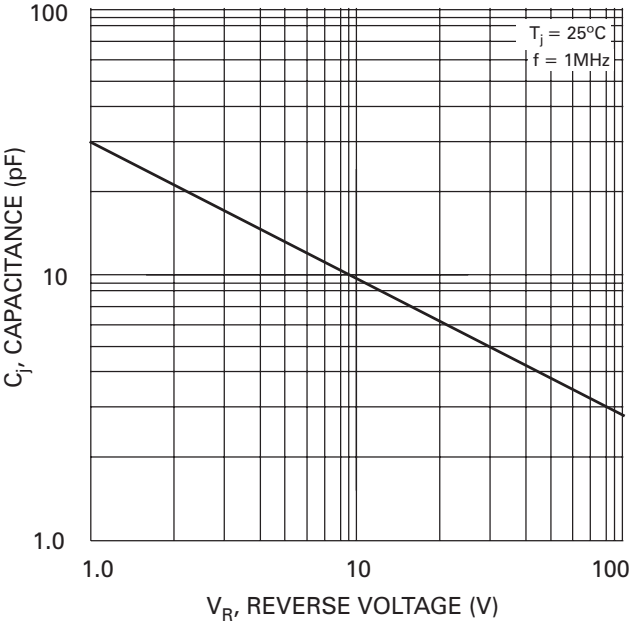



Fig. 4 Typical Junction Capacitance