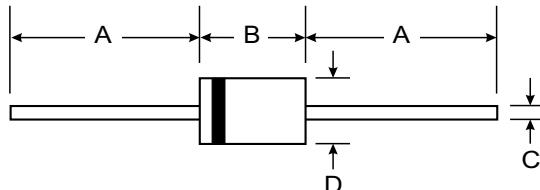


Features

- Diffused Junction
- High Current Capability and Low Forward Voltage Drop
- Surge Overload Rating to 30A Peak
- Low Reverse Leakage Current
- Plastic Material: UL Flammability Classification Rating 94V-0



Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Weight: DO-41 0.30 grams (approx)
A-405 0.20 grams (approx)
- Mounting Position: Any
- Marking: Type Number

| | DO-41 Plastic | | A-405 | |
|-----|---------------|-------|-------|------|
| Dim | Min | Max | Min | Max |
| A | 25.40 | — | 25.40 | — |
| B | 4.06 | 5.21 | 4.10 | 5.20 |
| C | 0.71 | 0.864 | 0.53 | 0.64 |
| D | 2.00 | 2.72 | 2.00 | 2.70 |

All Dimensions in mm

"L" Suffix Designates A-405 Package
No Suffix Designates DO-41 Package

Maximum Ratings and Electrical Characteristics

@ $T_A = 25^\circ\text{C}$ unless otherwise specified

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

| Characteristic | Symbol | 1N 4001/L | 1N 4002/L | 1N 4003/L | 1N 4004/L | 1N 4005/L | 1N 4006/L | 1N 4007/L | Unit |
|---|---------------------------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------------------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V_{RRM} V_{RWM} 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) @ $T_A = 75^\circ\text{C}$ | 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 @ $I_F = 1.0\text{A}$ | V_{FM} | | | | 1.0 | | | | V |
| Peak Reverse Current @ $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$ | I_{RM} | | | | 5.0 | 50 | | | μA |
| Typical Junction Capacitance (Note 2) | C_j | | 15 | | | 8 | | | pF |
| Typical Thermal Resistance Junction to Ambient | $R_{\theta JA}$ | | | 100 | | | | | K/W |
| Maximum DC Blocking Voltage Temperature | T_A | | | +150 | | | | | $^\circ\text{C}$ |
| Operating and Storage Temperature Range (Note 3) | T_j, T_{STG} | | | -65 to +175 | | | | | $^\circ\text{C}$ |

Notes:

1. Leads maintained at ambient temperature at a distance of 9.5mm from the case.
2. Measured at 1. MHz and applied reverse voltage of 4.0V DC.
3. JEDEC Value.

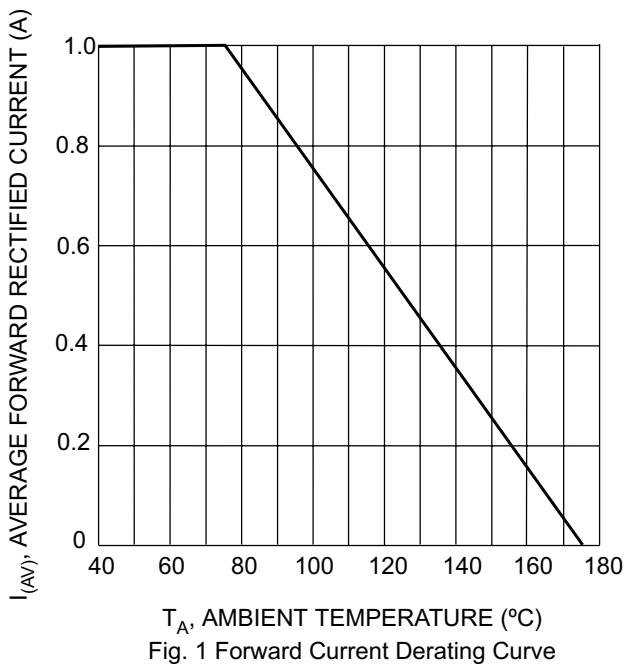


Fig. 1 Forward Current Derating Curve

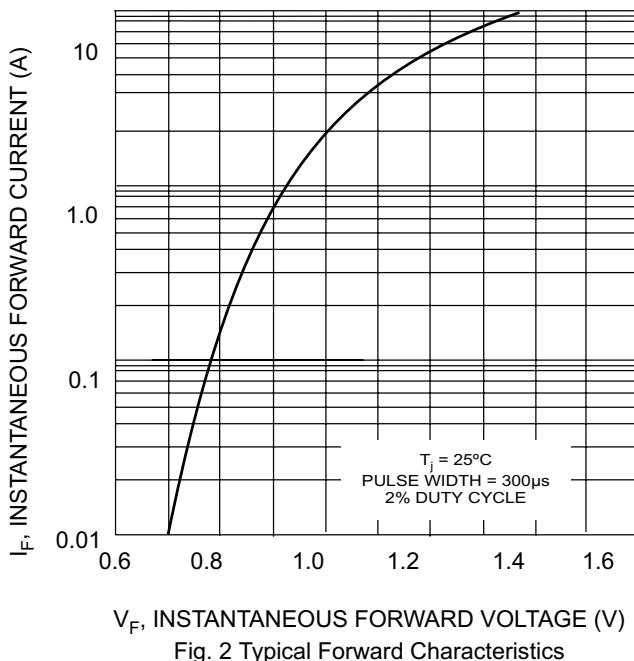


Fig. 2 Typical Forward Characteristics

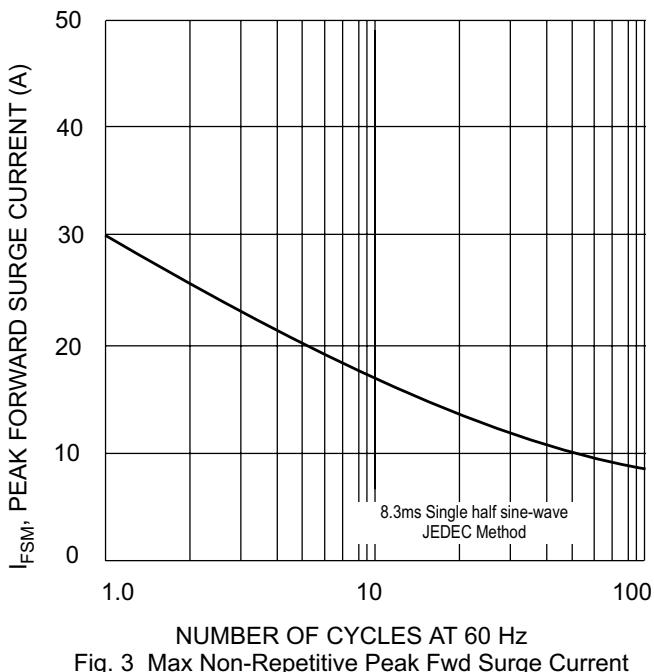


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

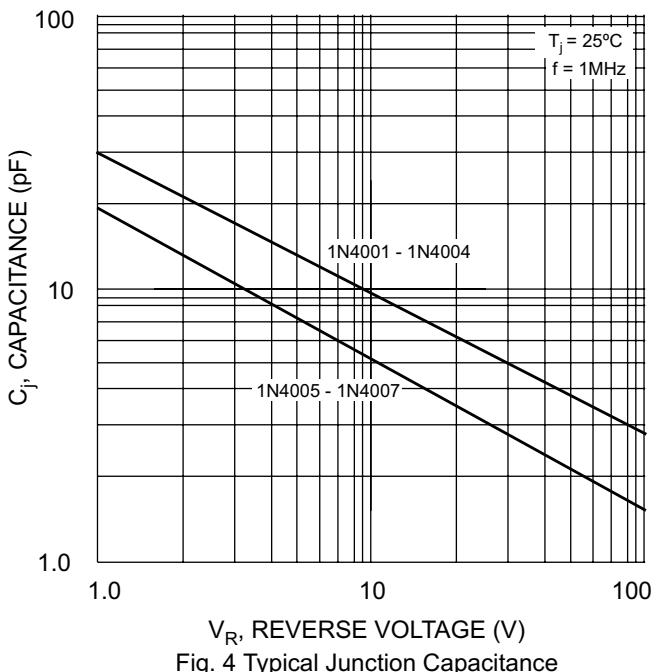


Fig. 4 Typical Junction Capacitance