

1N4001-G Thru. 1N4007-G

Voltage: 50 to 1000 V

Current: 1.0 A

RoHS Device

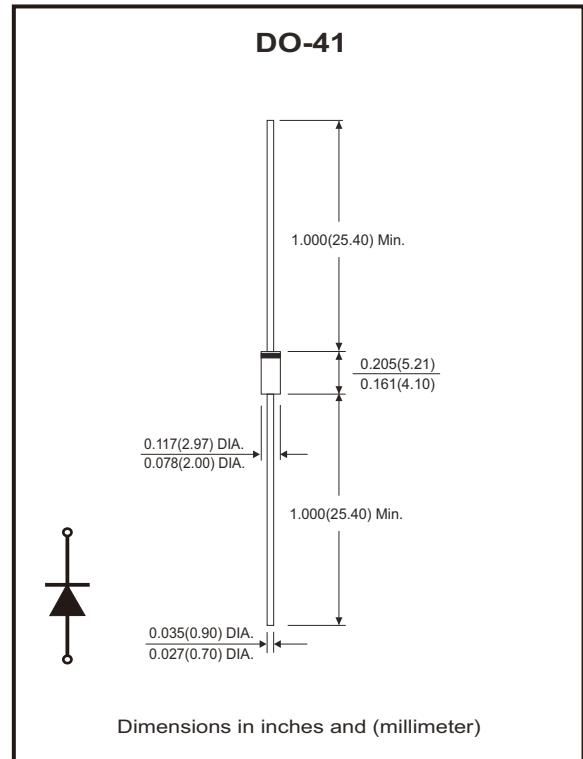


Features

- 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-750, method 2026
- Mounting position: Any
- Weight: 0.012ounce, 0.34 grams(approx.).



Electrical Characteristics (at TA=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 -G | 1N4002 -G | 1N4003 -G | 1N4004 -G | 1N4005 -G | 1N4006 -G | 1N4007 -G | Unit |
|---|-----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current 0.375"(9.5mm) Lead Length @TA=55°C | I_{AV} | 1.0 | | | | | | | A |
| Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method) | I_{FSM} | 30 | | | | | | | A |
| Maximum Instantaneous Forward Voltage @1.0A | V_F | 1.1 | | | | | | | V |
| Maximum DC Reverse Current at Rated DC Blocking voltage per element | TA=25°C | 5.0 | | | | | | | µA |
| | TA=100°C | 50 | | | | | | | |
| Typical Junction Capacitance (Note 1) | C_J | 15 | | | | | | | pF |
| Typical Thermal Resistance (Note 2) | $R_{\theta JA}$ | 60 | | | | | | | °C/W |
| Operating Temperature Range | T_J | -55 ~ +150 | | | | | | | °C |
| Storage Temperature Range | T_{STG} | -55 ~ +150 | | | | | | | °C |

NOTES:

1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
2. Thermal Resistance from junction to ambient and junction to lead at 0.375"(9.5mm) lead length P.C.B mounted.

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

Fig.1 - Typical Forward Current Derating Curve

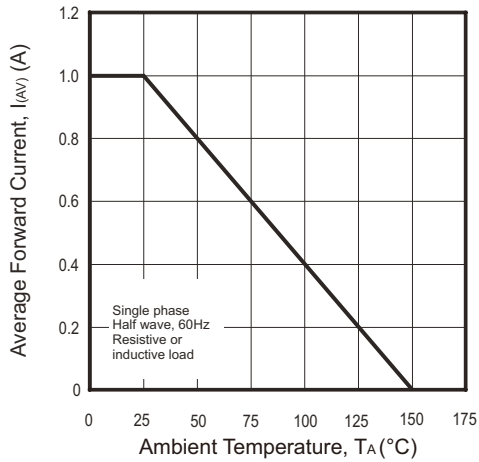


Fig.2 - Maximum. Non-Repetitive Peak Forward Surge Current

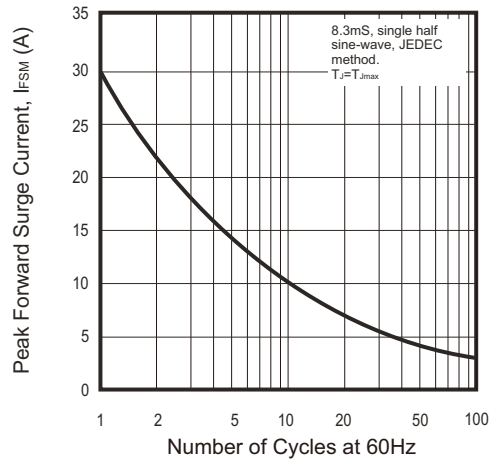


Fig.3 - Typical Instantaneous Forward Characteristics

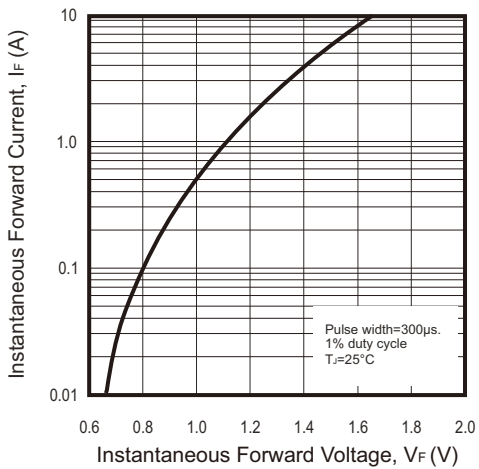


Fig.4 - Typical Reverse Characteristics

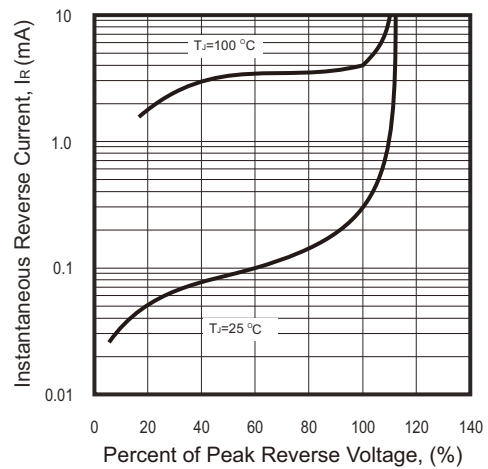
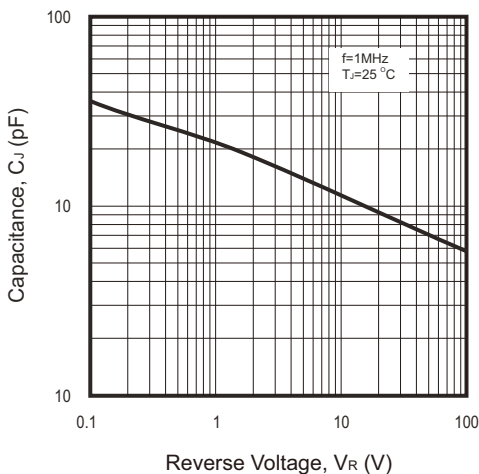


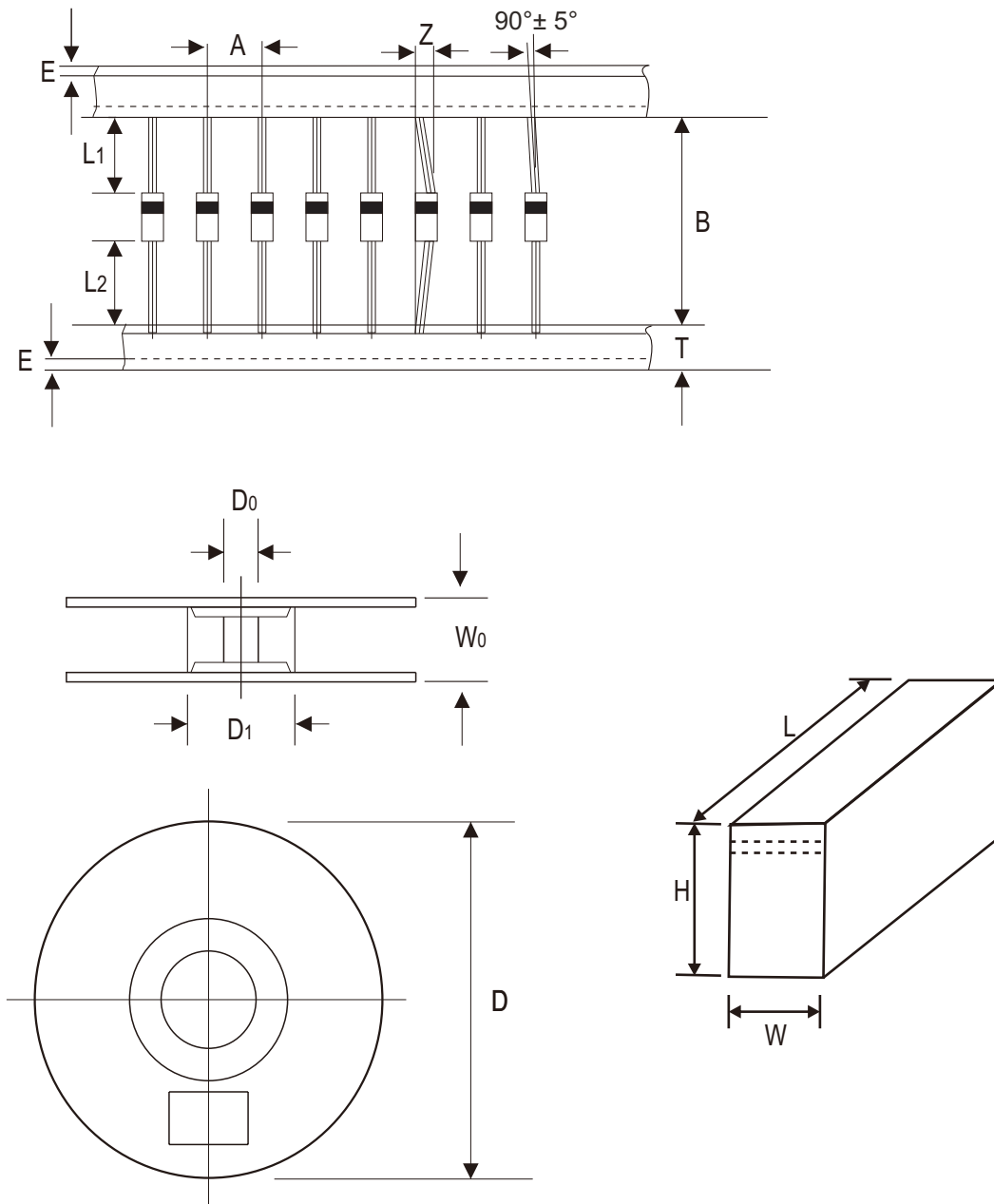
Fig.5 - Typical Junction Capacitance



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Taping Specification For Axial Lead Diodes



| DO-41 | SYMBOL | A | B | Z | T | E | L1-L2 |
|-------|--------|-------------------|-------------------|-------------|-------------------|-------------|-------------|
| | (mm) | 5.00 ± 0.50 | 52.40 ± 1.50 | 1.60 (max) | 6.00 ± 0.40 | 3.00 (max) | 1.00 (max) |
| | (inch) | 0.197 ± 0.020 | 2.063 ± 0.059 | 0.063 (max) | 0.236 ± 0.016 | 0.118 (max) | 0.039 (max) |

| DO-41 | SYMBOL | D1 | D0 | D | W0 | L | W | H |
|-------|--------|-------------------|-------------------|--------|-------------------|--------------------|-------------------|-------------------|
| | (mm) | 85.70 ± 0.30 | 16.60 ± 0.40 | 330.00 | 72.00 ± 3.00 | 260.00 ± 5.00 | 75.00 ± 5.00 | 150.00 ± 5.00 |
| | (inch) | 3.374 ± 0.012 | 0.654 ± 0.016 | 12.992 | 2.835 ± 0.118 | 10.236 ± 0.197 | 2.953 ± 0.197 | 5.906 ± 0.197 |

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