



**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

**1N4001  
THRU  
1N4007**

**TECHNICAL SPECIFICATIONS OF SILICON RECTIFIER**

**VOLTAGE RANGE - 50 to 1000 Volts    CURRENT - 1.0 Ampere**

**FEATURES**

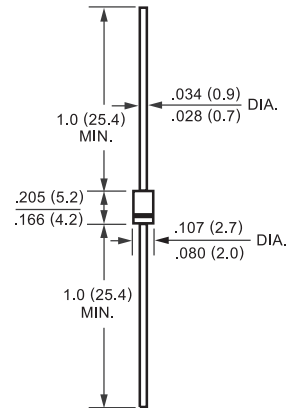
- \* Low cost
- \* Low leakage
- \* Low forward voltage drop
- \* High current capability

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: MIL-STD-202E, Method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 0.33 gram



DO-41



Dimensions in inches and (millimeters)

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

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

|   | SYMBOL   | 1N4001       | 1N4002 | 1N4003 | 1N4004 | 1N4005 | 1N4006 | 1N4007 | UNITS |
|---|----------|--------------|--------|--------|--------|--------|--------|--------|-------|
| Maximum Recurrent Peak Reverse Voltage  | VRRM     | 50           | 100    | 200    | 400    | 600    | 800    | 1000   | Volts |
| Maximum RMS Voltage   | VRMS     | 35           | 70     | 140    | 280    | 420    | 560    | 700    | Volts |
| Maximum DC Blocking Voltage   | VDC      | 50           | 100    | 200    | 400    | 600    | 800    | 1000   | Volts |
| Maximum Average Forward Rectified Current at TA = 75°C  | Io       | 1.0          |        |        |        |        |        |        | Amps  |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) | IFSM     | 30           |        |        |        |        |        |        | Amps  |
| Maximum Instantaneous Forward Voltage at 1.0A DC  | VF       | 1.1          |        |        |        |        |        |        | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage   | IR       | @ TA = 25°C  |        |        |        |        |        |        | uAmps |
|   |          | @ TA = 100°C |        |        |        |        |        |        |       |
| Maximum Full Load Reverse Current Average, Full Cycle .375*(9.5mm) lead length at TL = 75°C       |          | 30           |        |        |        |        |        |        | uAmps |
| Typical Junction Capacitance (Note)   | CJ       | 15           |        |        |        |        |        |        | pF    |
| Typical Thermal Resistance  | RθJA     | 50           |        |        |        |        |        |        | °C/W  |
| Operating and Storage Temperature Range   | TJ, Tstg | -65 to + 175 |        |        |        |        |        |        | °C    |

NOTES : Measured at 1 MHz and applied reverse voltage of 4.0 volts

RATING AND CHARACTERISTIC CURVES (1N4001 THRU 1N4007)

FIG. 1 - TYPICAL FORWARD CURRENT DERATING CURVE

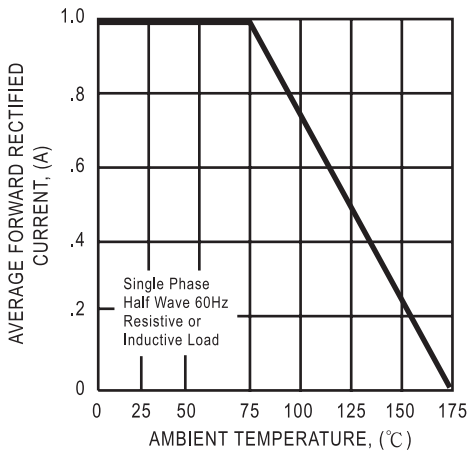


FIG. 2 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

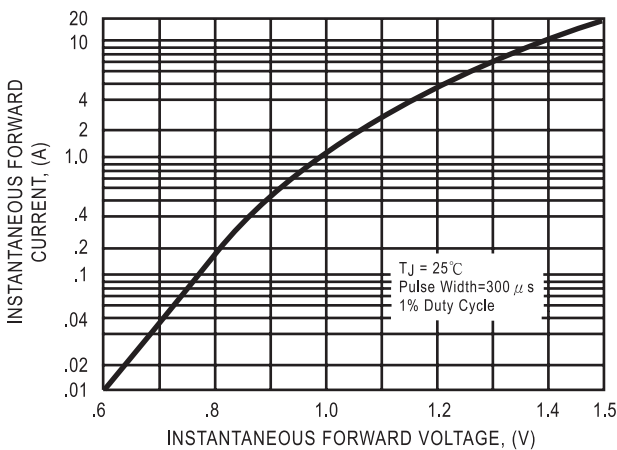


FIG. 3 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

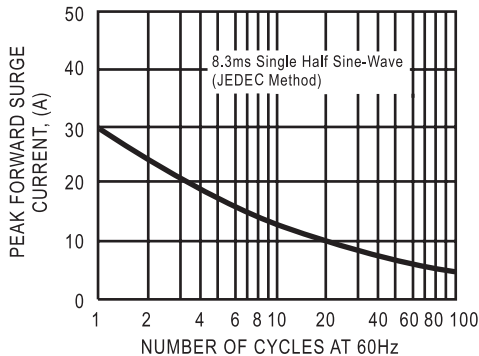


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

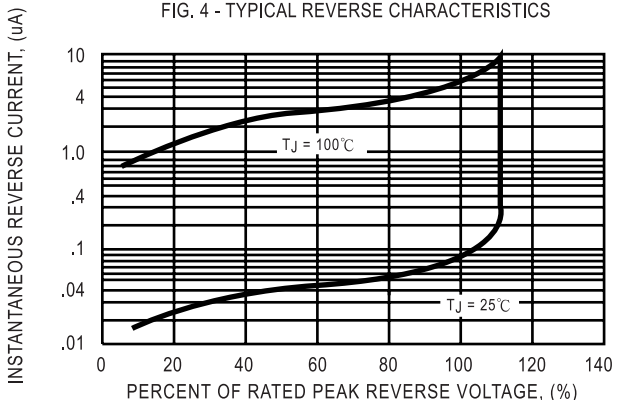


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

