

1N4001 THRU 1N4007

TECHNICAL SPECIFICATIONS OF SILICON RECTIFIER

VOLTAGE: 50-1000V

CURRENT: 1.0A

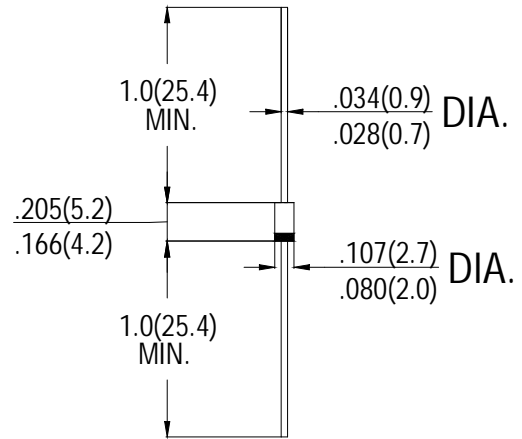
FEATURES

- High reliability
- Low leakage
- Low forward voltage drop
- High current capability

MECHANICAL DATA

- **Case:** Molded plastic
- **Epoxy:** UL94V-0 rate flame retardant
- **Lead:** MIL-STD- 202E, Method 208 guaranteed
- **Polarity:** Color band denotes cathode end
- **Mounting position:** Any
- **Weight:** 0.33 grams

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, 60Hz, 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 | 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 at $T_A=75^\circ\text{C}$ | I_o | 1.0 | | | | | | | A |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rate load (JEDEC method) | I_{FSM} | 30 | | | | | | | A |
| Maximum Instantaneous forward Voltage at 1.0A DC | V_F | 1.1 | | | | | | | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | @ $T_A=25^\circ\text{C}$ | 5.0 | | | | | | | μA |
| | @ $T_A=100^\circ\text{C}$ | 500 | | | | | | | |
| Maximum Full Load Reverse Current Average Full Cycle .375"(9.5mm) lead length at $T_L=75^\circ\text{C}$ | I_R | 30 | | | | | | | |
| Typical Junction Capacitance (Note) | C_J | 15 | | | | | | | pF |
| Typical Thermal Resistance | $R_{\theta JA}$ | 50 | | | | | | | $^\circ\text{C/W}$ |

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