

# 1N4001 THRU 1N4007

## 1.0 AMP SILICON RECTIFIERS

### FEATURES

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Low cost construction utilizing void-free molded plastic technique
- Diffused junction
- Low reverse leakage
- High current capability
- Easily cleaned with Freon, Alcohol, Chlorothen, and similar solvents
- High temperature soldering guaranteed : 265°C/10 seconds/.375" (9.5mm) lead lengths at 5 lbs (2.3kg) tension

### MECHANICAL DATA

- Case: Molded plastic
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any
- Weight: 0.012 ounce, 0.3 gram

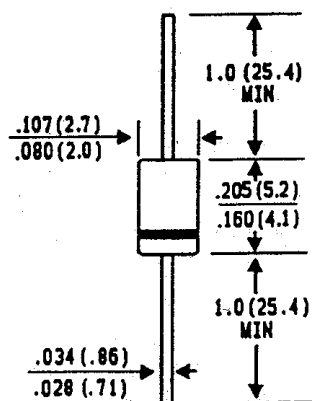
### VOLTAGE RANGE

50 to 1000 Volts

### CURRENT

1.0 Ampere

### 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%.

	SYMBOLS	1N4001	1N4002	1N4003	1N4004	1N4005	1N4006	1N4007	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>rrm</sub>	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>rms</sub>	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>dc</sub>	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current .375" (9.5mm) lead length at TA=75°C	I(AV)	1.0							A
Peak Forward Surge Current 8.3 ms single half sine wave superimposed on rated load (JEDEC method)	I <sub>fsm</sub>	30							A
Maximum instantaneous Forward Voltage at 1.0A DC	V <sub>F</sub>	1.1							V
Maximum Reverse Current at Rated DC Blocking Voltage per element @TA=25°C	I <sub>R</sub>	5.0							uA
@TA=100°C	HTIR	50							uA
Maximum DC Reverse Current Average, Full cycle .375" (9.5mm) lead length at TL=75°C	HTIR	30							uA
Typical Junction Capacitance (Note1)	C <sub>J</sub>	30							pf
Typical Thermal Resistance (Note2)	R <sub>thja</sub>	50							°C/W
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>stg</sub>	-65 TO +175							°C

### NOTES :

1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts.
2. Thermal Resistance from Junction to Ambient at .375" (9.5mm) lead length, P.C. board mounted.

## RATINGS AND CHARACTERISTIC CURVES 1N4001 THRU 1N4007

FIG. 1 — FORWARD CURRENT DERATING CURVE

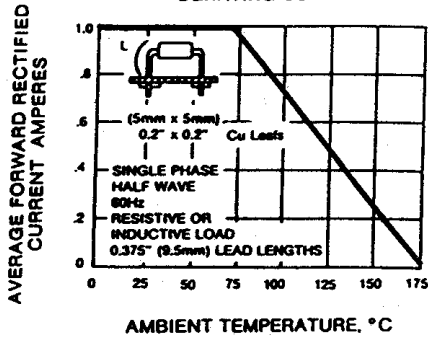


FIG. 2 — TYPICAL FORWARD CHARACTERISTICS

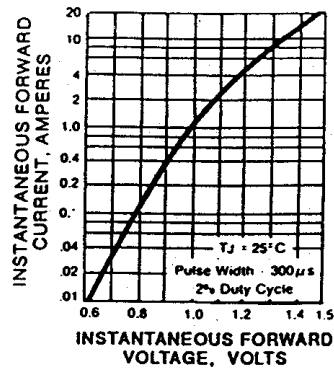


FIG. 3 — MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

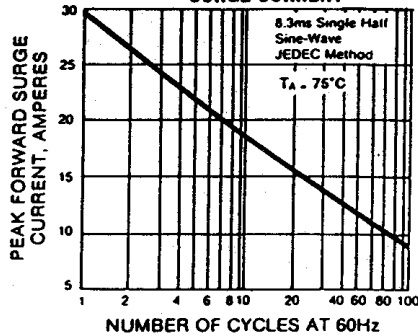


FIG. 4 — PEAK FORWARD SURGE CURRENT

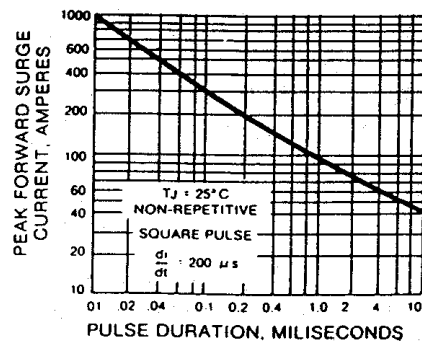
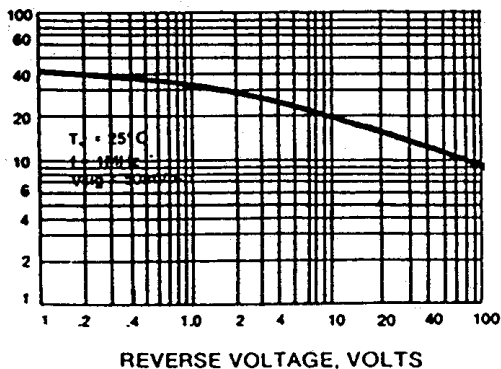


FIG. 5 — TYPICAL JUNCTION CAPACITANCE



INSTANTANEOUS REVERSE CURRENT MICROAMPERES

FIG. 6 — TYPICAL REVERSE CHARACTERISTICS

