

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

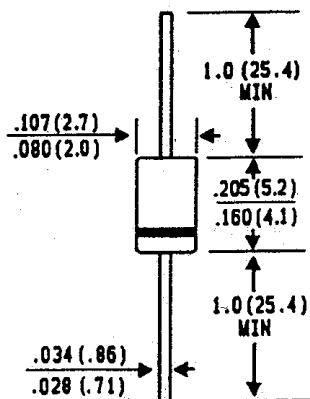
VOLTAGE RANGE

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 _{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 .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 _{fsm}	30							A
Maximum instantaneous Forward Voltage at 1.0A DC	V _F	1.1							V
Maximum Reverse Current at Rated DC Blocking Voltage per element @TA=25°C	I _R	5.0							uA
Maximum Reverse Current at Rated DC Blocking Voltage per element @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 _J	30							pf
Typical Thermal Resistance (Note2)	R _{thja}	50							°C/W
Operating and Storage Temperature Range	T _j , T _{stg}	-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

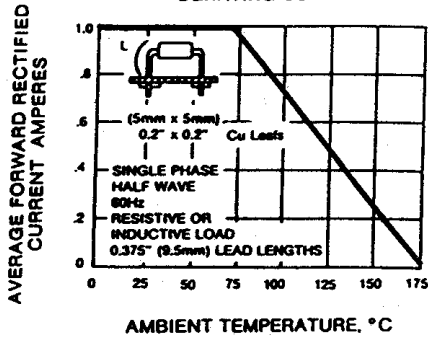


FIG. 2 — TYPICAL FORWARD CHARACTERISTICS

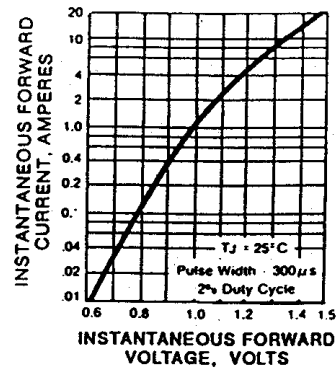


FIG. 3 — MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

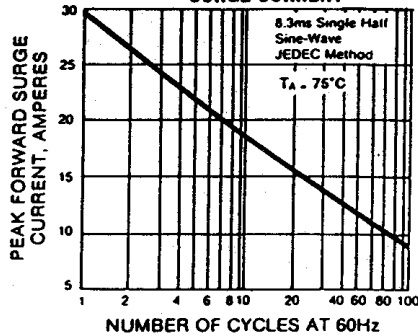


FIG. 4 — PEAK FORWARD SURGE CURRENT

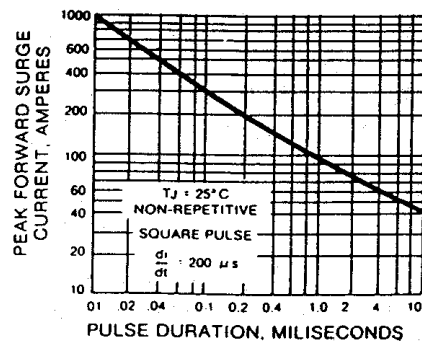
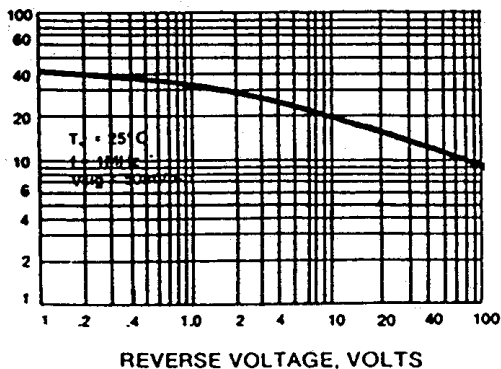
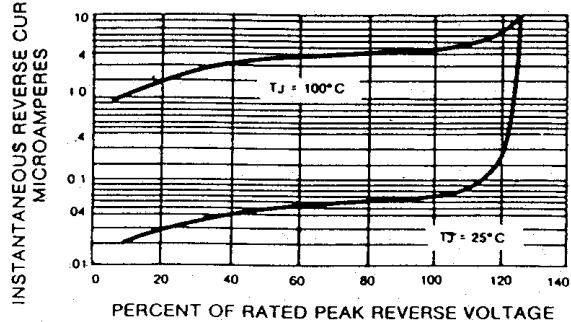


FIG. 5 — TYPICAL JUNCTION CAPACITANCE



INSTANTANEOUS REVERSE CURRENT MICROAMPERES

FIG. 6 — TYPICAL REVERSE CHARACTERISTICS



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