



GENERAL PURPOSE SILICON RECTIFIER

1N4001

THRU

1N4007

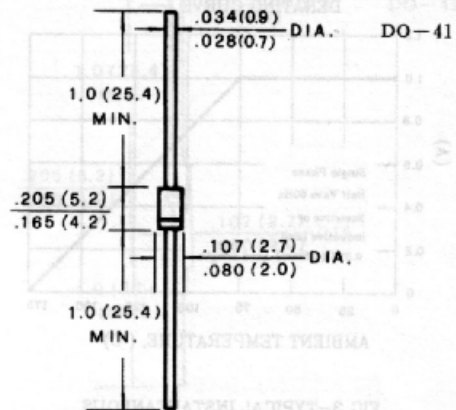
FEATURES

- Low cost construction
- Low forward voltage drop
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed;
260°C/10 seconds/.375" (9.5mm) lead length
at 5 lbs (2.3kg) tension

MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E
method 208C
- Mounting position: Any
- Weight: 0.012 ounce, 0.33 gram

VOLTAGE RANGE 50 to 1000 Volts
CURRENT 1.0 Ampere



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%.

		SYMBOLS	1N 4001	1N 4002	1N 4003	1N 4004	1N 4005	1N 4006	1N 4007	UNITS
Maximum Repetitive Peak Reverse Voltage		V _{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage		V _{RMS}	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage		V _{DC}	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current 0.375" (9.5mm) lead length at T _A = 75°C		I _(AV)	1.0							Amp
Peak Forward Surge Current 8.3ms single half sine—wave superimposed on rated load (JEDEC Method)		I _{FSM}	30							Amps
Maximum Instantaneous Forward Voltage at 1.0A		V _F	1.1							Volts
Maximum DC Reverse Current at rated DC blocking voltage	T _A = 25°C	I _R	5.0							μAmps
	T _A = 100°C		50							
Maximum Full Load Reverse Current, full cycle average 0.375" (9.5mm) lead length at T _L = 75°C		I _{R(AV)}	30							μAmps
Typical Junction Capacitance (NOTE 1)		C _J	15							pF
Typical Thermal Resistance (NOTE 2)		R _{θJA}	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 with 0.2" $\times$ 0.2" (5.0 $\times$ 5.0mm) copper pads.

RATINGS AND CHARACTERISTIC CURVES IN4001 THRU IN4007

FIG. 1-TYPICAL FORWARD CURRENT DERATING CURVE

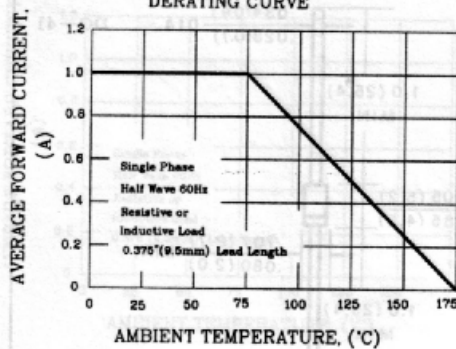


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

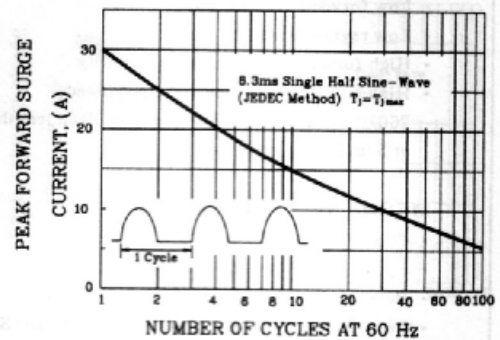


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

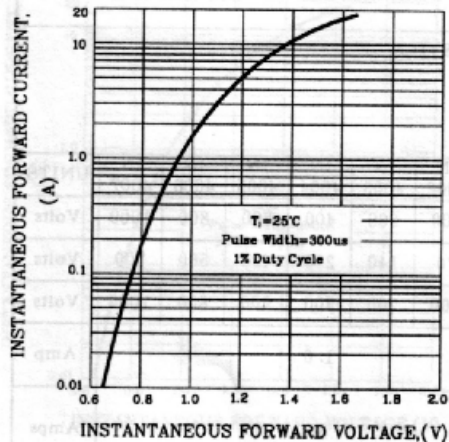


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

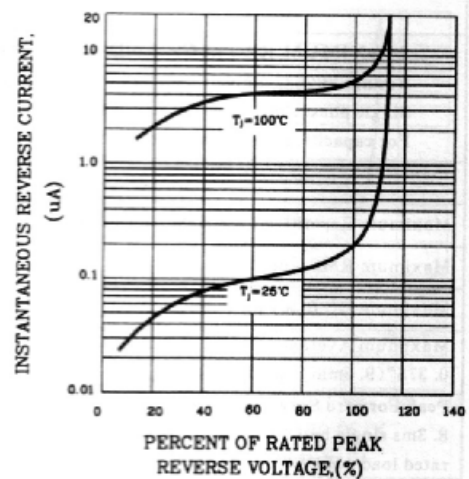


FIG. 5-TYPICAL JUNCTION CAPACITANCE

