

# 1N4001 THRU 1N4007

## GENERAL PURPOSE PLASTIC RECTIFIER

VOLTAGE: 50 TO 1000V

CURRENT: 1.0A



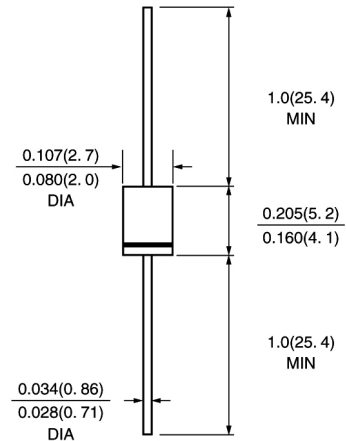
### FEATURE

Molded case feature for auto insertion  
High current capability  
Low leakage current  
High surge capability  
High temperature soldering guaranteed  
250°C/10sec/0.375" lead length at 5 lbs tension

### MECHANICAL DATA

Terminal: Plated axial leads solderable per MIL-STD 202E, method 208C  
Case: Molded with UL-94 Class V-0 recognized Flame Retardant Epoxy  
Polarity: color band denotes cathode  
Mounting position: any

### DO-41\DO-204AL



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

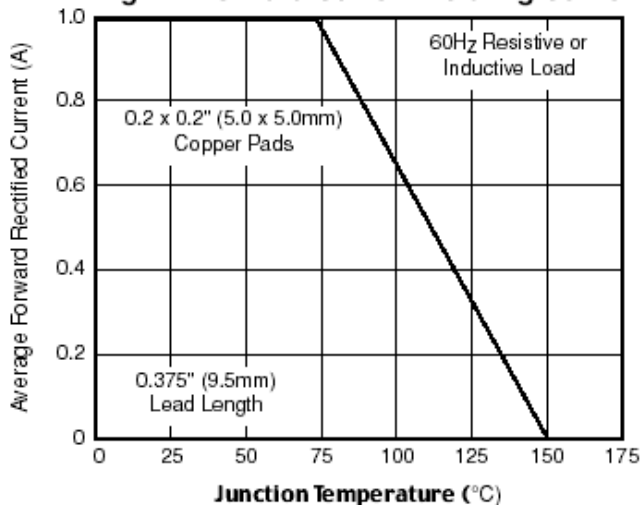
(single-phase, half -wave, 60HZ, resistive or inductive load rating at 25°C, unless otherwise stated, for capacitive load, derate current by 20%)

	SYMBOL	1N 4001	1N 4002	1N 4003	1N 4004	1N 4005	1N 4006	1N 4007	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 3/8" lead length at T <sub>a</sub> =75°C	I <sub>f(av)</sub>	1.0							A
* Peak Forward Surge Current 8.3ms single Half sine-wave superimposed on rated load	I <sub>fsm</sub>	30.0							A
* Maximum Instantaneous Forward Voltage at rated forward current	V <sub>f</sub>	1.1							V
Maximum full load reverse current full cycle at T <sub>L</sub> =75°C	I <sub>r(av)</sub>	30.0							μA
Maximum DC Reverse Current at rated DC blocking voltage	I <sub>r</sub>	5.0 50.0							μA μA
Typical Junction Capacitance (Note 1)	C <sub>j</sub>	15.0							pF
Typical Thermal Resistance (Note 2)	R(ja)	50.0							°C/W
Storage and Operation Junction Temperature	T <sub>stg</sub>	-50 to +150							°C

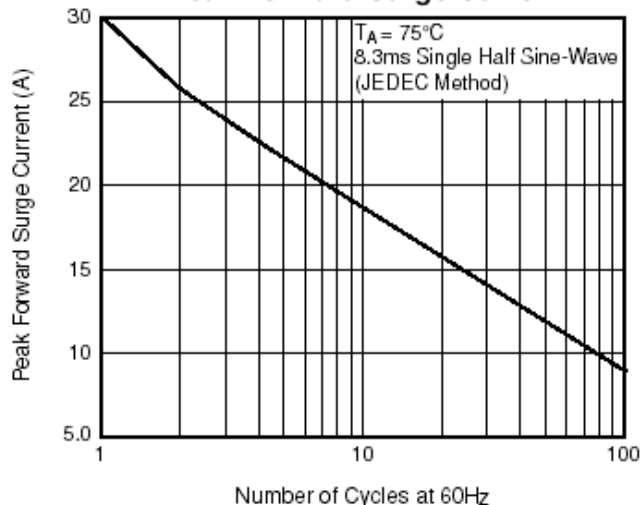
Note:

1. Measured at 1.0 MHz and applied voltage of 4.0Vdc
  2. Thermal Resistance from Junction to Ambient at 0.375" lead length, P.C. Board Mounted
- \* JEDEC Registered value

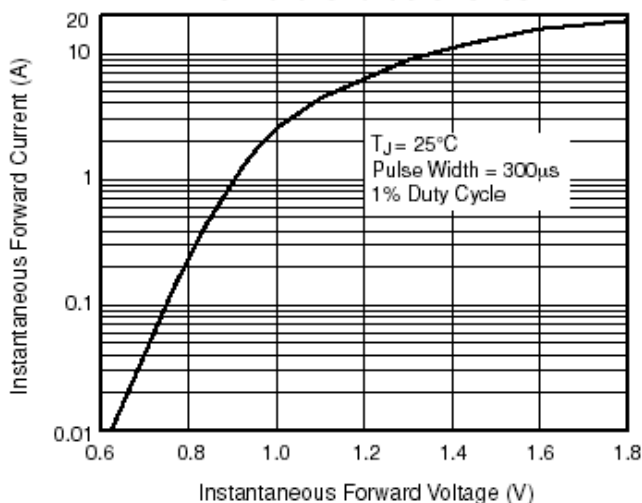
**Fig. 1 – Forward Current Derating Curve**



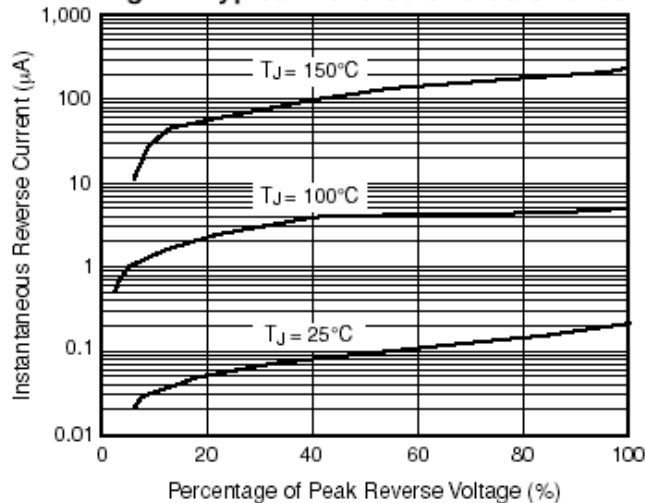
**Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current**



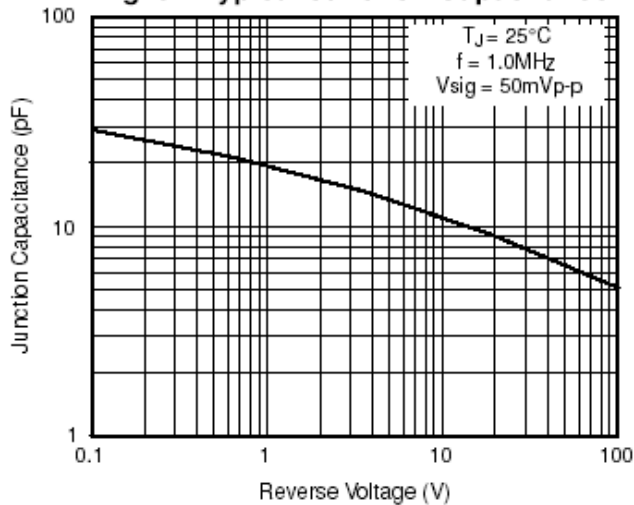
**Fig. 3 – Typical Instantaneous Forward Characteristics**



**Fig. 4 – Typical Reverse Characteristics**



**Fig. 5 – Typical Junction Capacitance**



**Fig. 6 – Typical Transient Thermal Impedance**

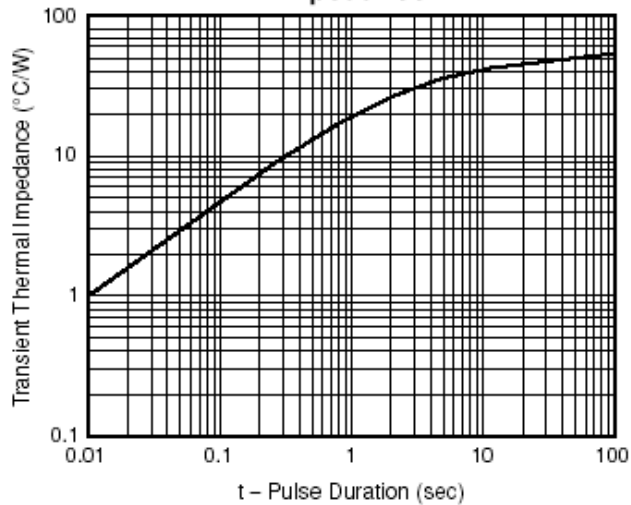


Fig. 7 — Maximum Non-Repetitive Peak Forward Surge Current  
(0.5ms ~ 10ms)

