

1N4001GP THRU 1N4007GP

SINTERED GLASS JUNCTION PLASTIC RECTIFIER

VOLTAGE: 50 TO 1000V

CURRENT: 1.0A



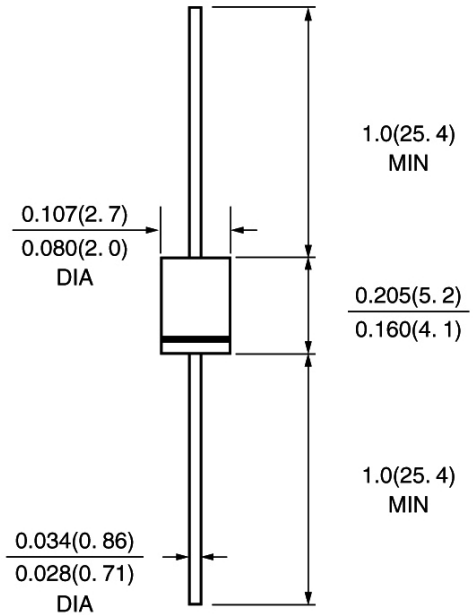
FEATURE

High temperature metallurgically bonded construction
Sintered glass cavity free junction
Capability of meeting environmental standard of MIL-S-19500
High temperature soldering guaranteed
350°C/10sec/0.375" lead length at 5 lbs tension
Operate at $T_a = 55^\circ\text{C}$ with no thermal run away
Typical $I_r < 0.1\mu\text{A}$

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	1N4001 GP	1N4002 GP	1N4003 GP	1N4004 GP	1N4005 GP	1N4006 GP	1N4007 GP	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 3/8" lead length at $T_a = 75^\circ\text{C}$	I _{f(av)}	1.0							A
* Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	I _{fsm}	30.0							A
Maximum Instantaneous Forward Voltage at 1.0A	V _f	1.1							V
* Maximum full load reverse current full cycle Average at 75°C	I _{r(av)}	30.0							μA
* Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at rated DC blocking voltage $T_a = 125^\circ\text{C}$	I _r	5.0 50.0							μA μA
Typical Reverse Recovery Time (Note 1)	T _{rr}	2.0							μS
Typical Junction Capacitance (Note 2)	C _j	8.0							pF
Typical Thermal Resistance (Note 3)	R(ja)	45.0							$^\circ\text{C}/\text{W}$
* Storage and Operating Junction Temperature	T _{stg} , T _j	-65 to +175							$^\circ\text{C}$

Note:

1. Reverse Recovery Condition $I_f = 0.5\text{A}$, $I_r = 1.0\text{A}$, $I_{rr} = 0.25\text{A}$
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
 3. Thermal Resistance from Junction to Ambient at 3/8" lead length, P.C. Board Mounted
- * JEDEC registered value

RATINGS AND CHARACTERISTIC CURVES 1N4001GP THRU 1N4007GP

FIG. 1 - FORWARD CURRENT DERATING CURVE

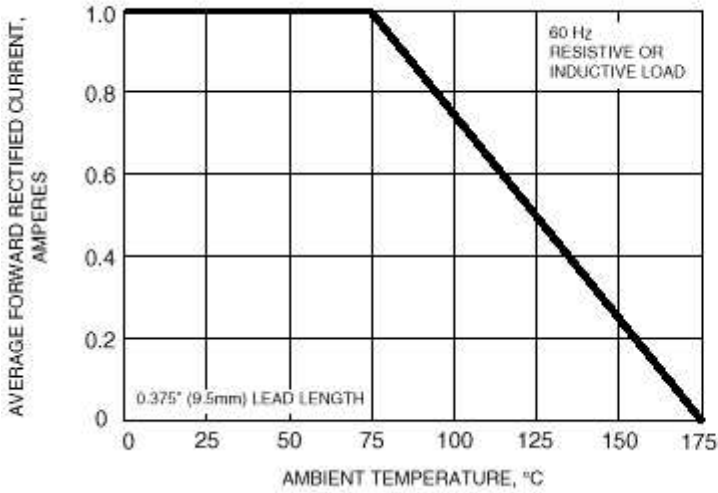


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

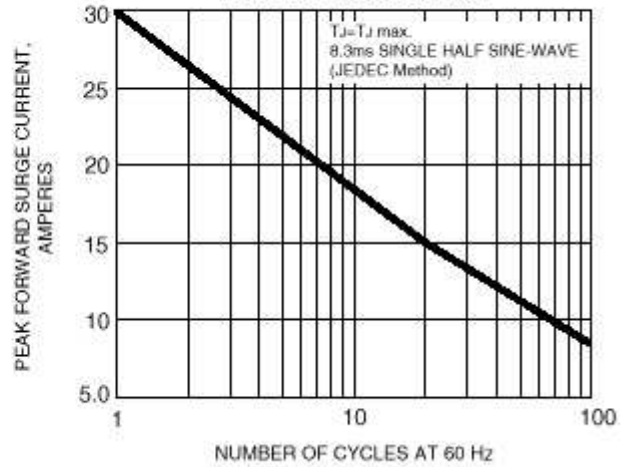


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

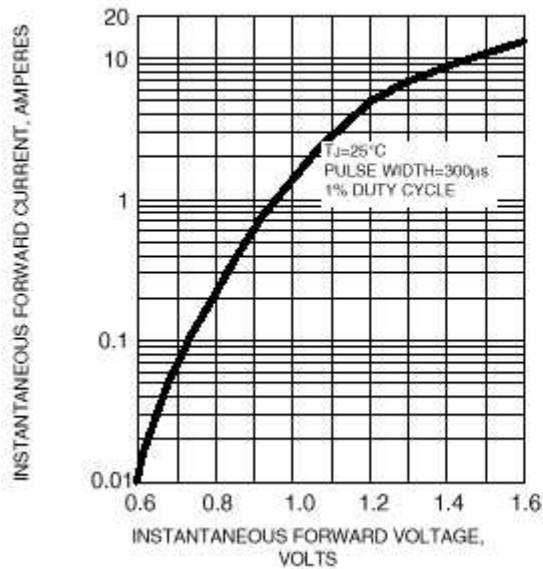


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

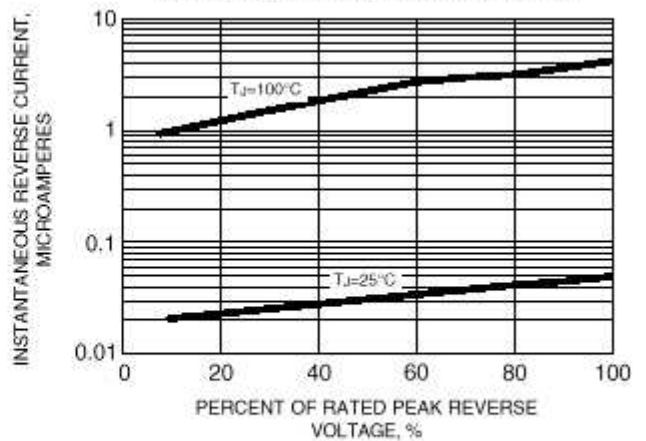


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

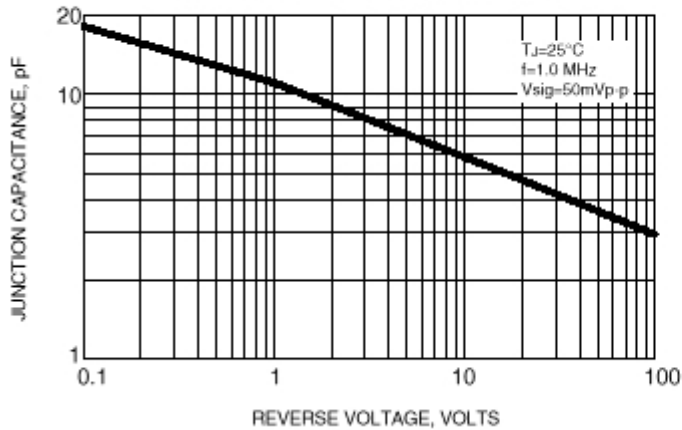


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

