

RATINGS AND CHARACTERISTIC CURVES 1N4001GP THRU 1N4007GP

FIG. 1 — FORWARD CURRENT DERATING CURVE

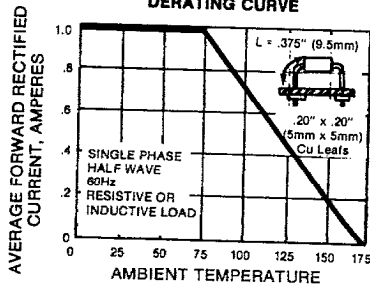


FIG. 2 — TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

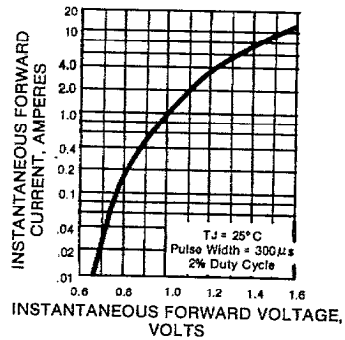


FIG. 3 — MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

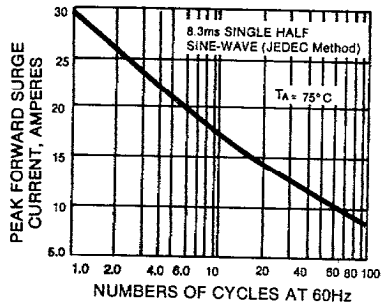


FIG. 4 — TYPICAL JUNCTION CAPACITANCE

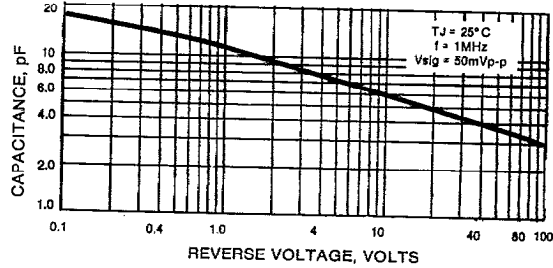


FIG. 5 — TYPICAL REVERSE CHARACTERISTICS

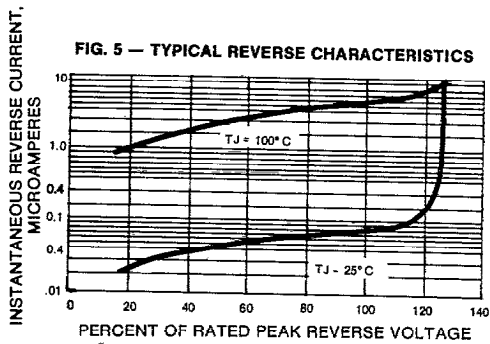
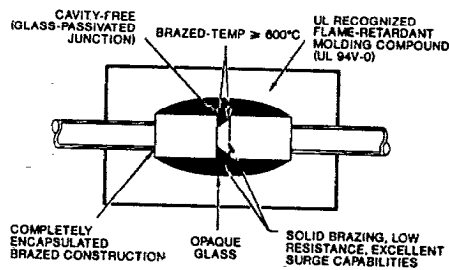


FIG. 6 — SUPERRECTIFIER



1N4001GP THRU 1N4007GP

MINIATURE GLASS PASSIVATED JUNCTION PLASTIC RECTIFIER

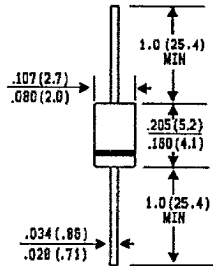
Voltage - 50 to 1000 Volts Current -1.0 Ampere

FEATURES

- ◆ High temperature metallurgically bonded constructed rectifiers
- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ Glass passivated cavity-free junction in DO-41 package
- ◆ 1.0 Ampere operation at $T_A = 75^\circ\text{C}$ with no thermal runaway
- ◆ Typical I_R less than $0.1 \mu\text{A}$
- ◆ Capable of meeting environmental standards of MIL-S-19500
- ◆ High temperature soldering guaranteed: $350^\circ\text{C}/10$ seconds/.375", (9.5mm) lead length at 5 lbs., (2.3kg) tension

PATENTED*

DO-41



Dimensions in inches and (millimeters)

*Glass-plastic encapsulation technique is covered by Patent No. 3,996,602 of 1976 and brazed-lead assembly to Patent No. 3,530,306 of 1976



MECHANICAL DATA

Case: JEDEC DO-41 Molded plastic over glass

Terminals: Axial leads, solderable per MIL-STD-202, Method 208

Polarity: Color band denotes cathode

Mounting Position: Any

Weight: 0.012 ounce, 0.3 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Resistive or inductive load. For capacitive load, derate current by 20%.

	SYMBOLS	1N 4001GP	1N 4002GP	1N 4003GP	1N 4004GP	1N 4005GP	1N 4006GP	1N 4007GP	UNITS
*Maximum Recurrent 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 .375", (9.5mm) Lead Lengths at $T_A = 75^\circ\text{C}$	$I_{(AV)}$	1.0							Amps
*Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30.0							Amps
Maximum Instantaneous Forward Voltage at 1.0A	V_F	1.1							Volts
*Maximum Full Load Reverse Current, Full Cycle Average .375", (9.5mm) Lead Length $T_A = 75^\circ\text{C}$	$I_{R(AV)}$	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	50.0							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)	$R_{\theta JA}$	45.0							$^\circ\text{C/W}$
*Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +175							$^\circ\text{C}$

NOTES: 1. Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RT} = 0.25\text{A}$.

2. Measured at 1.0 MHz and applied reverse voltage of 4.0 V_{DC} .

3. Thermal Resistance from Junction to Ambient at .375" (9.5mm) Lead Lengths, P.C. Board Mounted.

* JEDEC Registered Values

RATINGS AND CHARACTERISTIC CURVES 1N3611GP THRU 1N3614GP AND 1N3957GP

FIG. 1 — FORWARD CURRENT DERATING CURVE

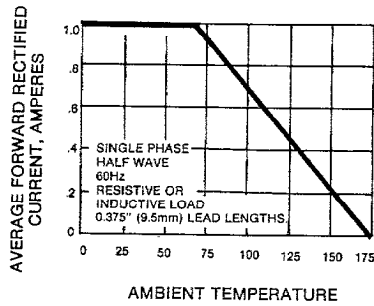


FIG. 2 — TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

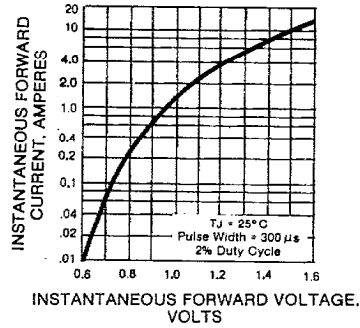


FIG. 3 — MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

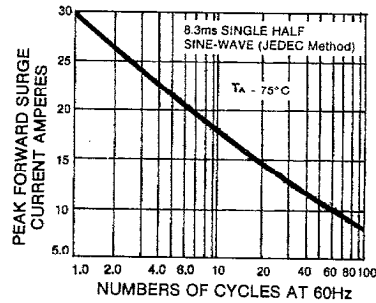


FIG. 4 — TYPICAL JUNCTION CAPACITANCE

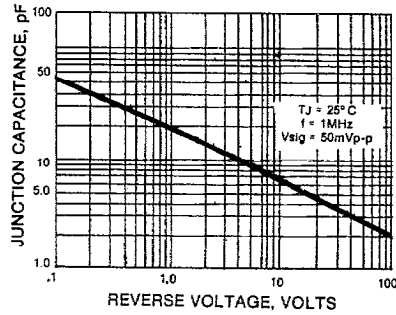


FIG. 5 — TYPICAL REVERSE CHARACTERISTICS

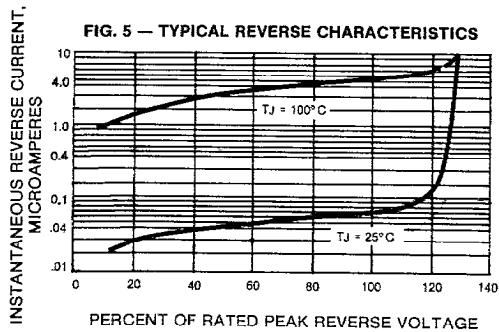


FIG. 6 — SUPERRECTIFIER

