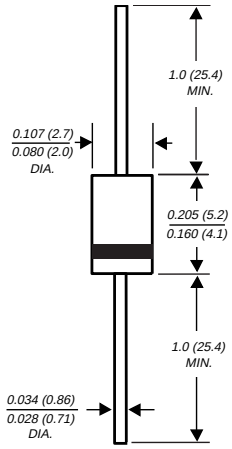
1N4001GP THRU 1N4007GP

GLASS PASSIVATED JUNCTION RECTIFIER

Reverse Voltage - *50 to 1000 Volts* ***Forward Current -*** *1.0 Ampere*

PATENTED*

DO-204AL



NOTE: *Lead diameter is* 0.026 (0.66) / 0.023 (0.58) *for suffix "E" part numbers*

Dimensions in inches and (millimeters)

* *Glass-plastic encapsulation technique is covered by Patent No. 3,996,602 and brazed-lead assembly by Patent No. 3,930,306*

SUPERECTIFIER®

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- High temperature metallurgically bonded construction
- Glass passivated cavity-free junction
- Capable of meeting environmental standards of MIL-S-19500
- 1.0 Ampere operation at T_A=75°C with no thermal runaway
- Typical I_R less than 0.1µA
- High temperature soldering guaranteed: 350°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

MECHANICAL DATA

Case: JEDEC DO-204AL molded plastic over glass body
Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
Polarity: Color band denotes cathode end
Mounting Position: Any
Weight: 0.012 ounce, 0.3 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

	SYMBOLS	1N 4001GP	1N 4002GP	1N 4003GP	1N 4004GP	1N 4005GP	1N 4006GP	1N 4007GP	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}	30.0							Amps
Maximum instantaneous forward voltage at 1.0A	V_F	1.1							Volts
* Maximum full load reverse current, full cycle average 0.375" (9.5mm) lead length T_A= 75°C	$I_{R(AV)}$	30.0							µA
* Maximum DC reverse current T_A=25°C at rated DC blocking voltage T_A=125°C	I_R	5.0 50.0							µA
Typical reverse recovery time (NOTE 1)	trr	2.0							µs
Typical junction capacitance (NOTE 2)	C_J	8.0							pF
Typical thermal resistance (NOTE 3)	$R_{\Theta JA}$ $R_{\Theta JL}$	55.0 25.0							°C/W
* Operating junction and storage temperature range	T_J, T_{STG}	-65 to +175							°C

NOTES:
(1) Reverse recovery test conditions: I_F=0.5A, I_R=1.0A, I_{rr}= 0.25A
(2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
(3) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted
*JEDEC registered values

GENERAL SEMICONDUCTOR®

RATINGS AND CHARACTERISTIC CURVES 1N4001GP THRU 1N4007GP

FIG. 1 - FORWARD CURRENT DERATING CURVE

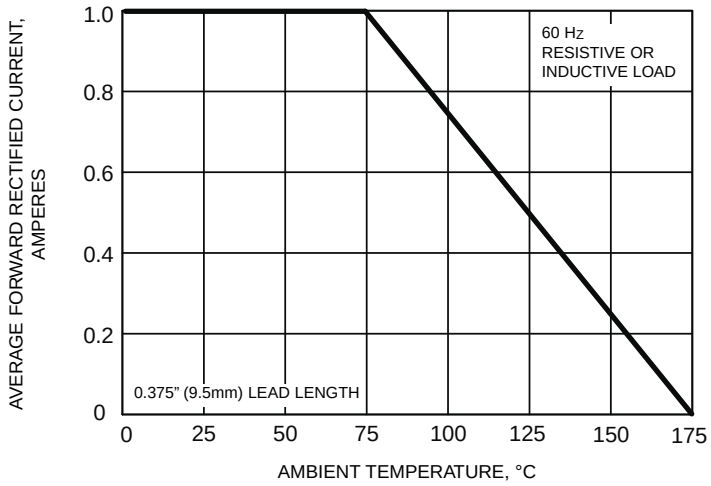


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

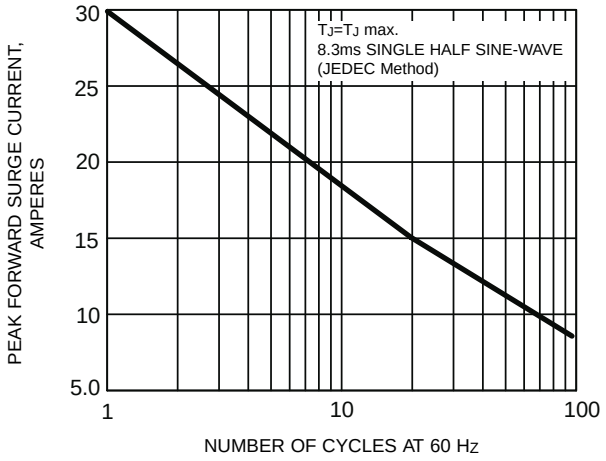


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

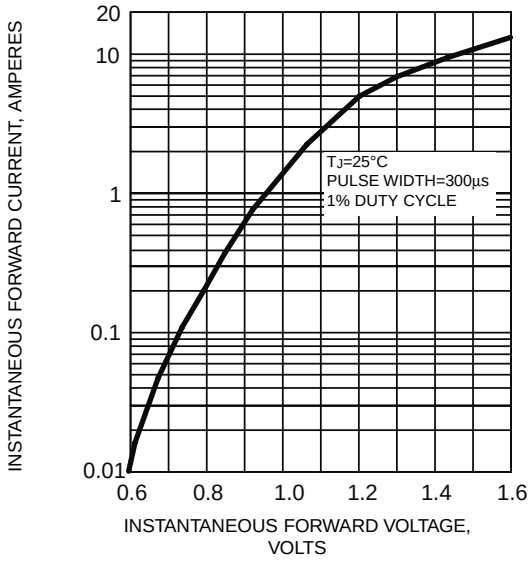


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

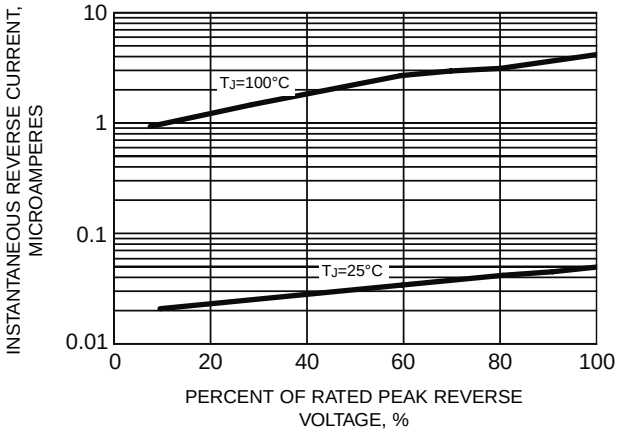


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

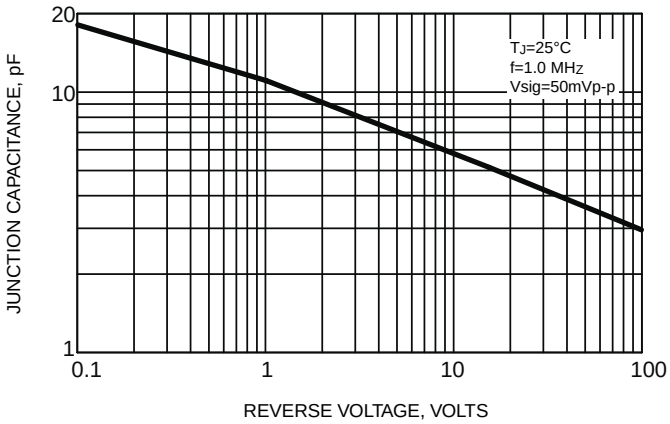
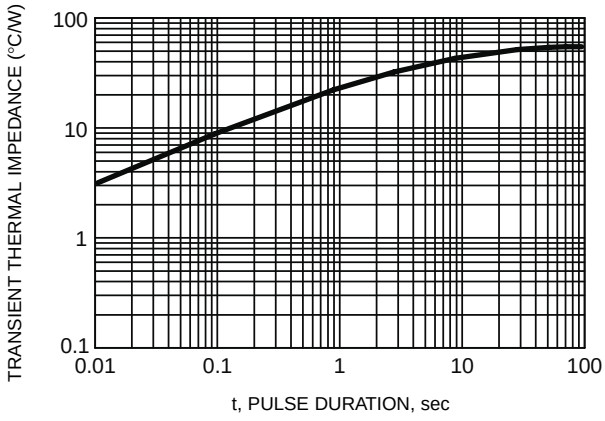


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE



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