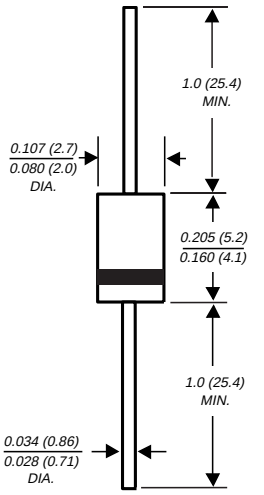
1N4001 THRU 1N4007

GENERAL PURPOSE PLASTIC RECTIFIER

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

DO-204AL



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

Dimensions in inches and (millimeters)

FEATURES

- The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- Construction utilizes void-free molded plastic technique
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed: 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

MECHANICAL DATA

Case: JEDEC DO-204AL molded plastic 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 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) T_A=75°C	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 at T_L=75°C	$I_{R(AV)}$	30.0							µA
*Maximum DC reverse current at rated DC blocking voltage T_A= 25°C / T_A=100°C	I_R	5.0 / 50.0							µA
Typical reverse recovery time (NOTE 1)	t_{rr}	30.0							µs
Typical junction capacitance (NOTE 2)	C_J	15.0							pF
Typical thermal resistance (NOTE 3)	$R_{\Theta JA}$ / $R_{\Theta JL}$	50.0 / 25.0							°C/W
Maximum DC blocking voltage temperature	T_A	+150							°C
*Operating junction and storage temperature range	T_J, T_{STG}	-50 to +175							°C

NOTES:
(1) Measured on Tektronix Type "S" recovery plug-in. Tektronix 545 Scope or equivalent, I_{FM}=20mA, I_{RM}=1mA
(2) Measured at 1.0 MH_Z and applied reverse voltage of 4.0 Volts
(3) Thermal resistance from junction to ambient and from junction to lead at 0.375" (9.5mm) lead length, P.C.B. mounted
*JEDEC registered value

GENERAL SEMICONDUCTOR

RATINGS AND CHARACTERISTIC CURVES 1N4001 THRU 1N4007

FIG.1 - FORWARD CURRENT DERATING CURVE

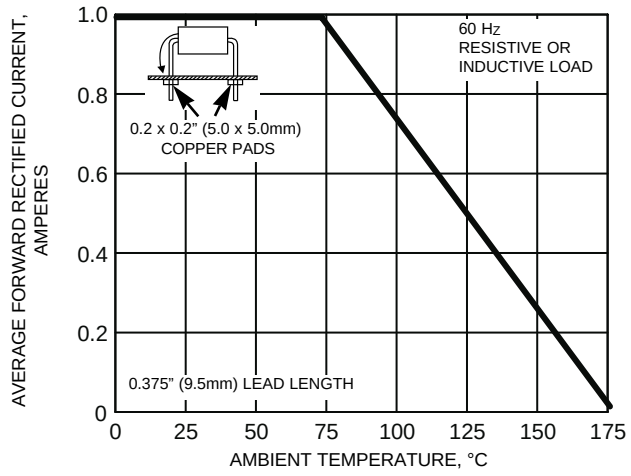


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

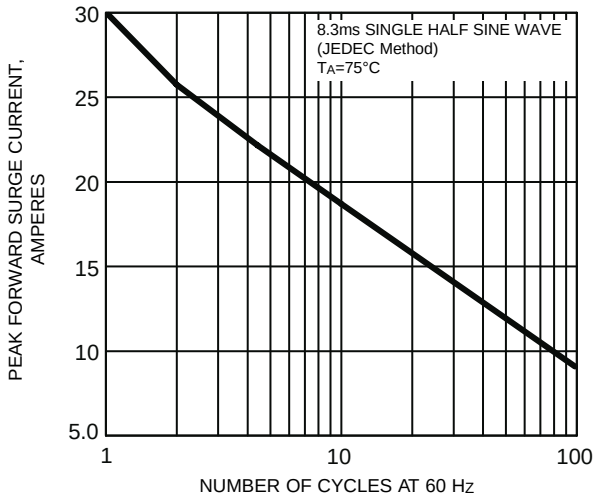


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

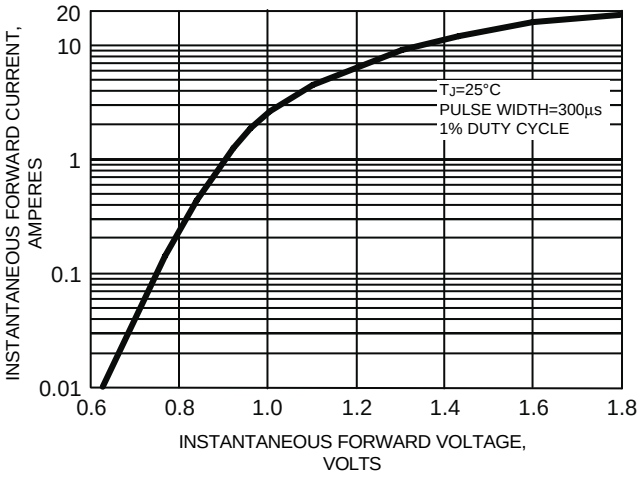


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

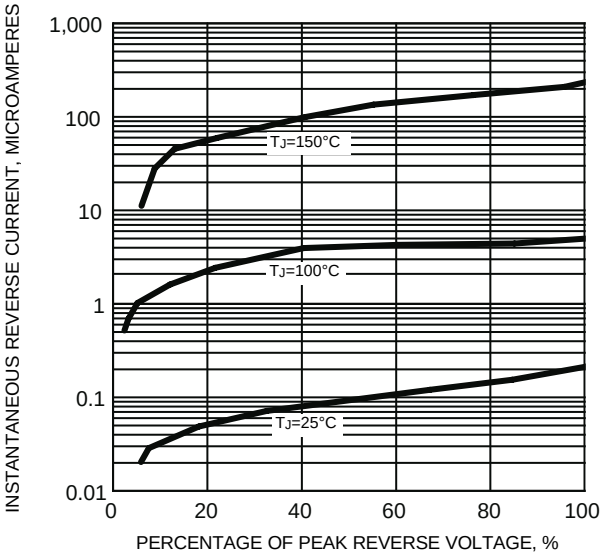


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

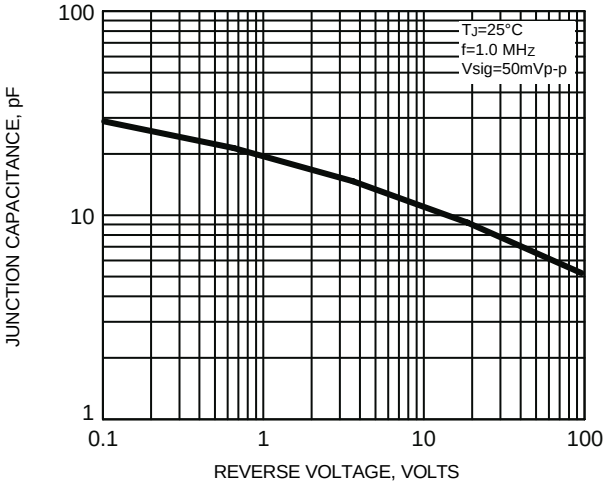
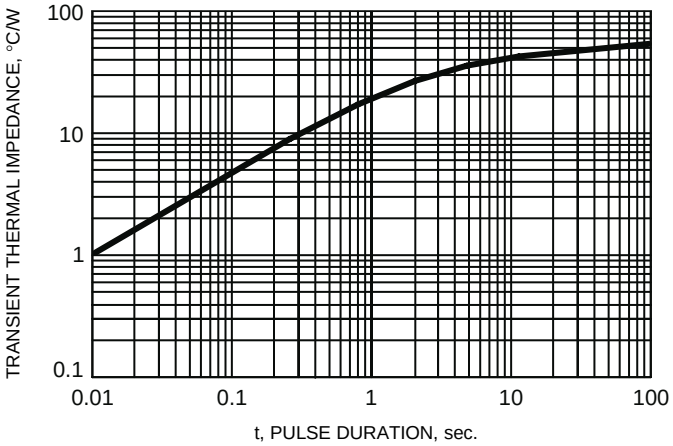


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE



GENERAL SEMICONDUCTOR