



1N4001G thru 1N4007G

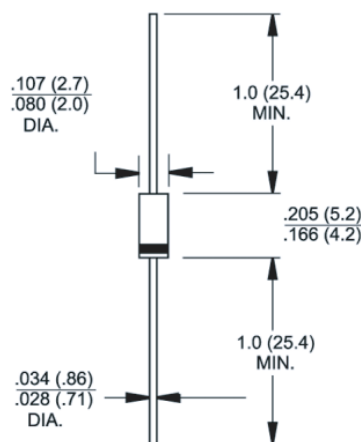
1.0 Amp. Glass Passivated Junction Rectifiers
Voltage Range 50 to 1000 Volts Forward Current 1.0 Ampere

Features

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



DO-204AL (DO-41)



Dimensions in inches and (millimeters)

Mechanical Data

- Case: JEDEC DO-204AL (DO-41), 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, 0.335 gram

Maximum Ratings and Electrical Characteristics

Ratings at 25 $^\circ\text{C}$ ambient temperature unless otherwise specified.

Parameters	Symbol	1N 4001G	1N 4002G	1N 4003G	1N 4004G	1N 4005G	1N 4006G	60/7105 1N4007G	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 $T_A=75^\circ\text{C}$	$I_{F(AV)}$	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 full load reverse current, full cycle average 0.375" (9.5mm) lead length $T_A=75^\circ\text{C}$	$I_{R(AV)}$	30							μA
Maximum instantaneous forward voltage at 1.0A	V_F	1.1							Volts
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							μA
Typical reverse recovery time at $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{tr}=0.25\text{A}$	t_{rr}	2.0							μs
Typical junction capacitance at 4.0V, 1MHz	C_j	8.0							pF
Typical thermal resistance (NOTE 1)	R_{JA} R_{JL}	55.0 25.0							$^\circ\text{C}/\text{W}$
Operating junction and storage temperature range	T_J , T_{STG}	-65 to +175							$^\circ\text{C}$

Notes: 1. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted

RATINGS AND CHARACTERISTIC CURVES

($T_A = 25^\circ\text{C}$ unless otherwise noted)

FIG. 1 - FORWARD CURRENT DERATING CURVE

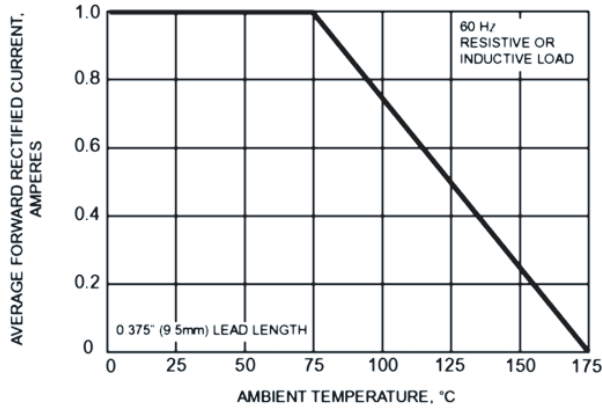


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

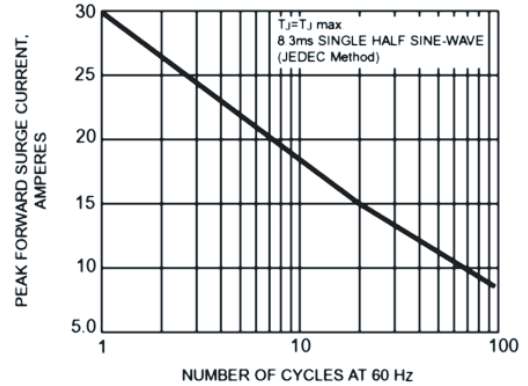


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

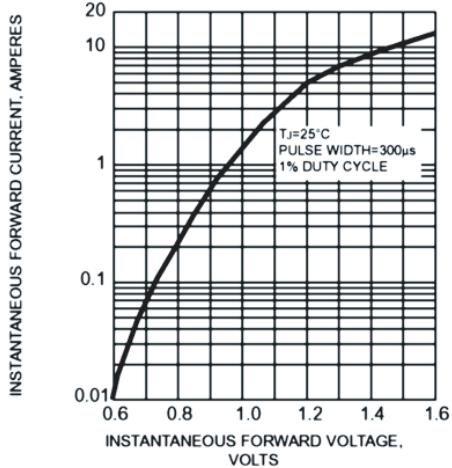


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

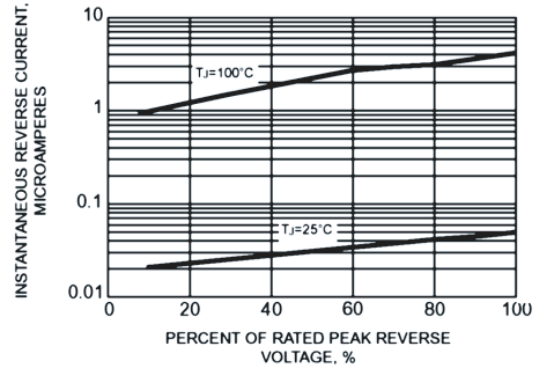


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

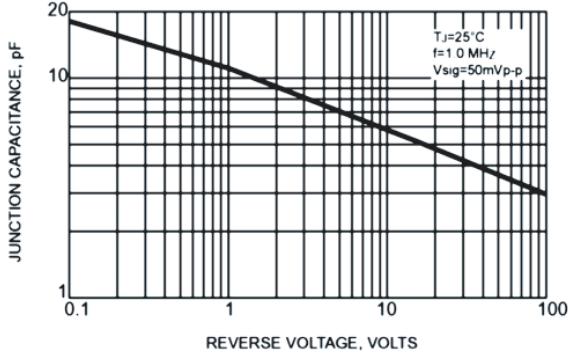


FIG. 6 - TYPICAL TRANSIENT THERMAL IMPEDANCE

