



1N4001 thru 1N4007

1.0 Amp. General Purpose Plastic Rectifiers
Voltage Range 50 to 1000 Volts Forward Current 1.0 Ampere

Features

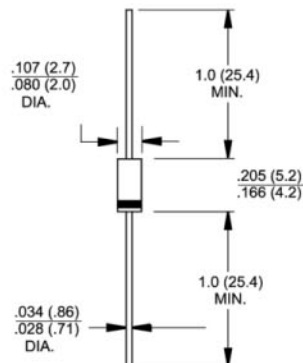
- ◆ Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- ◆ Construction utilizes void-free molded plastic technique
- ◆ Low reverse leakage
- ◆ High forward surge capability
- ◆ High temperature soldering guaranteed:
250°C/10 seconds, 0.375" (9.5mm) lead length,
5 lbs. (2.3kg)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



DO-204AL (DO-41)

Mechanical Data

- ◆ Case: JEDEC DO-204AL (DO-41), 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, 0.33 gram



Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Dimensions in inches and (millimeters)

Parameter	Symbols	1N4001	1N4002	1N4003	1N4004	1N4005	1N4006	1N4007	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) $T_A = 75^\circ\text{C}$	I_{FSM}	30.0							Amps
Maximum full load reverse current, full cycle average 0.375" (9.5mm) lead length at $T_A = 75^\circ\text{C}$	$I_{R(AV)}$	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 $T_A = 100^\circ\text{C}$	I_R	5.0 50							μA
Typical reverse recovery time at $I_{FM} = 20\text{mA}$, $I_{RM} = 1\text{mA}$ (Note 2)	t_r	30.0							μs
Typical junction capacitance at 4.0V, 1MHz	C_j	15							pF
Typical thermal resistance (Note 1)	$R_{\theta JA}$ $R_{\theta JL}$	50.0 25.0							$^\circ\text{C/W}$
Maximum DC blocking voltage temperature	T_A	+150							$^\circ\text{C}$
Operating junction and storage temperature range	T_J , T_{STG}	-50 to +175							$^\circ\text{C}$

- Notes:**
1. Thermal resistance from junction to ambient, and from junction to lead at 0.375" (9.5mm) lead length, P.C.B. mounted
 2. Measured on Tektronix type "S" recovery plug-in. Tektronix 545 scope or equivalent
 3. This product is ROHS compliant.
 4. This product is lead-free.
 5. This product can stand 260 degree (less than 10 seconds).

RATINGS AND CHARACTERISTIC CURVES

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

