

General Purpose Plastic Rectifiers

PRODUCT SUMMARY

Reverse Voltage 50 to 1000 Volts
 Forward current 1.0 Ampere



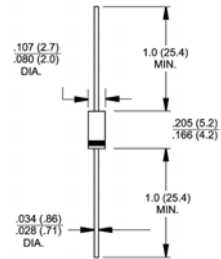
FEATURES

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
 T_J is 150 °C (Max.) and T_{STG} is 175 °C (Max.) with PI glue

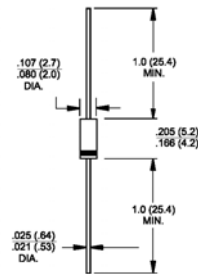
MECHANICAL DATA

Case: JEDEC DO-204AL (DO-41)/A-405, molded plastic body
 Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
 Polarity: Color band denotes cathode end
 Mounting Position: Any
 Weight: DO-41 - 0.012 ounce, 0.33 gram
 A-405 - 0.008 ounce, 0.23 gram

DO-204AL (DO-41)



A-405



Note: Lead diameter is 0.025(0.64)/0.021(0.53) for suffix "S" part numbers



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

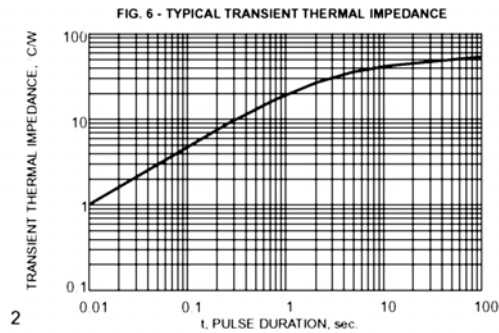
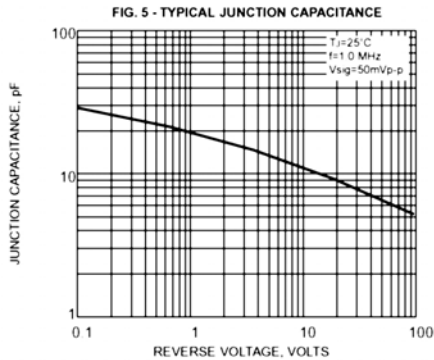
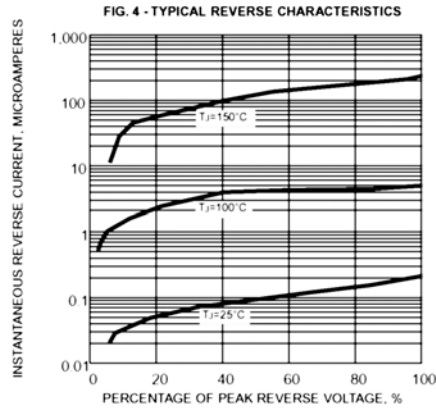
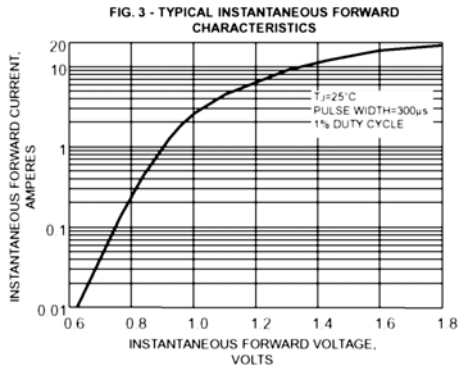
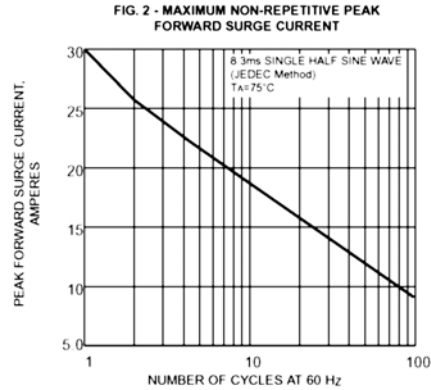
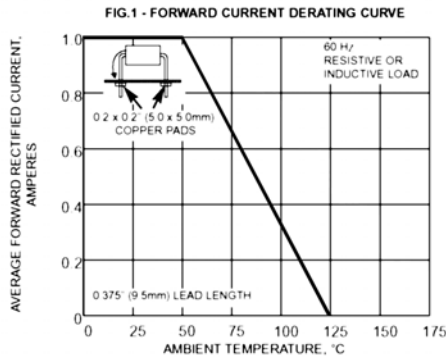
Ratings at 25 °C ambient temperature unless otherwise specified.

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 $T_A=50^\circ\text{C}$	$I_{F(AV)}$	1.0							Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) $T_A=50^\circ\text{C}$	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 at rated DC blocking voltage	I_R	$T_A=25^\circ\text{C}$: 5.0 $T_A=100^\circ\text{C}$: 50							μA
Typical reverse recovery time at $I_{FM}=20\text{mA}$, $I_{RM}=1\text{mA}$ (Note 2)	t_{rr}	1.0							μS
Typical junction capacitance at 4.0V, 1MHz	C_j	15							pF
Typical thermal resistance (Note 1)	$R_{\theta JA}$ $R_{\theta JL}$	$R_{\theta JA}$: 50.0 $R_{\theta JL}$: 25.0							$^\circ\text{C/W}$
Operating junction temperature range	T_j	-55 to +125							$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 to +150							$^\circ\text{C}$

- 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

RATINGS AND CHARACTERISTIC CURVES

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



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