

General Purpose Plastic Rectifiers

PRODUCT SUMMARY

Reverse Voltage 50 to 1000 Volts
 Forward current 1.0 Ampere



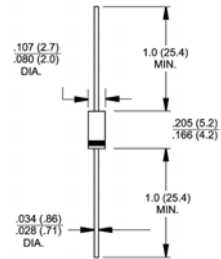
FEATURES

- 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

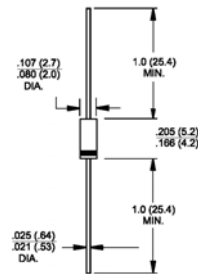
Case: JEDEC DO-204AL (DO-41)/A-405, molded plastic body
 Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026
 Polarity: Color band denotes cathode end
 Mounting Position: Any
 Weight: DO-41 - 0.012 ounce, 0.33 gram
 A-405 - 0.008 ounce, 0.23 gram

DO-204AL (DO-41)



Dimensions in inches and (millimeters)

A-405



Dimensions in inches and (millimeters)

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



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

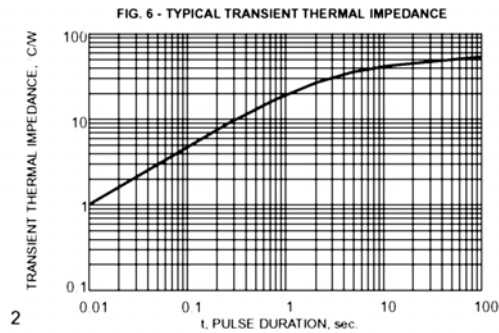
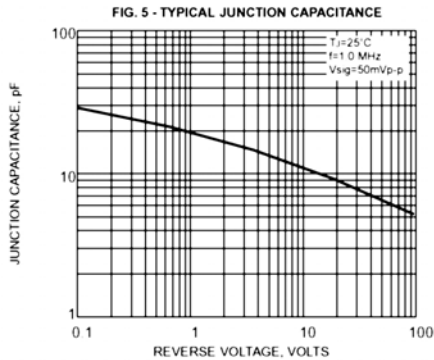
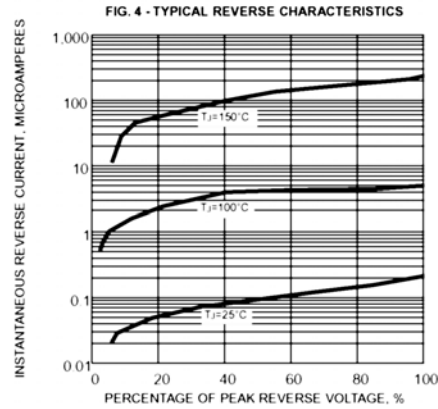
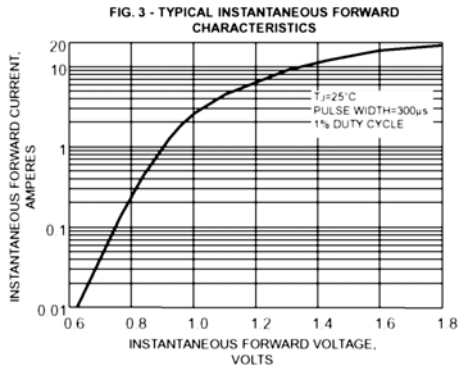
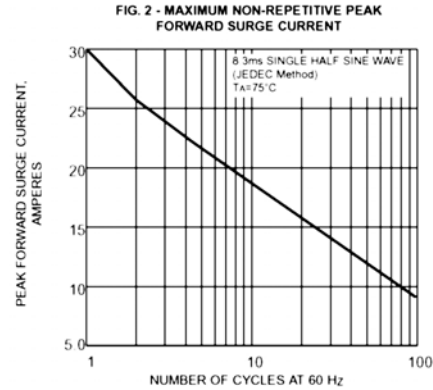
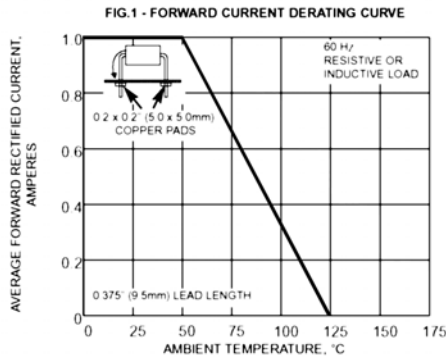
Ratings at 25 °C ambient temperature unless otherwise specified.

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	$T_A=25^\circ\text{C}$ 50 $T_A=100^\circ\text{C}$							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)	$R_{\theta JA}$ $R_{\theta JL}$	50.0 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)



Information furnished by Silicon Standard Corporation is believed to be accurate and reliable. However, Silicon Standard Corporation makes no guarantee or warranty, expressed or implied, as to the reliability, accuracy, timeliness or completeness of such information and assumes no responsibility for its use, or for infringement of any patent or other intellectual property rights of third parties that may result from its use. Silicon Standard reserves the right to make changes as it deems necessary to any products described herein for any reason, including without limitation enhancement in reliability, functionality or design. No license is granted, whether expressly or by implication, in relation to the use of any products described herein or to the use of any information provided herein, under any patent or other intellectual property rights of Silicon Standard Corporation or any third parties.