

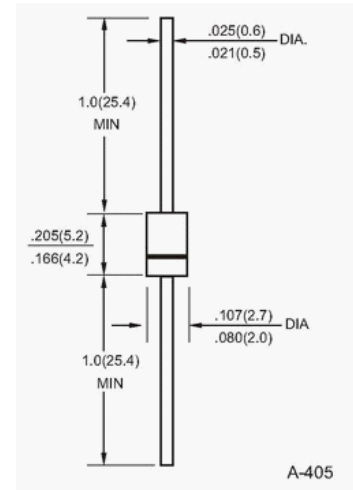


REVERSE VOLTGE 50V~1000V, FORWARD CURRENT 1.0AMP Rectifiers

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

DO-41(0.6mm)



Mechanical Data

- **Case:** 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.

| | Symbols | 1N4001S | 1N4002S | 1N4003S | 1N4004S | 1N4005S | 1N4006S | 1N4007S | 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 $T_A=75^\circ\text{C}$ | $I_{(AV)}$ | 1.0 | | | | | | | | Amp |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (MIL-STD-750D 4066 method) $T_A=75^\circ\text{C}$ | I_{FSM} | 30.0 | | | | | | | | Amps |
| Maximum instantaneous forward voltage at 1.0A | V_F | 1.1 | | | | | | | | Volts |
| Maximum DC reverse current at rated DC blocking voltage $T_A=25^\circ\text{C}$ $T_A=100^\circ\text{C}$ | I_R | 5.0 50.0 | | | | | | | | μA |
| Typical reverse recovery time (Note 1) | T_{rr} | 2.0 | | | | | | | | μS |
| Typical junction capacitance (Note 2) | C_J | 15.0 | | | | | | | | F |
| Typical thermal resistance (Note 3) | $R_{\theta JA}$ $R_{\theta JL}$ | 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) Reverse recovery test conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_F=0.25\text{A}$
- (2) Measured at 1.0MHz 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



1N4001S ~ 1N4007S

RATINGS AND CHARACTERISTIC CURVES

