

General Purpose Plastic Rectifier

1N4001 thru 1N4007

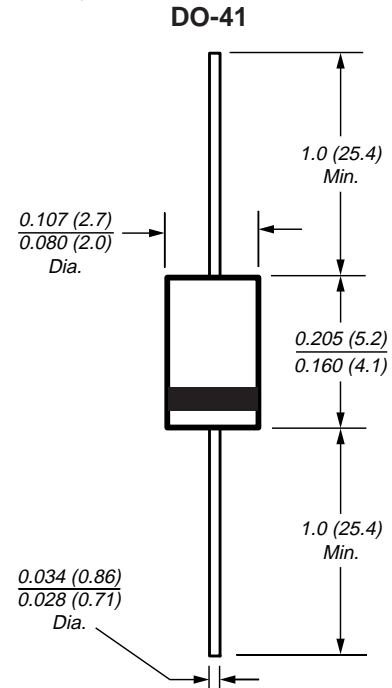
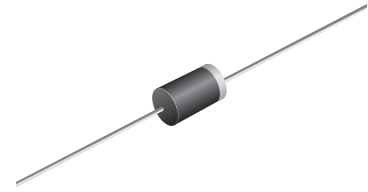
Reverse Voltage: 50 to 1000V
Forward Current: 1.0A

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Low reverse leakage
- High forward surge capability
- High temperature soldering guaranteed: 350°C/10 Seconds, 0.375" (9.5mm) lead length
- Guardring for overvoltage protection

Mechanical Data

- Case: JEDEC 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 oz., 0.3 g
- Weight: 0.34 g



Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symb.	1N 4001	1N 4002	1N 4003	1N 4004	1N 4005	1N 4006	1N 4007	Unit
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	V
* Maximum RMS voltage	VRMS	35	70	140	280	420	560	700	V
* Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	V
* Maximum average forward rectified current 0.375" (9.5mm) lead length at T _A = 75°C	I _{F(AV)}	1.0							A
* Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) T _A = 75°C	I _{FSM}	30							A
* Maximum full load reverse current, full cycle average 0.375" (9.5mm) lead length T _L = 75°C	I _{R(AV)}	30							μA
Typical thermal resistance ⁽¹⁾	R _{θJA} R _{θJL}	50 25							°C/W
* Maximum DC blocking voltage temperature	T _A	+150							V
* Operating junction and storage temperature range	T _J , T _{STG}	-50 to +175							°C

Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

Maximum instantaneous forward voltage at 1.0A	V _F	1.1							V
* Maximum DC reverse current at rated DC blocking voltage	I _R	5.0 50							μA
Typical junction capacitance at 4.0V, 1MHz	C _J	15							pF

Note: (1) Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted *JEDEC registered values

Ratings and Characteristic Curves (TA = 25°C unless otherwise noted)

Fig. 1 – Forward Current Derating Curve

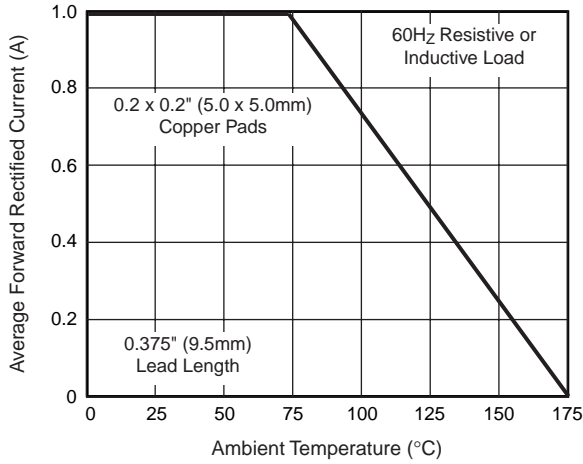


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current

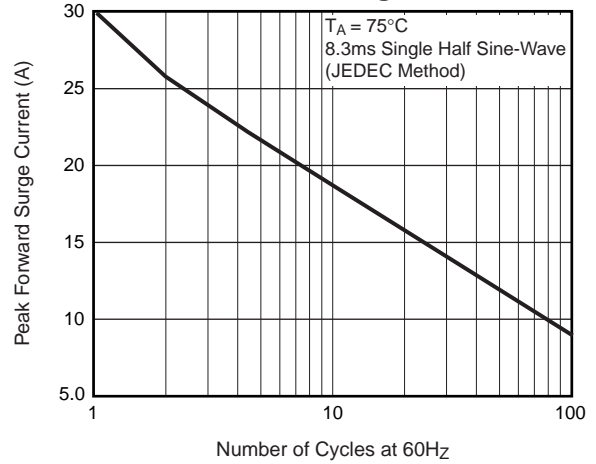


Fig. 3 – Typical Instantaneous Forward Characteristics

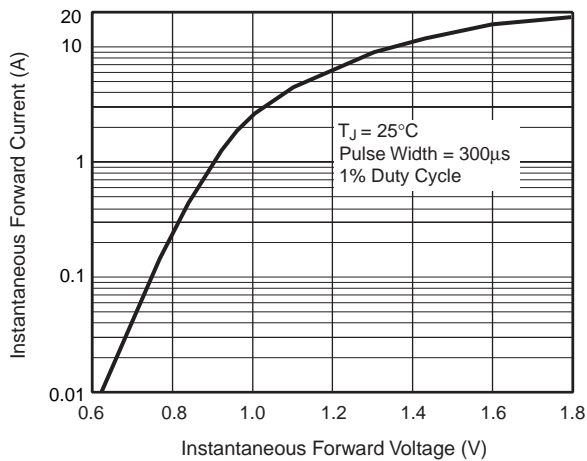


Fig. 4 – Typical Reverse Characteristics

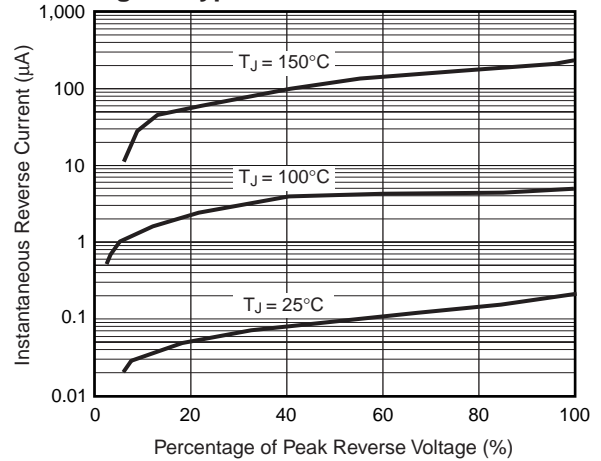


Fig. 5 – Typical Junction Capacitance

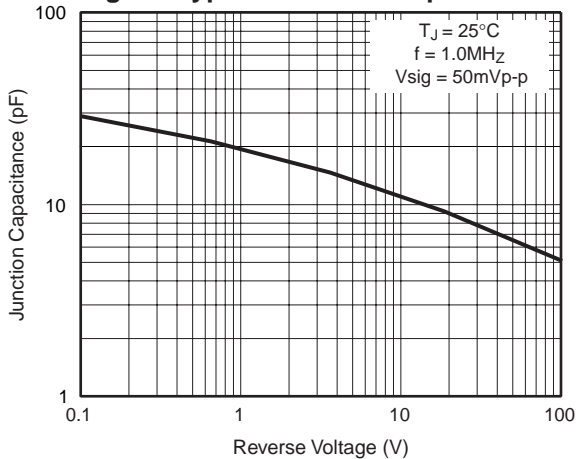


Fig. 6 – Typical Transient Thermal Impedance

