

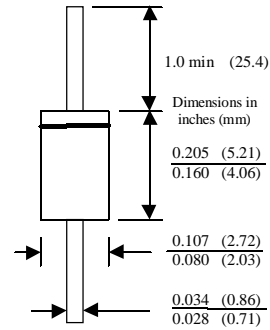
# 1N4001 - 1N4007

## Features

- Low forward voltage drop.
- High surge current capability.



**DO-41**  
COLOR BAND DENOTES CATHODE



## 1.0 Ampere General Purpose Rectifiers

### Absolute Maximum Ratings\*

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

Symbol	Parameter	Value	Units
$I_O$	Average Rectified Current .375" lead length @ $T_A = 75^\circ\text{C}$	1.0	A
$i_{f(\text{surge})}$	Peak Forward Surge Current 8.3 ms single half-sine-wave Superimposed on rated load (JEDEC method)	30	A
$P_D$	Total Device Dissipation Derate above $25^\circ\text{C}$	2.5 20	W mW/ $^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	50	$^\circ\text{C}/\text{W}$
$T_{\text{stg}}$	Storage Temperature Range	-55 to +175	$^\circ\text{C}$
$T_J$	Operating Junction Temperature	-55 to +150	$^\circ\text{C}$

\*These ratings are limiting values above which the serviceability of any semiconductor device may be impaired.

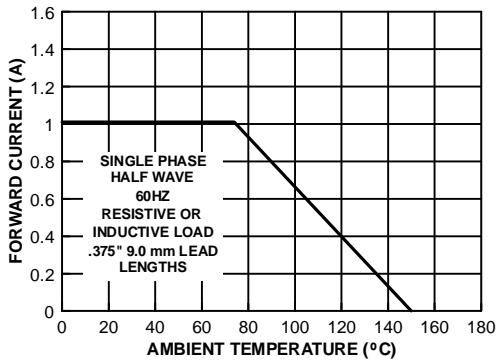
### Electrical Characteristics

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

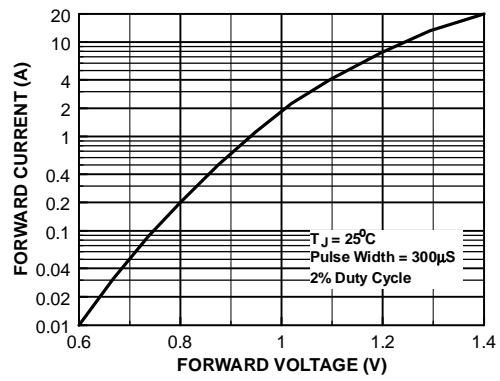
Parameter	Device							Units
	4001	4002	4003	4004	4005	4006	4007	
Peak Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
DC Reverse Voltage (Rated $V_R$ )	50	100	200	400	600	800	1000	V
Maximum Reverse Current @ rated $V_R$ $T_A = 25^\circ\text{C}$	5.0							$\mu\text{A}$
$T_A = 100^\circ\text{C}$	500							$\mu\text{A}$
Maximum Forward Voltage @ 1.0 A	1.1							V
Maximum Full Load Reverse Current, Full Cycle $T_A = 75^\circ\text{C}$	30							$\mu\text{A}$
Typical Junction Capacitance $V_R = 4.0\text{ V}, f = 1.0\text{ MHz}$	15							pF

Typical Characteristics

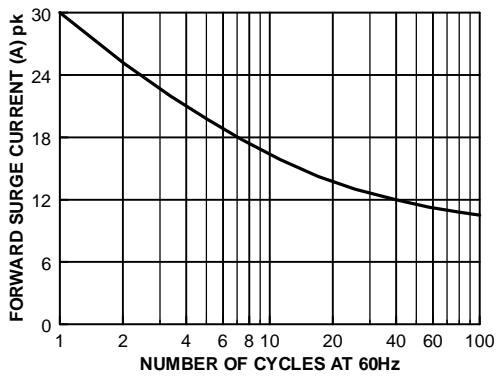
Forward Current Derating Curve



Forward Characteristics



Non-Repetitive Surge Current



Reverse Characteristics

