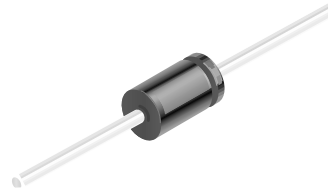


# 1N4001 - 1N4007

## Features

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



**DO-41**  
COLOR BAND DENOTES CATHODE

## General Purpose Rectifiers

### Absolute Maximum Ratings\*

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

Symbol	Parameter	Value							Units
		4001	4002	4003	4004	4005	4006	4007	
$V_{RRM}$	Peak Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V
$I_{F(AV)}$	Average Rectified Forward Current, .375 " lead length @ $T_A = 75^\circ\text{C}$	1.0							A
$I_{FSM}$	Non-repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine-Wave	30							A
$T_{stg}$	Storage Temperature Range	-55 to +175							$^\circ\text{C}$
$T_J$	Operating Junction Temperature	-55 to +175							$^\circ\text{C}$

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

### Thermal Characteristics

Symbol	Parameter	Value	Units
$P_D$	Power Dissipation	3.0	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	50	$^\circ\text{C/W}$

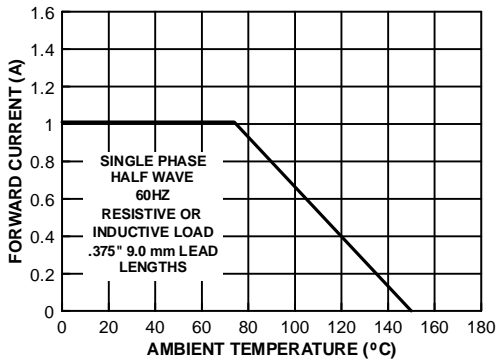
### Electrical Characteristics

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

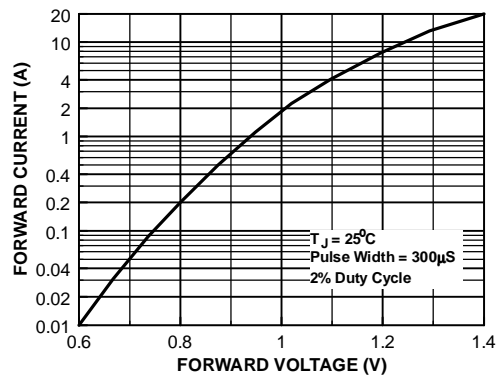
Symbol	Parameter	Device							Units
		4001	4002	4003	4004	4005	4006	4007	
$V_F$	Forward Voltage @ 1.0 A	1.1							V
$I_{rr}$	Maximum Full Load Reverse Current, Full Cycle $T_A = 75^\circ\text{C}$	30							$\mu\text{A}$
$I_R$	Reverse Current @ rated $V_R$ $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	5.0 500							$\mu\text{A}$ $\mu\text{A}$
$C_T$	Total Capacitance $V_R = 4.0\text{ V}$ , $f = 1.0\text{ MHz}$	15							pF

Typical Characteristics

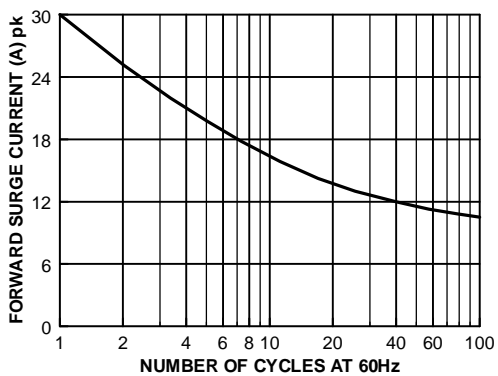
Forward Current Derating Curve



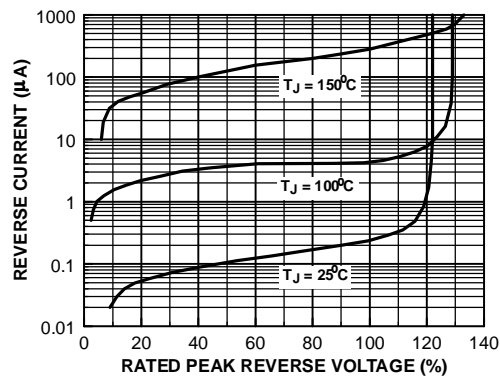
Forward Characteristics



Non-Repetitive Surge Current



Reverse Characteristics



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CoolFET™	FASTr™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
DOME™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
EcoSPARK™	GTO™	MSX™	QT Optoelectronics™	TinyLogic®
E <sup>2</sup> CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	ꞆC™	OCX™	RapidConfigure™	UHC™
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Programmable Active Droop™		OPTOPLANAR™	SMART START™	

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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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