May 2009



1N4001 - 1N4007 General Purpose Rectifiers

Features

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



DO-41 COLOR BAND DENOTES CATHODE

Symbol	Parameter	Value						Units	
		4001	4002	4003	4004	4005	4006	4007	Units
V _{RRM}	Peak Repetitive Reverse Voltage	50 100 200 400 600 800 1000		1000	V				
I _{F(AV)}	Average Rectified Forward Current .375 " lead length @ T _A = 75°C				1.0				А
I _{FSM}	Non-Repetitive Peak Forward Surge Current 8.3ms Single Half-Sine-Wave	30		A					
l ² t	Rating for Fusing (t<8.3ms)	3.7		A ² sec					
T _{STG}	Storage Temperature Range	-55 to +175		°C					
Т _Ј	Operating Junction Temperature	-55 to +175			°C				

Absolute Maximum Ratings * T_A = 25 °C unless otherwise noted

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

Thermal Characteristics

Symbol	Parameter	Value	Units	
PD	Power Dissipation	3.0	W	
$R_{ extsf{ heta}JA}$	Thermal Resistance, Junction to Ambient	50	°C/W	

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

Symbol	Parameter	Value	Units
V _F	Forward Voltage @ 1.0A	1.1	V
l _{rr}	Maximum Full Load Reverse Current, Full Cycle $T_A = 75^{\circ}C$	30	μΑ
Ι _R	$\begin{array}{llllllllllllllllllllllllllllllllllll$	5.0 50	μΑ μΑ
CT	Total Capacitance V _R = 4.0V, f = 1.0MHz	15	pF

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Typical Performance Characteristics

Figure 1. Forward Current Derating Curve

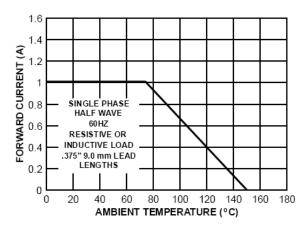


Figure 3. Non-Repetitive Surge Current

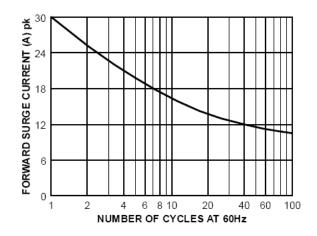


Figure 2. Forward Characteristics

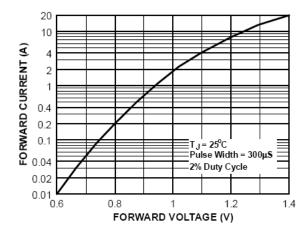
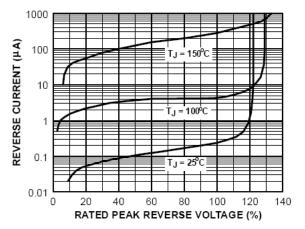


Figure 4. Reverse Characteristics



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