

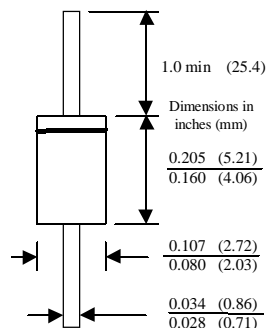
UF4001 - UF4007

Features

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



DO-41
COLOR BAND DENOTES CATHODE



1.0 Ampere Glass Passivated High Efficiency 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°C	2.08 17	W mW/ $^\circ\text{C}$
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	60	$^\circ\text{C}/\text{W}$
$R_{\theta JL}$	Thermal Resistance, Junction to Lead	15	$^\circ\text{C}/\text{W}$
T_{stg}	Storage Temperature Range	-65 to +150	$^\circ\text{C}$
T_J	Operating Junction Temperature	-65 to +150	$^\circ\text{C}$

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

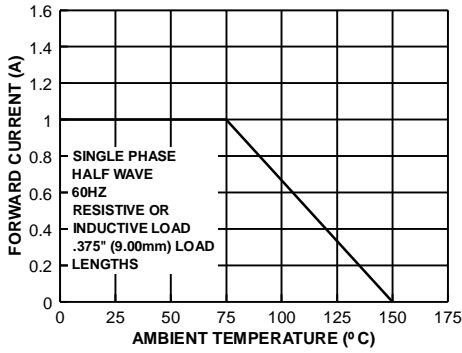
Electrical Characteristics

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

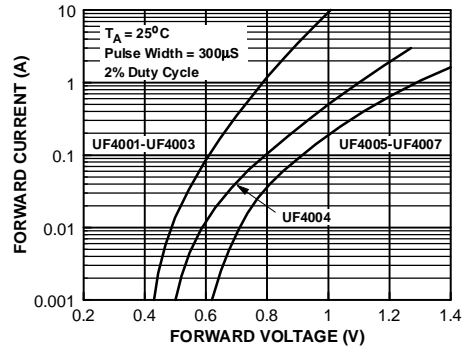
Parameter	Device							Units
	4001	4002	4003	4004	4005	4006	4007	
Peak Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
DC Reverse Voltage (Rated V_R)	50	100	200	400	600	800	1000	V
Maximum Reverse Current @ rated V_R $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	10 50							μA μA
Maximum Reverse Recovery Time $I_F = 0.5 \text{ A}$, $I_{R1} = 1.0 \text{ A}$, $I_{RR} = 0.25 \text{ A}$	50			75				nS
Maximum Forward Voltage @ 1.0 A	1.0			1.7				V
Typical Junction Capacitance $V_R = 4.0 \text{ V}$, $f = 1.0 \text{ MHz}$	17							pF

Typical Characteristics

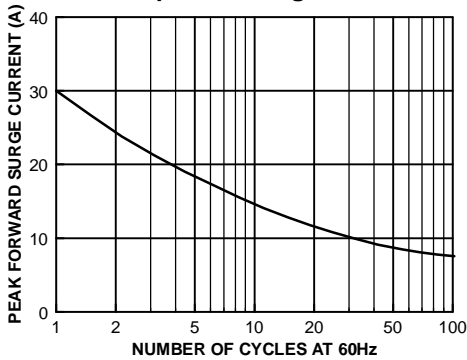
Forward Characteristics



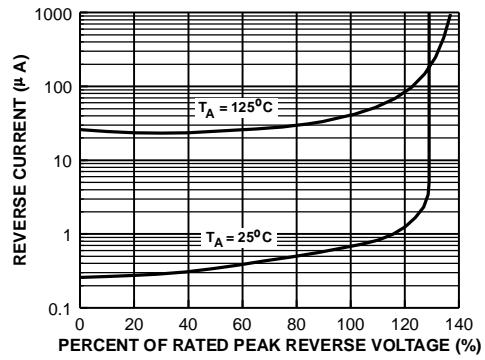
Forward Characteristics



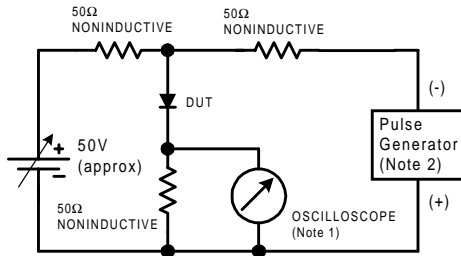
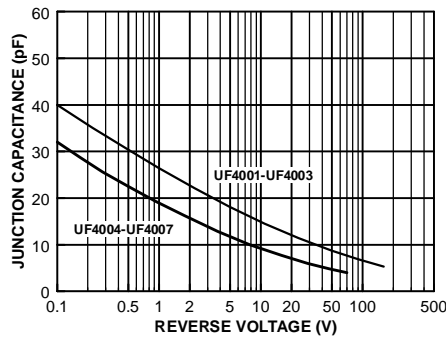
Non-Repetitive Surge Current



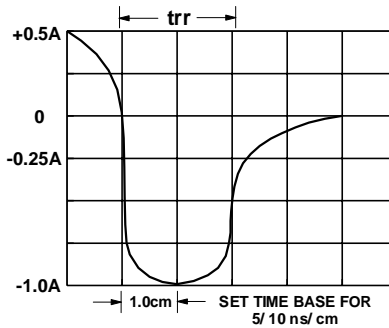
Reverse Characteristics



Typical Junction Capacitance



- NOTES:
 1. Rise time = 7.0 ns max; Input impedance = 1.0 megaohm 22 pf.
 2. Rise time = 10 ns max; Source impedance = 50 ohms.



Reverse Recovery Time Characteristic and Test Circuit Diagram

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