

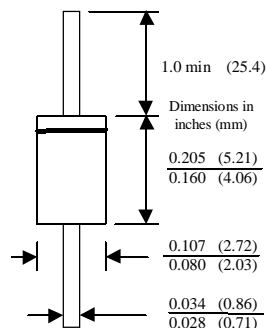
UF4001 - UF4007

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 | $^\circ\text{C/W}$ |
| $R_{\theta JL}$ | Thermal Resistance, Junction to Lead | 15 | $^\circ\text{C/W}$ |
| 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.

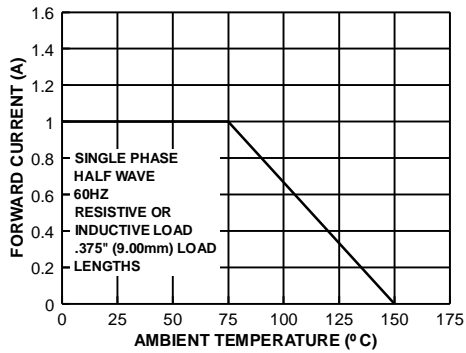
Electrical Characteristics

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

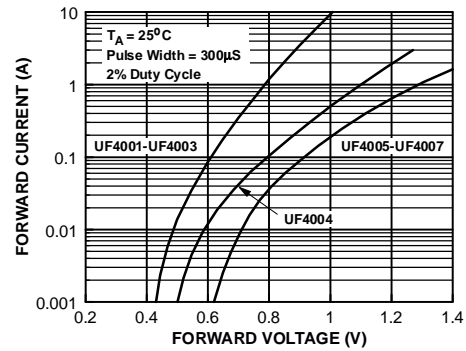
| Parameter | Device | | | | | | | Units |
|---|----------|------|------|------|------|------|------|----------|
| | 4001 | 4002 | 4003 | 4004 | 4005 | 4006 | 4007 | |
| Peak Repetitive Reverse Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | 35 | 70 | 140 | 280 | 420 | 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°C T _A = 100°C | 10 50 | | | | | | | μA μA |
| Maximum Reverse Recovery Time I _F = 0.5 A, I _R = 1.0 A, I _{RR} = 0.25 A | 50 | | | | 75 | | | nS |
| Maximum Forward Voltage @ 1.0 A | 1.0 | | | | 1.7 | | | V |
| Typical Junction Capacitance V _R = 4.0 V, f = 1.0 MHz | 17 | | | | | | | pF |

Typical Characteristics

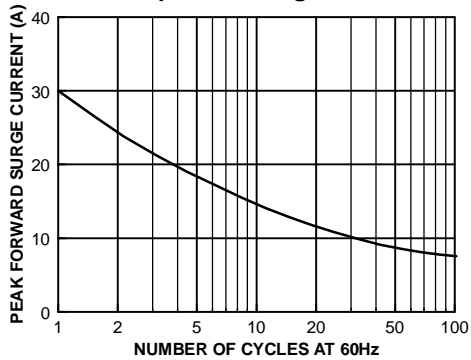
Forward Characteristics



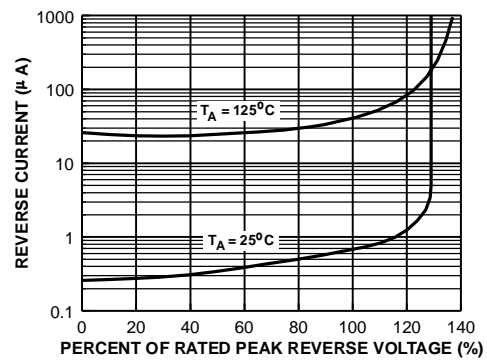
Forward Characteristics



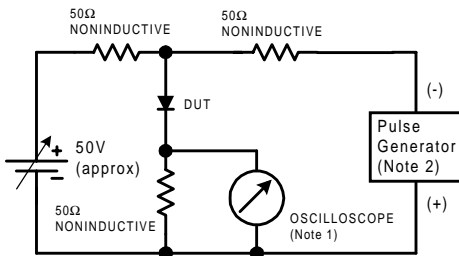
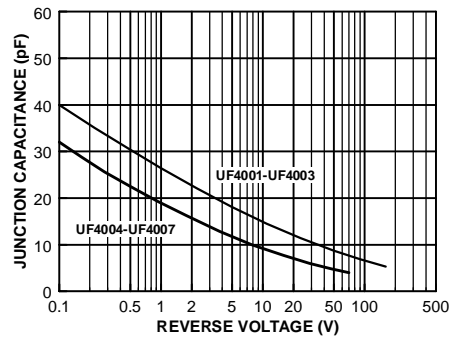
Non-Repetitive Surge Current



Reverse Characteristics

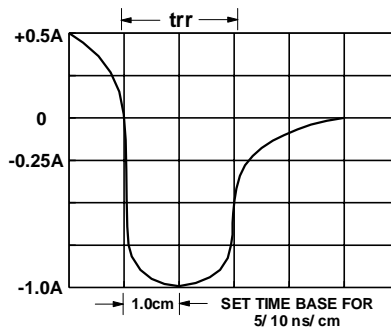


Typical Junction Capacitance



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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PRODUCT STATUS DEFINITIONS

Definition of Terms

| Datasheet Identification | Product Status | Definition |
|--------------------------|------------------------|---|
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