

UF4001 - UF4007

Fast Rectifiers

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



DO-41 (Plastic)
COLOR BAND DENOTES CATHODE

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}	Maximum 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 8.3ms Single Half-Sine-Wave	30							A
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.

Thermal Characteristics

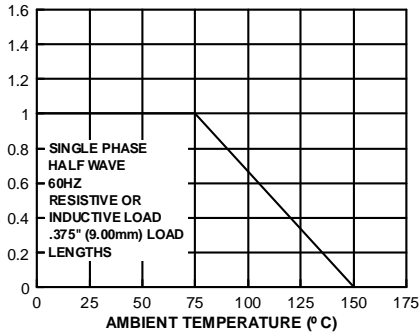
Symbol	Parameter	Value	Units
P_D	Power Dissipation	2.08	W
$R_{\theta JA}$	Thermal Resistance, Junction to Ambient	60	$^\circ\text{C}/\text{W}$
$R_{\theta JL}$	Thermal Resistance, Junction to Lead	30	$^\circ\text{C}/\text{W}$

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

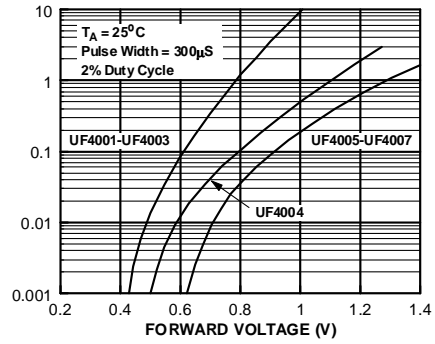
Symbol	Parameter	Value							Units
		4001	4002	4003	4004	4005	4006	4007	
V_F	Forward Voltage @ 1.0A	1.0			1.7				V
t_{rr}	Reverse Recovery Time $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$	50			75				ns
I_R	Reverse Current @ Rated V_R $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	10			50				μA μA
C_T	Total Capacitance $V_R = 4.0\text{V}$, $f = 1.0\text{MHz}$	17							pF

Typical Performance Characteristics

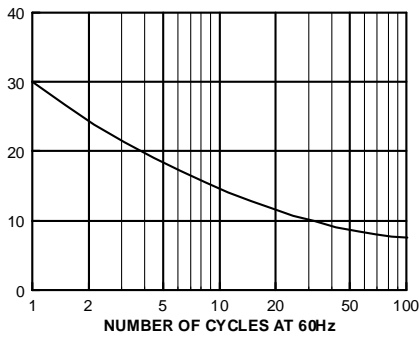
Forward Characteristics



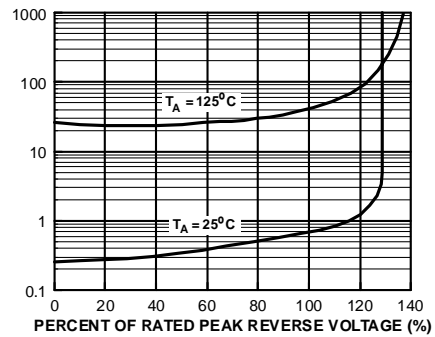
Forward Characteristics



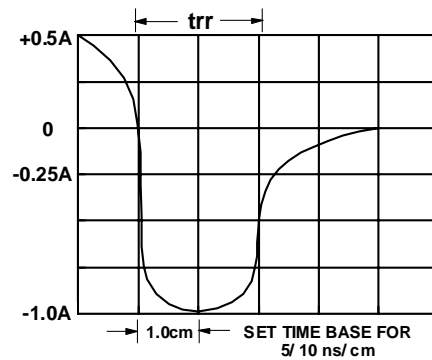
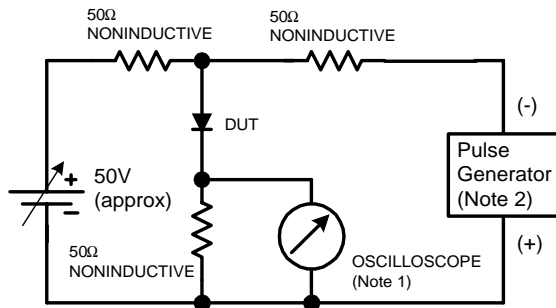
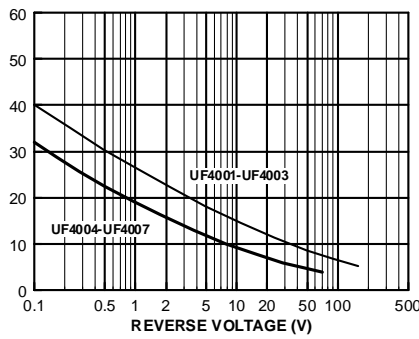
Non-Repetitive Surge Current



Reverse Characteristics



Typical Junction Capacitance



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DOME™	GTO™	MicroPak™	QFET [®]	SuperSOT™-8
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FACT™	ImpliedDisconnect™	OCX™	RapidConfigure™	TruTranslation™
FACT Quiet Series™		OCXPro™	RapidConnect™	UHC™
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2. A critical component is any component of a life support device or system whose failure to perform can be reasonably expected to cause the failure of the life support device or system, or to affect its safety or effectiveness.

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