












UF4001 – UF4007

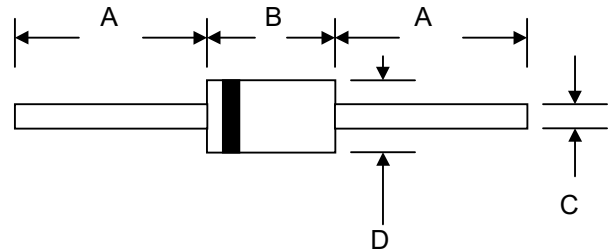
1.0A ULTRAFAST RECOVERY RECTIFIER

Features

-  Diffused Junction
-  Low Forward Voltage Drop
-  High Current Capability
-  High Reliability
-  High Surge Current Capability

Mechanical Data

-  Case: Molded Plastic
-  Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
-  Polarity: Cathode Band
-  Weight: 0.34 grams (approx.)
-  Mounting Position: Any
-  Marking: Type Number



DO-41		
Dim	Min	Max
A	25.4	—
B	4.06	5.21
C	0.71	0.864
D	2.00	2.72
All Dimensions in mm		

Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	UF 4001	UF 4002	UF 4003	UF 4004	UF 4005	UF 4006	UF 4007	Unit
Peak Repetitive Reverse Voltage	V_{RRM}								V
Working Peak Reverse Voltage	V_{RWM}	50	100	200	400	600	800	1000	
DC Blocking Voltage	V_R								
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1)	I_o	1.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30							A
Forward Voltage @ 1.0A	V_{FM}	1.0		1.3		1.7		V	
Peak Reverse Current At Rated DC Blocking Voltage @ $T=25^\circ\text{C}$ @ $T_k=100^\circ\text{C}$	I_{RM}	5.0				100			μA
Reverse Recovery Time (Note 2)	t_{rr}	50				75			nS
Typical Junction Capacitance (Note 3)	C_j	20				10			pF
Operating Temperature Range	T_j	-65 to +125							$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +150							$^\circ\text{C}$

*Glass passivated forms are available upon request

- Note: 1. Leads maintained at ambient temperature at a distance of 9.5mm from the case
2. Measured with $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $IRR = 0.25\text{A}$. See figure 5.
3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

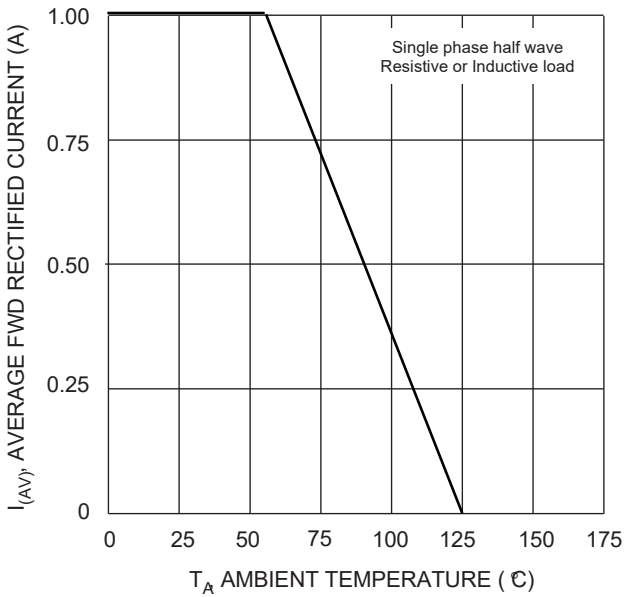


Fig. 1 Forward Current Derating Curve

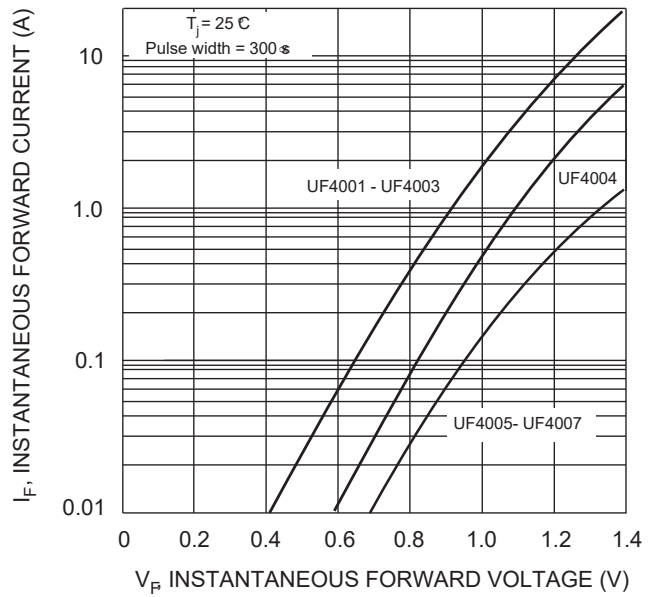


Fig. 2 Typical Forward Characteristics

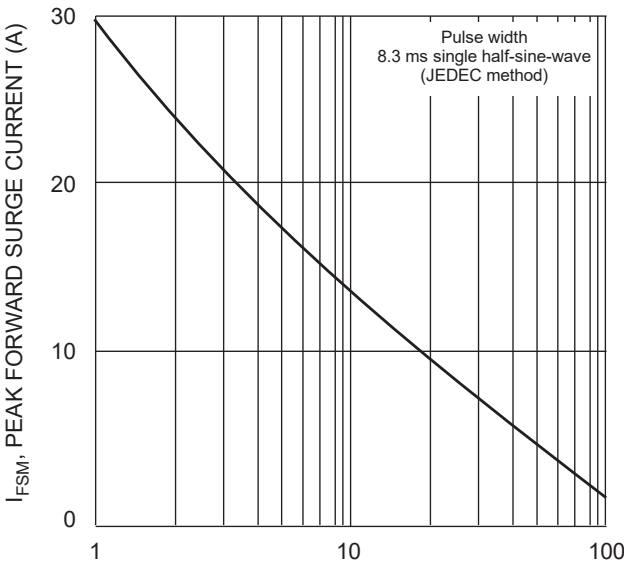


Fig. 3 Peak Forward Surge Current

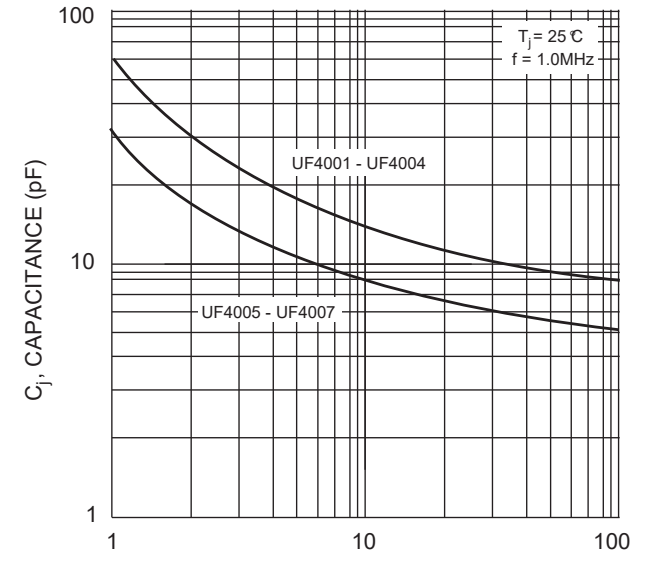
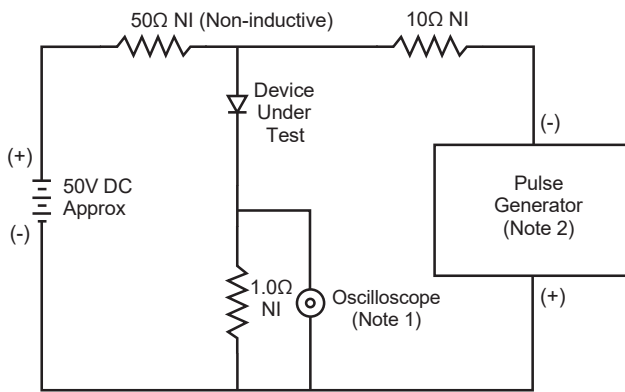
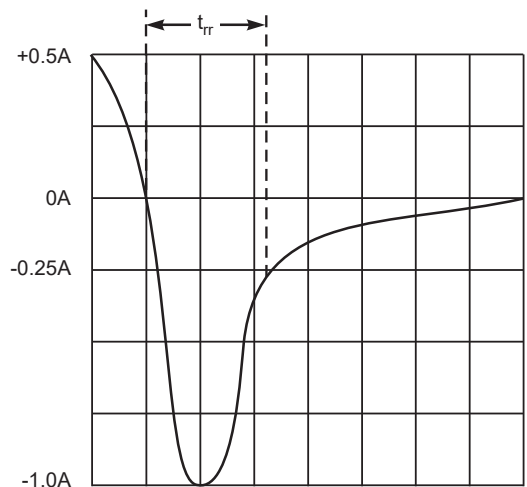


Fig. 4 Typical Junction Capacitance




- Notes:
1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ/22pF.
 2. Rise Time = 10ns max. Input Impedance = 50Ω.



Set time base for 5/10ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

ORDERING INFORMATION

Product No. 	Package Type	Shipping Quantity
UF4001-T3	DO-41	5000/Tape & Reel
UF4001-TB	DO-41	5000/Tape & Box
UF4001	DO-41	1000 Units/Box
UF4002-T3	DO-41	5000/Tape & Reel
UF4002-TB	DO-41	5000/Tape & Box
UF4002	DO-41	1000 Units/Box
UF4003-T3	DO-41	5000/Tape & Reel
UF4003-TB	DO-41	5000/Tape & Box
UF4003	DO-41	1000 Units/Box
UF4004-T3	DO-41	5000/Tape & Reel
UF4004-TB	DO-41	5000/Tape & Box
UF4004	DO-41	1000 Units/Box
UF4005-T3	DO-41	5000/Tape & Reel
UF4005-TB	DO-41	5000/Tape & Box
UF4005	DO-41	1000 Units/Box
UF4006-T3	DO-41	5000/Tape & Reel
UF4006-TB	DO-41	5000/Tape & Box
UF4006	DO-41	1000 Units/Box
UF4007-T3	DO-41	5000/Tape & Reel
UF4007-TB	DO-41	5000/Tape & Box
UF4007	DO-41	1000 Units/Box

Products listed in **bold** are WTE **Preferred** devices.

T3 suffix refers to a 13" reel. TB suffix refers to Ammo Pack.

Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.