UF2001 - UF2007

2.0A ULTRA-FAST RECTIFIER

Features

- Diffused Junction
- Ultra-Fast Switching for High Efficiency
- Surge Overload Rating to 60A Peak
- Low Reverse Leakage Current
- **Lead Free Finish, RoHS Compliant (Note 1)**
- **For automotive applications requiring specific change control (i.e. parts qualified to AEC-Q100/101/104/200, PPAP capable, and manufactured in IATF 16949 certified facilities), please contact us or your local Diodes representative. https://www.diodes.com/quality/product-definitions/**

Mechanical Data

- Package: DO-15
- Package Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Finish – Tin. Solderable per MIL-STD-202, Method 208 (e3)
- Polarity: Cathode Band
- Marking: Type Number
- Weight: 0.4 grams (Approximate)

Ordering Information (Note 2)

Part Number	Package	Packing	
		Qty.	Carrier
UF2001-T	DO-15	4k	Tape & Reel, 13-inch
UF2002-T	DO-15	4k	Tape & Reel, 13-inch
UF2003-T	DO-15	4k	Tape & Reel, 13-inch
UF2004-T	DO-15	4k	Tape & Reel, 13-inch
UF2005-T	DO-15	4k	Tape & Reel, 13-inch
UF2006-T	DO-15	4k	Tape & Reel, 13-inch
UF2007-T	DO-15	4k	Tape & Reel, 13-inch

Notes: 1. RoHS revision 13.2.2003. High temperature solder exemption applied, see *EU Directive Annex Note 7.*
2. For packaging details, go to our website at https://www.diodes.com/design/support/packaging/diodes-packaging/.

Maximum Ratings and Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

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

Characteristic	Symbol	UF 2001	UF 2002	UF 2003	UF 2004	UF 2005	UF 2006	UF 2007	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage (Note 3)	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 4) @ T_A = +50°C	I_O	2.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	60							A
Forward Voltage @ I_F = 2.0A	V_{FM}	1.0			1.3	1.7			V
Peak Reverse Current @ T_A = +25°C at Rated DC Blocking Voltage (Note 3) @ T_A = +100°C	I_{RM}	5.0 100							µA
Reverse Recovery Time (Note 5)	t_{rr}	50				75			ns
Typical Total Capacitance (Note 6)	C_T	50				30			pF
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	50							°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150							°C

Notes: 3. Short duration pulse test used to minimize self-heating effect.
4. Valid provided that leads are maintained at ambient temperature at a distance of 9.5mm from the case.
5. Measured at I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A. See Figure 5.
6. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

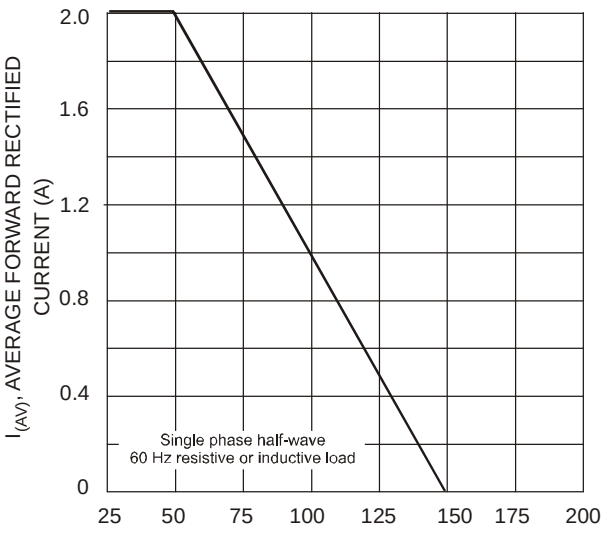


Fig. 1 Forward Current Derating Curve

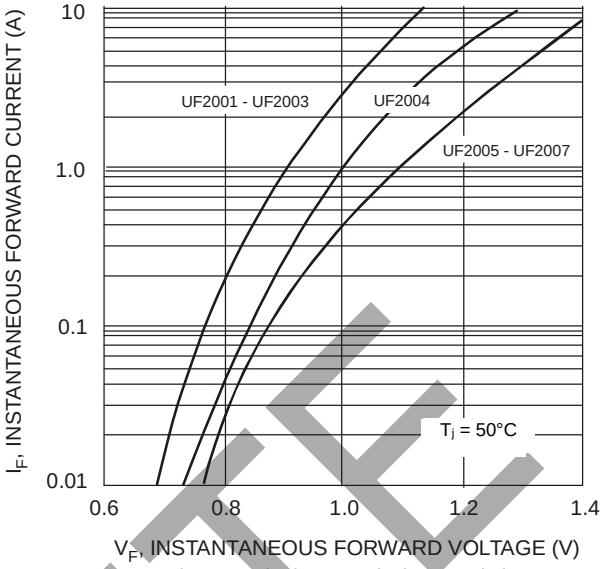


Fig. 2 Typical Forward Characteristics

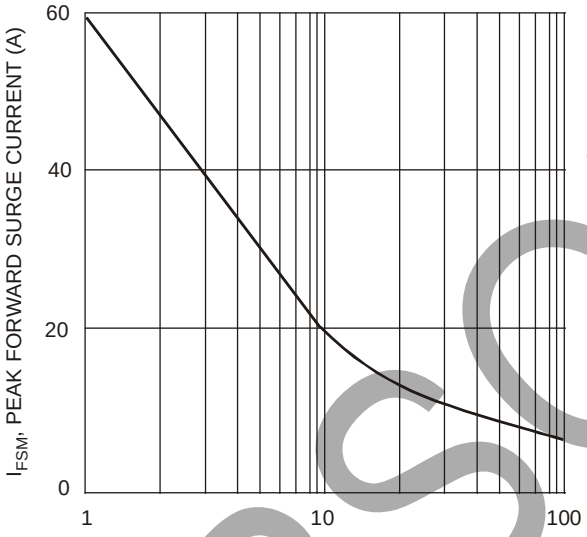


Fig. 3 Peak Forward Surge Current

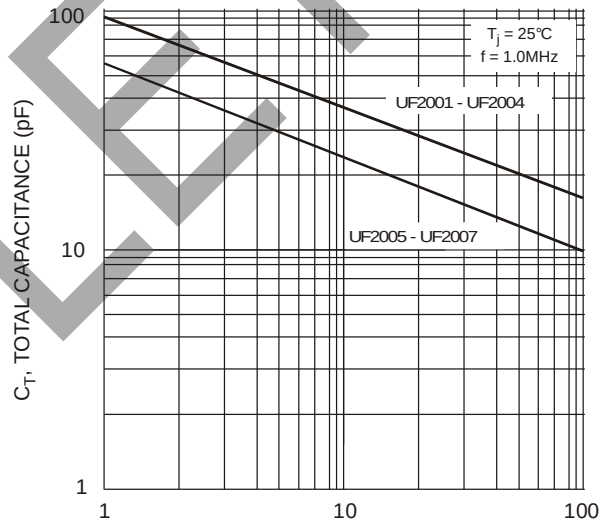
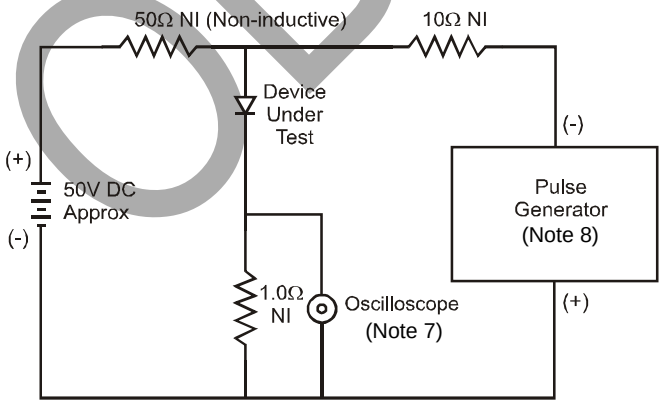
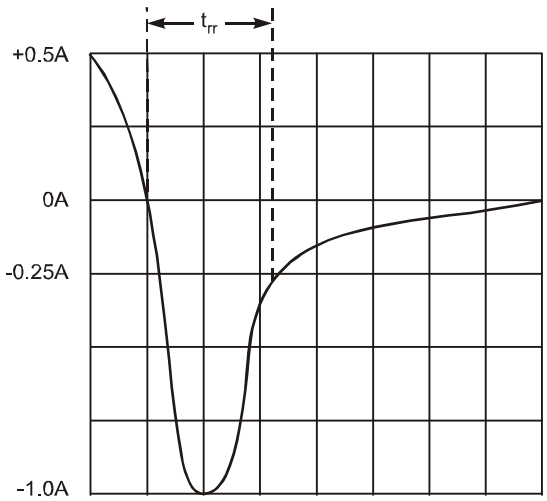


Fig. 4 Typical Total Capacitance





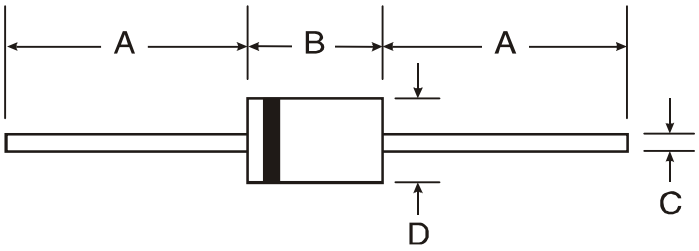
Notes: 7. Rise time = 7.0ns max. Input impedance = 1.0MΩ, 22pF.
8. Rise time = 10ns max. Input impedance = 50Ω.

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

Package Outline Dimensions

Please see http://www.diodes.com/package-outlines.html for the latest version.

DO-15



DO-15		
Dim	**Min**	**Max**
A	25.40	-
B	5.50	7.62
C	0.686	0.889
D	2.60	3.60
All Dimensions in mm		

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