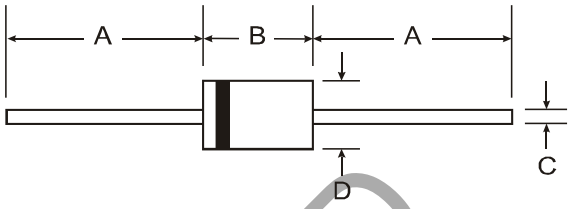
NOT RECOMMENDED FOR NEW DESIGN
USE MURS320 OR US3M

UF3001 – UF3007

3.0A ULTRA-FAST RECTIFIER

Features

- Diffused Junction
- Ultra-Fast Switching for High Efficiency
- Surge Overload Rating to 150A Peak
- Low Reverse Leakage Current
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**



DO-201AD		
Dim	**Min**	**Max**
A	25.40	—
B	7.20	9.50
C	1.20	1.30
D	4.80	5.30
All Dimensions in mm		

Mechanical Data

- Case: DO-201AD
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020C
- Terminals: Finish—Tin. Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Marking: Type Number
- Ordering Information: See Last Page
- Weight: 1.1 grams (Approximate)

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 3001	UF 3002	UF 3003	UF 3004	UF 3005	UF 3006	UF 3007	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage (Note 6)	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 3) @ T_A = 55°C	I_O	3.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	150							A
Forward Voltage @ I_F = 3.0A	V_{FM}	1.0			1.3	1.7			V
Peak Reverse Current @ T_A = 25°C at Rated DC Blocking Voltage (Note 6) @ T_A = 100°C	I_{RM}	5.0 100							μA
Reverse Recovery Time (Note 5)	t_{rr}	50				75			ns
Typical Total Capacitance (Note 4)	C_T	75				50			pF
Typical Thermal Resistance Junction to Ambient	$R_{\Theta JA}$	35							°C/W
Operating and Storage Temperature Range	T_j, T_{STG}	-65 to +150							°C

Notes:
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3).compliant. All applicable RoHS exemptions applied.
2. See https://www.diodes.com/quality/lead-free/ for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
3. Valid provided that leads are maintained at ambient temperature at a distance of 9.5mm from the case.
4. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
5. Measured with I_F = 0.5A, I_R = 1.0A, I_{rr} = 0.25A. See Figure 5.
6. Short duration pulse test used to minimize self-heating effect.

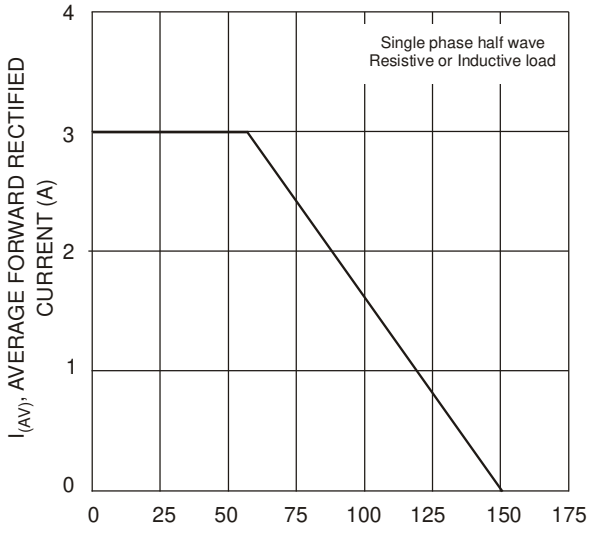


Fig. 1 Forward Current Derating Curve

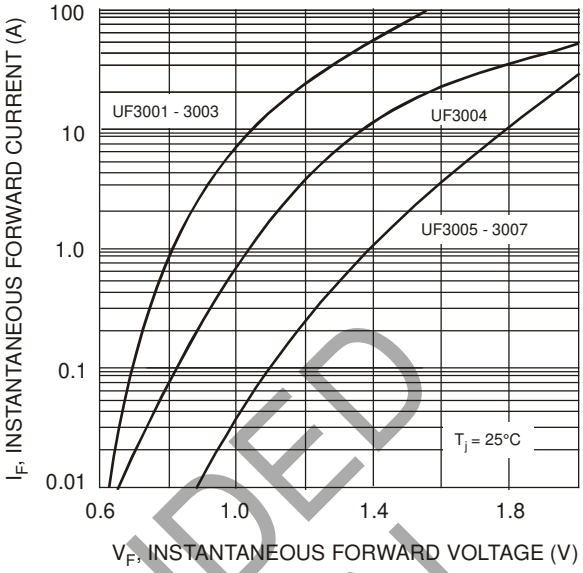


Fig. 2 Typical Forward Characteristics

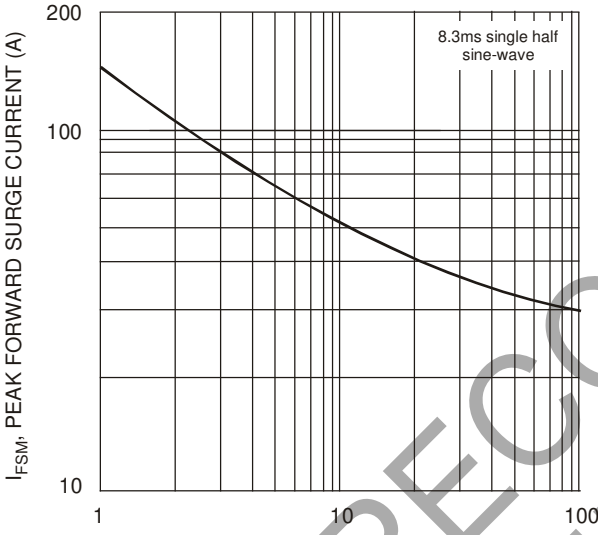


Fig. 3 Peak Forward Surge Current

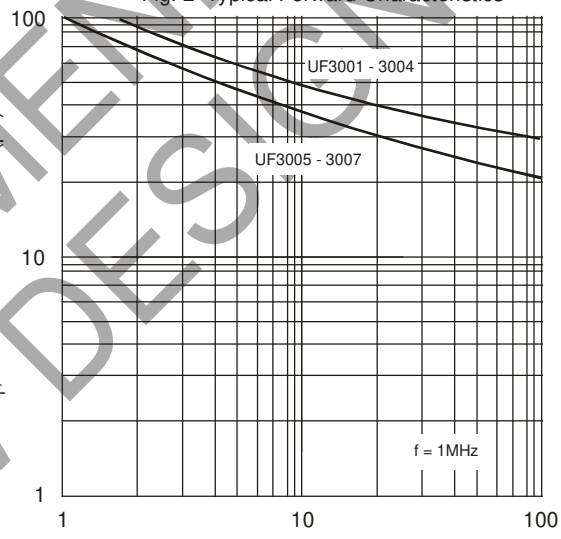
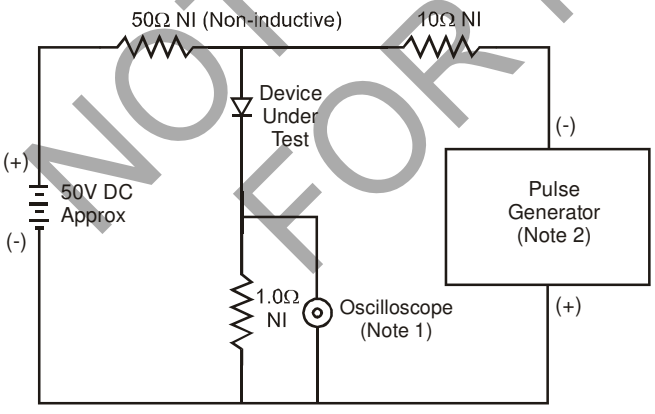
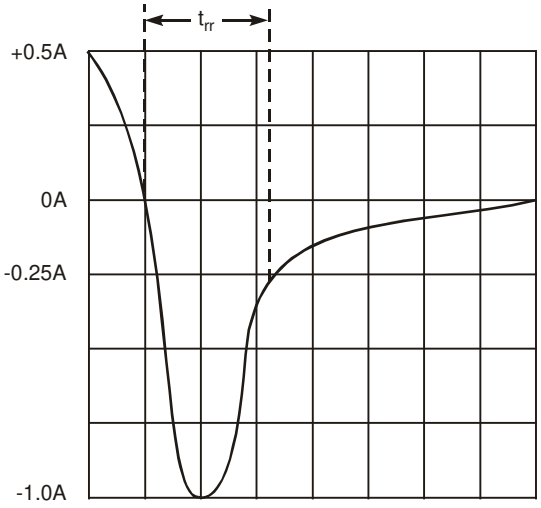


Fig. 4 Typical Total Capacitance





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

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

Ordering Information (Note 6)

Device	Packaging	Shipping
UF3001-B	DO-201AD	500/Bulk
UF3001-T	DO-201AD	1.2K/Tape & Reel, 13-inch
UF3002-B	DO-201AD	500/Bulk
UF3002-T	DO-201AD	1.2K/Tape & Reel, 13-inch
UF3003-B	DO-201AD	500/Bulk
UF3003-T	DO-201AD	1.2K/Tape & Reel, 13-inch
UF3004-B	DO-201AD	500/Bulk
UF3004-T	DO-201AD	1.2K/Tape & Reel, 13-inch
UF3005-B	DO-201AD	500/Bulk
UF3005-T	DO-201AD	1.2K/Tape & Reel, 13-inch
UF3006-B	DO-201AD	500/Bulk
UF3006-T	DO-201AD	1.2K/Tape & Reel, 13-inch
UF3007-B	DO-201AD	500/Bulk
UF3007-T	DO-201AD	1.2K/Tape & Reel, 13-inch

Notes: 7. For packaging details, visit our website at http://www.diodes.com/package-outlines.html.

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2. support or sustain life and whose failure to perform when properly used in accordance with instructions for use provided in the labeling can be reasonably expected to result in significant injury to the user.

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