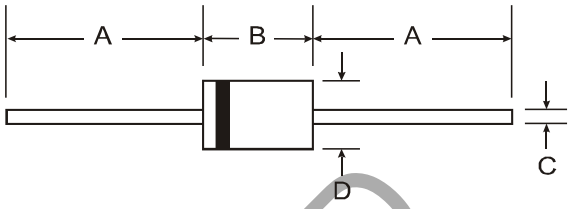
Features

- 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.

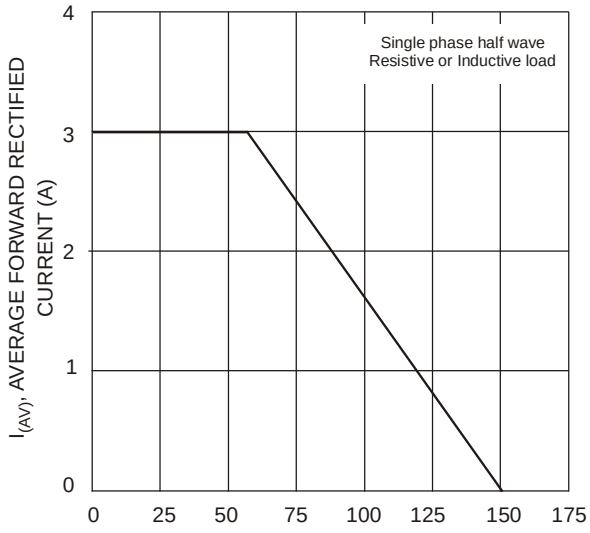


Fig. 1 Forward Current Derating Curve

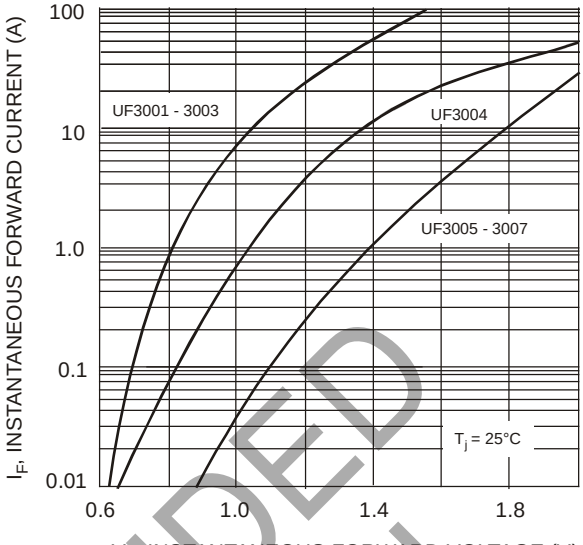


Fig. 2 Typical Forward Characteristics

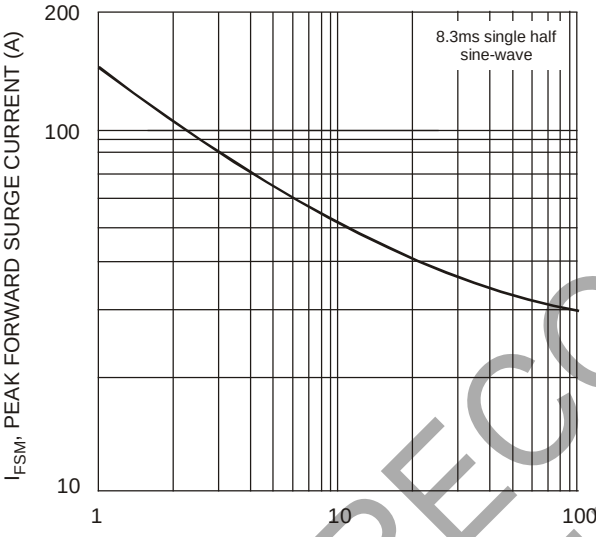


Fig. 3 Peak Forward Surge Current

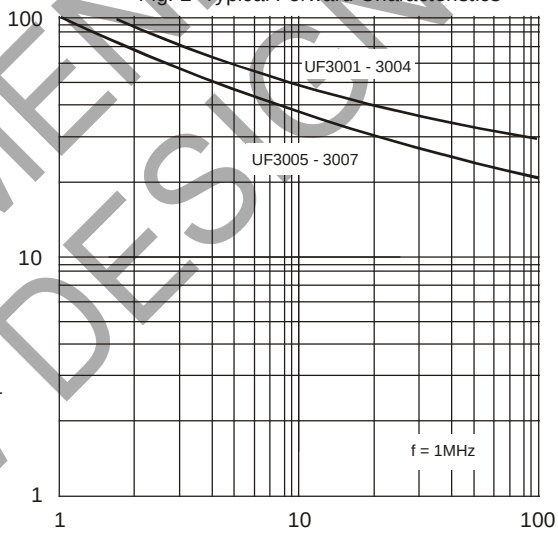
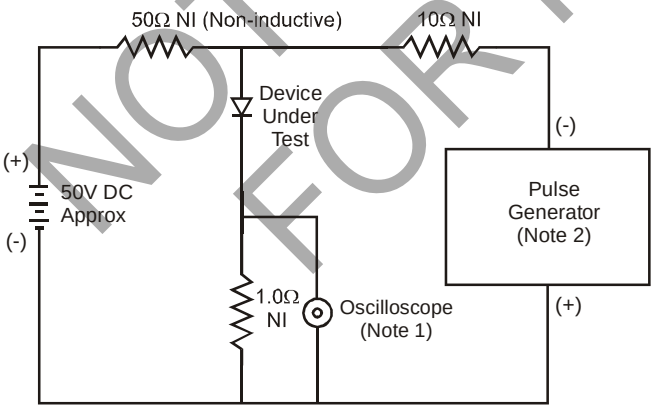
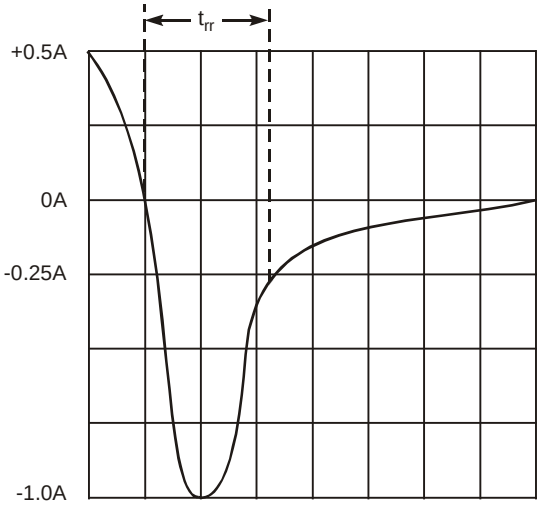


Fig. 4 Typical Total Capacitance





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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