

# 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 (Note 4)

### **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 (e3)

Polarity: Cathode Band Marking: Type Number

Ordering Information: See Last Page Weight: 1.1 grams (approximate)

DO-201AD					
Dim	Min	Max			
Α	25.40				
В	7.20	9.50			
С	1.20	1.30			
D	4.80	5.30			
All Dimensions in mm					

#### **Maximum Ratings and Electrical Characteristics** @ T<sub>A</sub> = 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 5)	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1) @ T <sub>A</sub> = 55 C	Io				3.0				А
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave Superimposed on Rated Load	d I <sub>FSM</sub>		150				Α		
Forward Voltage @ I <sub>F</sub> = 3.0A	V <sub>FM</sub>		1.0		1.3		1.7		V
Peak Reverse Current @ T <sub>A</sub> = 25 C at Rated DC Blocking Voltage (Note 5) @ T <sub>A</sub> = 100 C					5.0 100				Α
Reverse Recovery Time (Note 3)	t <sub>rr</sub>		5	0			75		ns
Typical Total Capacitance (Note 2)		75 50				pF			
Typical Thermal Resistance Junction to Ambient		35					°C/W		
Operating and Storage Temperature Range		-65 to +150					С		

- Notes: 1. Valid provided that leads are maintained at ambient temperature at a distance of 9.5mm from the case.
  - 2. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.
  - 3. Measured with  $I_F = 0.5A$ ,  $I_R = 1.0A$ ,  $I_{rr} = 0.25A$ . See Figure 5.
  - 4. RoHS revision 13.2.2003. High temperature solder exemption applied, see EU Directive Annex Note 7.
  - 5. Short duration pulse test used to minimize self-heating effect.

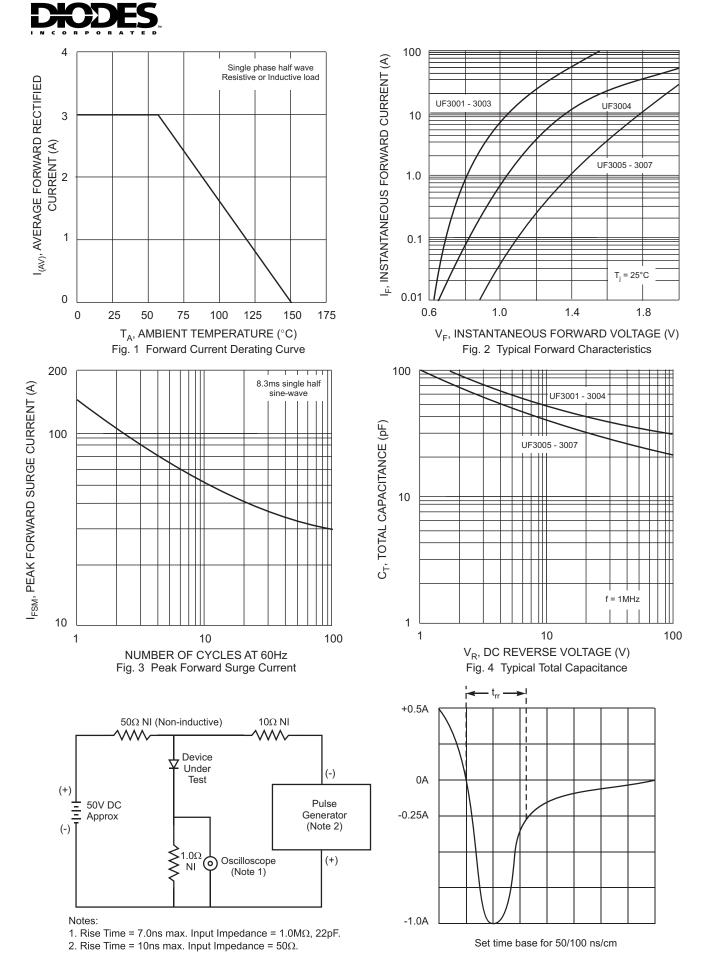


Fig. 5 Reverse Recovery Time Characteristic and Test Circuit



## 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: 6. For packaging details, visit our website at http://www.diodes.com/datasheets/ap02008.pdf.

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