

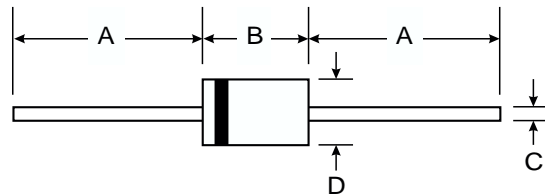
UF5400 - UF5408



3.0A ULTRA-FAST RECTIFIER

Features

- Diffused Junction
- Ultra-Fast Switching for High Efficiency
- High Current Capability and Low Forward Voltage Drop
- Surge Overload Rating to 150A Peak
- Low Reverse Leakage Current
- Plastic Material: UL Flammability Classification Rating 94V-0



Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Cathode Band
- Marking: Type Number
- Weight: 1.1 grams (approx.)
- Mounting Position: Any

DO-201AD		
Dim	Min	Max
A	24.5	—
B	7.20	9.50
C	1.10	1.30
D	4.80	5.30
All Dimensions in mm		

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 5400	UF 5401	UF 5402	UF 5403	UF 5404	UF 5405	UF 5406	UF 5407	UF 5408	Unit
Peak Repetitive Reverse Voltage	V _{RRM}	50	100	200	300	400	500	600	800	1000	V
Working Peak Reverse Voltage	V _{RWM}										
DC Blocking Voltage	V _R										
RMS Reverse Voltage	V _{R(RMS)}	35	70	140	280	420	560	700	700	700	V
Average Rectified Output Current (Note 1) @ 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 (JEDEC Method)	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 @ T _A = 100°C	I _{RM}					5.0		100			μA
Reverse Recovery Time (Note 3)	t _{rr}	50					75				ns
Typical Junction Capacitance (Note 2)	C _j	75					50				pF
Typical Thermal Resistance Junction to Ambient	R _{θJA}	35									K/W
Operating and Storage Temperature Range	T _j , T _{STG}	-65 to +150									°C

- 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.

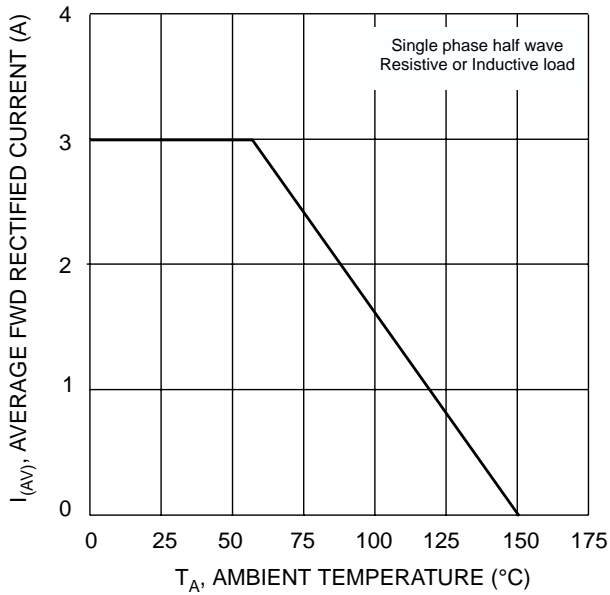


Fig. 1 Forward Current Derating Curve

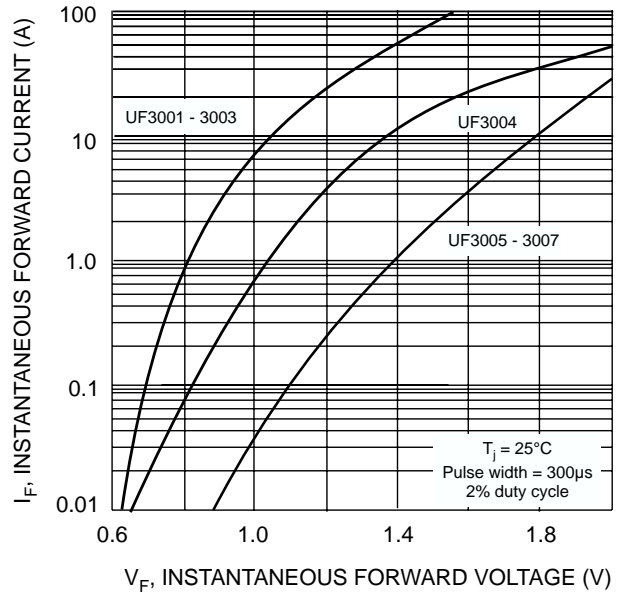


Fig. 2 Typical Forward Characteristics

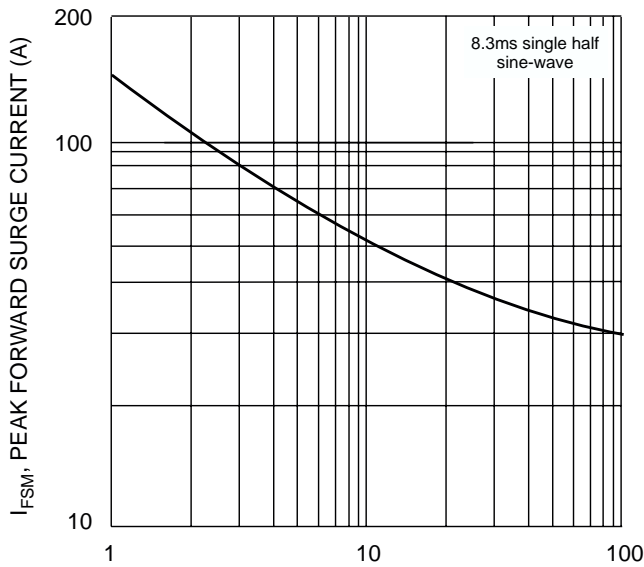


Fig. 3 Peak Forward Surge Current

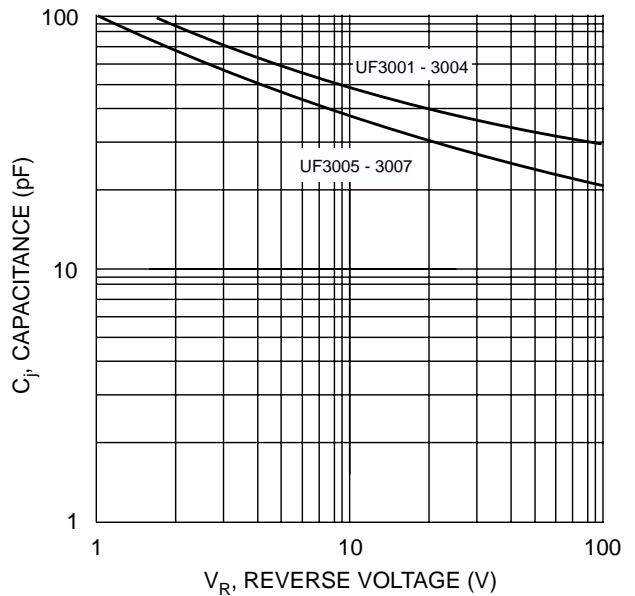
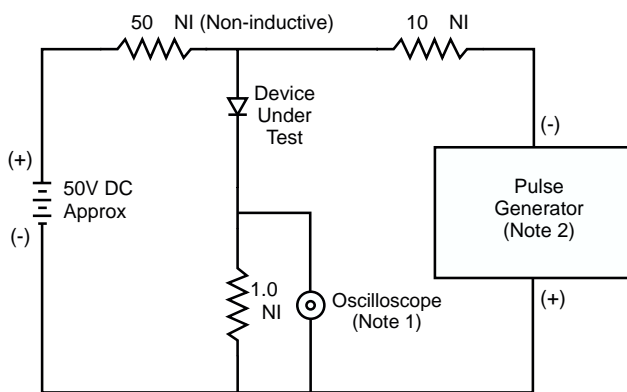
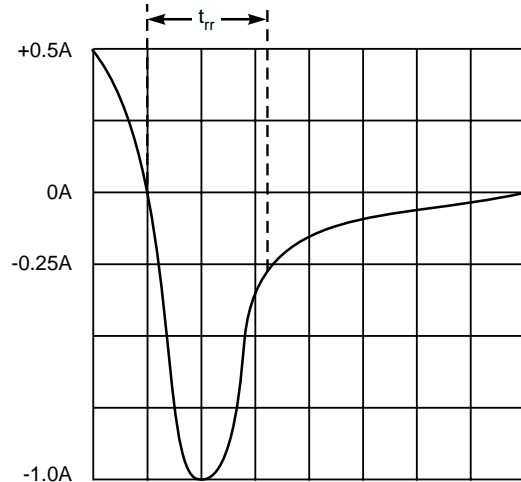


Fig. 4 Typical Junction Capacitance



Notes:

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



Set time base for 50/100 ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit