

UF304 / UF308

3A Ultra Fast Switching Rectifiers



High Efficiency



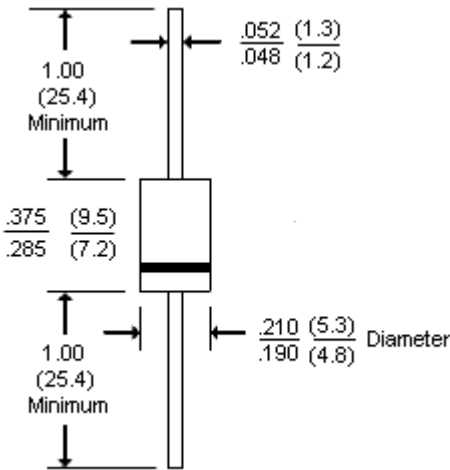
Features:

- Fast reverse recovery time, t_{rr} .
- Low forward voltage, V_F .
- Low cost axial packages.
- Void-free plastic in DO-201AD package.
- 3.0 Ampere operation at $T_A = 55^\circ\text{C}$ with no thermal runaway.
- Exceeds environmental standards of MIL-S-19500/228.
- Ultra fast switching for high efficiency.

Mechanical Data:

- Case : Moulded plastic.
Terminals : Axial leads, solderable per MIL-STD-202, Method 208.
Polarity : Band denotes cathode.
Mounting Position : Any.

DO-201AD



Dimensions : Inches (Millimetres)

Maximum Ratings and Electrical Characteristics:

Ratings at 25°C ambient temperature unless otherwise specified.

Resistive or inductive load, 60Hz.

Parameters	UF304	UF308	Units
Peak reverse voltage, repetitive; V_{RM}	400	800	V
Maximum RMS voltage	280	560	
DC blocking voltage; V_R	400	800	
Average forward current, I_o at $T_A = 55^\circ\text{C}$ 3.8" lead length, 60Hz, resistive or inductive load	3.0		A
Peak forward surge current I_{FM} (surge) 8.3m seconds single half sine-wave superimposed on rated load (JEDEC method)	150		
Maximum forward voltage V_F at 3.0A, 25°C	1.1	1.7	V
Maximum reverse current at rated reverse voltage	10.0		mA
$T_J = 25^\circ\text{C}$ $T_J = 100^\circ\text{C}$	500		
Typical junction capacitance (Note 1) C_J	75	50	pF
Typical junction resistance (Note 2) $R_{\theta JA}$	20.0		$^\circ\text{C/W}$
Reverse recovery time $I_F = 0.5\text{A}$, $I_R = 1\text{A}$, $I_{rr} = 0.25\text{A}$	50	75	ns
Operating and storage temperature range	-55 to +150		$^\circ\text{C}$



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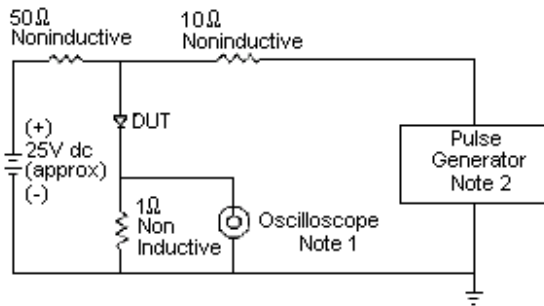
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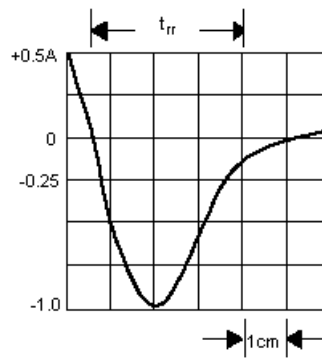
Notes:

1. Measured at 1MHz and applied reverse voltage of 4.0V dc.
2. Thermal resistance from junction to ambient and from junction to lead length 0.375" (9.5mm) PCB mounted.

Rating and Characteristics Curves



- NOTE:
1. Rise Time = 7ns maximum
Input Impedance = 1MΩ, 22pF
 2. Rise Time = 10ns maximum
Source Impedance = 50Ω



Set Time
Base For
50ns/cm

Figure 1 - Reverse Recovery Time Characteristics and Test Circuit Diagram

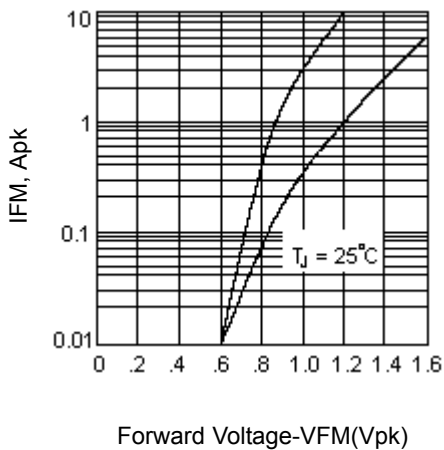


Figure 2 - Forward Characteristics

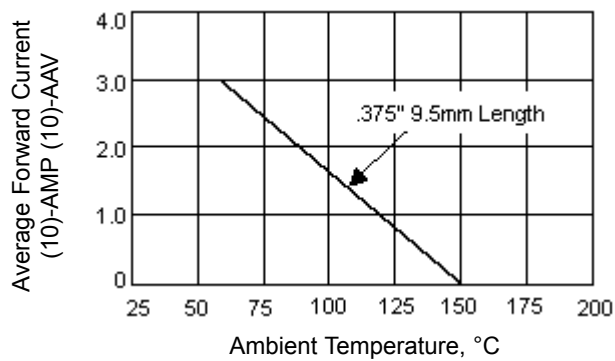


Figure 3 - Forward Current Derating Curve

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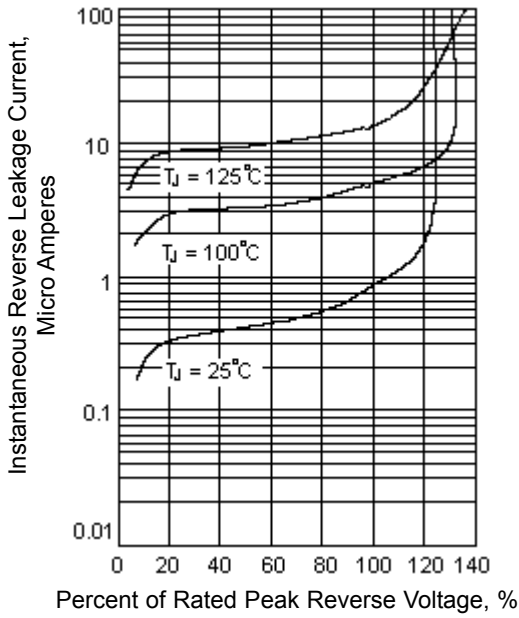


Figure 4 - Typical Reverse Leakage Characteristics

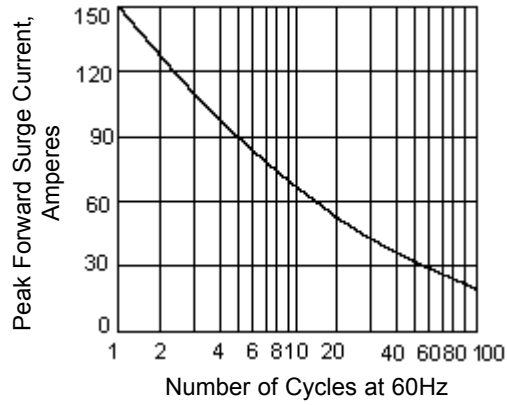


Figure 5 - Peak Forward Surge Current

Specifications

V_{RRM} maximum (V)	$I_{F(av)}$ (A)	I_{FSM} (A)	t_{rr} maximum (ns)	V_F (V) at $I_F = 3.0A$	Length	Diameter	Part Number
400	3.0	150	50	1.1	9.5	5.3	UF304
800			75	1.7			UF308

Dimensions : Millimetres



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Notes:

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