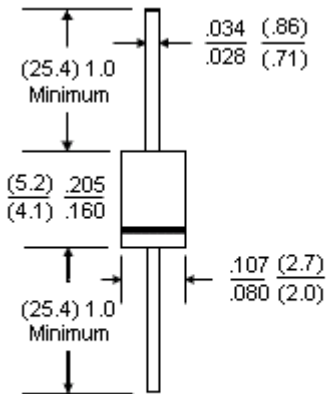


UF102, 108

Fast Recovery Axial Rectifiers



DO-41



Features:

- Fast reverse recovery time, t_{rr} .
- Low forward voltage, V_F .
- Low cost axial packages.
- Void-free plastic in DO-41 package.
- 1.0 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.
Weight	: 0.013 Ounce, 0.3 Gram.

Dimensions : Inches (Millimetres)

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

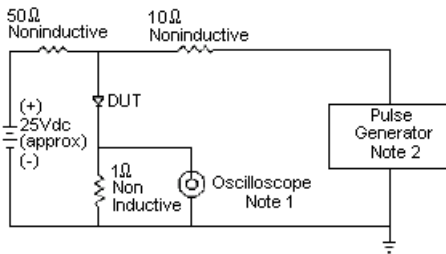
Description	UF102	UF108	Units
Peak reverse voltage, repetitive; V_{RM}	200	800	V
Maximum RMS voltage	140	560	
DC blocking voltage; V_R	200	800	
Average forward current, I_o at $T_A = 55^\circ\text{C}$ 3.8" lead length, 60Hz, resistive or inductive load	1.0		A
Peak forward surge current I_{FM} (surge) 8.3m seconds single half sine-wave superimposed on rated load (JEDEC method)	30		
Maximum forward voltage V_F at 1.0A, 25°C	1.0	1.7	V
Maximum reverse current at rated, $T_J = 25^\circ$	10.0		μA
Reverse voltage $T_J = 100^\circ\text{C}$	500		μA
Typical junction capacitance (Note 1) C_J	17.0		pF
Typical junction resistance (Note 2) $R_{\theta JA}$	60.0		$^\circ\text{C/W}$
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		$^\circ\text{C}$

Notes:

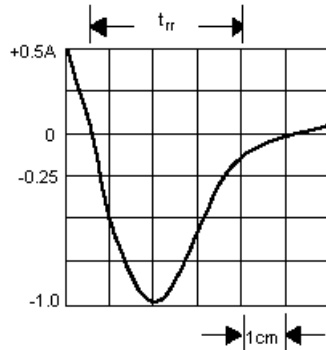
1. Measured at 1MHz and applied reverse voltage of 4.0V dc.
2. Thermal resistance from junction to ambient and from junction to lead length 0.375" (9.5mm) PCB mounted.



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

Typical Trace

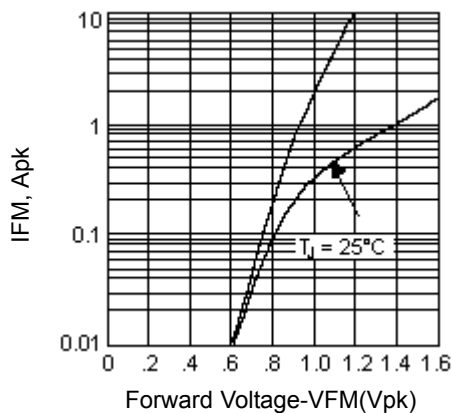


Figure 2 - Forward Characteristics

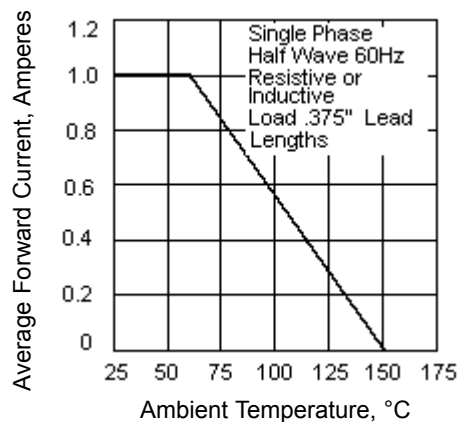


Figure 3 - Forward Current Derating Curve

UF102, 108

Fast Recovery Axial Rectifiers

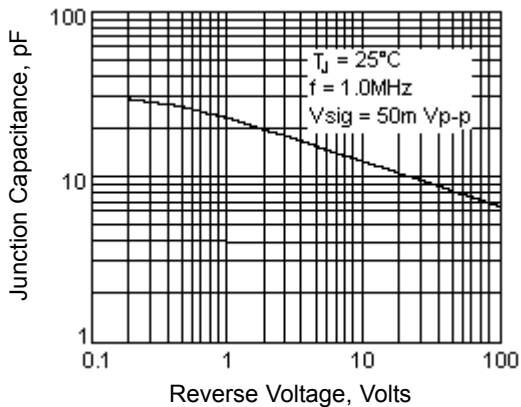


Figure 4 - Typical Junction Capacitance

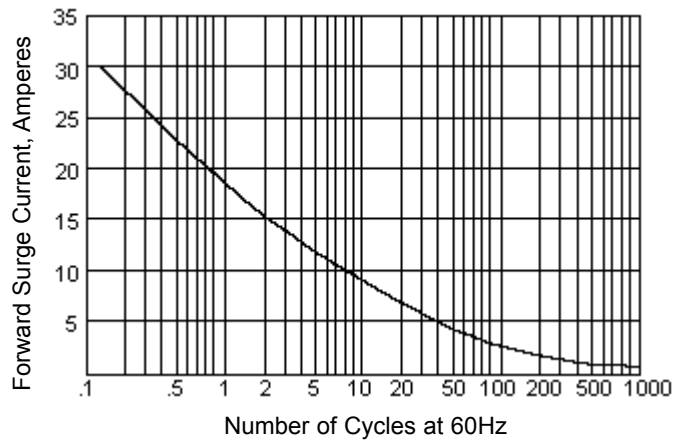


Figure 5 - Peak Forward Surge Current

Specifications

V_{RRM} maximum (V)	$I_{F(av)}$ (A)	I_{FSM} (A)	t_{rr} maximum (ns)	V_F (V) at $I_F = 1.0A$	Length	Diameter	Part Number
200	1	30	50	1.0	5.2	2.7	UF102
800			75	1.7			UF108

Dimensions : Millimetres



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