

# Ultra Fast Rectifier

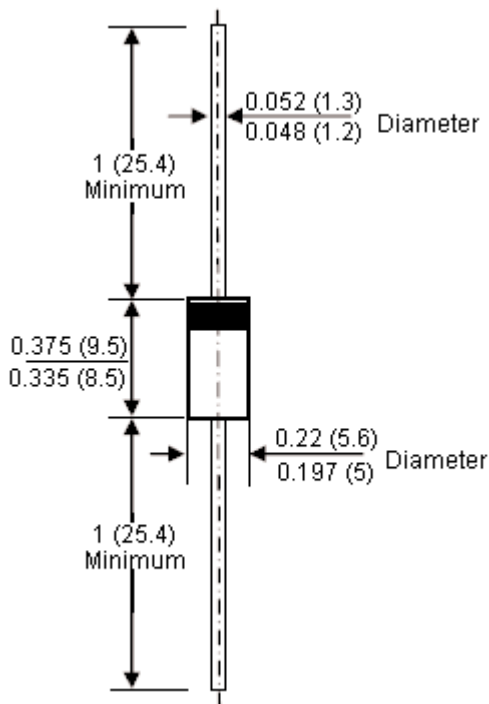


## Features:

- Diffused junction.
- Ultra fast switching for high efficiency.
- Low reverse leakage current.
- Low forward voltage drop.
- High current capability.

Reverse Voltage - 800 V  
Forward Current - 3 Amperes

## DO - 27



Dimensions : Inches (Millimetres)

## Mechanical Data

Case : JEDEC DO-27 moulded plastic.  
Polarity : Colour band denotes cathode.  
Weight : 0.04 oz, 1.1 g.  
Mounting position : Any.

## Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

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

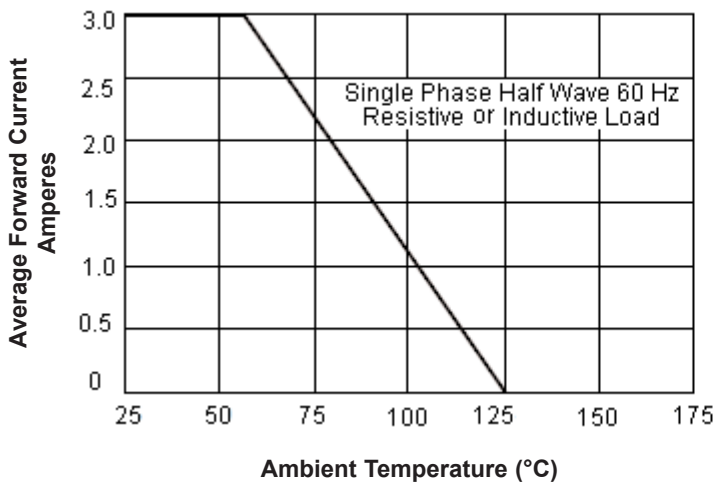
For capacitive load, derate current by 20%.

Characteristics	Symbol	UF3007	Unit
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	800	V
Maximum RMS Voltage	$V_{RMS}$	560	
Maximum DC Blocking Voltage	$V_{DC}$	800	
Maximum Average Forward Rectified Current at $T_A = 55^\circ\text{C}$	$I_{(AV)}$	3	A
Peak Forward Surge Current 8.3 ms Single Half Sine-wave Super Imposed on Rated Load (JEDEC Method)	$I_{FSM}$	125	
Peak Forward Voltage at 3 A dc	$V_F$	1.7	V
Maximum DC Reverse Current Rated DC Blocking Voltage	$I_R$	5 100	$\mu\text{A}$
Maximum Reverse Recovery Time (Note 1)	$T_{RR}$	75	nS
Typical Junction Capacitance (Note 2)	$C_J$	30	pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	20	$^\circ\text{C}/\text{W}$
Operating Temperature Range	$T_J$	-55 to +125	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55 to +150	

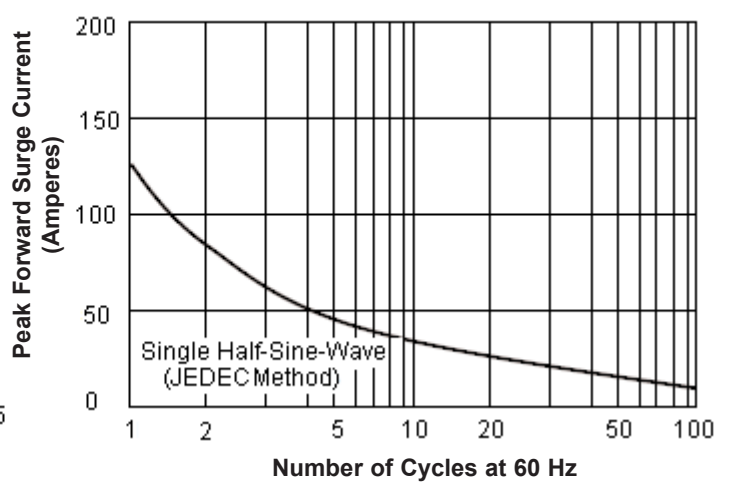
- Notes :**
1. Measured with  $I_F = 0.5\text{ A}$ ,  $I_R = 1\text{ A}$ ,  $I_{RR} = 0.25\text{ A}$ .
  2. Measured at 1 MHz and applied reverse voltage of 4 V dc.
  3. Thermal resistance junction to ambient.

## Rating and Characteristics Curves

Forward Current Derating Curve

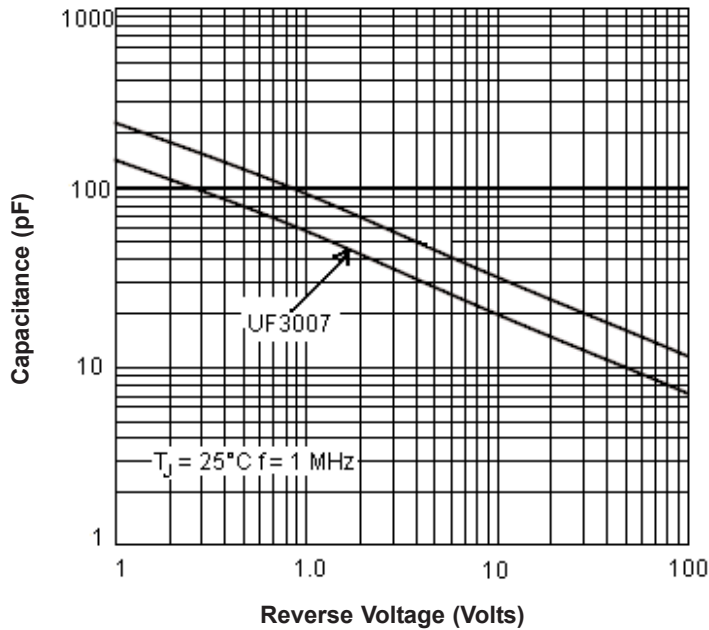


Maximum Non-Repetitive Surge Current

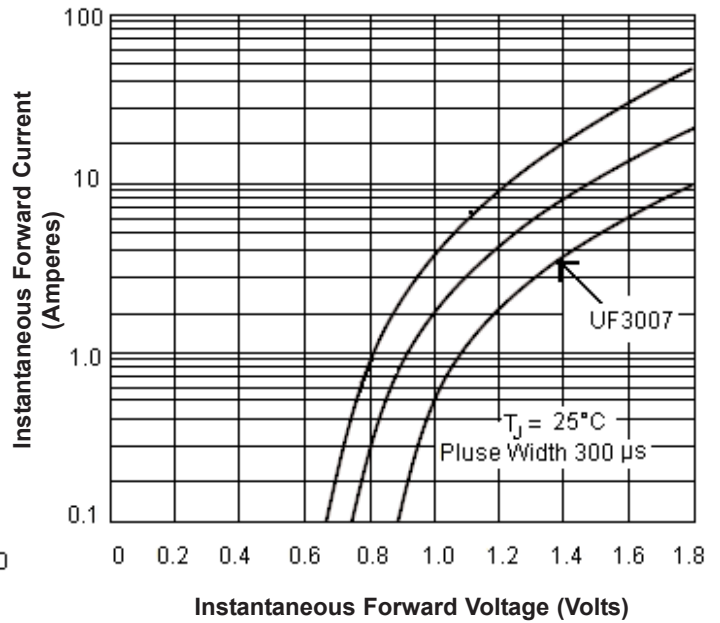


## Rating and Characteristics Curves

Typical Junction Capacitance



Typical Forward Characteristics



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