

Ultra Fast Rectifier

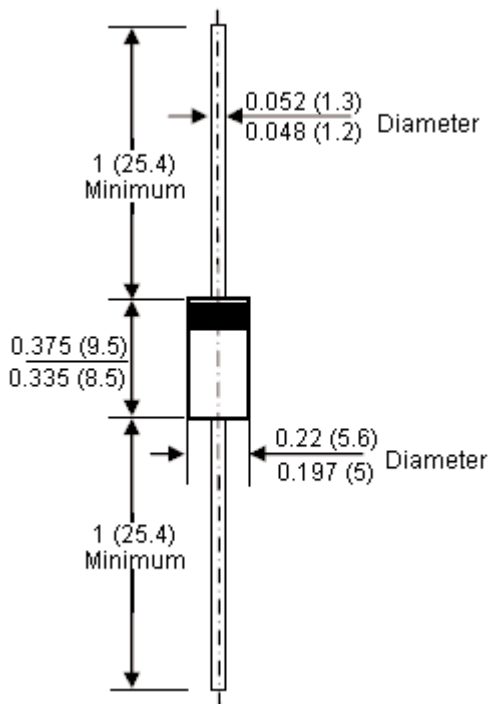


Features:

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

Reverse Voltage - 300 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.

Ultra Fast Rectifier



Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

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

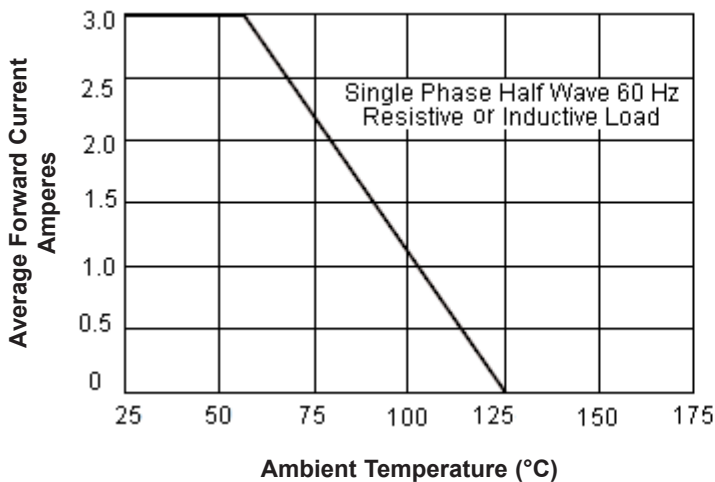
For capacitive load, derate current by 20%.

Characteristics	Symbol	UF3004	Unit
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	300	V
Maximum RMS Voltage	V_{RMS}	210	
Maximum DC Blocking Voltage	V_{DC}	300	
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	1.3	V
Maximum DC Reverse Current Rated DC Blocking Voltage	I_R	5 100	μA
Maximum Reverse Recovery Time (Note 1)	T_{RR}	50	nS
Typical Junction Capacitance (Note 2)	C_J		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	

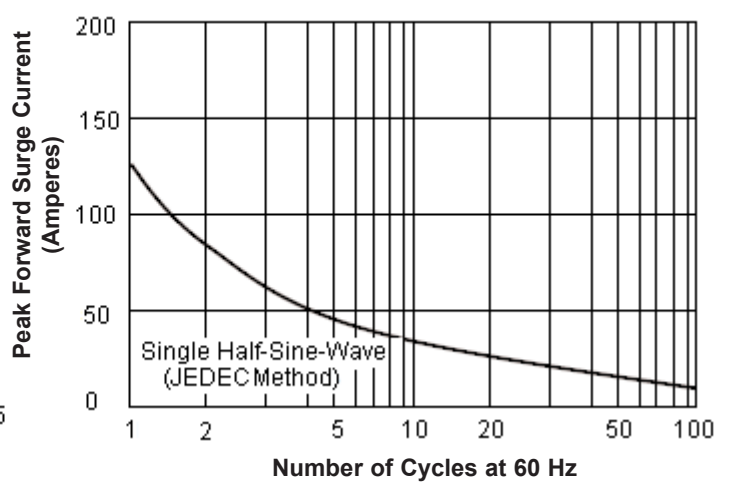
- Notes :**
1. Measured with $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{RR} = 0.25\text{ A}$.
 2. Measured at 1 MHz and applied reverse voltage of 4 V dc.
 3. Thermal resistance junction to ambient.

Rating and Characteristics Curves

Forward Current Derating Curve

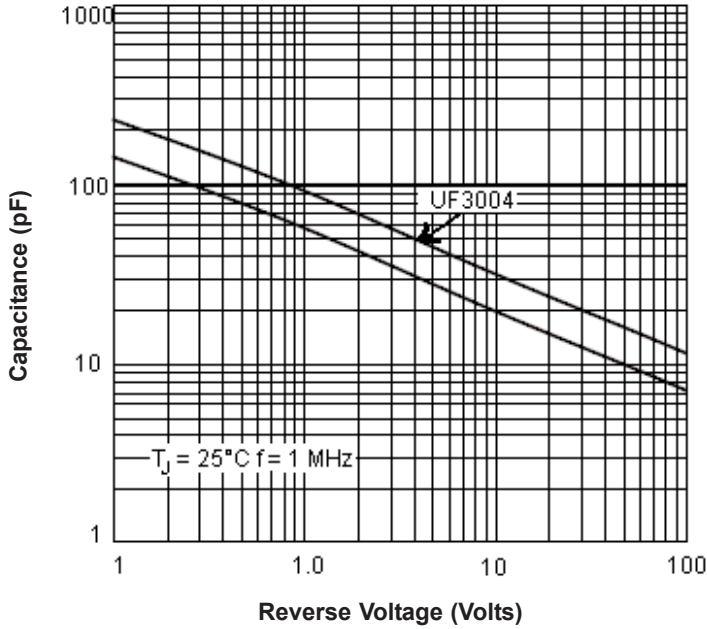


Maximum Non-Repetitive Surge Current

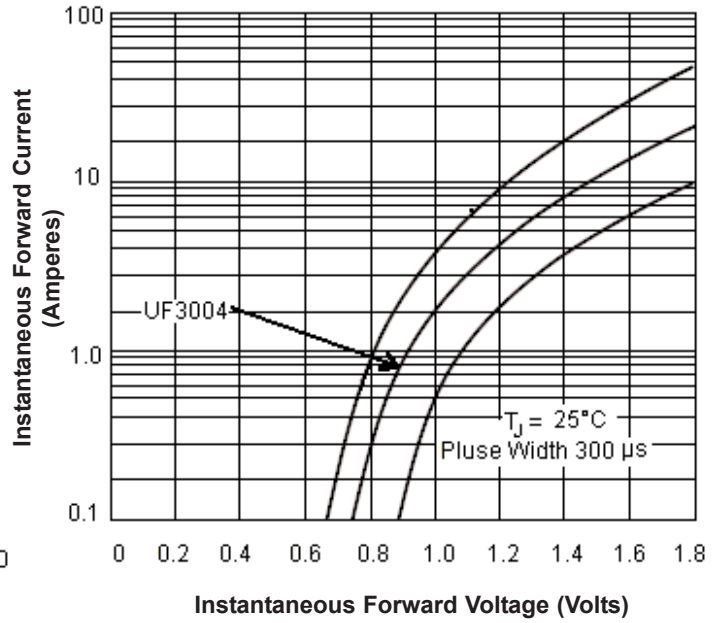


Rating and Characteristics Curves

Typical Junction Capacitance



Typical Forward Characteristics



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