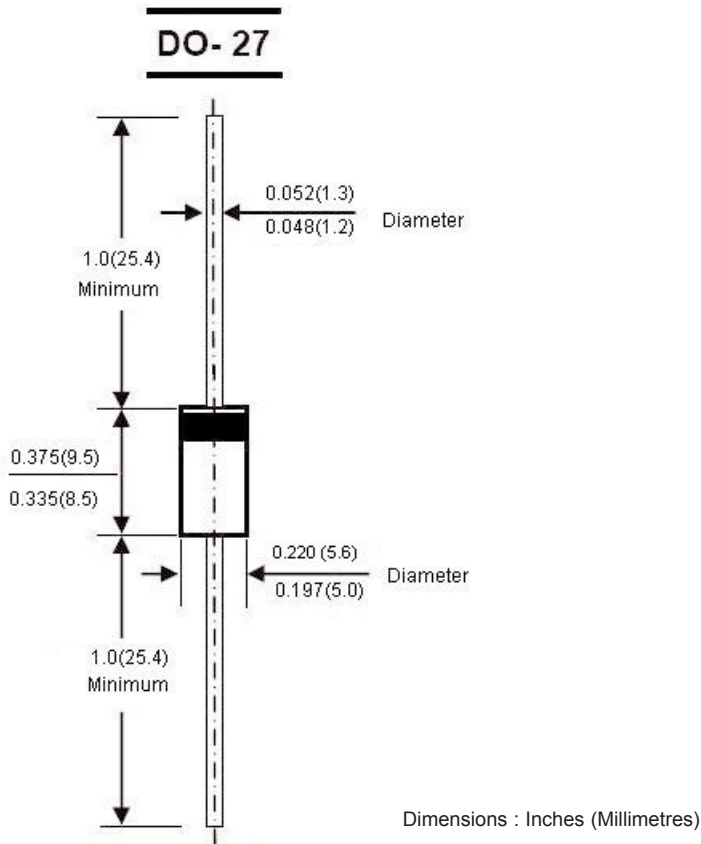


Reverse Voltage - 50 to 1,000 Volts and Forward Current - 3.0 Amperes



## Features:

- Low cost
- Diffused junction
- Ultra fast switching for high efficiency
- Low reverse leakage current
- Low forward voltage drop
- High current capability
- The plastic material carries UL recognition 94V-0.

## Mechanical Data:

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

## Maximum Ratings and Electrical Characteristics:

Rating at 25°C ambient temperature unless otherwise specified.  
Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%

# Ultra Fast Rectifiers



Characteristics	Symbol	UF3001	UF3002	UF3003	UF3004	UF3005	UF3006	UF3007	UF3008	Unit
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	300	400	600	800	1000	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	210	280	420	560	700	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	300	400	600	800	1000	V
Maximum Average Forward Rectified Current 0.375" (9.5mm) Lead Lengths @ $T_A=50^{\circ}C$	$I_{(AV)}$	3.0								A
BakelitePeak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load(JEDEC Method)	$I_{FSM}$	125								A
Peak Forward Voltage at 2.0A DC (Note 1)	$V_F$	1.0			1.3		1.7			V
Maximum DC Reverse Current @ $T_J=25^{\circ}C$ at Rated DC Bolcking Voltage @ $T_J=100^{\circ}C$	$I_R$					5.0 100			$\mu A$	
Maximum Reverse Recovery Time (Note 1)	$T_{RR}$	50				75			nS	
Typical Junction Capacitance (Note1)	$C_J$	50				30			pF	
Typical Thermal Resistance (Note2)	$R_{\theta JA}$	20								$^{\circ}C/W$
Operating Temperature Range	$T_J$	-55 to +125								$^{\circ}C$
Storage Temperature Range	$T_{STG}$	-55 to +150								$^{\circ}C$

## Notes:

1. Measured with  $I_F=0.5A$ ,  $C_{IR}=1A$ ,  $C_{IRR}=0.25A$
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
3. Thermal resistance junction to ambient.

## Rating and Characteristic Curves

Figure 1 - Forward Current Derating Curve

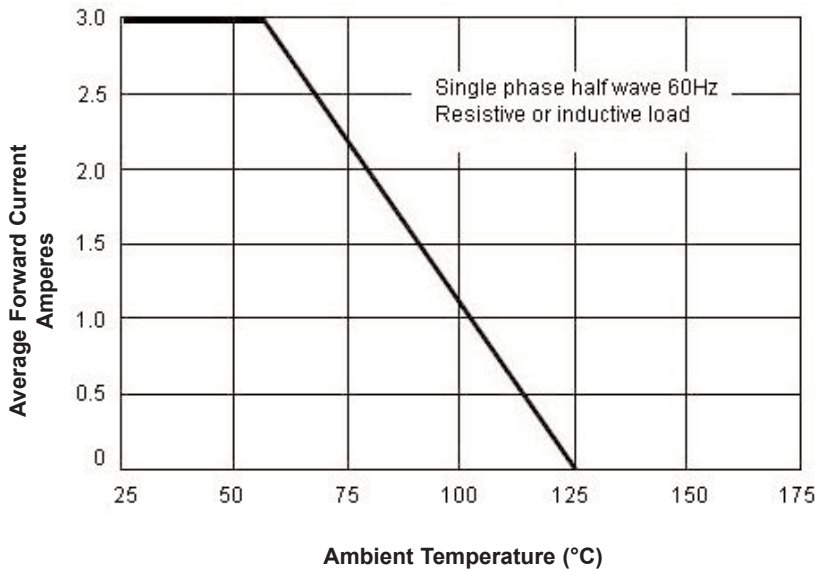


Figure 2 - Maximum Non-repetitive Surge Current

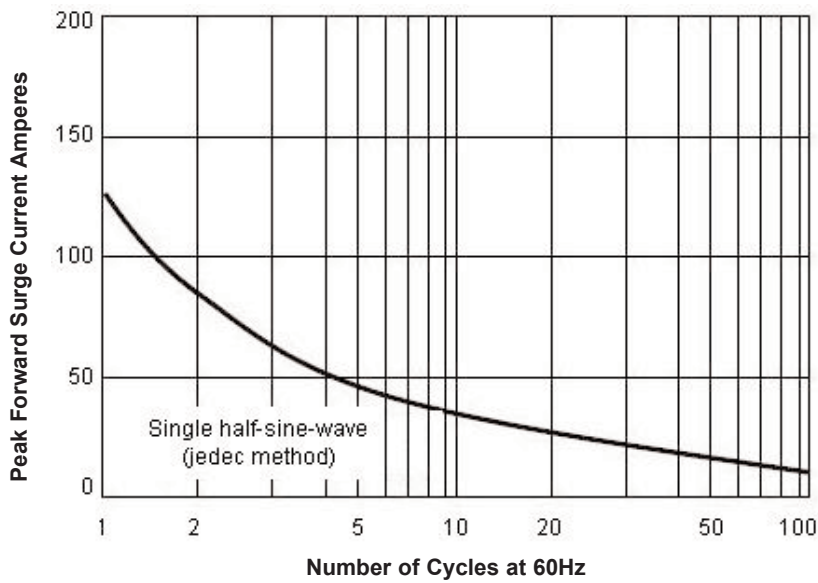


Figure 3 - Typical Junction Capacitance

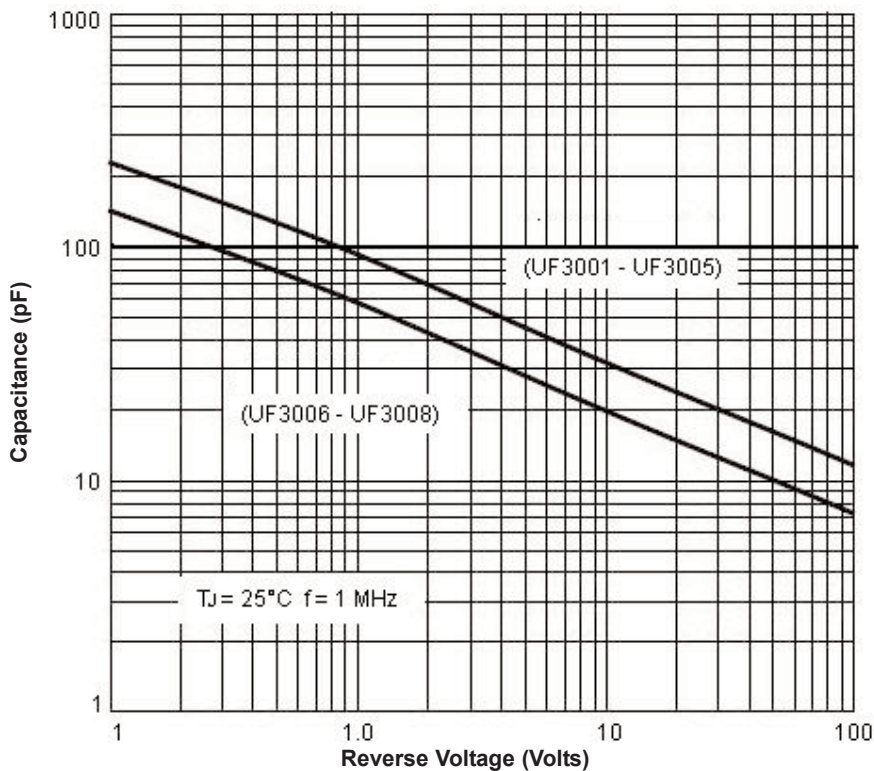
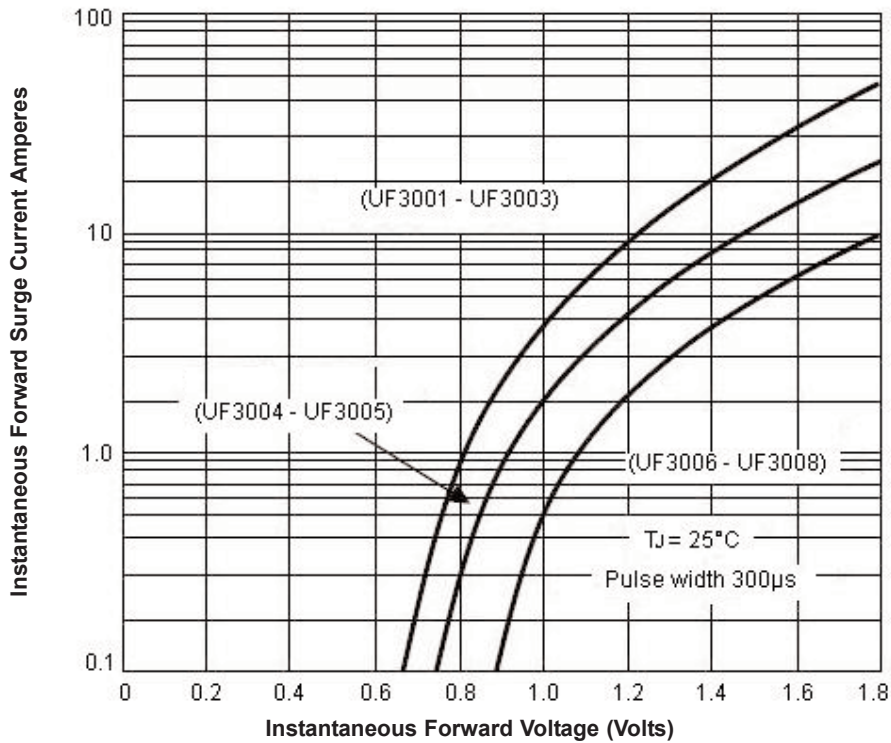


Figure 4 - Typical Forward Characteristics



## Part Number Table

Description	Part Number
Ultra Fast Rectifiers	UF3001
Ultra Fast Rectifiers	UF3002
Ultra Fast Rectifiers	UF3003
Ultra Fast Rectifiers	UF3004
Ultra Fast Rectifiers	UF3005
Ultra Fast Rectifiers	UF3006
Ultra Fast Rectifiers	UF3007
Ultra Fast Rectifiers	UF3008

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