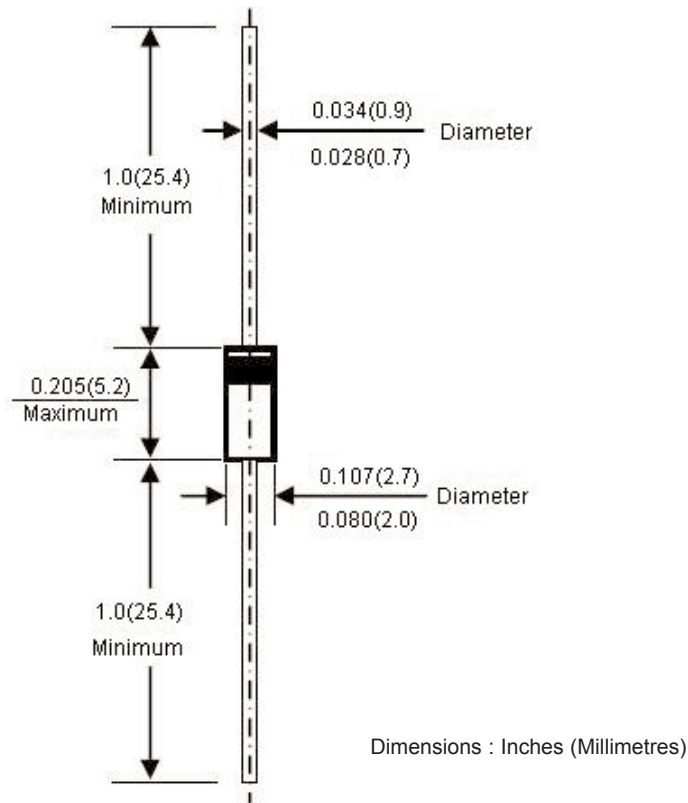


Reverse Voltage - 50 to 1,000 Volts and Forward Current - 1.0 Amperes

## DO- 41



### 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	: 0.012 ounces, 0.34 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%

Characteristics	Symbol	UF4001	UF4002	UF4003	UF4004	UF4005	UF4006	UF4007	UF4008	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 @ $T_A=50^\circ\text{C}$	$I_{(AV)}$	1.0								A	
Bakelite Peak Forward Surge Current 8.3ms Single Half Sine-Wave Super Imposed on Rated Load(JEDEC Method)	$I_{FSM}$	30								A	
Peak Forward Voltage at 2.0A DC (Note 1)	$V_F$	1.0			1.3		1.7			V	
Maximum DC Reverse Current @ $T_J=25^\circ\text{C}$ at Rated DC Bolcking Voltage @ $T_J=100^\circ\text{C}$	$I_R$					5.0					$\mu\text{A}$
						100					
Maximum Reverse Recovery Time (Note 1)	$T_{RR}$				50		75			nS	
Typical Junction Capacitance (Note1)	$C_J$				20		10			pF	
Typical Thermal Resistance (Note2)	$R_{eJA}$	25								$^\circ\text{C/W}$	
Operating Temperature Range	$T_J$	-55 to +125								$^\circ\text{C}$	
Storage Temperature Range	$T_{STG}$	-55 to +150								$^\circ\text{C}$	

## Notes:

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

## Rating and Characterstic Curves.

Figure 1 - Forward Current Derating Curve

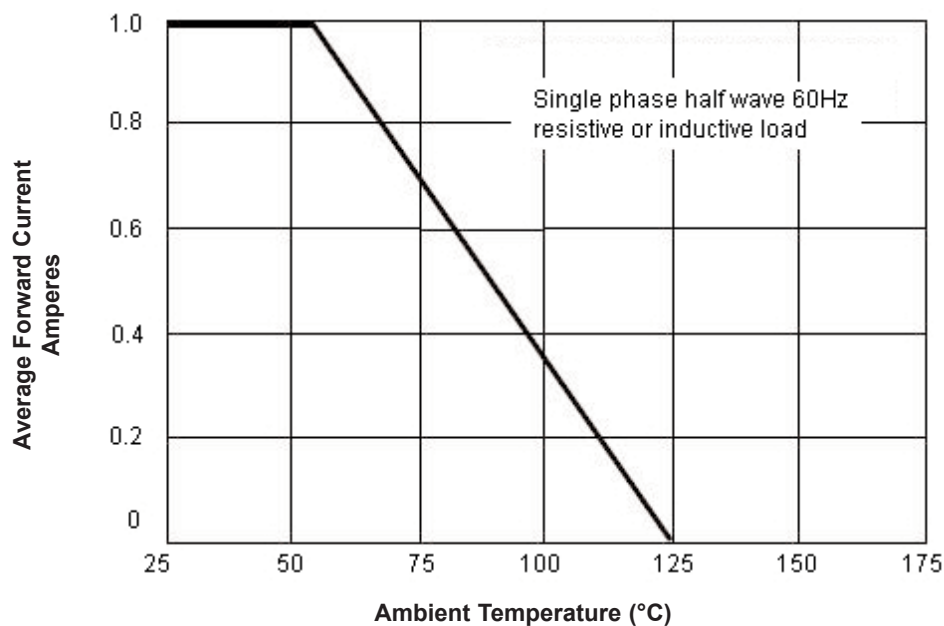


Figure 2 - Maximum Non-repetitive Surge Current

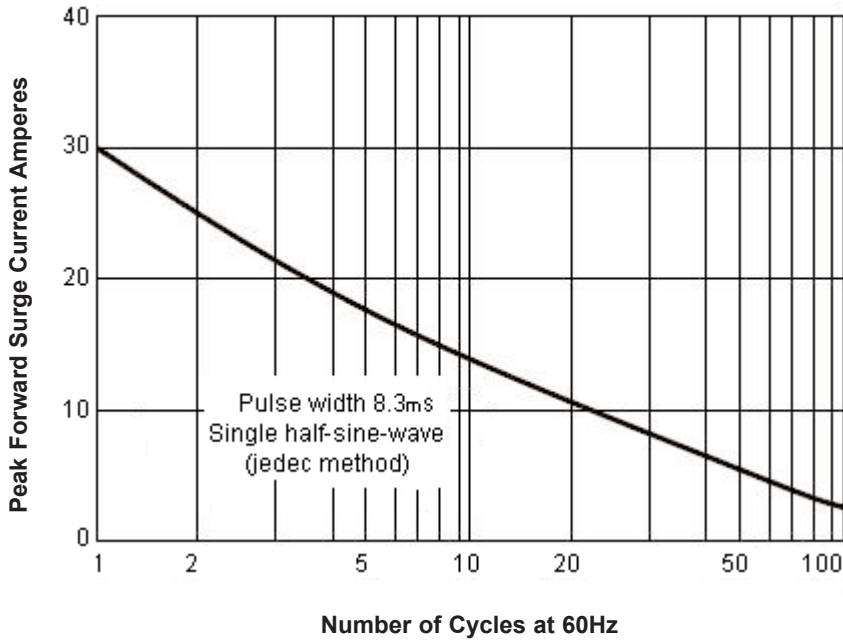


Figure 3 - Typical Junction Capacitance

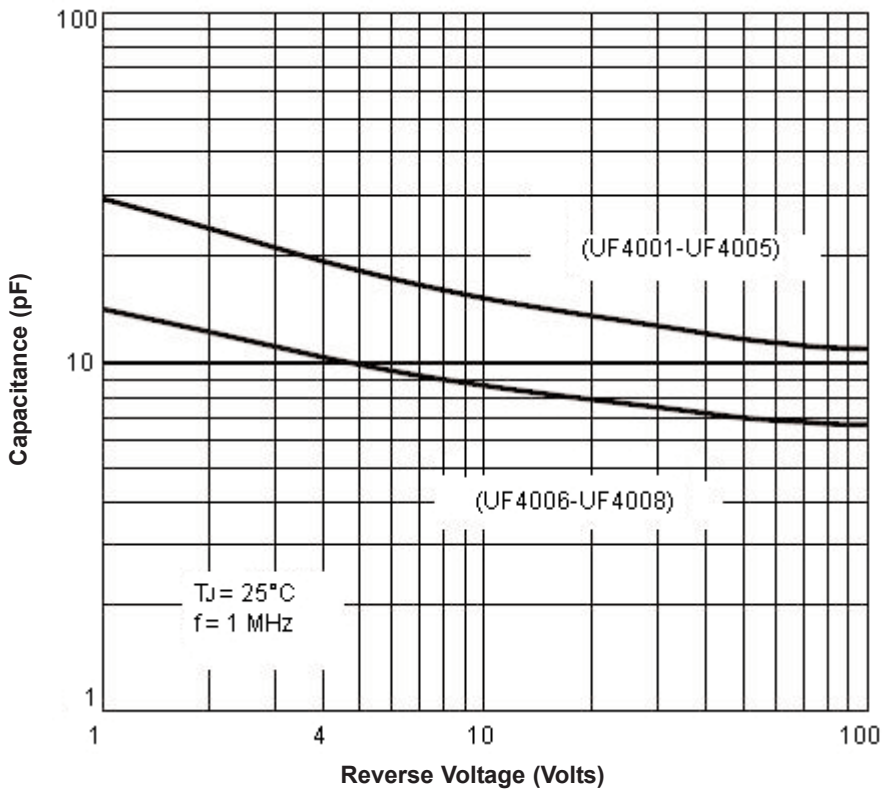
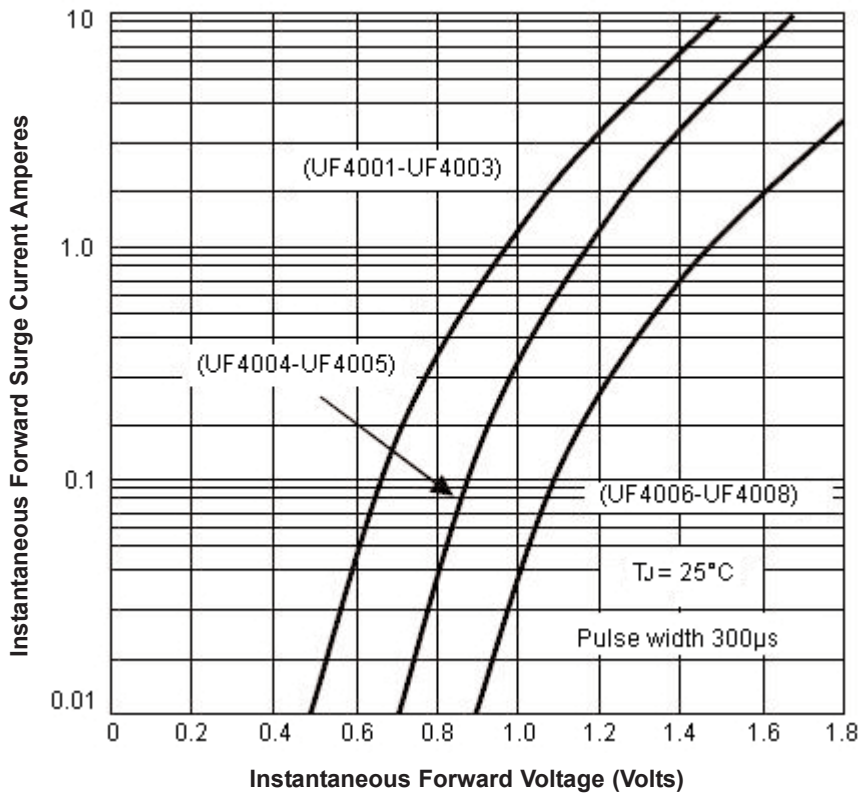


Figure 4 - Typical Forward Characteristics



## Part Number Table

Description	Part Number
Ultra Fast Rectifiers	UF4001
Ultra Fast Rectifiers	UF4002
Ultra Fast Rectifiers	UF4003
Ultra Fast Rectifiers	UF4004
Ultra Fast Rectifiers	UF4005
Ultra Fast Rectifiers	UF4006
Ultra Fast Rectifiers	UF4007
Ultra Fast Rectifiers	UF4008

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