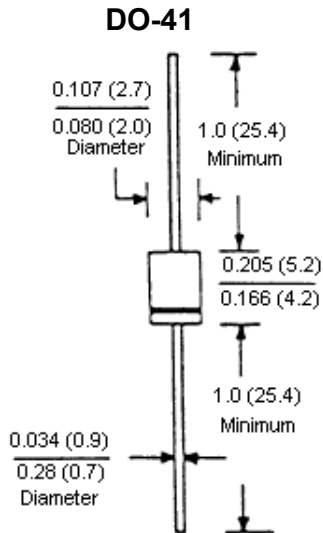


# UF4000 Series

## Power Diodes - Ultra-Fast Recovery

### Axial



Dimensions : Inches (Millimetres)

### Features:

- 1.0 ampere operation at  $T_A = 55^\circ\text{C}$  with no thermal runaway.
- Glass passivated chip junction.
- Low cost, fast efficient plastic rectifiers.
- Ultrafast recovery time for high efficiency.
- Low forward voltage.
- Low leakage current.
- High surge current capability.

### Mechanical Data:

Case	: JEDEC DO-41 moulded plastic body over passivated chip.
Terminals	: Plated axial leads, solderable per MIL-STD-750, Method 2026.
Mounting position	: Any.
Polarity	: Colour band denotes cathode end.
High temperature soldering guaranteed	: $250^\circ\text{C}/10$ seconds/ $0.375''$ , (9.5mm) lead lengths at 5lbs, (2.3kg) tension.

### Maximum Ratings and Electrical Characteristics

Rating at  $25^\circ\text{C}$  ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Type Number	UF4001	UF4002	UF4003	UF4004	UF4005	UF4006	UF4007	Unit
Maximum Recurrent Peak Reverse Voltage	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	
Maximum DC Blocking Voltage	50	100	200	400	600	800	1000	
Maximum Average Forward Rectified Current $0.375''$ (9.5mm) Lead Length at $T_A = 55^\circ\text{C}$	1.0							A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	30							
Maximum Instantaneous Forward Voltage at 1.0A	1.0				1.7			V
Maximum DC Reverse Current at $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage at $T_A = 125^\circ\text{C}$					10.0 50.0			$\mu\text{A}$
Maximum Reverse Recovery Time (Note 1)	50				75			
Typical Junction Capacitance (Note 2)	17.0							
Typical Thermal Resistance (Note 3) $R_{\theta JA}$ $R_{\theta JL}$					60.0 15.0			$^\circ\text{C}/\text{W}$
Operating/Storage Temperature Range $T_J, T_{STG}$	-65 to +150							$^\circ\text{C}$



**Notes:**

1. Reverse recovery test conditions:  $I_F = 0.5A$ ,  $I_R = 1.0A$ ,  $I_{RR} = 0.25A$ .
2. Measured at 1MHz and applied reverse voltage of 4.0V dc.
3. Thermal resistance from junction to ambient and from junction to lead length 0.375" (9.5mm), PCB mounted.

### Ratings and Characteristic Curves

Figure - 1 Maximum Forward Current Derating Curve

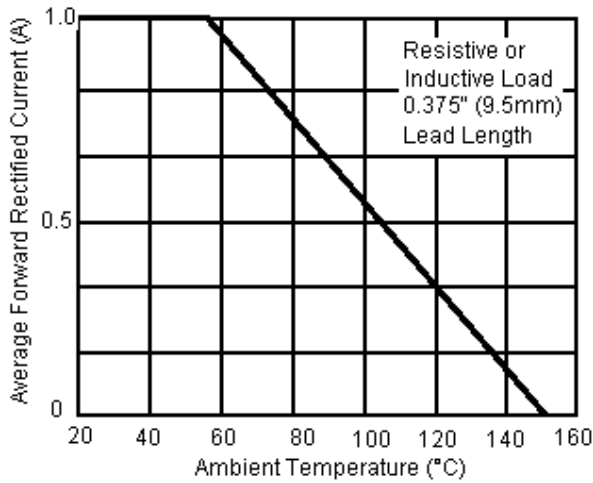


Figure - 2 Maximum Non-Repetitive Peak Forward Surge Current

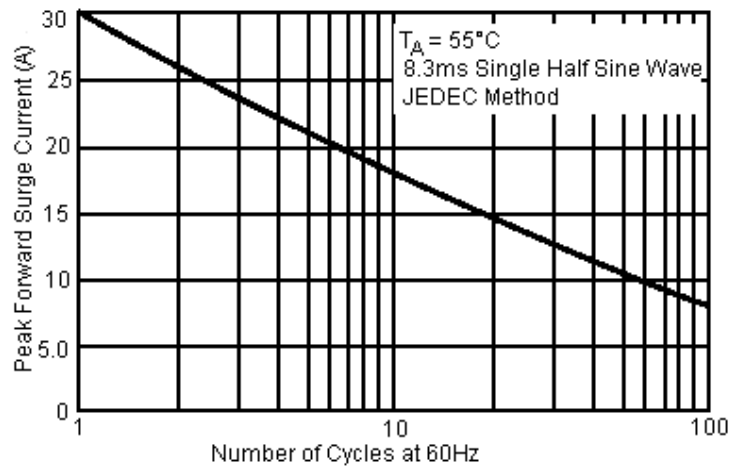


Figure - 3 Typical Reverse Characteristics

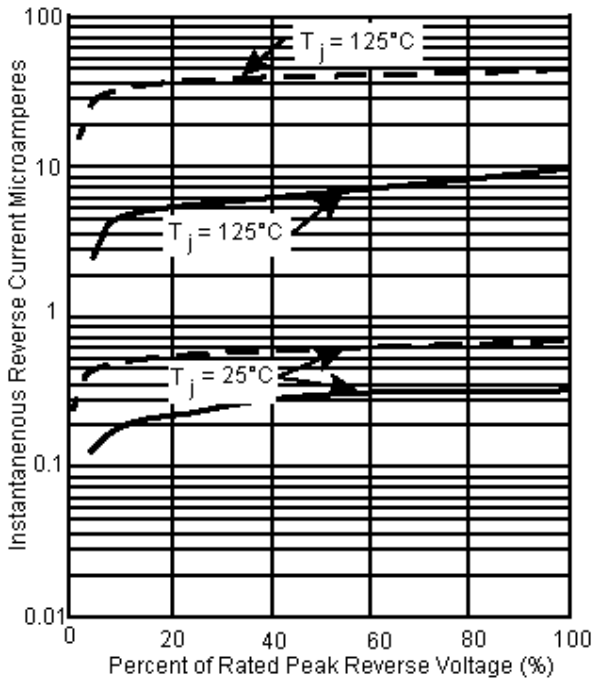
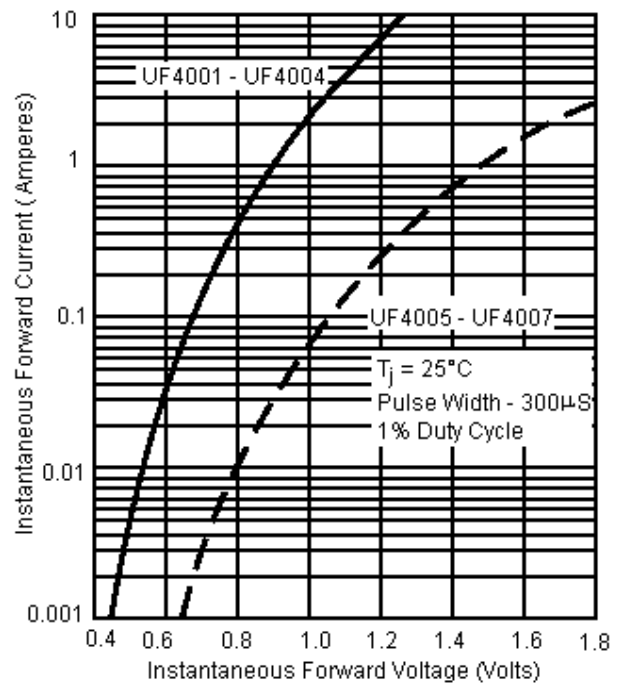


Figure - 4 Typical Instantaneous Forward Characteristics

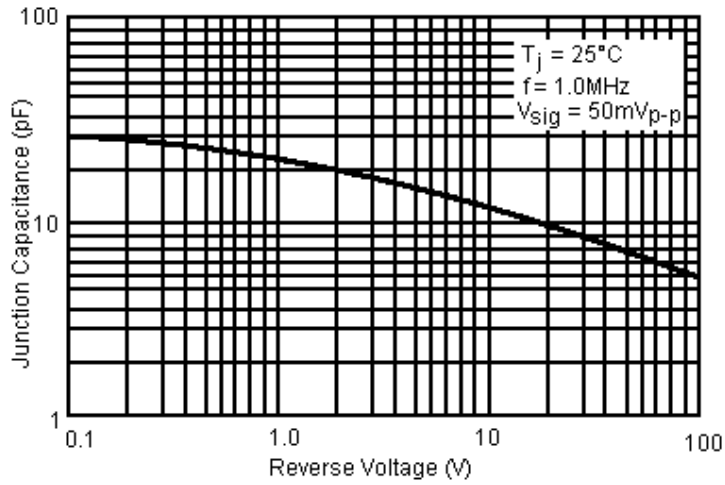


# UF4000 Series

## Power Diodes - Ultra-Fast Recovery



Figure - 5 Typical Junction Capacitance



### Specifications

$I_f$ (av) (A)	$t_{rr}$ (nS)	$I_{fsm}$ (A)	$V_f$ maximum (V)	Length	Diameter	Package	Part Number
1	50	30	1	5.2	2.7	DO-41	UF4001
							UF4002
							UF4003
1	75	30	1.7	5.2	2.7	DO-41	UF4004
							UF4005
							UF4006
							UF4007

Dimensions : Millimetres



# UF4000 Series

## Power Diodes - Ultra-Fast Recovery



### Notes:

### International Sales Offices:



**AUSTRALIA** – Farnell InOne  
Tel No: ++ 61 2 9645 8888  
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