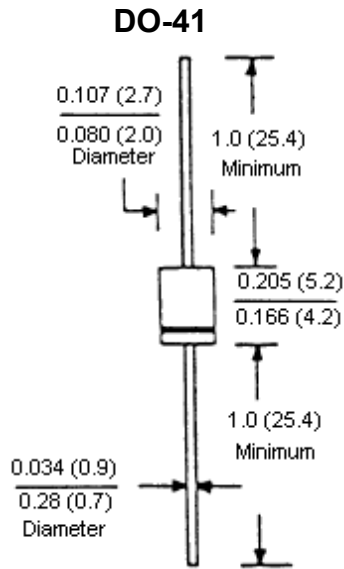


UF4000 Series

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°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			μA
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							$^\circ\text{C}$

UF4000 Series

Power Diodes - Ultra-Fast Recovery



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

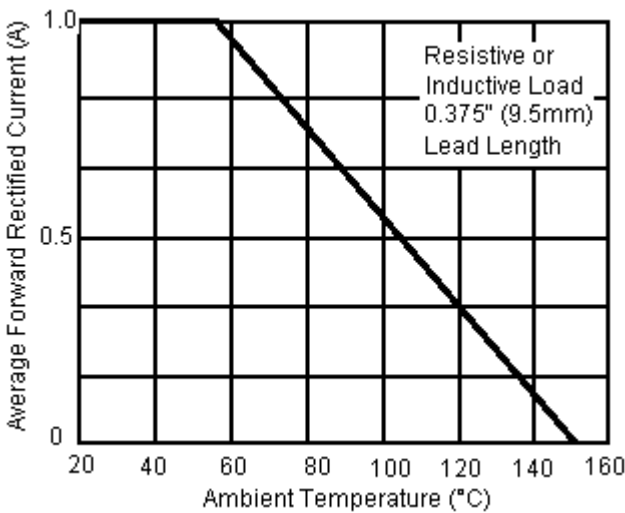


Figure - 2 Maximum Non-Repetitive Peak Forward Surge Current

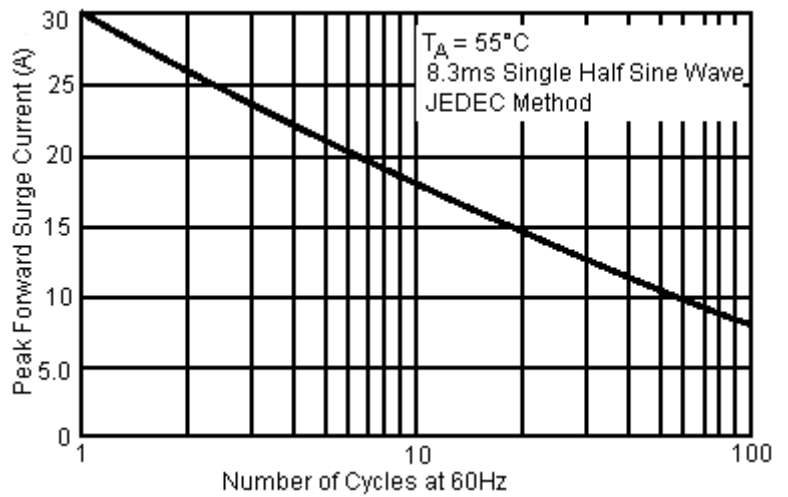


Figure - 3 Typical Reverse Characteristics

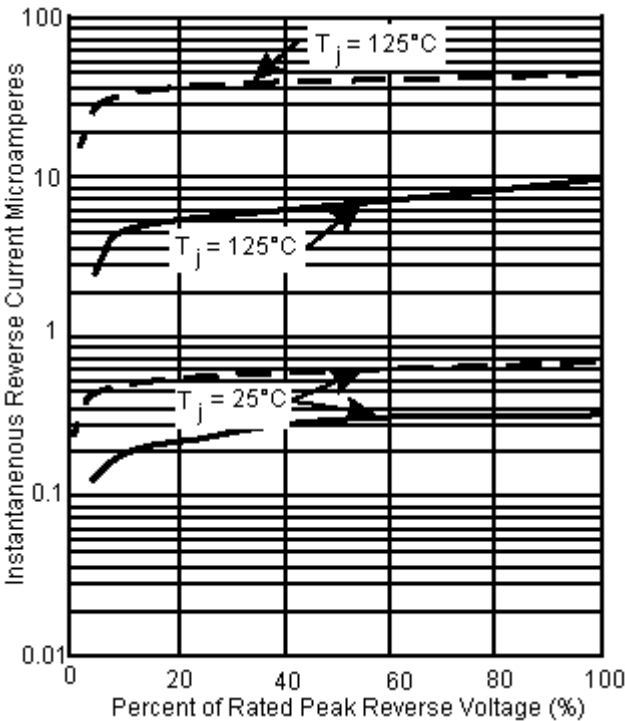
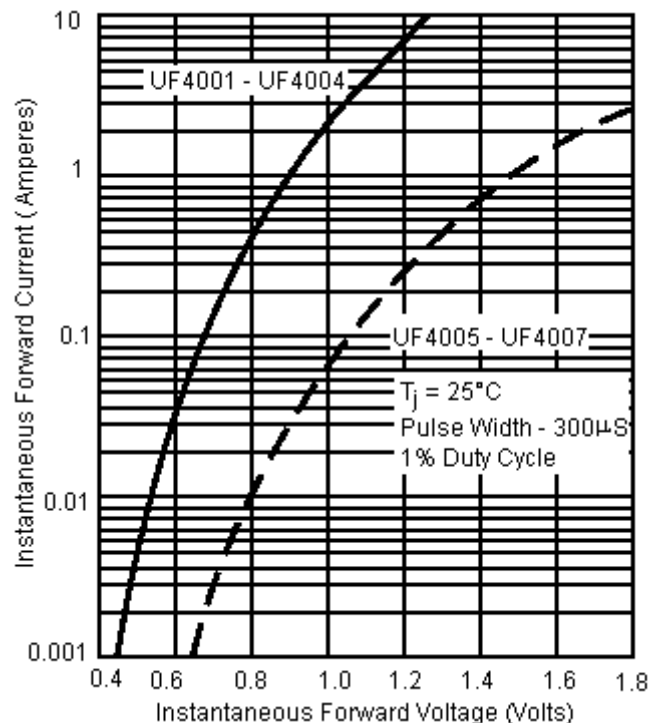


Figure - 4 Typical Instantaneous Forward Characteristics

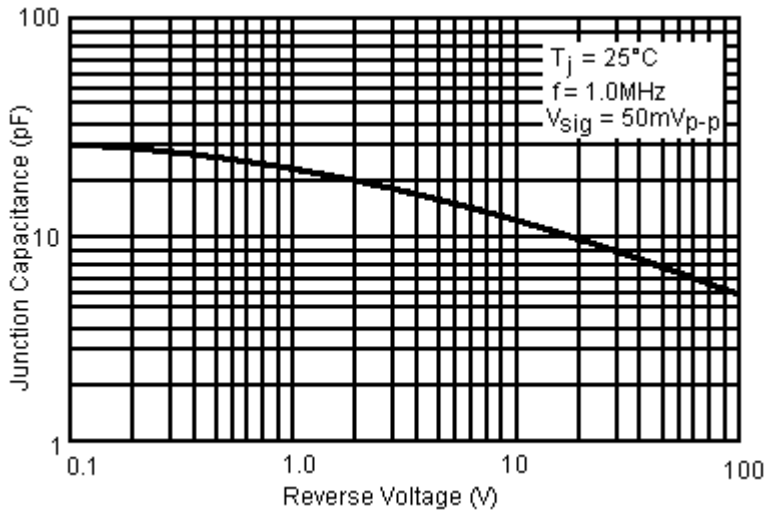


UF4000 Series

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
			1.7				UF4002
1	75						UF4003
	UF4004						
							UF4005
							UF4006
							UF4007

Dimensions : Millimetres



UF4000 Series

Power Diodes - Ultra-Fast Recovery



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