

Pb Free Plating Product

UF4001 thru UF4007



1.0 AMP. ULTRA FAST RECOVERY RECTIFIERS

Features

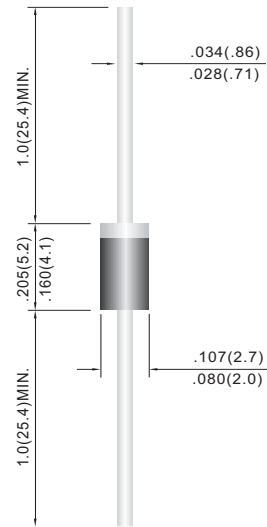
- Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- Ideally suited for use in very high frequency switching power supplies, inverters and as free wheeling diodes
- Ultrafast recovery time for high efficiency
- Excellent high temperature switching
- Soft recovery characteristics

Mechanical Data

- Case: molded plastic, DO-41
- Epoxy: UL 94V-0 rate flame retardant
- Lead: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed
- Polarity: Color band denotes cathode end
- Mounting Position: Any

DO-41

Unit: inch(mm)

**Absolute Maximum Ratings and Characteristics**

Ratings 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%.

Parameter	Symbols	UF4001	UF4002	UF4003	UF4004	UF4005	UF4006	UF4007	Units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current 0.375"(9.5mm) Lead Length at $T_A = 55^\circ\text{C}$	$I_{(AV)}$	1							A
Peak Forward Surge Current, 8.3 ms Single Half-sine -wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	30							A
Maximum Forward Voltage at 1 A DC	V_F	1			1.7			V	
Maximum Reverse Current at Rated DC Blocking Voltage $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	I_R	5 500							μA
Typical Junction Capacitance ¹⁾	C_J	17							pF
Typical Thermal Resistance ²⁾	$R_{\theta JA}$	60							$^\circ\text{C/W}$
Maximum Reverse Recovery Time ³⁾	t_{rr}	50			75			ns	
Operating and Storage Temperature Range	T_J, T_S	-55 to +150							$^\circ\text{C}$

¹⁾ Measured at 1 MHz and applied reverse voltage of 4 V DC.

²⁾ Thermal resistance junction to ambient and from junction to lead at 0.375"(9.5mm) lead length P.C.B mounted.

³⁾ Reverse recovery test conditions: $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{rr} = 0.25\text{ A}$.

FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVE

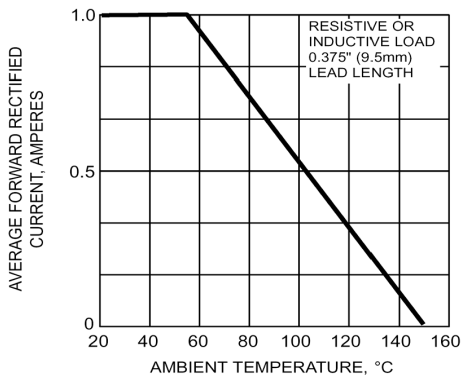


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

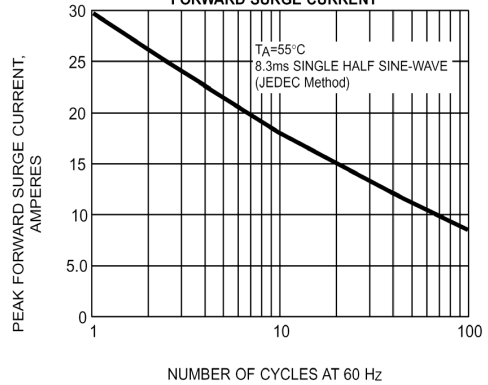


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

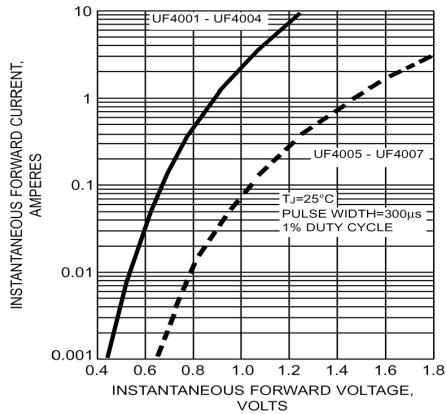


FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

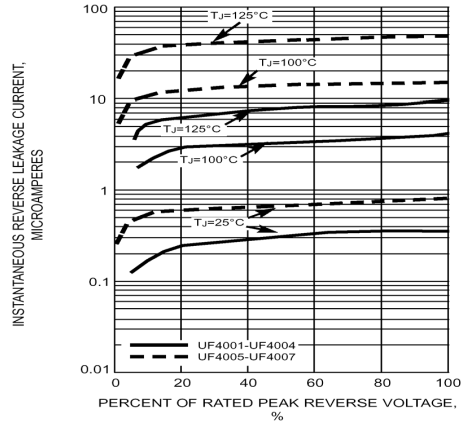


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

