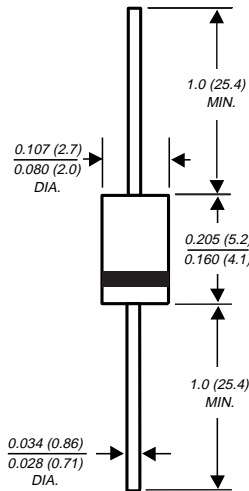


# UF4001 THRU UF4007

## ULTRAFast EFFICIENT PLASTIC RECTIFIER

Reverse Voltage - 50 to 1000 Volts      Forward Current - 1.0 Ampere

### DO-204AL



Dimensions in inches and (millimeters)

### FEATURES

- ◆ Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- ◆ 1.0 ampere operation at  $T_A=55^\circ\text{C}$  with no thermal runaway
- ◆ Glass passivated chip junction
- ◆ Low cost
- ◆ Ultrafast recovery time for high efficiency
- ◆ Low forward voltage
- ◆ Low leakage current
- ◆ High surge current capability
- ◆ High temperature soldering guaranteed: 250°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension



### MECHANICAL DATA

**Case:** JEDEC DO-204AL molded plastic body over passivated chip

**Terminals:** Plated axial leads, solderable per MIL-STD-750, Method 2026

**Polarity:** Color band denotes cathode end

**Mounting Position:** Any

**Weight:** 0.012 ounce, 0.3 gram

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

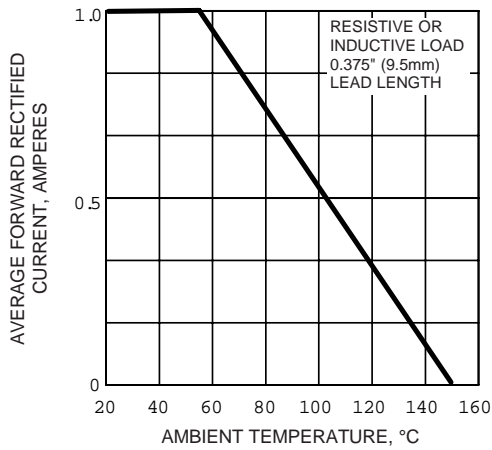
	SYMBOLS	UF 4001	UF 4002	UF 4003	UF 4004	UF 4005	UF 4006	UF 4007	UNITS	
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts	
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts	
Maximum DC blocking voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts	
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=55^\circ\text{C}$	I <sub>(AV)</sub>	1.0							Amp	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	30.0							Amps	
Maximum instantaneous forward voltage at 1.0A	V <sub>F</sub>	1.0				1.7			Volts	
Maximum DC reverse current at rated DC blocking voltage	I <sub>R</sub>	$T_A=25^\circ\text{C}$			10.0			$T_A=100^\circ\text{C}$		$\mu\text{A}$
Maximum reverse recovery time (NOTE 1)	t <sub>rr</sub>	50.0				75.0			ns	
Typical junction capacitance (NOTE 2)	C <sub>J</sub>	17.0							pF	
Typical thermal resistance (NOTE 3)	R <sub>θJA</sub> R <sub>θJL</sub>				60.0			15.0		$^\circ\text{C/W}$
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150							$^\circ\text{C}$	

#### NOTES:

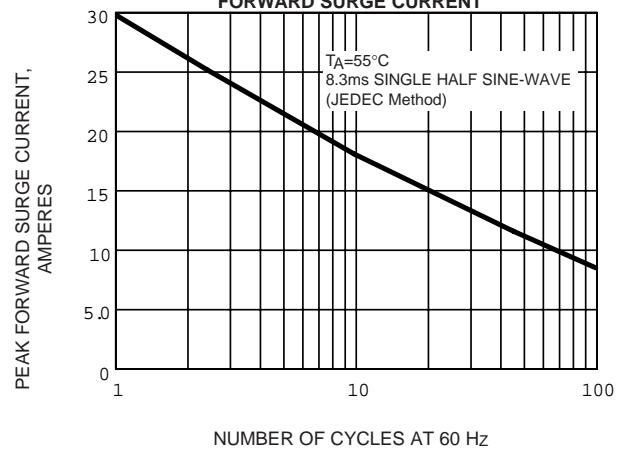
- (1) Reverse recovery test conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>rr</sub>=0.25A
- (2) Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts
- (3) Thermal resistance from junction to ambient and from junction to lead length 0.375" (9.5mm), P.C.B. mounted

# RATINGS AND CHARACTERISTIC CURVES UF4001 THRU UF4007

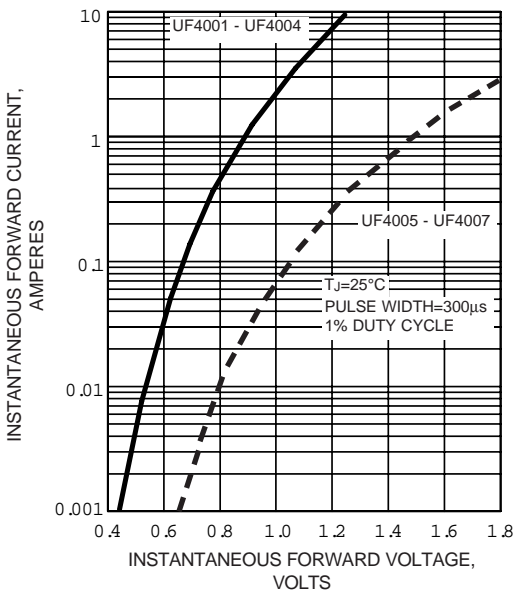
**FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVE**



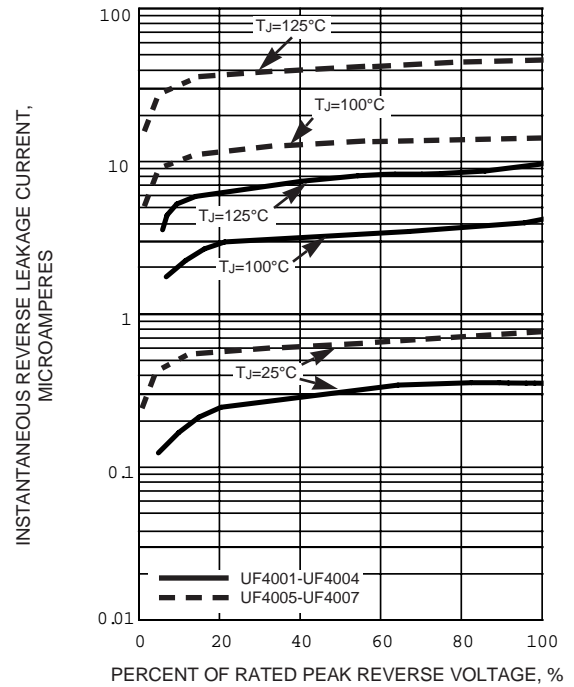
**FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS**



**FIG. 5 - TYPICAL JUNCTION CAPACITANCE**

