



### Reverse Voltage 50 to 1000 Volts, Forward Current 1.0 Ampere

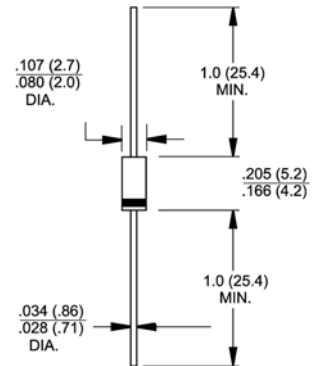
#### Features

- ◆ 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
- ◆ Glass passivated junction
- ◆ High temperature soldering guaranteed:  
250°C/10 seconds, 0.375" (9.5mm) lead length,  
5 bs. (2.3kg) tension

#### Mechanical Data

- ◆ Case: JEDEC DO-204AL(DO-41) molded plastic body over passivated chip
- ◆ Terminals: Axial leads, solderable per MIL-STD-750, Method 2026
- ◆ Polarity: Color band denotes cathode end
- ◆ Mounting Position: Any
- ◆ Weight: 0.012 ounce, 0.34 gram

#### DO-204AL (DO-41)



Dimensions in inches and (millimeters)

#### Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbols	UF4001	UF4002	UF4003	UF4004	UF4005	UF4006	UF4007	Units	
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts	
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts	
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts	
Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A=55^\circ\text{C}$	$I_{F(AV)}$	1.0								Amp
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	30.0								Amps
Maximum instantaneous forward voltage at 1.0A (Note 2)	$V_F$	1.0			1.7				Volts	
Maximum DC reverse current at rated DC blocking voltage @ $T_A=25^\circ\text{C}$ @ $T_A=100^\circ\text{C}$	$I_R$	10.0				50				$\mu\text{A}$
Maximum reverse recovery time $I_F=0.5\text{A}$ , $I_R=1.0\text{A}$ , $I_T=0.25\text{A}$	$t_{rr}$	50				75				nS
Typical junction capacitance at 4.0V, 1MHz	$C_J$	17								pF
Typical thermal resistance (Note 1)	$R_{\theta JA}$ $R_{\theta JB}$	60				15				$^\circ\text{C/W}$
Operating junction temperature range	$T_J$	-55 to +150								$^\circ\text{C}$
Storage temperature range	$T_{STG}$	-55 to +150								$^\circ\text{C}$

- Notes**
1. Thermal resistance from junction to ambient at 0.375"(9.5mm) lead length
  2. Pulse test: 300 $\mu\text{s}$  pulse width, 1% duty cycle



# UF4001 ~ UF4007

## RATINGS AND CHARACTERISTIC CURVES

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

FIG. 1 - MAXIMUM FORWARD CURRENT DERATING CURVE

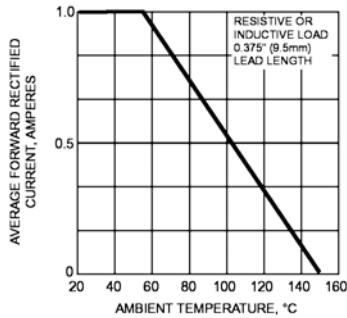


FIG. 2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

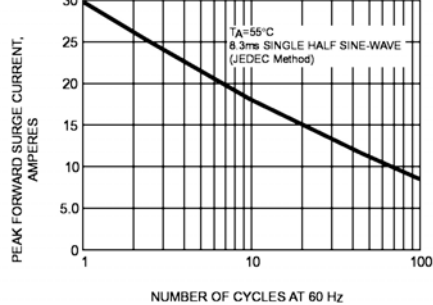


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

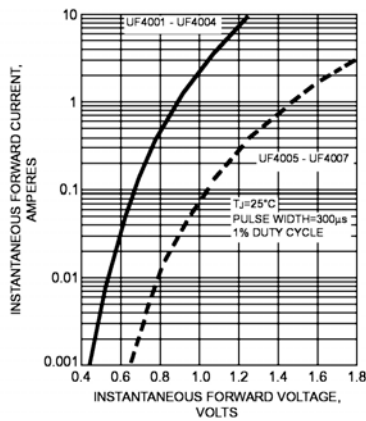


FIG. 4 - TYPICAL REVERSE LEAKAGE CHARACTERISTICS

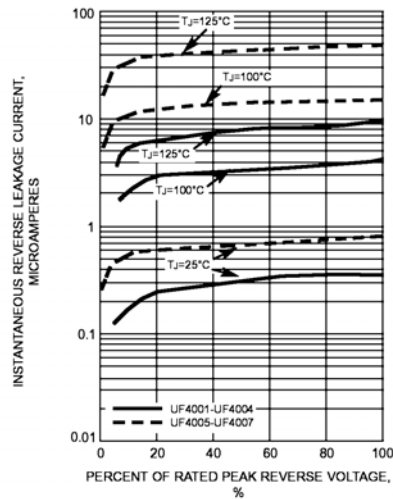


FIG. 5 - TYPICAL JUNCTION CAPACITANCE

