



# UF4001 THRU UF4007

## 1.0 AMP. ULTRA FAST RECTIFIERS



**VOLTAGE RANGE**  
50 to 1000 Volts  
**CURRENT**  
1.0 Ampere

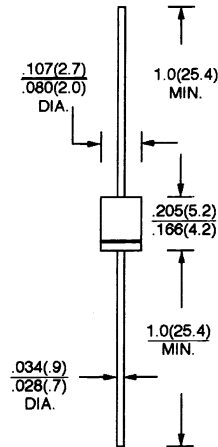
### FEATURES

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability

### MECHANICAL DATA

- \* Case: Molded plastic
- \* 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
- \* Weight: 0.34 grams

### DO-41



Dimensions in inches and (millimeters)

### 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%

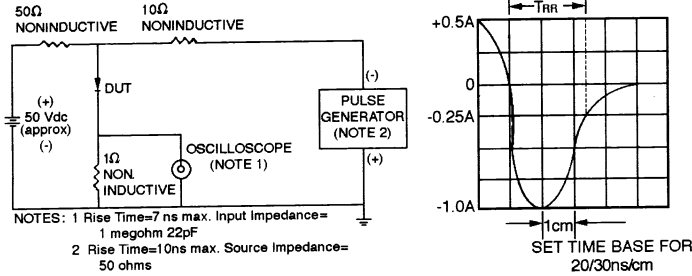
| TYPE NUMBER   | SYMBOLS     | UF 4001     | UF 4002 | UF 4003 | UF 4004 | UF 4005 | UF 4006 | UF 4007 | UNITS   |
|---|-------------|-------------|---------|---------|---------|---------|---------|---------|---------|
| Maximum Recurrent Peak Reverse Voltage  | $V_{RRM}$   | 50          | 100     | 200     | 400     | 600     | 800     | 1000    | V       |
| Maximum RMS Voltage   | $V_{RMS}$   | 35          | 70      | 140     | 280     | 420     | 560     | 700     | V       |
| Maximum D. C Blocking Voltage   | $V_{DC}$    | 50          | 100     | 200     | 400     | 600     | 800     | 1000    | V       |
| Maximum Average Forward Rectified Current<br>(.375"9.5mm) lead length @ $T_A = 50^\circ C$                | $I_{F(AV)}$ | 1.0         |         |         |         |         |         |         | A       |
| Peak Forward Surge Current, 8.3 ms single half sine - wave<br>superimposed on rated load (JEDEC method)   | $I_{FSM}$   | 30          |         |         |         |         |         |         | A       |
| Maximum Instantaneous Forward Voltage at 1.0A   | $V_F$       | 1.1         |         |         | 1.4     |         |         | V       |         |
| Maximum D. C Reverse Current @ $T_A = 25^\circ C$<br>At Rated D. C Blocking Voltage @ $T_A = 100^\circ C$ | $I_R$       | 5.0<br>100  |         |         |         |         |         |         | $\mu A$ |
| Maximum Reverse Recovery Time (Note 1)  | $T_{RR}$    | 50          |         |         | 75      |         |         | nS      |         |
| Typical Junction Capacitance (Note 2)   | $C_J$       | 20          |         |         | 15      |         |         | pF      |         |
| Operation Temperature Range   | $T_J$       | -65 to +125 |         |         | °C      |         |         |         |         |
| Storage Temperature Range   | $T_{STG}$   | -65 to +150 |         |         | °C      |         |         |         |         |

NOTES: 1. Reverse Recovery Test Conditions:  $I_F = 0.5A$ ,  $I_R = 1.0A$ ,  $I_{RR} = 0.25A$ .  
2. Measured at 1 MHz and applied reverse voltage of 4.0V D. C.

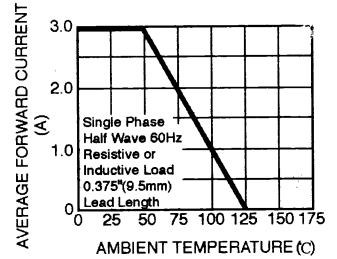
# RATINGS AND CHARACTERISTIC CURVES

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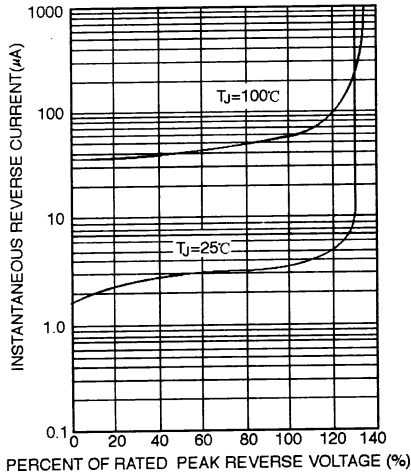
**FIG. 1 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS**



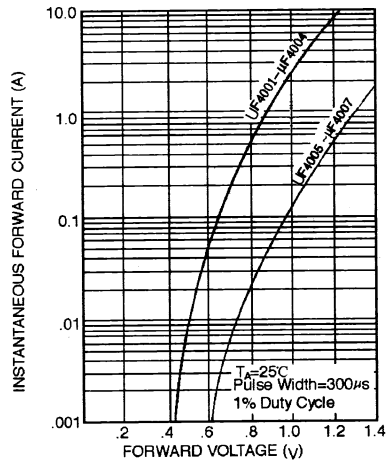
**FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE**



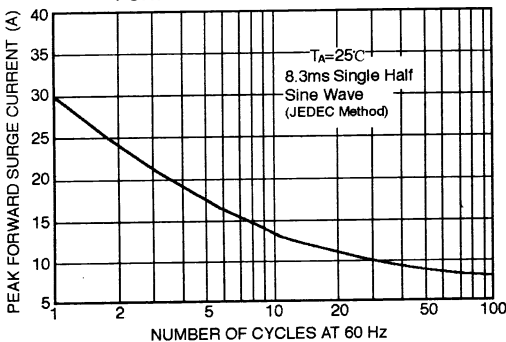
**FIG. 3 - TYPICAL REVERSE CHARACTERISTICS**



**FIG. 4 - TYPICAL FORWARD CHARACTERISTICS**



**FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT**



**FIG. 6 - TYPICAL JUNCTION CAPACITANCE**

