

# UF4001 THRU UF4007

## ULTRAFAST RECTIFIER

VOLTAGE: 50-1000V

CURRENT: 1.0A

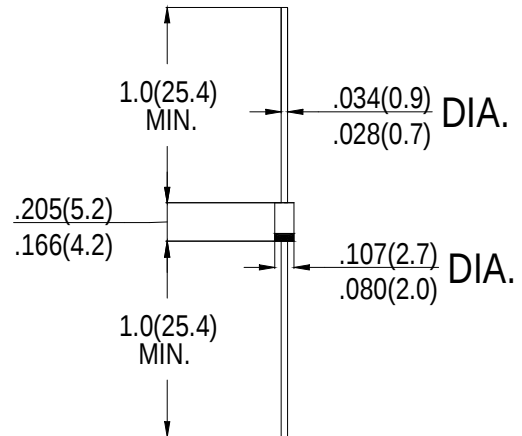
### FEATURES

- Low power loss, high efficiency
- Low leakage
- Low forward voltage
- High current capability
- High speed switching
- High surge capability
- High reliability

### MECHANICAL DATA

- **Case:** Molded plastic
- **Epoxy:** UL94V-0 rate flame retardant
- **Lead:** MIL-STD- 202E, Method 208 guaranteed
- **Polarity:** Color band denotes cathode end
- **Mounting position:** Any
- **Weight:** 0.33 grams

### DO-41



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%

|                                                                                                       | SYMBOL                 | UF 4001 | UF 4002 | UF 4003 | UF 4004 | UF 4005 | UF 4006 | UF 4007 | units     |
|-------------------------------------------------------------------------------------------------------|------------------------|---------|---------|---------|---------|---------|---------|---------|-----------|
| Maximum Recurrent Peak Reverse Voltage                                                                | <b>V<sub>RRM</sub></b> | 50      | 100     | 200     | 400     | 600     | 800     | 1000    | <b>V</b>  |
| Maximum RMS Voltage                                                                                   | <b>V<sub>RMS</sub></b> | 35      | 70      | 140     | 280     | 420     | 560     | 700     | <b>V</b>  |
| Maximum DC Blocking Voltage                                                                           | <b>V<sub>DC</sub></b>  | 50      | 100     | 200     | 400     | 600     | 800     | 1000    | <b>V</b>  |
| Maximum Average Forward rectified Current at T <sub>A</sub> =50°C                                     | <b>I<sub>o</sub></b>   | 1.0     |         |         |         |         |         |         | <b>A</b>  |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rate load (JEDEC method)       | <b>I<sub>FSM</sub></b> | 30      |         |         |         |         |         |         | <b>A</b>  |
| Maximum Instantaneous forward Voltage at 1.0A DC                                                      | <b>V<sub>F</sub></b>   | 1.0     |         |         |         | 1.7     |         |         | <b>V</b>  |
| Maximum DC Reverse Current at Rated DC Blocking Voltage T <sub>A</sub> =25°C                          | <b>I<sub>R</sub></b>   | 5.0     |         |         |         |         |         |         | <b>µA</b> |
| Maximum Full Load Reverse Current Full Cycle Average,.375”(9.5mm) lead length at T <sub>L</sub> =75°C |                        | 100     |         |         |         |         |         |         |           |
| Maximum Reverse Recovery Time (Note 1)                                                                | <b>t<sub>rr</sub></b>  | 50      |         |         |         |         |         |         | <b>nS</b> |
| Typical Junction Capacitance (Note 2)                                                                 | <b>C<sub>J</sub></b>   | 15      |         |         |         | 12      |         |         | <b>pF</b> |

Notes: 1. Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1.0\text{A}$ ,  $I_{RR}=0.25\text{A}$

2. Measured at 1MHz and applied reverse voltage of 4.0 volts