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## UF4001 thru UF4007

Glass Passivated High Efficient Rectifiers  
Reverse Voltage 50 to 1000 Volts Forward Current 1.0 Ampere

### Features

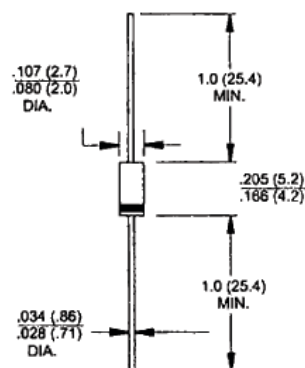
- ◆ Plastic package has Underwriters Laboratories Flammability Classification 94V-0
- ◆ Ideally suited for use in very high frequency switching power supplies, inverters and as free wheeling diodes
- ◆ Ultrafast recovery time for high efficiency
- ◆ Excellent high temperature switching
- ◆ Soft recovery characteristics
- ◆ Glass passivated junction
- ◆ High temperature soldering guaranteed:  
250°C/10 seconds, 0.375" (9.5mm) lead length,  
5 lbs. (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 <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<br>0.375" (9.5mm) lead length at T <sub>A</sub> =55°C                                           | I <sub>FAV</sub>                   | 1.0         |        |        |        |        |        |        | Amp   |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on<br>rated load (JEDEC Method)                                    | I <sub>FSM</sub>                   | 30.0        |        |        |        |        |        |        | Amps  |
| Maximum instantaneous forward voltage at 1.0A (Note 2)                                                                                    | V <sub>F</sub>                     | 1.0         |        |        |        | 1.7    |        |        | Volts |
| Maximum DC reverse current                    @T <sub>A</sub> =25°C<br>at rated DC blocking voltage                @T <sub>A</sub> =100°C | I <sub>R</sub>                     | 10.0<br>50  |        |        |        |        |        |        | µA    |
| Maximum reverse recovery time<br>I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>R</sub> = 0.25A                                       | t <sub>rr</sub>                    | 50          |        |        |        | 75     |        |        | nS    |
| Typical junction capacitance at 4.0V, 1MHz                                                                                                | C <sub>j</sub>                     | 17          |        |        |        |        |        |        | pF    |
| Typical thermal resistance (Note 1)                                                                                                       | R <sub>JA</sub><br>R <sub>SA</sub> | 60<br>15    |        |        |        |        |        |        | °C/W  |
| Operating junction temperature range                                                                                                      | T <sub>J</sub>                     | -55 to +150 |        |        |        |        |        |        | °C    |
| Storage temperature range                                                                                                                 | T <sub>STG</sub>                   | -55 to +150 |        |        |        |        |        |        | °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

[www.surgecomponents.com](http://www.surgecomponents.com)



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## RATINGS AND CHARACTERISTIC CURVES

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

