



# UF501G THRU UF507G

Glass Passivated Ultra Fast Recovery Rectifier

## Features

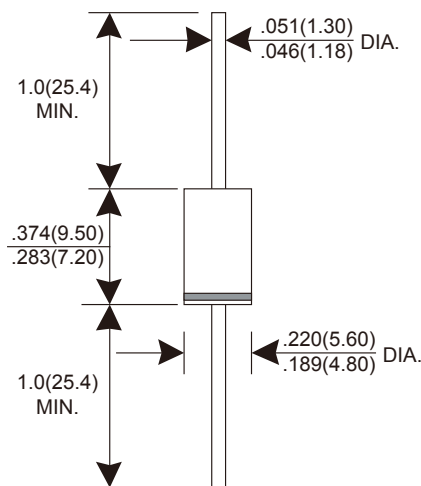
- \* Fast switching for high efficiency
- \* Low forward voltage drop
- \* High current capability
- \* Low reverse leakage current
- \* High surge current capability

## Mechanical Data

- \* Case: Molded plastic, DO-201AD
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Solderable per MIL-STD-202, method 208
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any

**Voltage Range 50 to 1000 V**  
**Current 5.0 Ampere**

### DO-201AD



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%.

| PARAMETER  | SYMBOL                            | UF 501G     | UF 502G | UF 503G | UF 504G | UF 505G | UF 506G | UF 507G | UNIT |    |
|--|-----------------------------------|-------------|---------|---------|---------|---------|---------|---------|------|----|
| Maximum repetitive peak reverse voltage  | V <sub>RRM</sub>                  | 50          | 100     | 200     | 400     | 600     | 800     | 1000    | V    |    |
| Maximum RMS voltage  | V <sub>RMS</sub>                  | 35          | 70      | 140     | 280     | 420     | 560     | 700     | V    |    |
| Maximum DC blocking voltage  | V <sub>DC</sub>                   | 50          | 100     | 200     | 400     | 600     | 800     | 1000    | V    |    |
| Maximum average forward rectified current @T <sub>A</sub> =55°C                                      | I <sub>F(AV)</sub>                | 5.0         |         |         |         |         |         |         | A    |    |
| Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load                   | I <sub>FSM</sub>                  | 150         |         |         |         |         |         |         | A    |    |
| Maximum instantaneous forward voltage @ I <sub>F</sub> =5.0A   | V <sub>F</sub>                    | 1.0         |         | 1.3     |         | 1.7     |         |         | V    |    |
| Maximum DC reverse current at rated DC blocking voltage @T <sub>A</sub> =25°C @T <sub>A</sub> =125°C | I <sub>R</sub>                    | 5<br>150    |         |         |         |         |         |         | μA   |    |
| Maximum reverse recovery time (Note 1)   | t <sub>rr</sub>                   | 50          |         |         |         | 75      |         |         |      | ns |
| Typical junction capacitance (Note 2)  | C <sub>J</sub>                    | 70          |         |         |         | 50      |         |         |      | pF |
| Typical thermal resistance from junction to ambient (Note 3)   | R <sub>θJA</sub>                  | 30          |         |         |         |         |         |         | °C/W |    |
| Operating junction and storage temperature range   | T <sub>J</sub> , T <sub>STG</sub> | -55 to +150 |         |         |         |         |         |         | °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 DC.

(3) Thermal resistance from junction to ambient at 0.375" (9.5 mm) lead length, PCB mounted.

# RATINGS AND CHARACTERISTICS CURVES UF501G THRU UF507G

Fig.1 - Forward Current Derating Curve

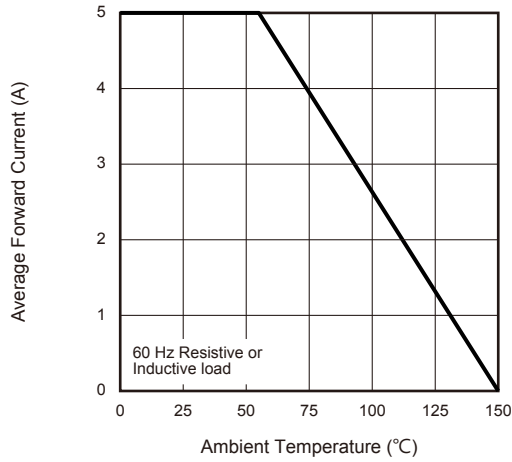


Fig.2 - Maximum Non-Repetitive Peak Forward Surge Current

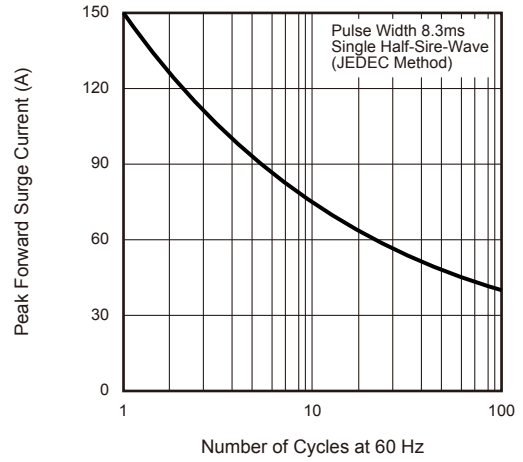


Fig.3 - Typical Instantaneous Forward Characteristics

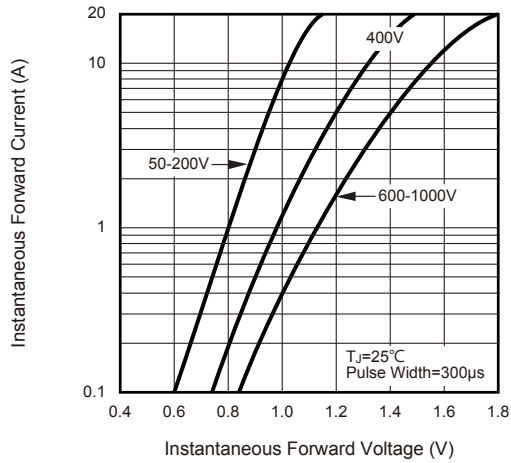


Fig.4 - Typical Reverse Leakage Characteristics

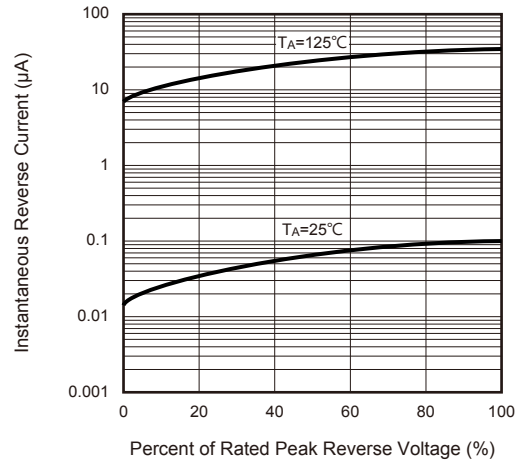


Fig.5 - Typical Junction Capacitance

