

# UF300G THRU UF308G

## GLASS PASSIVATED JUNCTION ULTRAFAST SWITCHING RECTIFIER

VOLTAGE - 50 to 800 Volts CURRENT - 3.0 Amperes

### DO-201AD

#### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O Utilizing Flame Retardant Epoxy Molding Compound
- Glass passivated junction in DO-201AD package
- 3.0 ampere operation at  $T_A=55^{\circ}\text{C}$  with no thermal runaway
- Exceeds environmental standards of MIL-S-19500/228
- Ultra Fast switching for high efficiency

#### MECHANICAL DATA

Case: Molded plastic, DO-201AD

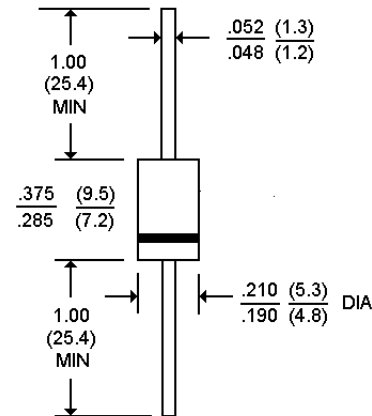
Terminals: axial leads, solderable per MIL-STD-202,

Method 208

Polarity: Band denotes cathode

Mounting Position: Any

Weight: 0.04 ounce, 1.1 gram



Dimensions in inches and (millimeters)

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at  $25^{\circ}\text{C}$  ambient temperature unless otherwise specified.

Resistive or inductive load 60Hz.

|                                                                                                                             | UF300G      | UF301G | UF302G | UF304G | UF306G | UF308G | UNITS |
|-----------------------------------------------------------------------------------------------------------------------------|-------------|--------|--------|--------|--------|--------|-------|
| Peak Reverse Voltage, Repetitive; V <sub>RM</sub> :                                                                         | 50          | 100    | 200    | 400    | 600    | 800    | V     |
| Maximum RMS Voltage                                                                                                         | 35          | 70     | 140    | 280    | 420    | 560    | V     |
| DC Reverse Voltage; V <sub>R</sub>                                                                                          | 50          | 100    | 200    | 400    | 600    | 800    | V     |
| Average Forward Current, I <sub>o</sub> @ T <sub>A</sub> =55 ºJ 3/8" lead length, 60 Hz, resistive or inductive load        | 3.0         |        |        |        |        |        | A     |
| Peak Forward Surge Current, I <sub>FM</sub> (surge) 8.3msec. single half sine wave superimposed on rated load(JEDEC method) | 150         |        |        |        |        |        | A     |
| Maximum Forward Voltage VF @ 3.0A, 25 ºJ                                                                                    | 1.00        |        |        | 1.30   | 1.70   |        | V     |
| Maximum Reverse Current, @ Rated T <sub>J</sub> =25 ºJ                                                                      | 10.0        |        |        |        |        |        | £g A  |
| Reverse Voltage T <sub>J</sub> =100 ºJ                                                                                      | 300         |        |        |        |        |        | £g A  |
| Typical Junction capacitance (Note 1) C <sub>J</sub>                                                                        | 75.0        |        |        | 50.0   |        |        | pF    |
| Typical Junction Resistance (Note 2) R £KJA                                                                                 | 60.0        |        |        |        |        |        | ºJ/W  |
| Reverse Recovery Time<br>I <sub>F</sub> =.5A, I <sub>R</sub> =1A, I <sub>rr</sub> =.25A                                     | 50          | 50     | 50     | 50     | 100    | 100    | ns    |
| Operating and Storage Temperature Range                                                                                     | -55 to +150 |        |        |        |        |        | ºJ    |

#### NOTES:

1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC
2. Thermal resistance from junction to ambient and from junction to lead length 0.375"(9.5mm) P.C.B. mounted

## RATING AND CHARACTERISTIC CURVES

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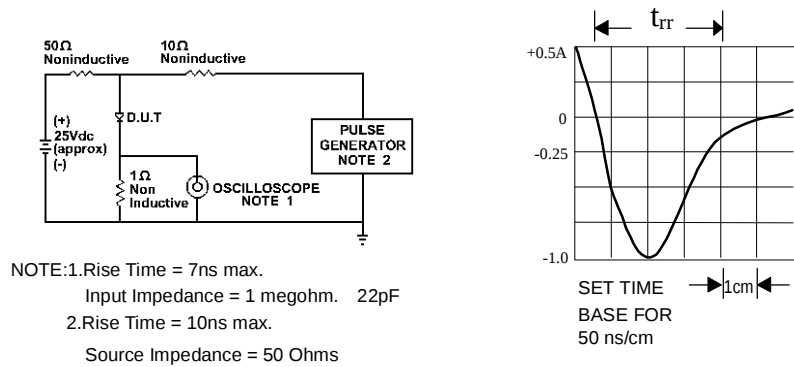


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

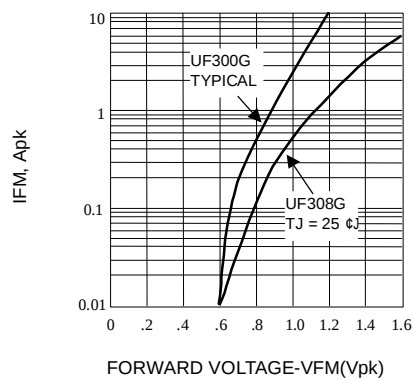


Fig. 2-FORWARD CHARACTERISTICS

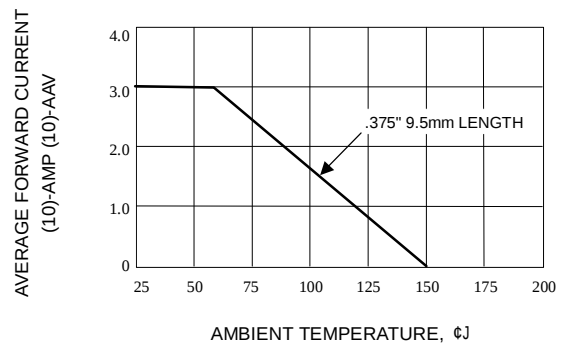


Fig. 3-FORWARD CURRENT DERATING CURVE

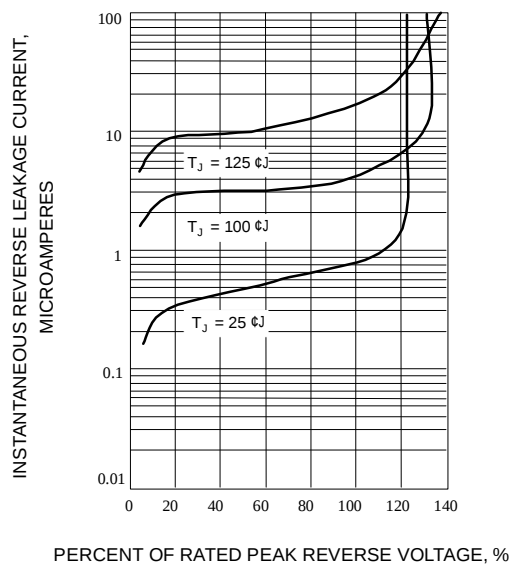


Fig. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

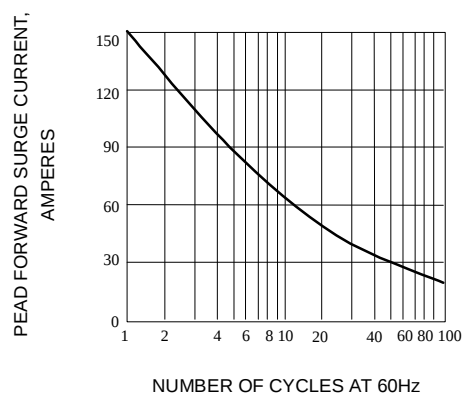


Fig. 5-PEAK FORWARD SURGE CURRENT