

# 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  $T_A=55\text{ }^{\circ}\text{C}$  with no thermal runaway
- Exceeds environmental standards of MIL-S-19500/228
- Ultra Fast switching for high efficiency

#### MECHANICAL DATA

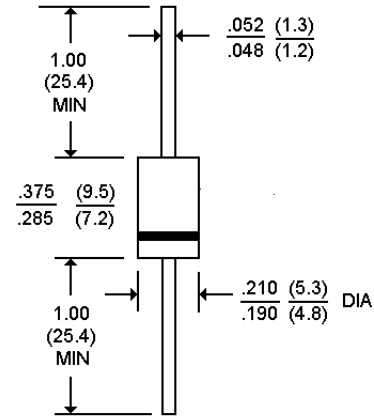
Case: Molded plastic, DO-201AD

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; $V_{RM}$ :	50	100	200	400	600	800	V
Maximum RMS Voltage	35	70	140	280	420	560	V
DC Reverse Voltage; $V_R$	50	100	200	400	600	800	V
Average Forward Current, $I_o$ @ $T_A=55\text{ }^{\circ}\text{C}$ 3/8" lead length, 60 Hz, resistive or inductive load	3.0						A
Peak Forward Surge Current, $I_{FM}$ (surge) 8.3msec. single half sine wave superimposed on rated load(JEDEC method)	150						A
Maximum Forward Voltage $V_F$ @ 3.0A, 25 $^{\circ}\text{C}$	1.00		1.30		1.70		V
Maximum Reverse Current, @ Rated $T_J=25\text{ }^{\circ}\text{C}$	10.0						$\mu\text{g A}$
Reverse Voltage $T_J=100\text{ }^{\circ}\text{C}$	300						$\mu\text{g A}$
Typical Junction capacitance (Note 1) $C_J$	75.0			50.0			$\mu\text{F}$
Typical Junction Resistance (Note 2) $R_{\theta\text{KJA}}$	60.0						$^{\circ}\text{C/W}$
Reverse Recovery Time $I_F=.5\text{A}$ , $I_R=1\text{A}$ , $I_{rr}=.25\text{A}$	50	50	50	50	100	100	ns
Operating and Storage Temperature Range	-55 to +150						$^{\circ}\text{C}$

#### 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

## UF300G THRU UF308G

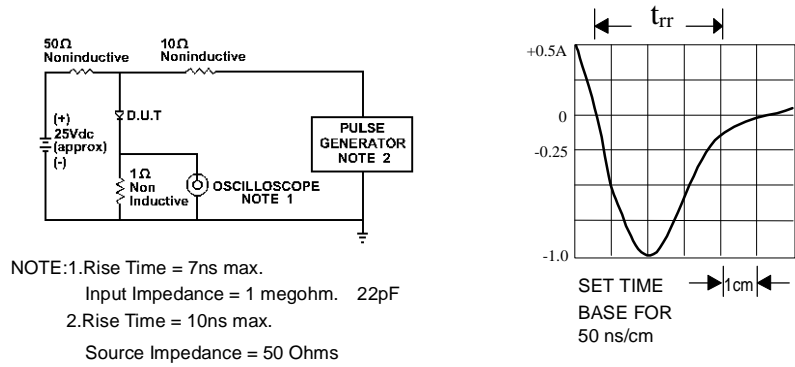


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

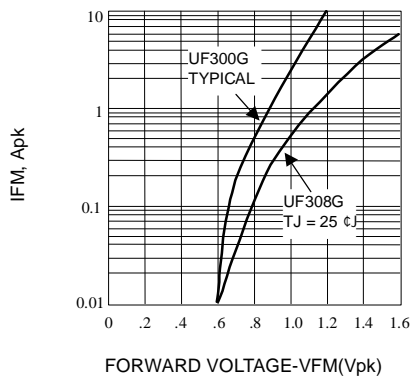


Fig. 2-FORWARD CHARACTERISTICS

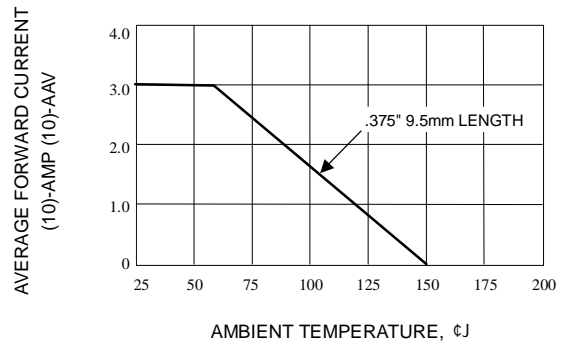


Fig. 3-FORWARD CURRENT DERATING CURVE

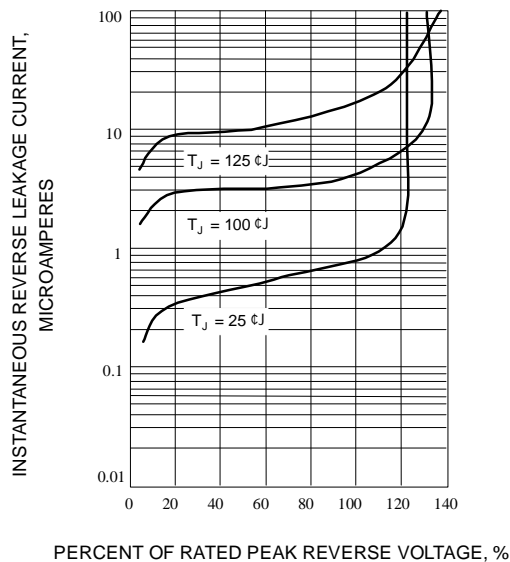


Fig. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

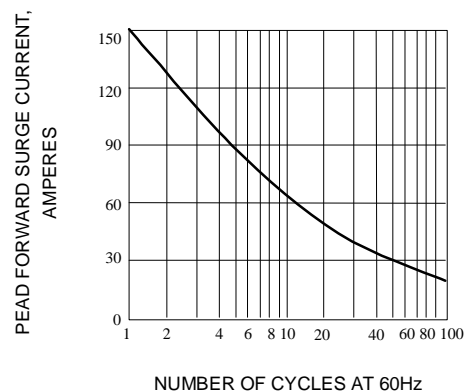


Fig. 5-PEAK FORWARD SURGE CURRENT