

UF300 THRU UF3010

ULTRAFAST SWITCHING RECTIFIER

VOLTAGE - 50 to 1000 Volts CURRENT - 3.0 Amperes

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound
- Void-free Plastic 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

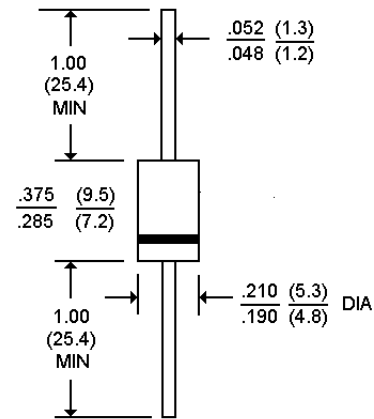
Terminals: Axial leads, solderable per MIL-STD-202, Method 208

Polarity: Band denotes cathode

Mounting Position: Any

Weight: 0.04 ounce, 1.1 gram

DO-201AD



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, 60 Hz

	UF300	UF301	UF302	UF304	UF306	UF308	UF3010	UNITS
Peak Reverse Voltage, Repetitive ; V_{RM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	35	70	140	280	420	560	700	V
DC Blocking Voltage; VR	50	100	200	400	600	800	1000	V
Average Forward Current, I_o @ $T_A=55\text{ }^{\circ}\text{C}$ 3.8" lead length, 60Hz, 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		1.10		1.70			V
Maximum Reverse Current, @ Rated $T_J=25\text{ }^{\circ}\text{C}$	10.0							$\mu\text{g A}$
Reverse Voltage $T_J=100\text{ }^{\circ}\text{C}$	500							$\mu\text{g A}$
Typical Junction capacitance (Note 1) C_J	75.0				50.0			μF
Typical Junction Resistance (Note 2) $R_{\theta JKJA}$	20.0							$^{\circ}\text{C/W}$
Reverse Recovery Time $I_F=.5A, I_R=1A, I_{rr}=.25A$	50	50	50	50	75	75	75	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

UF300 THRU UF3010

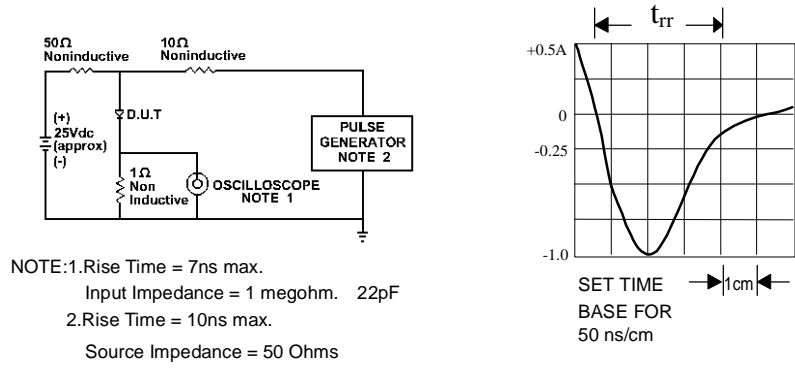


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

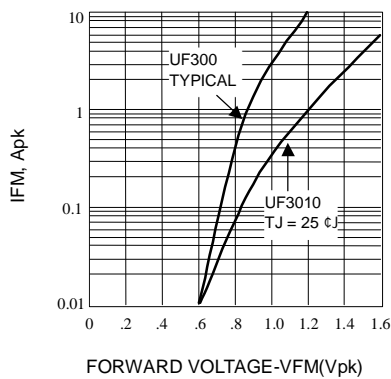


Fig. 2-FORWARD CHARACTERISTICS

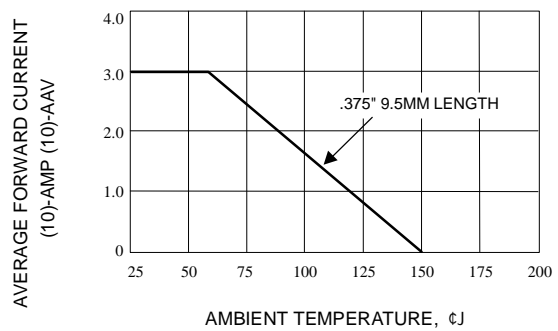


Fig. 3-FORWARD CURRENT DERATING CURVE

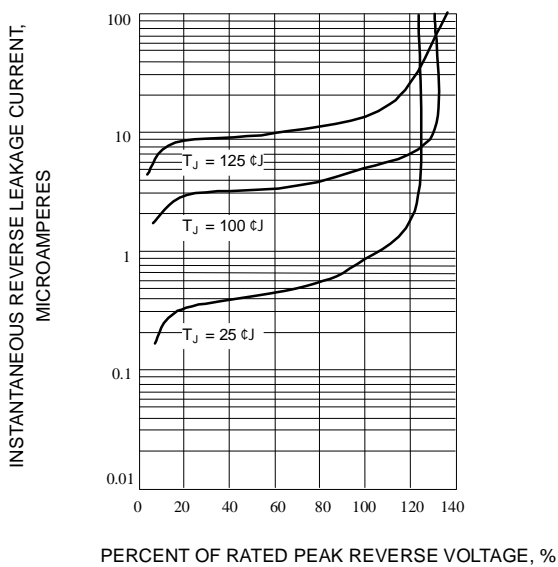


Fig. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

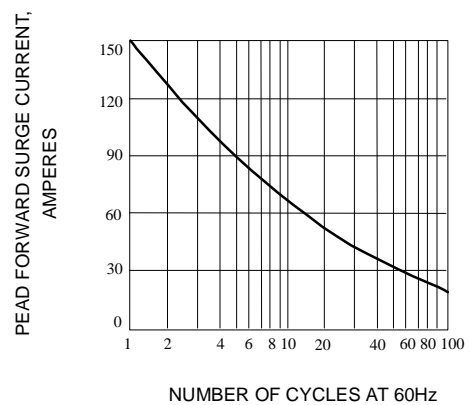


Fig. 5-PEAK FORWARD SURGE CURRENT