TAYCHIPST

ULTRAFAST RECOVERY RECTIFIERS

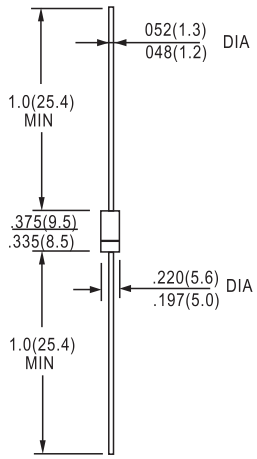
UF300 THRU UF3010

50V-1000V 3.0A

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound
- Exceeds environmental standards of MIL-S-19500/228.
- Ultra Fast switching for high efficiency.
- In compliance with EU RoHS 2002/95/EC directives

DO-27



Dimensions in inches and (millimeters)

Mechanical Data

- Case: Molded plastic, DO-201AD
- Terminals: Axial leads, solderable per MIL-STD-750,Method 2026
- Polarity: Band denotes cathode
- Mounting Position: Any
- Weight: 0.0395 ounce, 1.122 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

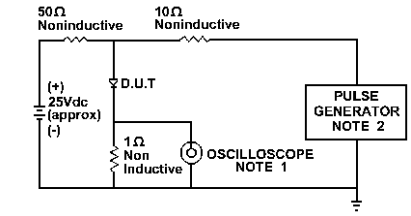
Ratings at 25°C ambient temperature unless otherwise specified. Resistive or inductive load, 60Hz.

PARAMETER	SYMBOL	UF300	UF301	UF302	UF304	UF306	UF308	UF3010	UNITS
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Current .375"(9.5mm) lead length at T_A=55°C	$I_{F(AV)}$	3.0							A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I_{FSM}	150							A
Maximum Forward Voltage at 3.0A	V_F	1.0			1.3	1.7			V
Maximum DC Reverse Current at Rated DC Blocking Voltage T_J=25°C T_J=100°C	I_R	10.0 750							μA
Typical Junction Capacitance (Note 1)	C_J	75				50			pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$ $R_{\theta JC}$	20 12							°C / W
Maximum Reverse Recovery Time (Note 3)	t_{rr}	50				75			ns
Operating Junction and Storage Temperature Range	T_J,T_{STG}	-55 to + 150							°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.
3. Reverse Recovery Time I_F=.5A ,I_R=1A , I_{rr}=.25A

RATINGS AND CHARACTERISTIC CURVES UF300 THRU UF3010



NOTE:1.Rise Time = 7ns max.
Input Impedance = 1 megohm. 22pF
2.Rise Time = 10ns max.
Source Impedance = 50 Ohms

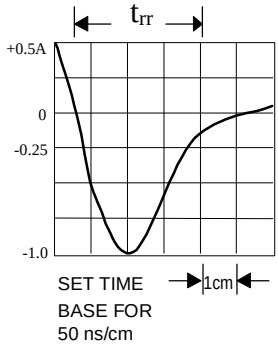


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

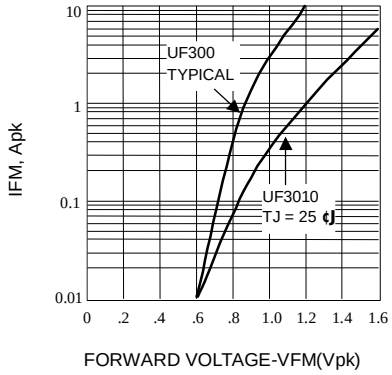


Fig. 2-FORWARD CHARACTERISTICS

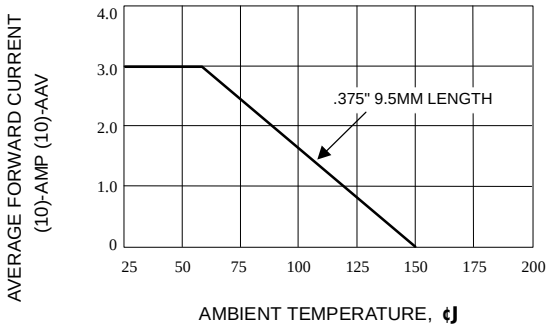


Fig. 3-FORWARD CURRENT DERATING CURVE

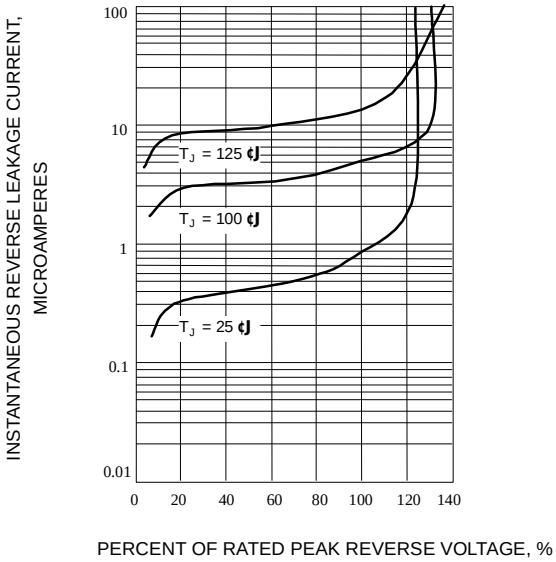


Fig. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

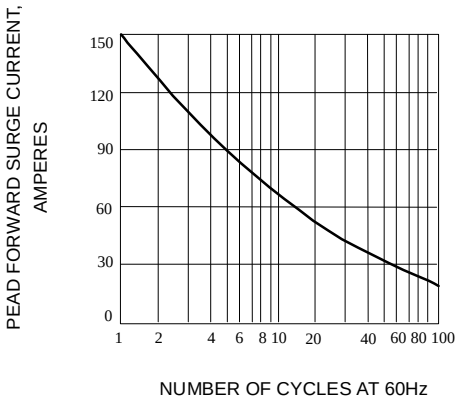


Fig. 5-PEAK FORWARD SURGE CURRENT