SEMICONDUCTOR

DATA SHEET

UF300G~UF3010G

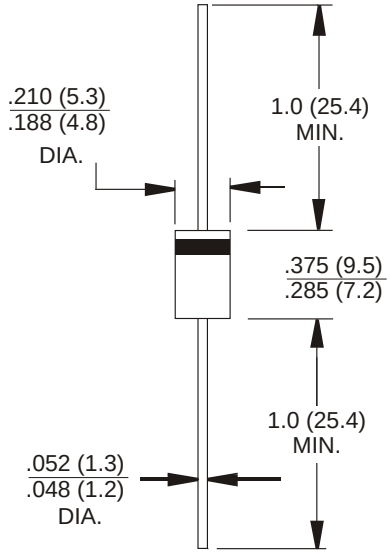
ULTRAFAST SWITCHING RECTIFIER

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
- 2.0 ampere operation at TA=55°C J with no thermal runaway
- Exceeds environmental standards of MIL-S-19500/228
- Ultra fast switching for high efficiency
- High temperature soldering : 260°C / 10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request

DO-201AD Unit:inch(mm)



MECHANICAL DATA

- Case: Glass passivation, DO-201AD
- Terminals: Axial leads, solderable per MIL-STD-202, Method 208
- Polarity: Band denotes cathode
- Mounting Position: Any
- Weight: 0.041 ounce, 1.1 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C J ambient temperature unless otherwise specified.

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

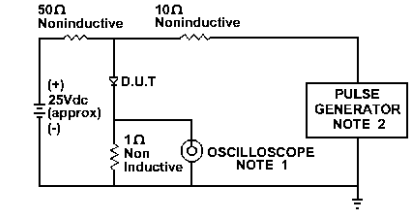
	SYMBOL	UF300G	UF301G	UF302G	UF304G	UF306G	UF308G	UF3010G	UNITS
Peak Reverse Voltage, Pepetitive ; V_{RM}		50	100	200	400	600	800	1000	V
Maximum RMS Voltage		35	70	140	280	420	560	700	V
DC Blocking Voltage; VR		50	100	200	400	600	800	1000	V
Average Forward Current, Io @T_A=55°C 3.8" lead length, 60Hz, resistive or inductive load		3.0							A
Peak Forward Surge Current IFM (surge) 8.3msec. single half sine-wave superimposed on rated load (JEDEC method)		150							A
Maximum Forward Voltage V_F @1.0A, 25°C	VF	1.00			1.3	1.5	1.7		V
Maximum Reverse Current, @ Rated T_A=25°C	IR	10.0							μA
Reverse Voltage T_A=100°C		500							μA
Typical Junction capacitance (Note 1) CJ	CJ	75.0				50.0			pF
Typical Junction Resistance (Note 2) R JA	RθJL	20.0							°C/W
Reverse Recovery Time I_F=.5A, I_R=1A, I_{rr}=.25A	TRR	50				75			ns
Operating and Storage Temperature Range	TSTG	-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

RATING AND CHARACTERISTIC CURVES

UF300G~UF3010G



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

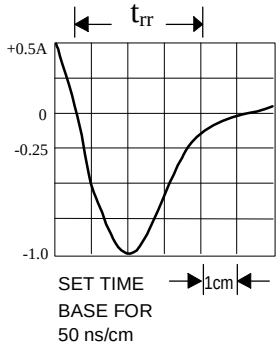


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

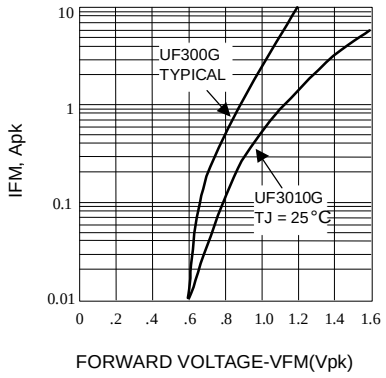


Fig. 2-FORWARD CHARACTERISTICS

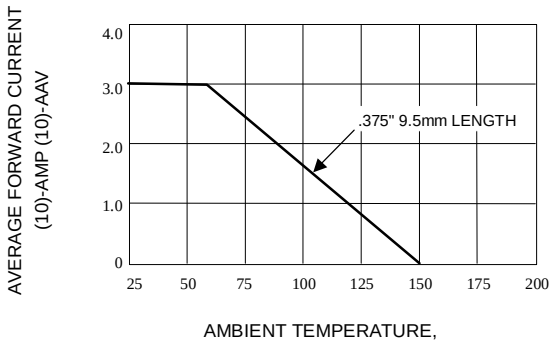


Fig. 3-FORWARD CURRENT DERATING CURVE

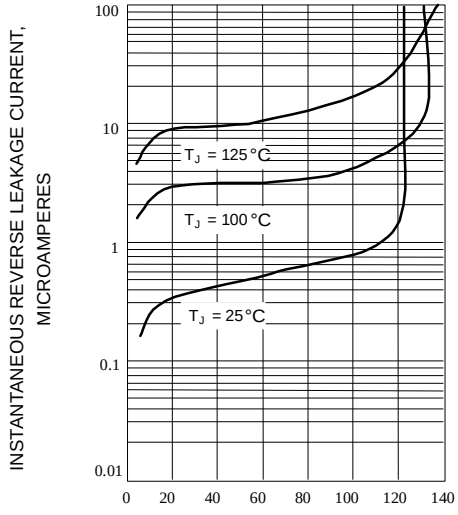


Fig. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

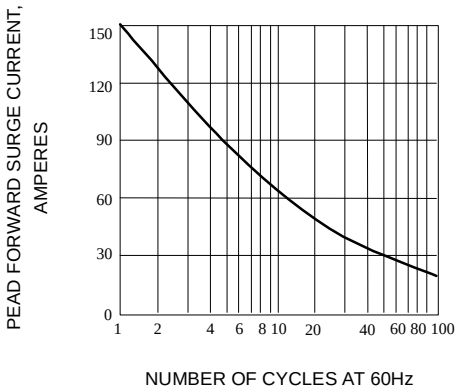


Fig. 5-PEAK FORWARD SURGE CURRENT