



SEMICONDUCTOR

DATA SHEET

UF300~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 TA=55 °C 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

MECHANICAL DATA

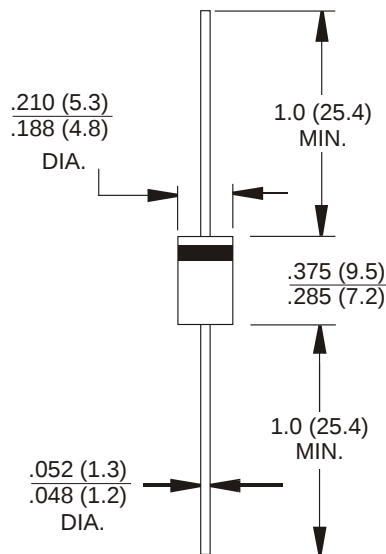
- Case: Molded plastic, DO-201AD
- Terminals: Axial leads, solderable per MIL-STD-202, Method 208
- Polarity: Band denotes cathode
- Mounting Position: Any
- Weight: 0.04 ounce, 1.1 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

Resistive or inductive load, 60 Hz

DO-201AD Unit:inch(mm)



	SYMBOL	UF300	UF301	UF302	UF304	UF306	UF308	UF3010	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; V _R		50	100	200	400	600	800	1000	V
Average Forward Current, I _o @T _A =55°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°C	V _F	1.00			1.30	1.7			V
Maximum Reverse Current, @ Rated T _A =25°C	I _R	10.0							μA
Reverse Voltage T _A =100°C		500							μA
Typical Junction capacitance (Note 1) C _J	C _J	75.0				50.0			pF
Typical Junction Resistance (Note 2) R _{θJA}	R _{θJL}	20.0							°C/W
Reverse Recovery Time I _F =.5A, I _R =1A, I _{rr} =.25A	T _{RR}	50				75			ns
Operating and Storage Temperature Range	T _{STG}	-55 to +150							°C

NOTES:

- Measured at 1 MHz and applied reverse voltage of 4.0 VDC
- 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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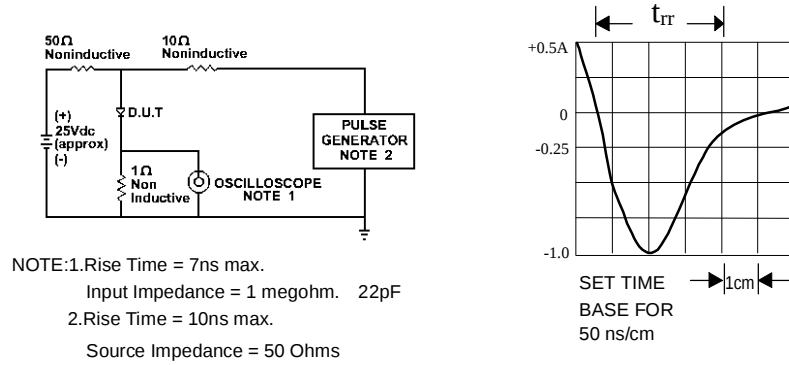


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

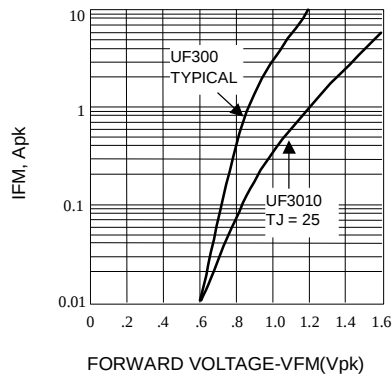


Fig. 2-FORWARD CHARACTERISTICS

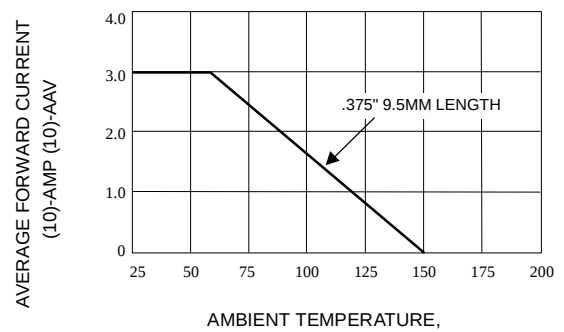


Fig. 3-FORWARD CURRENT DERATING CURVE

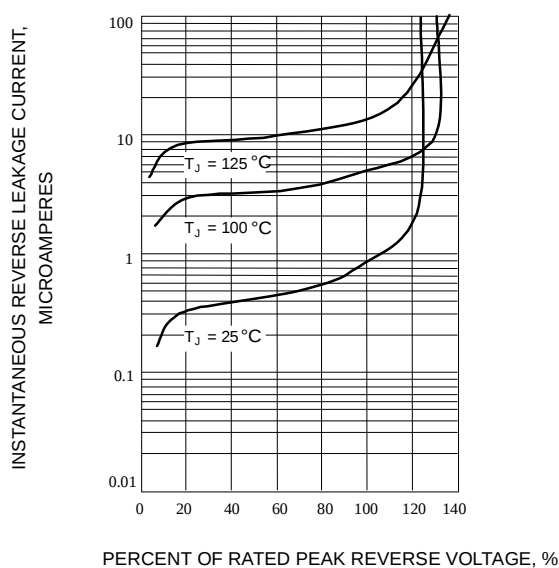


Fig. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS

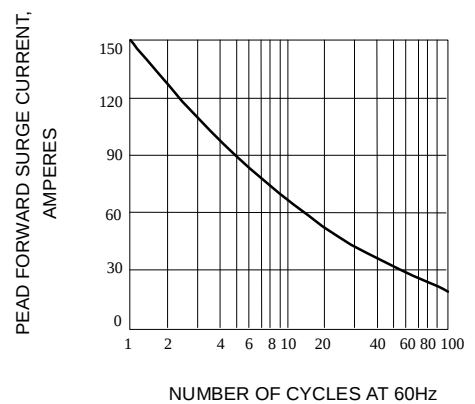


Fig. 5-PEAK FORWARD SURGE CURRENT