



DATA SHEET

SEMICONDUCTOR

UF100~UF1010

ULTRAFAST SWITCHING RECTIFIER

VOLTAGE - 50 to 1000 Volts CURRENT - 1.0 Ampere



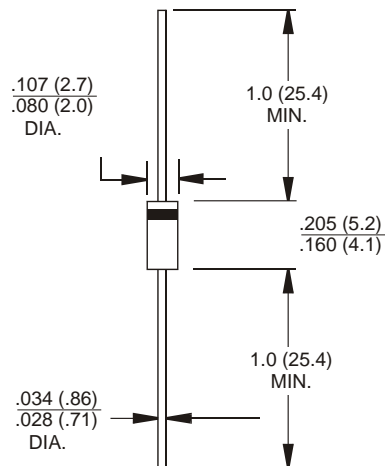
FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound
- Class passivated Junction In DO-41 Package
- 1.0 ampere operation at TA=55°C with no thermal runaway
- Exceeds environmental standards at terminals
- Ultra fast switching for high efficiency
- High temperature soldering: 260°C
- Pb free product at available 99% Sn above meet RoHS environment substance directive request

MECHANICAL DATA

- Case: Molded plastic, DO-41
- Terminals: Axial leads, solderable per MIL-STD-202, Method 208
- Polarity: Band denotes cathode
- Mounting Position: Any
- Weight: 0.013 ounce, 0.3 gram

DO-41 Unit: inch(mm)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

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

CHARACTERISTICS	SYMBOL	UF100	UF101	UF102	UF104	UF106	UF108	UF1010	UNITS
Maximum Recurrent Peak Reverse Voltage		50	100	200	400	600	800	1000	V
Maximum RMS Voltage		35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage		50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @TL =75°C		1.0							A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC METHOD)		30.0							A
Maximum forward Voltage at 1.0A DC	VF	1.00		1.30	1.50	1.70			V
Maximum DC Reverse Current @TJ =25°C at Rated DC Blocking Voltage @TJ =100°C	IR	5							µA
		100							µA
Maximum Reverse Recovery Time (Note 1)	CJ	17.0							pF
Typical Junction Resistance(Note 2)R JA	RθJL	60.0							° C/W
Reverse Recovery Time IF=.5A, IR=1A, Itr=.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

UF100~UF1010

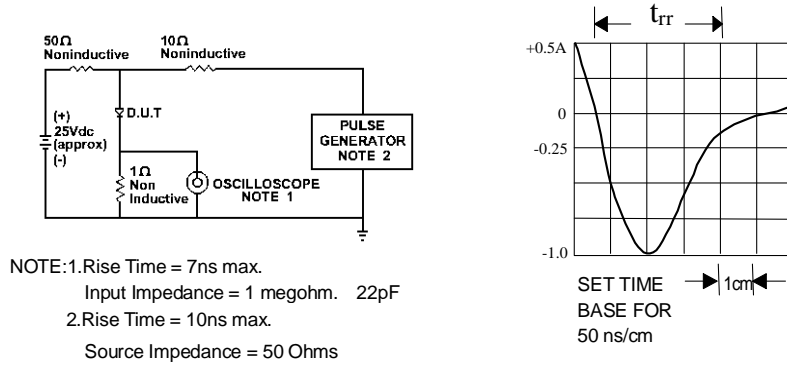


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

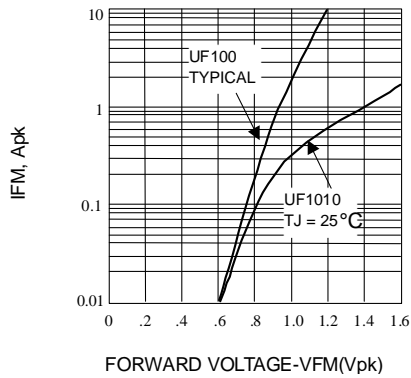


Fig. 2-FORWARD CHARACTERISTICS

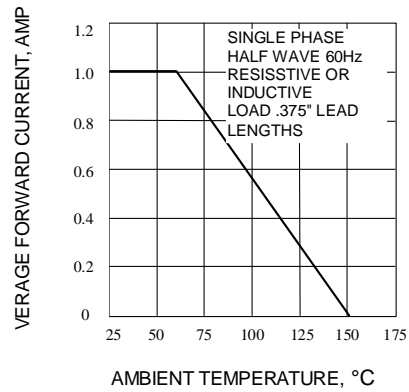


Fig. 3-FORWARD CURRENT DERATING CURVE

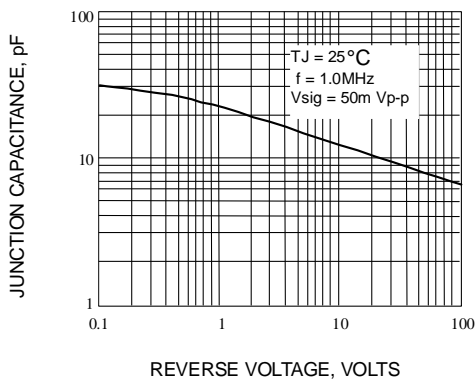


Fig. 4-TYPICAL JUNCTION CAPACITANCE

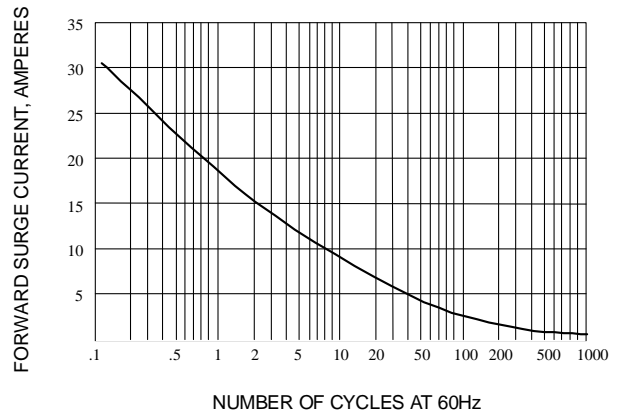


Fig. 5-PEAK FORWARD SURGE CURRENT