



**TRANSYS
ELECTRONICS
LIMITED**

UF100S THRU UF1010S

ULTRAFAST SWITCHING RECTIFIER

VOLTAGE - 50 to 1000 Volts CURRENT - 1.0 Ampere

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0 utilizing Flame Retardant Epoxy Molding Compound
- Void-free Plastic in A-405 package
- 1.0 ampere operation at $T_A=55^\circ\text{C}$ with no thermal runaway
- Exceeds environmental standards of MIL-S-19500/228
- Ultra fast switching for high efficiency

MECHANICAL DATA

Case: Molded plastic, A-405

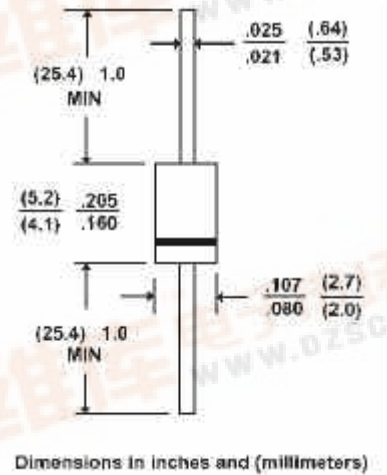
Terminals: Axial leads, solderable per MIL-STD-202, Method 208

Polarity: Band denotes cathode

Mounting Position: Any

Weight: 0.008 ounce, 0.22 gram

A-045



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

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

	UF100S	UF101S	UF102S	UF104S	UF106S	UF108S	UF1010S	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, I_o @ $T_A=55\text{ }^{\circ}\text{C}$ 3.8" lead length, 60Hz, resistive or inductive load	1.0							A
Peak Forward Surge Current I_{FM} (surge) 8.3msec. single half sine-wave superimposed on rated load (JEDEC method)	30.0							A
Maximum Forward Voltage V_F @ 1.0A, 25 $^{\circ}\text{C}$	1.00			1.10	1.70			V
Maximum Reverse Current, @ Rated $T_J=25\text{ }^{\circ}\text{C}$	5.0							$\text{ }\mu\text{gA}$
Reverse Voltage $T_J=100\text{ }^{\circ}\text{C}$	500							$\text{ }\mu\text{gA}$
Typical Junction capacitance (Note 1) CJ	60							pF/W
Typical Junction Resistance (Note 2) R θ KJA	17							$^{\circ}\text{C/W}$
Reverse Recovery Time $I_F=.5\text{A}$, $I_R=1\text{A}$, $I_{rr}=.25\text{A}$	50	50	50	50	75	75	75	ns
Operating and Storage Temperature Range	-55 TO +150							$^{\circ}\text{C}$

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

UF100S THRU UF1010S

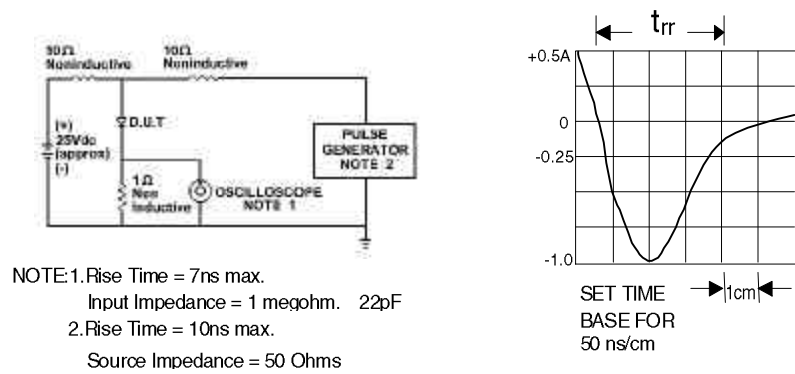


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

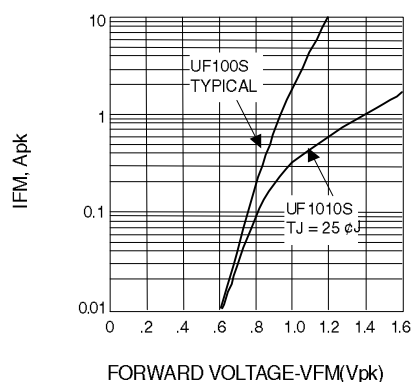


Fig. 2-FORWARD CHARACTERISTICS

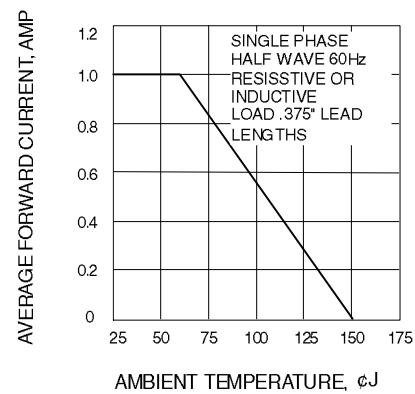


Fig. 3-FORWARD CURRENT DERATING CURVE

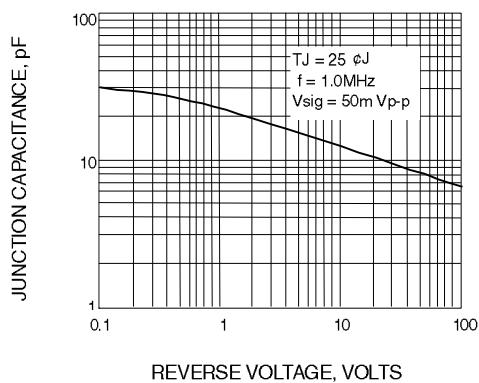


Fig. 4-TYPICAL JUNCTION CAPACITANCE

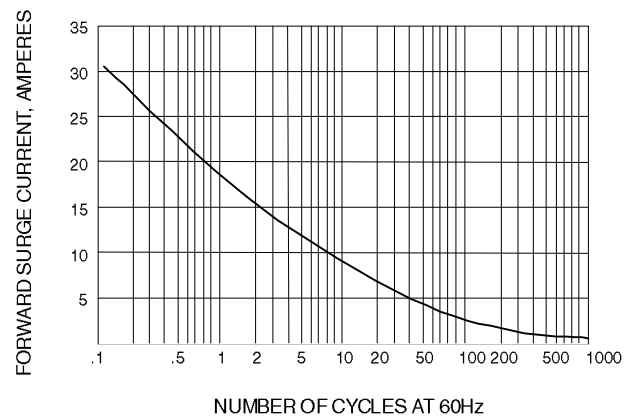


Fig. 5-PEAK FORWARD SURGE CURRENT