

# UF100S THRU UF1010S



## 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
- 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

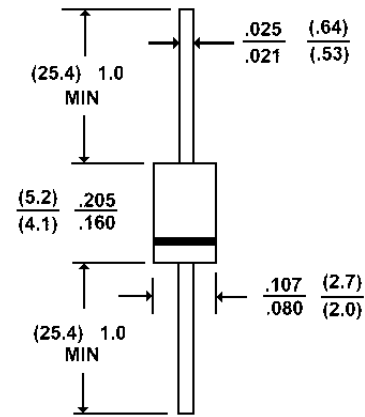
Terminals: Axial leads, solderable per MIL-STD-202, Method 208

Polarity: Band denotes cathode

Mounting Position: Any

Weight: 0.008 ounce, 0.22 gram

### A-045



Dimensions in inches and (millimeters)

### 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, Repetitive ; $V_{RM}$	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, $I_o$ @ $T_A=55^\circ\text{C}$ 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°C	1.00		1.10		1.70			V
Maximum Reverse Current, @ Rated $T_J=25^\circ\text{C}$	5.0							uA
Reverse Voltage $T_J=100^\circ\text{C}$	500							uA
Typical Junction capacitance (Note 1) CJ	60							°C/W
Typical Junction Resistance (Note 2) R°C JA	17							pF
Reverse Recovery Time $I_F=.5A, I_R=1A, I_{rr}=.25A$	50	50	50	50	75	75	75	ns
Operating and Storage Temperature Range	-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  
UF100S THRU UF1010S

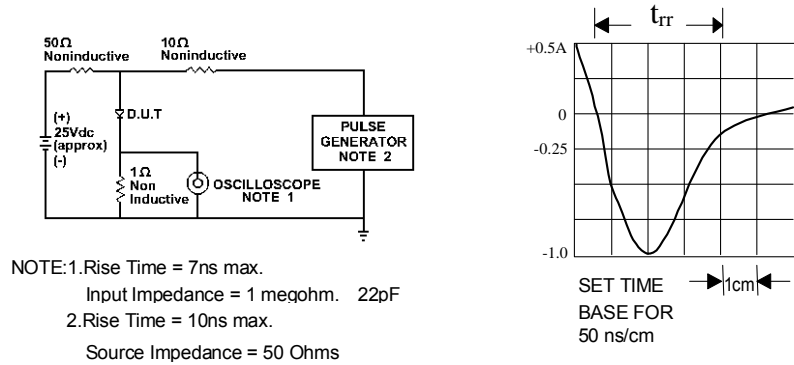


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

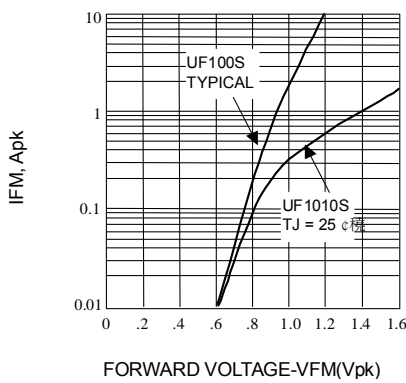


Fig. 2-FORWARD CHARACTERISTICS

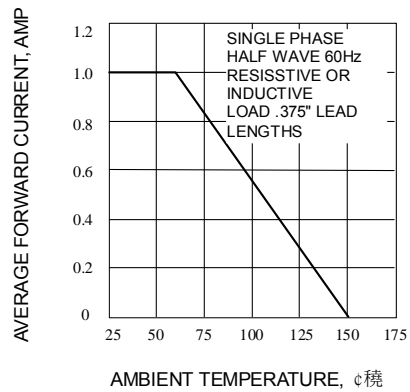


Fig. 3-FORWARD CURRENT DERATING CURVE

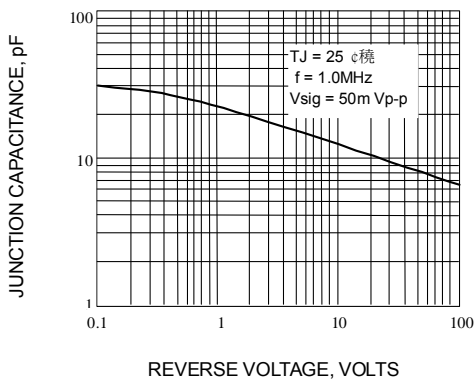


Fig. 4-TYPICAL JUNCTION CAPACITANCE

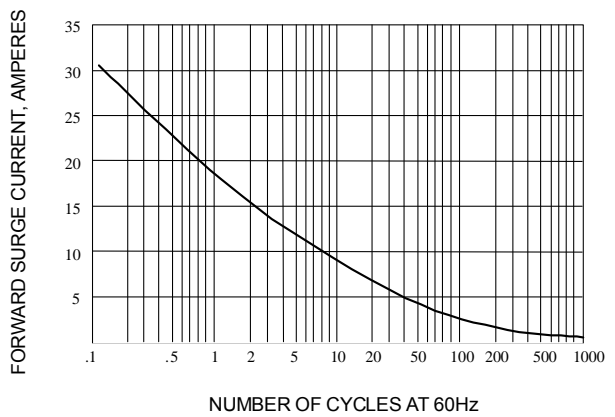


Fig. 5-PEAK FORWARD SURGE CURRENT