

# UF100 THRU 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
- Void-free Plastic in DO-41 package
- 1.0 ampere operation at  $T_A=55\text{ }^{\circ}\text{C}$  with no thermal runaway
- Exceeds environmental standards of MIL-S-19500/228
- Ultra fast switching for high efficiency

### MECHANICAL DATA

Case: Molded plastic, DO-41

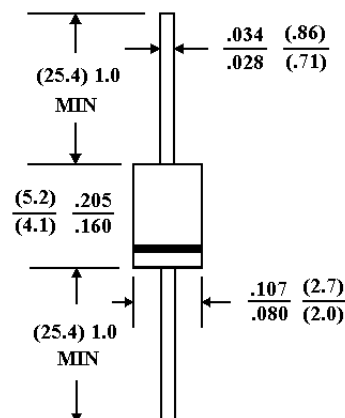
Terminals: Axial leads, solderable per MIL-STD-202, Method 208

Polarity: Band denotes cathode

Mounting Position: Any

Weight: 0.013 ounce, 0.3 gram

### DO-41



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25  $^{\circ}\text{C}$  ambient temperature unless otherwise specified.

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

	UF100	UF101	UF102	UF104	UF106	UF108	UF1010	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, $I_o$ @ $T_A=55\text{ }^{\circ}\text{C}$ 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 $T_J=25\text{ }^{\circ}\text{C}$	10.0							$\mu\text{g A}$
Reverse Voltage $T_J=100\text{ }^{\circ}\text{C}$	500							$\mu\text{g A}$
Typical Junction capacitance (Note 1) CJ	17.0							pF
Typical Junction Resistance (Note 2) R $\theta\text{KJA}$	60.0							$^{\circ}\text{C}/\text{W}$
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:

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 THRU UF1010

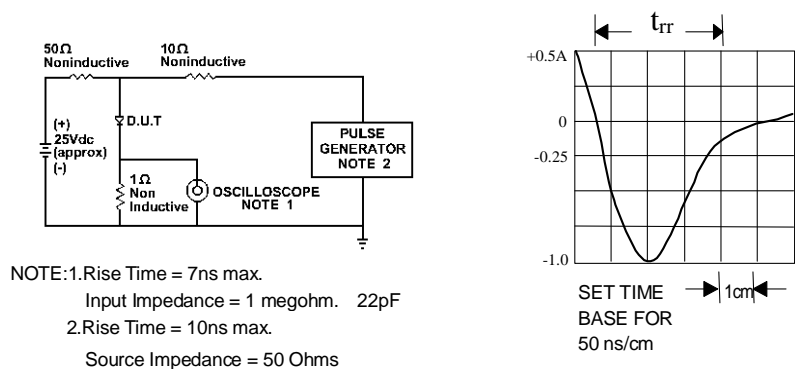


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

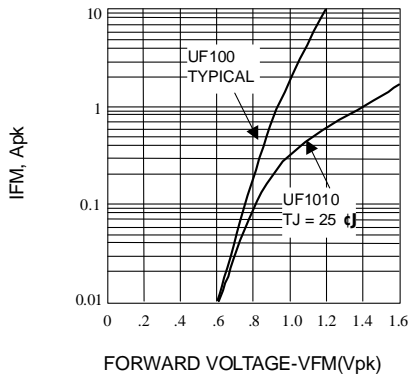


Fig. 2-FORWARD CHARACTERISTICS

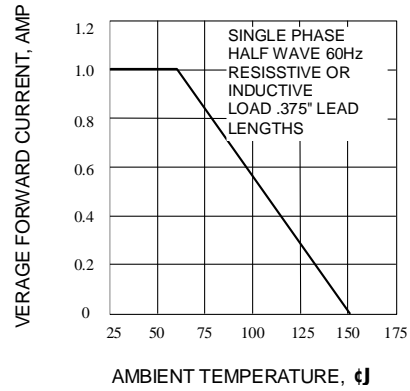


Fig. 3-FORWARD CURRENT DERATING CURVE

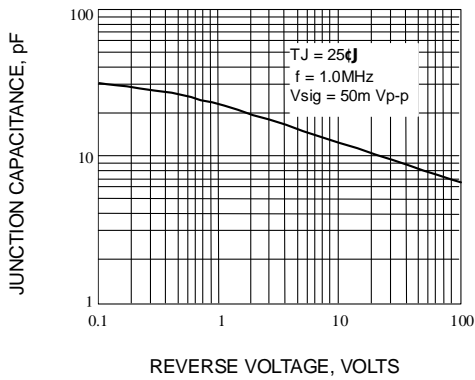


Fig. 4-TYPICAL JUNCTION CAPACITANCE

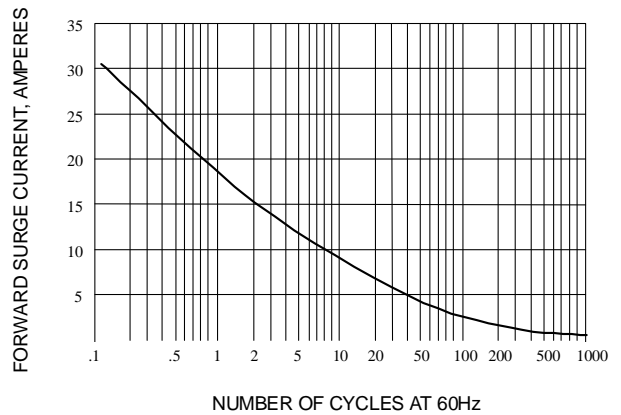


Fig. 5-PEAK FORWARD SURGE CURRENT