

# 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

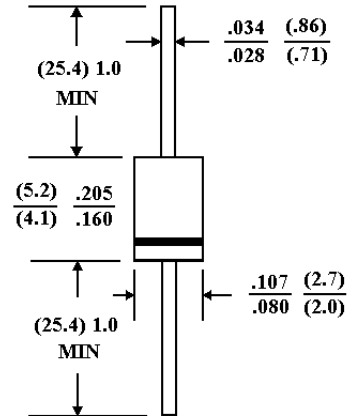
Terminals: Axial leads, solderable per MIL-STD-202, Method 208

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							$\mu\text{F}$
Typical Junction Resistance (Note 2) R $\theta\text{KJA}$	60.0							$^\circ\text{C/W}$
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							$^\circ\text{C}$

### 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

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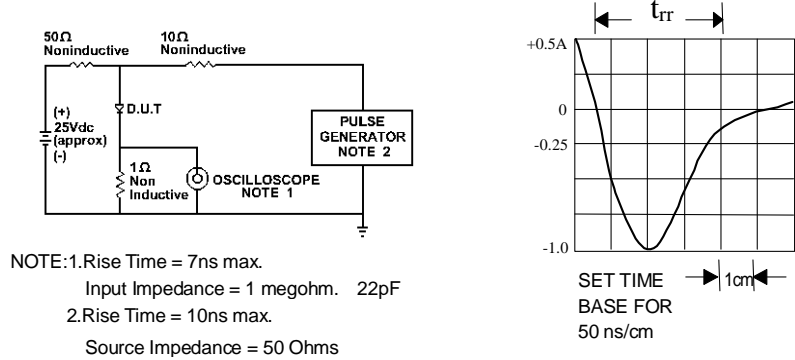


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

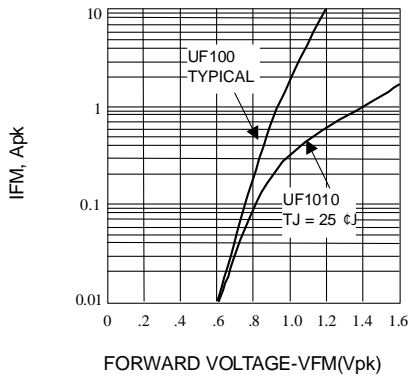


Fig. 2-FORWARD CHARACTERISTICS

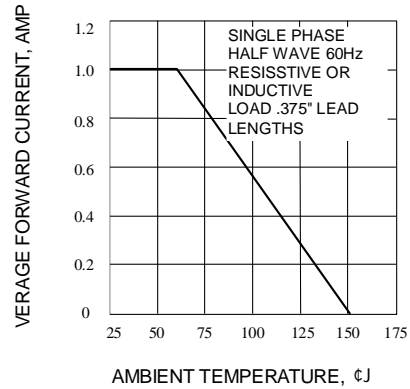


Fig. 3-FORWARD CURRENT DERATING CURVE

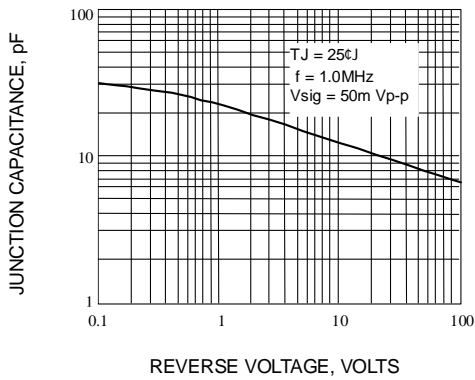


Fig. 4-TYPICAL JUNCTION CAPACITANCE

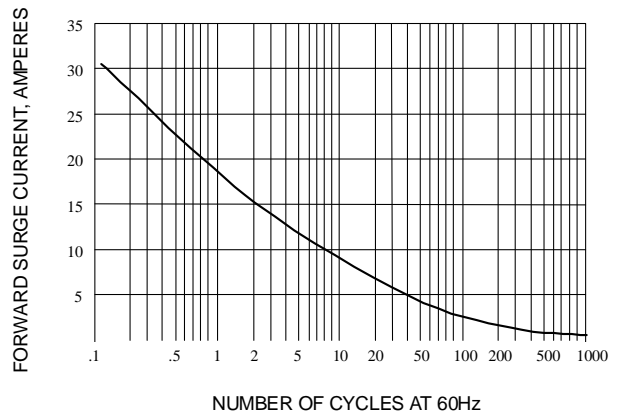


Fig. 5-PEAK FORWARD SURGE CURRENT