



ULTRAFAST SWITCHING RECTIFIER



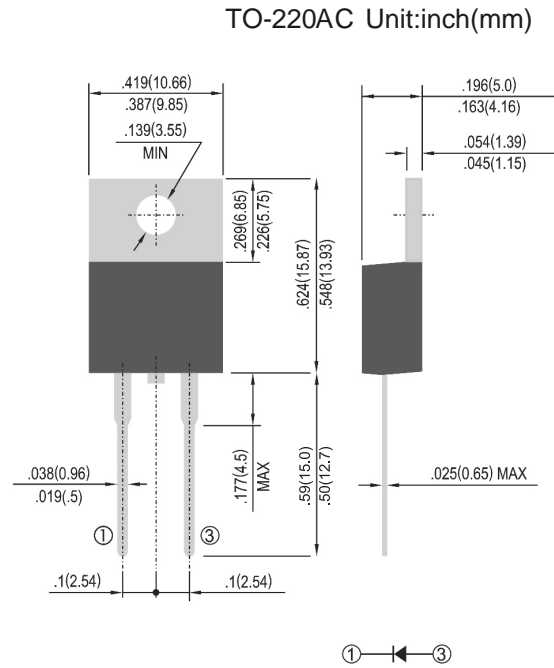
VOLTAGE - 50 to 800 Volts CURRENT - 10.0 Amperes

FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0 Utilizing Flame Retardant Epoxy Molding Compound
- Exceeds environmental standards of MIL-S-19500/228
- Low power loss, high efficiency
- Low forward voltage, high current capability
- High surge capacity
- Ultra Fast recovery times, high voltage
- High temperature soldering : 260°C / 10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request

MECHANICAL DATA

- Case: TO-220AC
- Terminals: Lead solderable per MIL-STD-202, Method 208
- Polarity: As marked
- Mounting Position: Any
- Weight: 0.08 ounce, 2.24 gram



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C J ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%

PARAMETER	SYMBOL	UF1000	UF1001	UF1002	UF1003	UF1004	UF1006	UF1008	UNITS
Maximum Recurrent Peak Reverse Voltage	VR	50	100	200	300	400	600	800	V
Maximum RMS Voltage	VRMS	35	70	140	210	280	420	560	V
Maximum DC Blocking Voltage	VDC	50	100	200	300	400	600	800	V
Maximum Average Forward Rectified Current .375"(9.5mm) lead length @ Tc=100°C	I (AV)	10							A
Peak Forward Surge Current, 8.3ms single half sine wave superimposed on rated load(JEDEC method)	IFMS	150							A
Maximum Instantaneous Forward Voltage at 10.0A	VF	1.0		1.3		1.7		V	
Maximum DC Reverse Current @ TA=25°C at Rated DC Blocking Voltage @ TA=125°C	IR	10.0							µA
		500							µA
Maximum Reverse Recovery Time (Note 1)	t _{rr}	50				75			ns
Typical Junction Capacitance (Note 2)	C _J	80				50			pF
Typical Junction Resistance (Note 3)	R _{θJA}	15							°C/W
Operating and Storage Temperature Range T _J , T _{STG}	T _J , T _{STG}	-55 to +150							°C

NOTES:

1. Reverse Recovery Test Conditions: IF=0.5A, IR=1A, Irr=0.25A
2. Measured at 1 MHz and applied reverse voltage of 4.0 VDC
3. Thermal resistance from junction to ambient and from junction to lead length 0.375"(9.5mm) P.C.B. mounted

DEVICE CHARACTERISTICS

UF1000 THRU UF1008

RATING AND CHARACTERISTIC CURVES

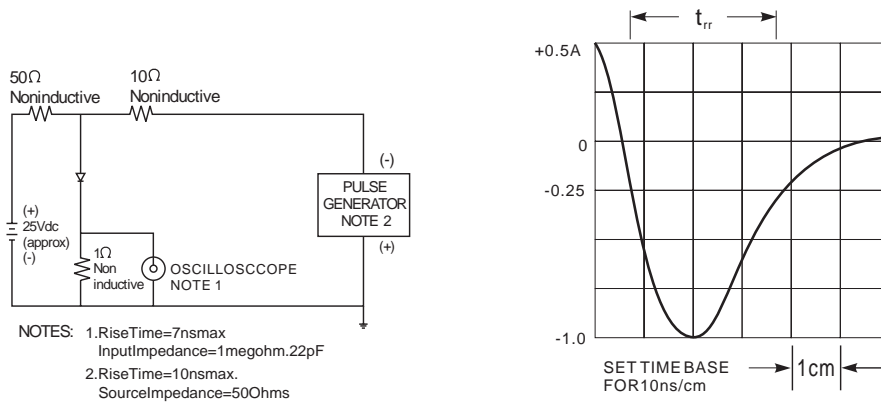


Fig.1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

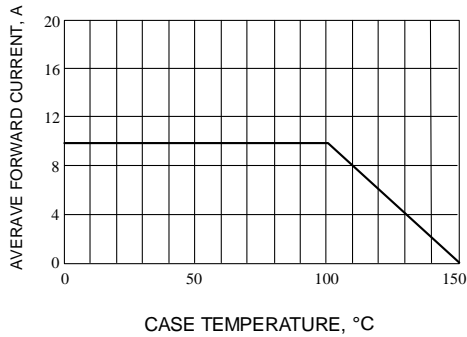


Fig. 1-TYPICAL FORWARD CURRENT DERATING CURVE

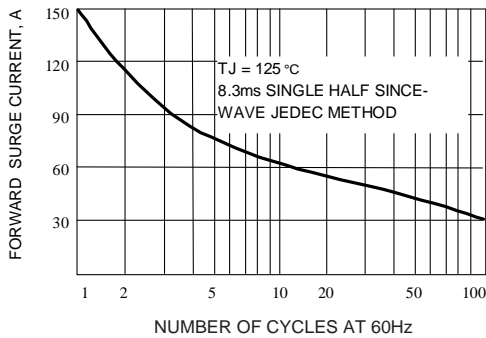


Fig. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

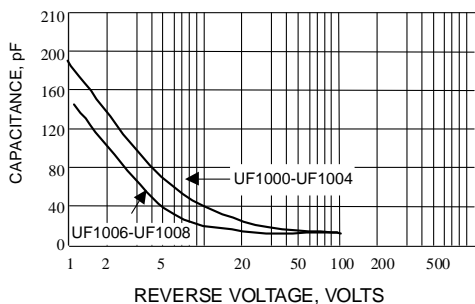


Fig. 4-TYPICAL JUNCTION CAPACITANCE

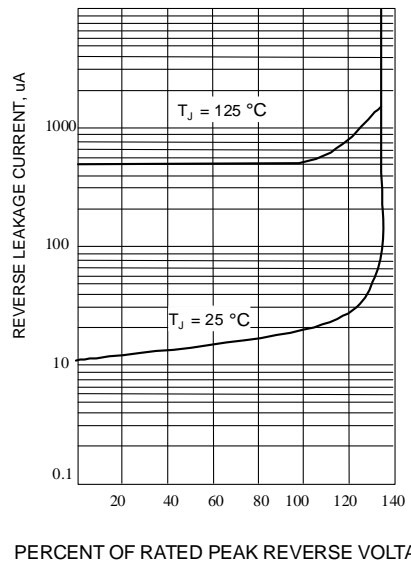


Fig. 2-TYPICAL REVERSE CHARACTERISTICS

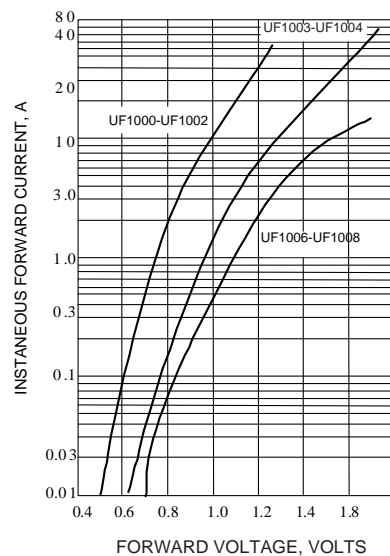


Fig. 5-TYPICAL FORWARD CHARACTERISTICS