UF1600 THRU UF1608

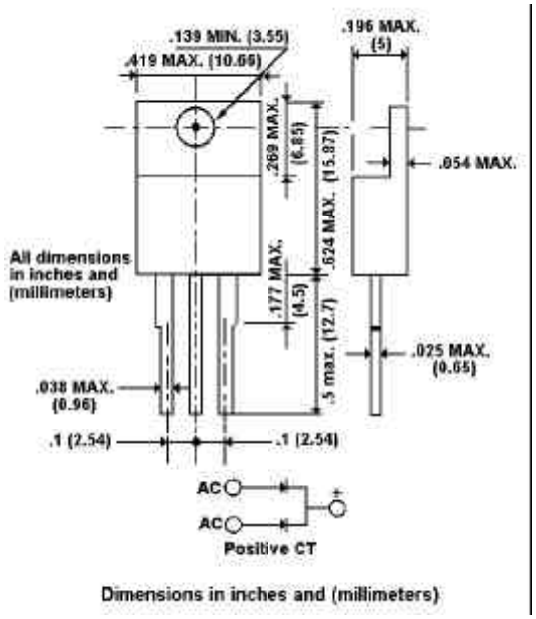
ULTRAFAST SWITCHING RECTIFIER

VOLTAGE - 50 to 800 Volts CURRENT - 16 Amperes

FEATURES

- Plastic package has Underwriters Laboratory
- Flammab ity Classification 94V-O Ut izing
- Flame Retardant Epoxy Molding Compound
- Exceeds environmental standards of MIL-S-19500/228
- Low power loss, high efficiency
- Low forward voltage, high current capab ity
- High surge capacity
- Ultra Fast recovery times, high voltage

TO-220AB



Dimensions in inches and (millimeters)

MECHANICAL DATA

Case: TO-220AB molded plastic

Terminals: Lead solderable per MIL-STD-202, Method 208

Polarity: As marked

Mounting Position: Any

Weight: 0.08 ounce, 2.24 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 ¢J ambient temperature unless otherwise specified.

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

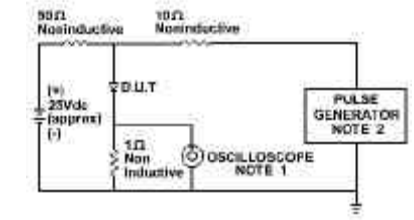
For capacitive load, derate current by 20%

TYPE NUMBER	UF1600	UF1601	UF1602	UF1603	UF1604	UF1606	UF1608	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	200	300	400	600	800	V
Maximum RMS Voltage	35	70	140	210	280	420	560	V
Maximum DC Blocking Voltage	50	100	200	300	400	600	800	V
Maximum Average Forward Rectified Current .375"(9.5mm) lead length @ T_C=100 ¢J	16							A
Peak Forward Surge Current, 8.3ms single half sine wave superimposed on rated load(JECEC method)	125							A
Maximum Instantaneous Forward Voltage at 8.0A	1.0			1.3		1.7		V
Maximum DC Reverse Current @T_A=25 ¢J at Rated DC Blocking Voltage @T_A=125 ¢J	10.0 500							£gA £gA
Maximum Reverse Recovery Time(Note 1)	50					100		ns
Typical Junction capacitance (Note 2)	170					130		pF
Typical Junction Resistance (Note 2) R £KJA	30							¢J/W
Operating and Storage Temperature Range T_J,T_{STG}	-50 to +150							¢J

NOTES:

1. Reverse Recovery Test Conditions: I_F=0.5A, I_R=1A, I =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

RATING AND CHARACTERISTIC CURVES
UF1600 THRU UF1608



NOTE:1.Rise Time = 7ns max.
Input Impedance = 1 megohm. 22pF
2.Rise Time = 10ns max.
Source Impedance = 50 Ohms

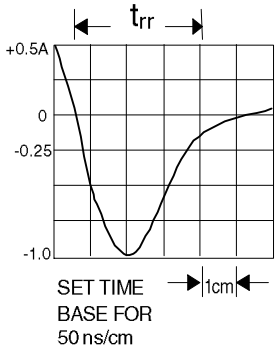


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

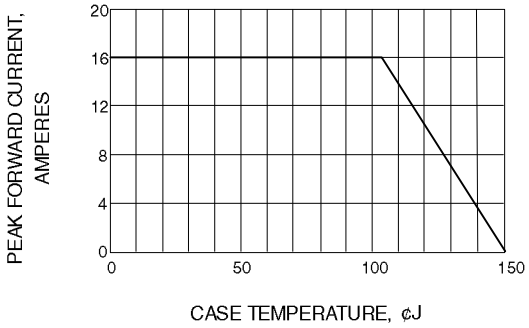


Fig. 1-TYPICAL FORWARD CURRENT DERATING CURVE

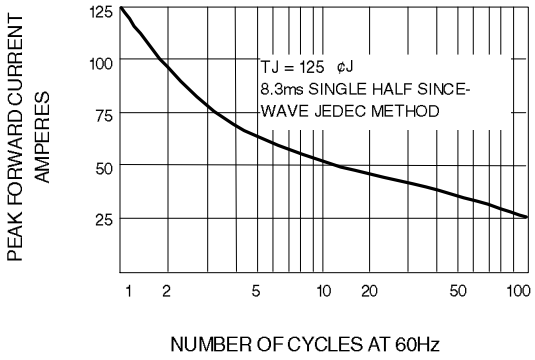


Fig. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

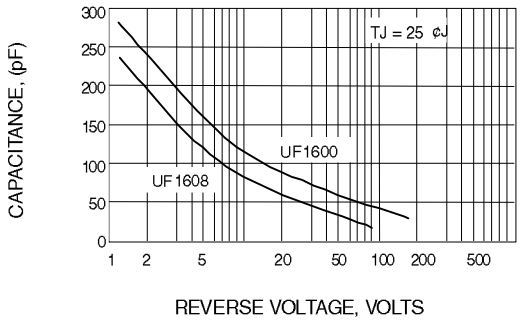


Fig. 4-TYPICAL JUNCTION CAPACITANCE

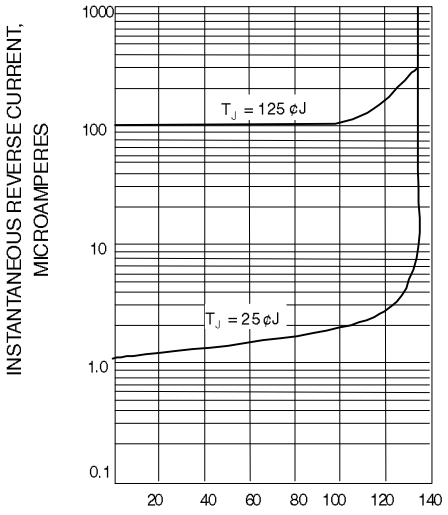


Fig. 2-TYPICAL REVERSE CHARACTERISTICS

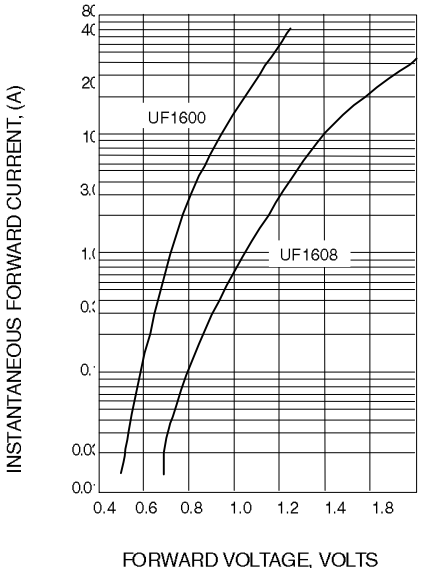


Fig. 5-TYPICAL FORWARD CHARACTERISTICS