



UF1600 THRU UF1608

ULTRAFAST SWITCHING RECTIFIER

VOLTAGE - 50 to 800 Volts CURRENT - 16 Amperes

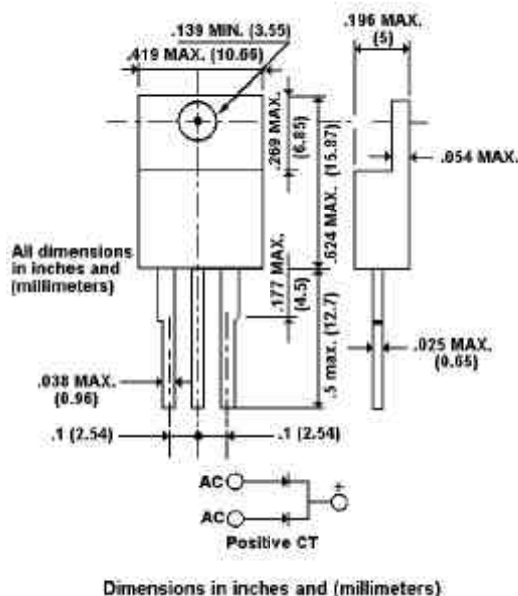
FEATURES

- 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

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

TO-220AB



MAXIMUM RATINGS AND ELECTRICAL

CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%

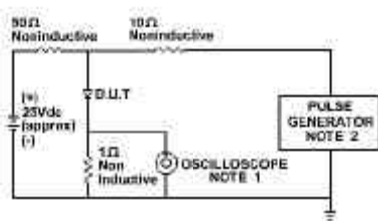
TYPE NUMBER	UF1600	UF1601	UF1602	UF1603	UF1604	UF1606	UF1608	UNITS
Maximum Recurrent Peak Reverse Voltage	50	100	200	300	400	600	800	V
Maximum RMS Voltage	35	70	140	210	280	420	560	V
Maximum DC Blocking Voltage	50	100	200	300	400	600	800	V
Maximum Average Forward Rectified Current .375"(9.5mm) lead length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

NOTES:

- Reverse Recovery Test Conditions: I_F=0.5A, I_R=1A, I_L=0.25A
- Measured at 1 MHz and applied reverse voltage of 4.0 VDC
- 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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NOTE: 1. Rise Time = 7ns max.
Input Impedance = 1 megohm. 22pF
2. Rise Time = 10ns max.
Source Impedance = 50 Ohms

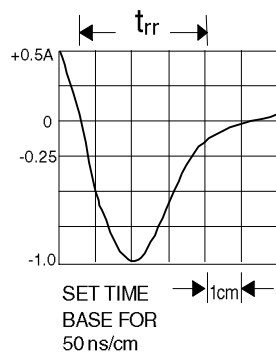


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

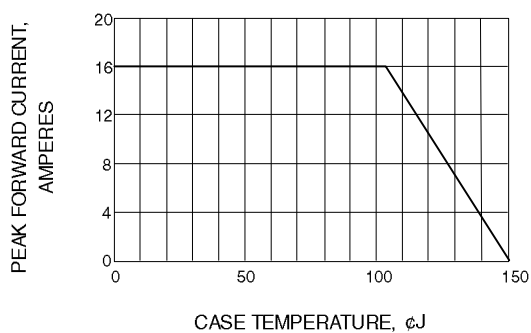


Fig. 1-TYPICAL FORWARD CURRENT DERATING CURVE

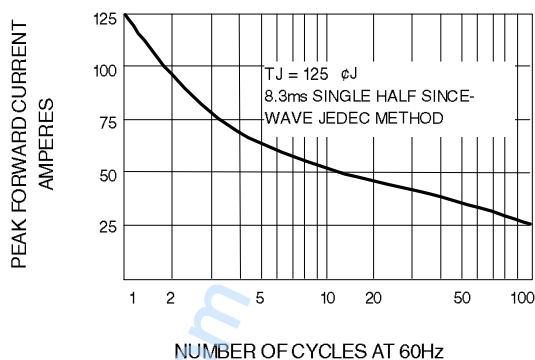


Fig. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

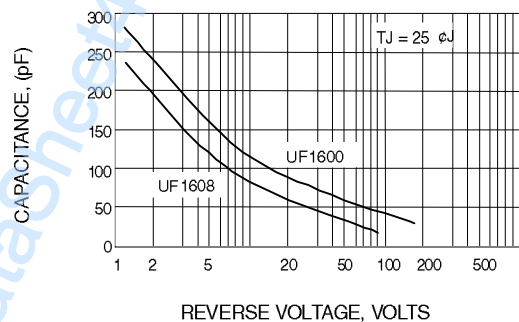


Fig. 4-TYPICAL JUNCTION CAPACITANCE

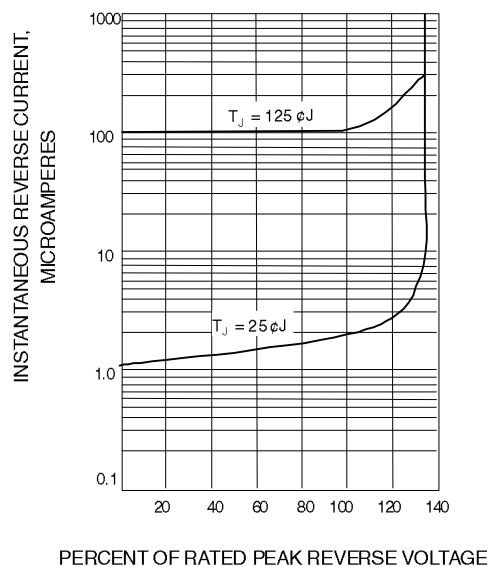


Fig. 2-TYPICAL REVERSE CHARACTERISTICS

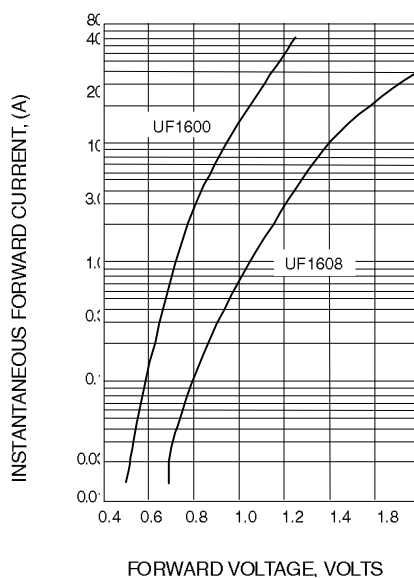


Fig. 5-TYPICAL FORWARD CHARACTERISTICS