SEMICONDUCTOR

DATA SHEET

UF1000~UF1008

ULTRAFAST SWITCHING RECTIFIER

VOLTAGE - 50 to 800 Volts CURRENT - 10.0 Amperes

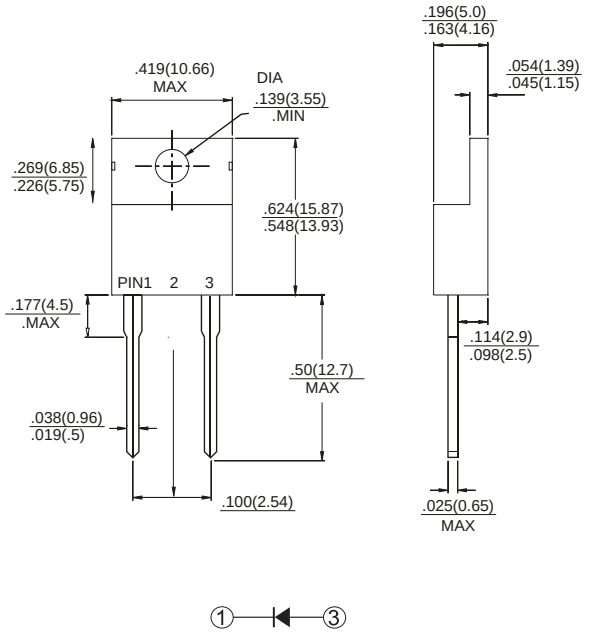
FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O 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^{O}C / 10 seconds at terminals
- Pb free product at available : 99% Sn above meet RoHS environment substance directive request

MECHANCALDATA

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

TO-220AC Unit:inch(mm)



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 ^{O}C J ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%

TYPE NUMBER	SYMBOL	UF1000	UF1001	UF1002	UF1003	UF1004	UF1006	UF1008	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		10							A
Peak Forward Surge Current, 8.3ms single half sine wave superimposed on rated load(JECEC method)		150							A
Maximum Instantaneous Forward Voltage at 10.0A	VF	1.0			1.3		1.7		V
Maximum DC Reverse Current @T_A=25°C	IR	10.0							μA
at Rated DC Blocking Voltage @T_A=125°C		500							μA
Maximum Reverse Recovery Time(Note 1)		50					75		ns
Typical Junctioncap acitance (Note 2)		80					50		pF
Typical Junction Resi stance (Note 2) RθJA		15							°C/W
Operating and Storage Temperature Range T_J,T_{STG}	TSTG	-55 to +150							°C

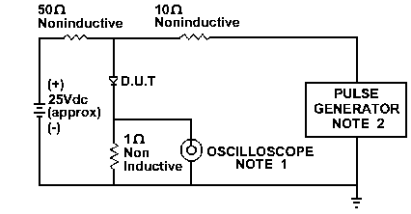
NOTES:

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

RATING AND CHARACTERISTIC CURVES

UF1000~UF1008

RATING AND CHARACTERISTIC CURVES
UF1000 THRU UF1008



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

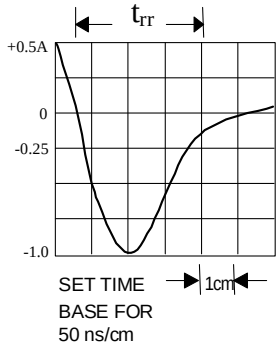


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

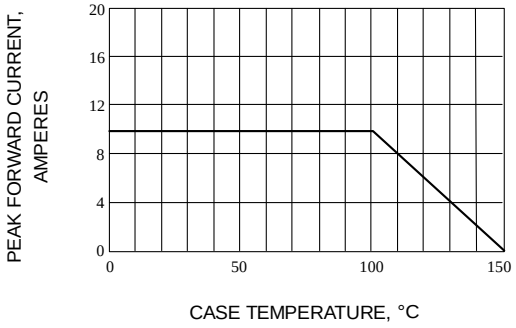


Fig. 1-TYPICAL FORWARD CURRENT DERATING CURVE

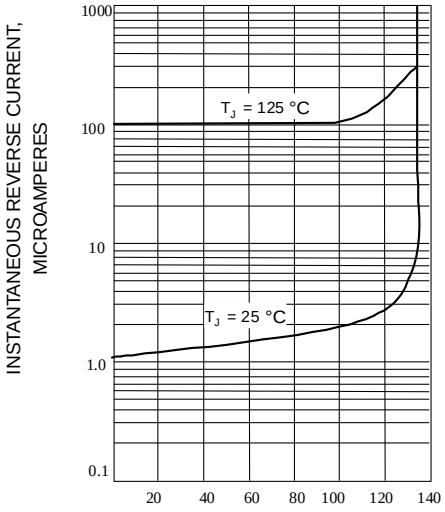


Fig. 2-TYPICAL REVERSE CHARACTERISTICS

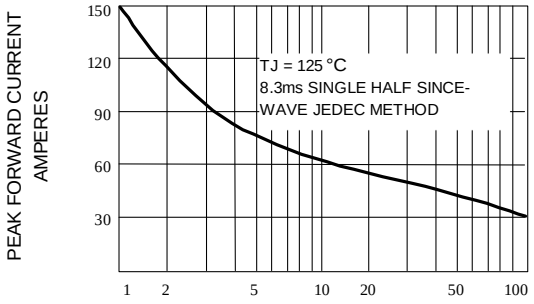


Fig. 3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

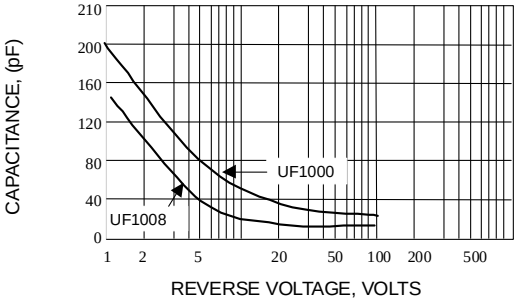


Fig. 4-TYPICAL JUNCTION CAPACITANCE

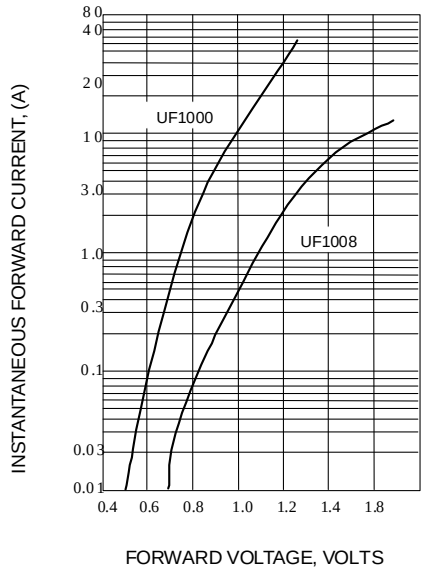


Fig. 5-TYPICAL FORWARD CHARACTERISTICS