



# DATA SHEET

## UF1000F~UF1008F

### ISOLATION ULTRAFAST RECOVERY RECTIFIERS

**VOLTAGE** 50 to 800 Volts **CURRENT** 10.0 Amperes

ITO-220AC

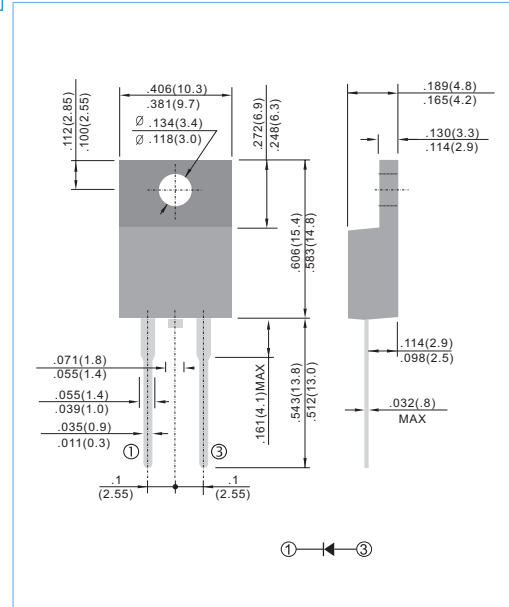
Unit : inch (mm)

#### 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 time, high voltage.
- Both normal and Pb free product are available :  
Normal : 80~95% Sn, 5~20% Pb  
Pb free: 98.5% Sn above

#### MECHANICAL DATA

Case: ITO-220AC full molded plastic package  
Terminals: Lead solderable per MIL-STD-202, Method 208  
Polarity: As marked.  
Standard packaging: Any  
Weight: 0.08 ounces, 2.24grams.



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%

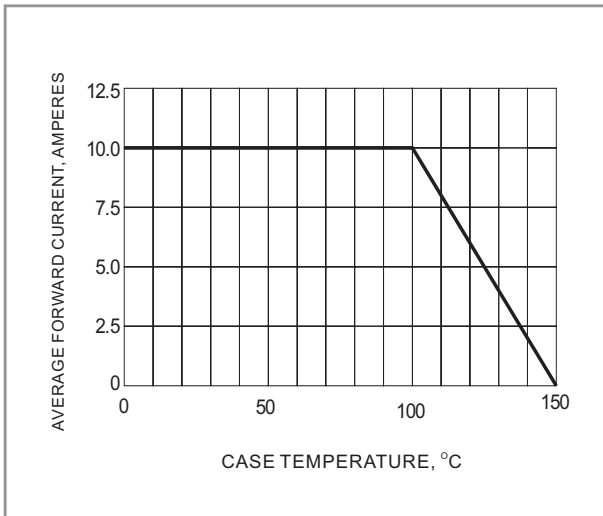
PARAMETER	SYMBOL	UF1000F	UF1001F	UF1002F	UF1003F	UF1004F	UF1006F	UF1008F	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	300	400	600	800	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	210	280	420	560	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	300	400	600	800	V
Maximum Average Forward Current at T <sub>c</sub> = 100°C	I <sub>AV</sub>	10							A
Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load(JEDEC method)	I <sub>FSM</sub>	150							A
Maximum Forward Voltage at 10.0A	V <sub>F</sub>	1.0		1.30		1.70		V	
Maximum DC Reverse Current T <sub>A</sub> =25°C at Rated DC Blocking Voltage T <sub>A</sub> =125°C	I <sub>R</sub>	10 500							µA
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	80				50		pF	
Maximum Reverse Recovery Time (Note 2)	T <sub>RR</sub>	50				100		ns	
Typical Thermal Resistance (Note 3)	R <sub>θJC</sub>	2							°C / W
Operating Junction and Storage Temperature Range	T <sub>J</sub> ,T <sub>STG</sub>	-50 to +150							°C

#### NOTES:

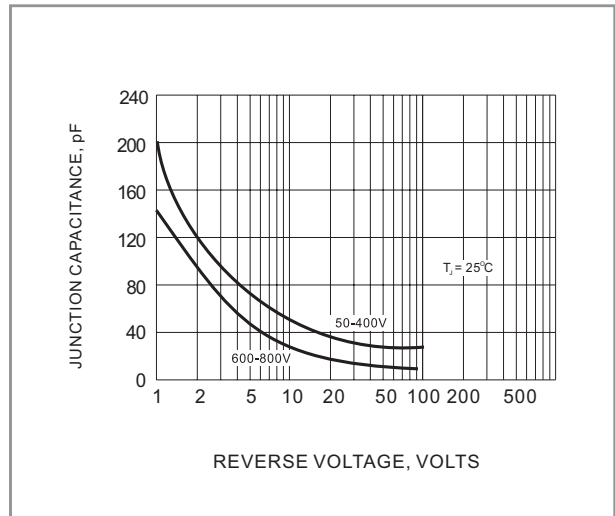
1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
2. Reverse Recovery Test Conditions: I<sub>F</sub>=.5A, I<sub>R</sub>=1A, I<sub>rr</sub>=.25A.
3. Thermal resistance from Junction to case.
4. Both Bonding and Chip structure are available.



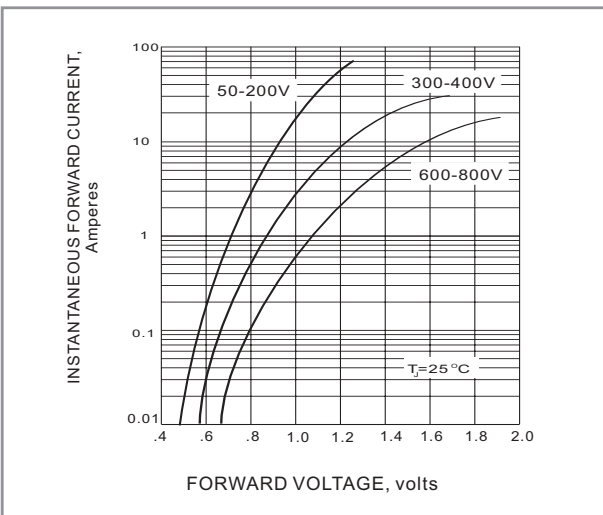
**RATING AND CHARACTERISTIC CURVES**



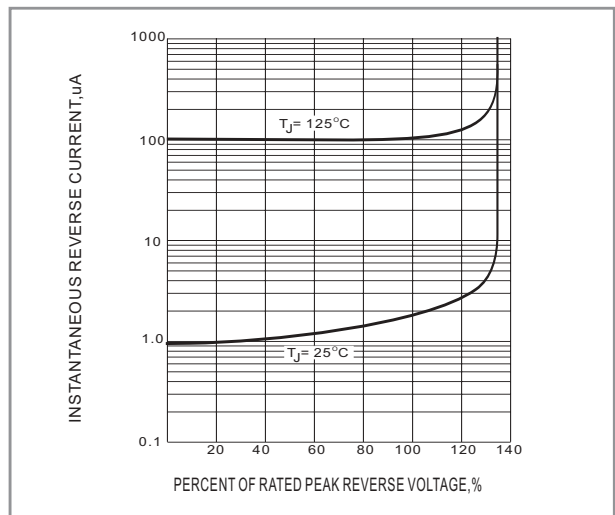
**Fig.1 FORWARD CURRENT DERATING CURVE**



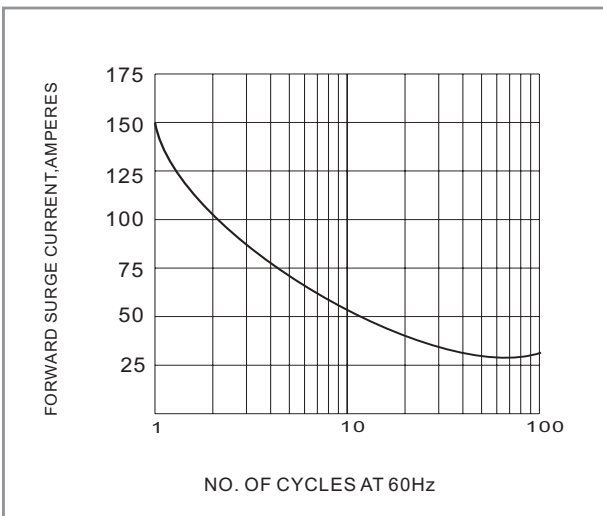
**Fig.2 TYPICAL JUNCTION CAPACITANCES**



**Fig.3 FORWARD CHARACTERISTICS**



**Fig.4 TYPICAL REVERSE CHARACTERISTICS**



**Fig.5 PEAK FORWARD SURGE CURRENT**