



# UF1000F~UF1006F

## ULTRAFAST RECOVERY RECTIFIERS

**VOLTAGE** 50 to 600 Volts **CURRENT** 10.0 Amperes

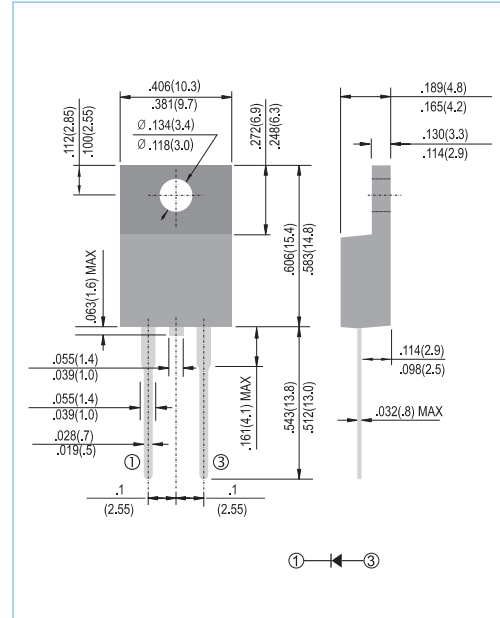
ITO-220AC Unit: inch ( mm )

### 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.
- In compliance with EU RoHS 2002/95/EC directives

### MECHANICAL DATA

- Case: ITO-220AC full molded plastic package
- Terminals: Lead solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Standard packaging: Any
- Weight: 0.055 ounces, 1.5615 grams.



### 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	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	300	400	600	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	210	280	420	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	300	400	600	V
Maximum Average Forward Current at $T_c = 100^\circ\text{C}$	$I_{F(AV)}$	10						A
Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load(JEDEC method)	$I_{FSM}$	150						A
Maximum Forward Voltage at 10.0A	$V_F$	1.0		1.30		1.70		V
Maximum DC Reverse Current $T_J=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_J=125^\circ\text{C}$	$I_R$	1.0 500						$\mu\text{A}$
Typical Junction Capacitance (Note 1)	$C_J$	80				50		pF
Maximum Reverse Recovery Time (Note 2)	$t_{rr}$	50				100		ns
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$	2						$^\circ\text{C} / \text{W}$
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150						$^\circ\text{C}$

#### NOTES:

1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
2. Reverse Recovery Test Conditions:  $I_F=.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{rr}=.25\text{A}$ .
3. Thermal resistance from Junction to case.
4. Both Bonding and Chip structure are available.



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## RATING AND CHARACTERISTIC CURVES

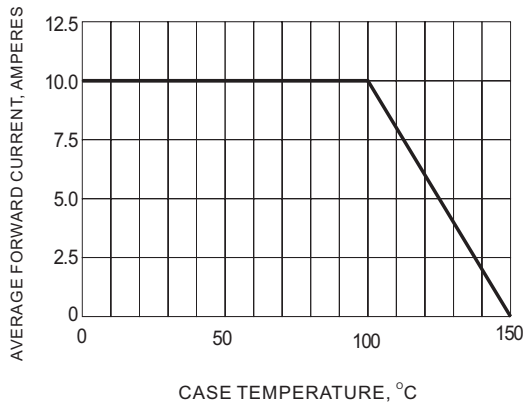


Fig.1 FORWARD CURRENT DERATING CURVE

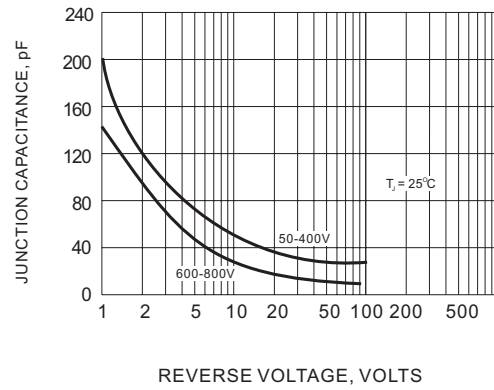


Fig.2 TYPICAL JUNCTION CAPACITANCES

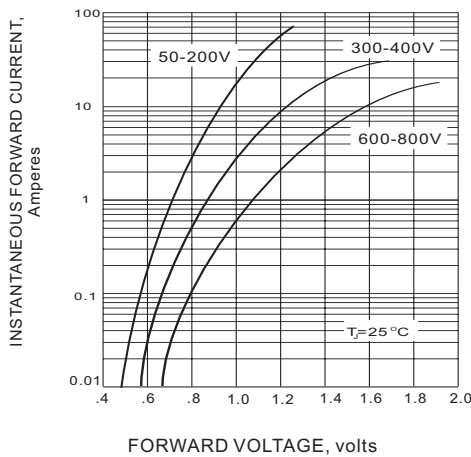


Fig.3 FORWARD CHARACTERISTICS

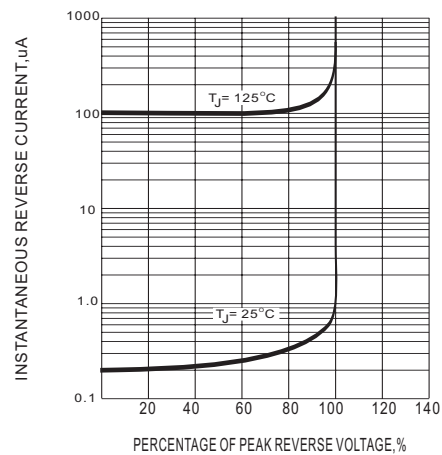


Fig.4 TYPICAL REVERSE CHARACTERISTICS

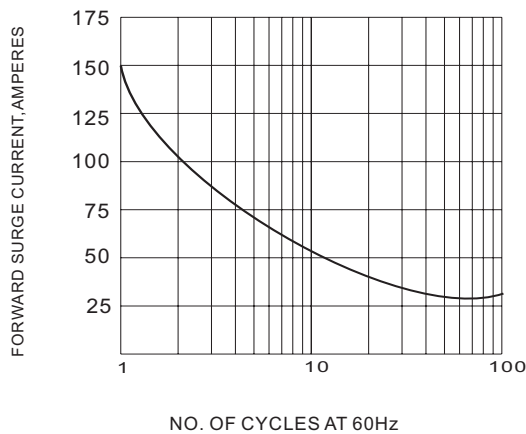


Fig.5 PEAK FORWARD SURGE CURRENT