



# DATA SHEET

## UF1000CT~UF1008CT

### ULTRAFAST RECOVERY RECTIFIERS

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

TO-220AB

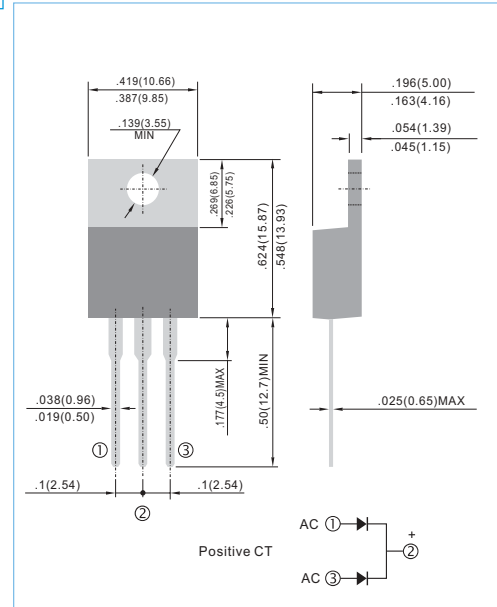
Unit : inch (mm)

#### 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: TO-220AB 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%

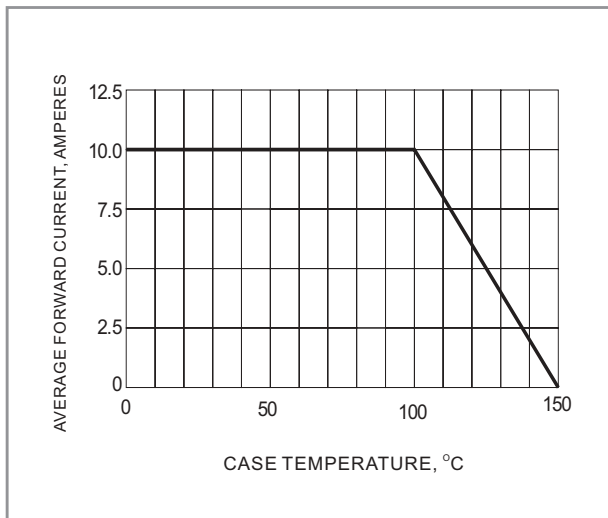
PARAMETER	SYMBOL	UF1000CT	UF1001CT	UF1002CT	UF1003CT	UF1004CT	UF1006CT	UF1008CT	UNITS	
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	300	400	600	800	V	
Maximum RMS Voltage	$V_{RMS}$	35	70	140	210	280	420	560	V	
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	300	400	600	800	V	
Maximum Average Forward Current at $T_c = 100^\circ\text{C}$	$I_{AV}$	10							A	
Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	125							A	
Maximum Forward Voltage at 5.0A	$V_F$	1.0			1.30		1.70		V	
Maximum DC Reverse Current $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A=125^\circ\text{C}$	$I_R$	10 500							$\mu\text{A}$	
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	$T_J, T_{STG}$	-50 to +150							$^\circ\text{C}$	

#### NOTES:

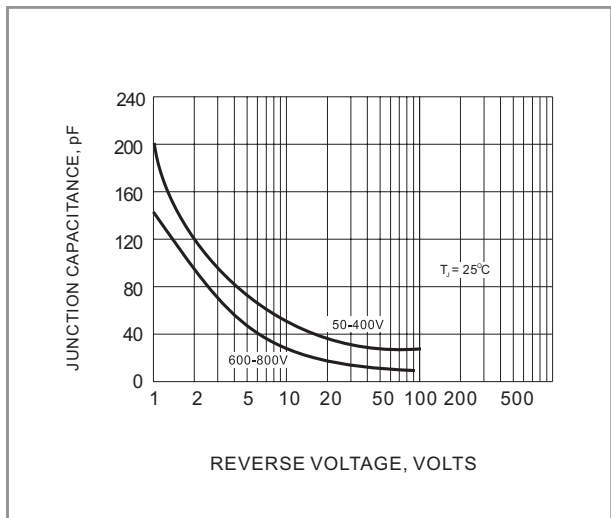
1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
2. Reverse Recovery Test Conditions:  $I_F=0.5\text{A}$ ,  $I_R=1\text{A}$ ,  $I_{rr}=0.25\text{A}$ .
3. Thermal resistance from Junction to case.
4. Both Bonding and Chip structure are available.



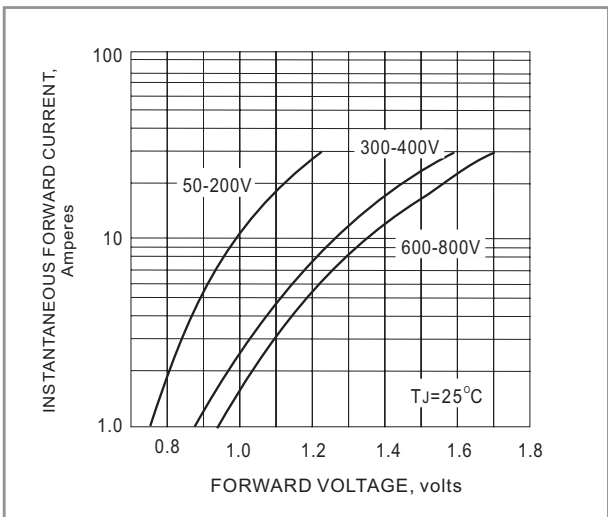
**RATING AND CHARACTERISTIC CURVES**



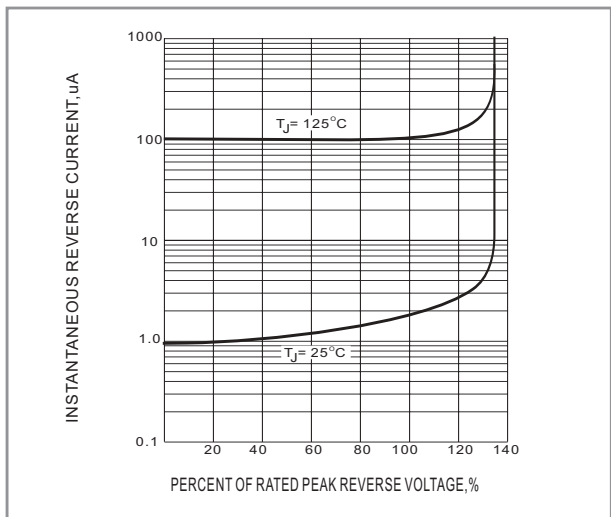
**Fig.1 FORWARD CURRENT DERATING CURVE**



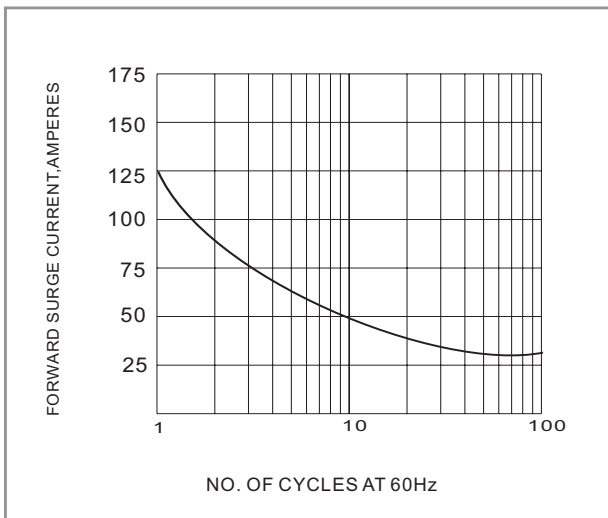
**Fig.2 TYPICAL JUNCTION CAPACITANCES**



**Fig.3 FORWARD CHARACTERISTICS**



**Fig.4 TYPICAL REVERSE CHARACTERISTICS**



**Fig.5 PEAK FORWARD SURGE CURRENT**