

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

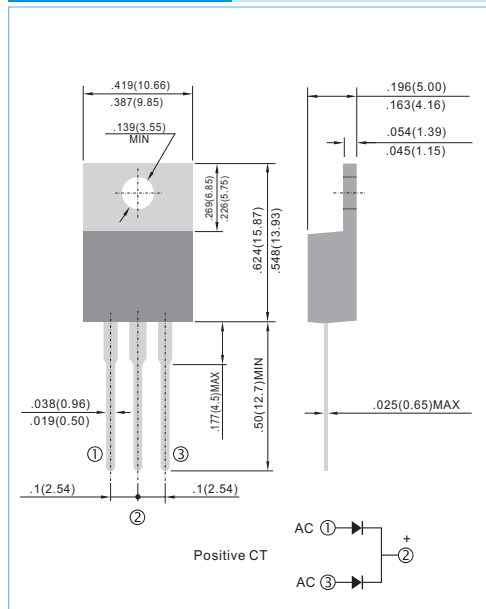
Case: TO-220AB full molded plastic package

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							μA
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:

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

RATING AND CHARACTERISTIC CURVES

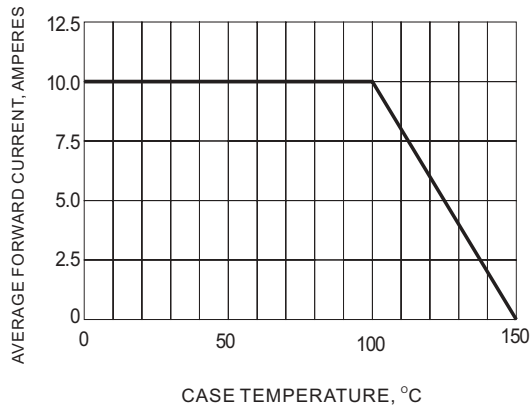


Fig.1 FORWARD CURRENT DERATING CURVE

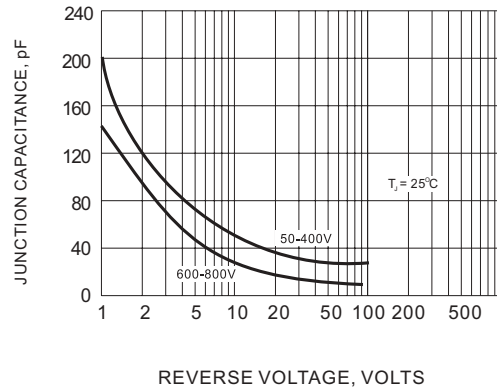


Fig.2 TYPICAL JUNCTION CAPACITANCES

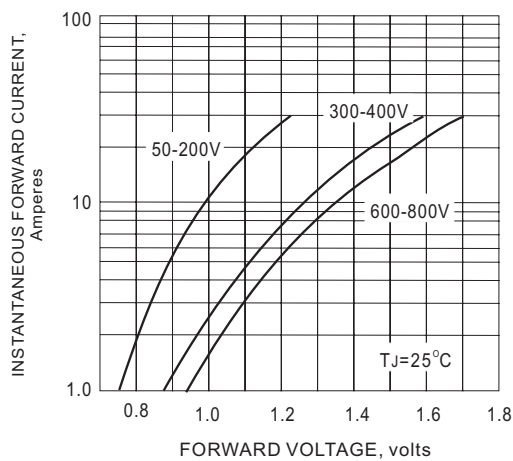


Fig.3 FORWARD CHARACTERISTICS

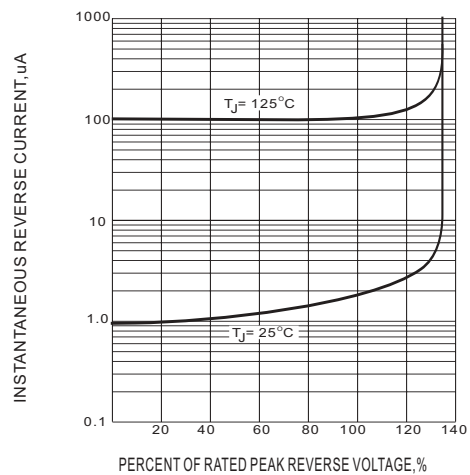


Fig.4 TYPICAL REVERSE CHARACTERISTICS

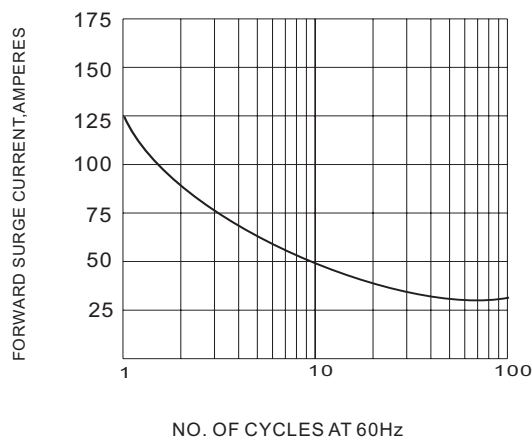


Fig.5 PEAK FORWARD SURGE CURRENT