



DATA SHEET

UF1000FCT~UF1008FCT

ULTRAFAST RECOVERY RECTIFIERS

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

ITO-220AB

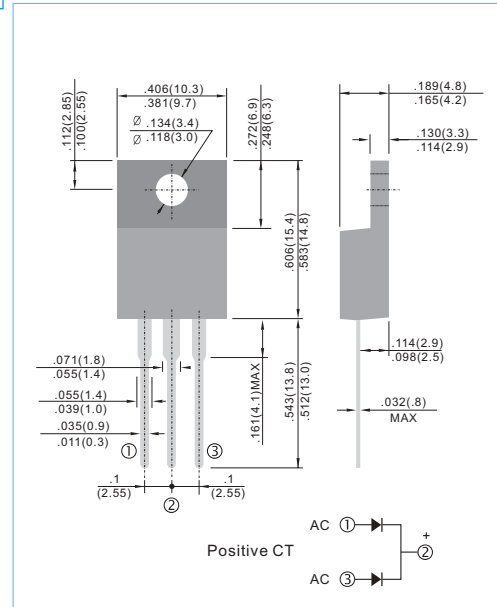
Unit : inch (mm)

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: ITO-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 | UF1000FCT | UF1001FCT | UF1002FCT | UF1003FCT | UF1004FCT | UF1006FCT | UF1008FCT | 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

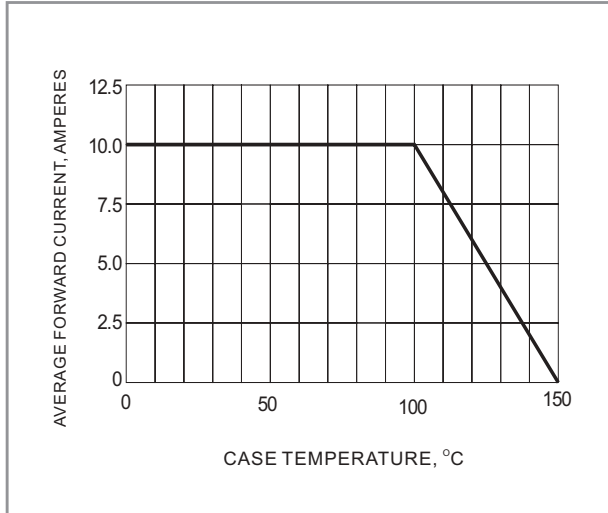


Fig.1 FORWARD CURRENT DERATING CURVE

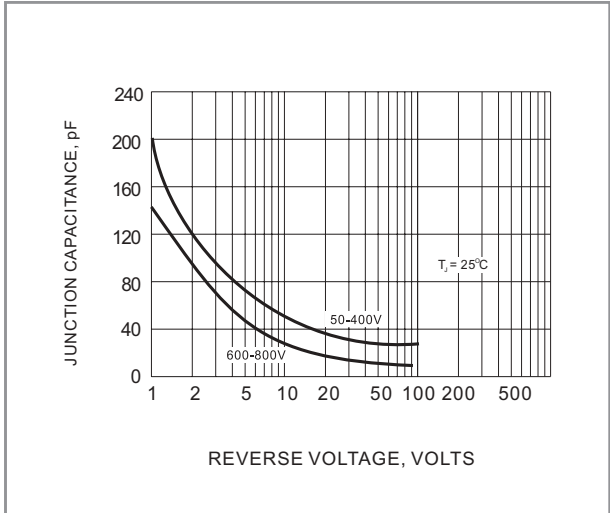


Fig.2 TYPICAL JUNCTION CAPACITANCES

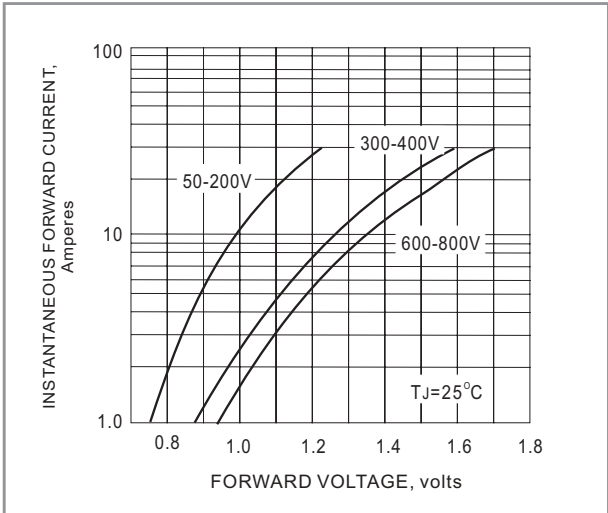


Fig.3 FORWARD CHARACTERISTICS

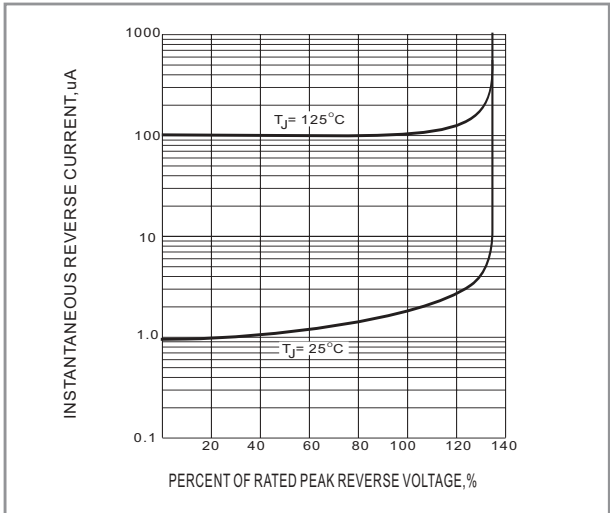


Fig.4 TYPICAL REVERSE CHARACTERISTICS

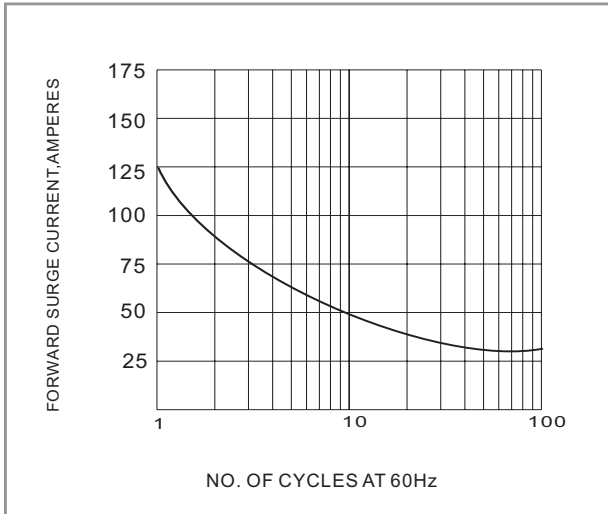


Fig.5 PEAK FORWARD SURGE CURRENT