



# UF2000CT~UF2006CT

## ULTRAFAST RECOVERY RECTIFIERS

**VOLTAGE** 50 to 600 Volt    **CURRENT** 20 Ampere

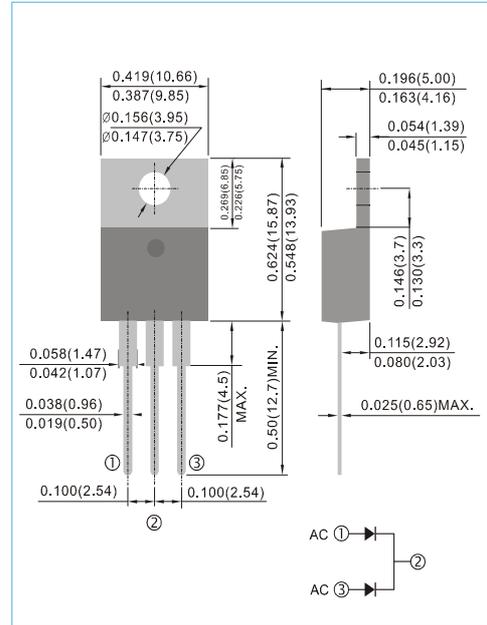
### FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound.
- Low power loss, high efficiency.
- Low forward voltage, high current capability
- High surge capacity.
- Ultra fast recovery times, high voltage.
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### MECHANICAL DATA

- Case: TO-220AB full molded plastic package
- Terminals: Lead solderable per MIL-STD-750, Method 2026
- Polarity: As marked.
- Standard packaging: Any
- Weight: 0.067 ounces, 1.89 grams.

**TO-220AB**    Unit : inch(mm)



### 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          | UF2000CT    | UF2001CT | UF2002CT | UF2003CT | UF2004CT | UF2006CT | 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 lead length at $T_C = 100^\circ\text{C}$                                     | $I_{F(AV)}$     | 20          |          |          |          |          |          | A                           |
| Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load                          | $I_{FSM}$       | 150         |          |          |          |          |          | A                           |
| Maximum Forward Voltage at 10A   | $V_F$           | 1           |          | 1.3      |          | 1.7      |          | V                           |
| Maximum DC Reverse Current at Rated DC Blocking Voltage<br>$T_J=25^\circ\text{C}$<br>$T_J=125^\circ\text{C}$ | $I_R$           | 1<br>500    |          |          |          |          |          | $\mu\text{A}$               |
| Typical Junction Capacitance (Note 1)  | $C_J$           | 200         |          |          |          |          |          | 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   | $T_J, T_{STG}$  | -65 to +150 |          |          |          |          |          | $^\circ\text{C}$            |

#### NOTES:

1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
2. Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1A$ ,  $I_{rr}=0.25A$ .
3. Thermal resistance from Junction to ambient and from junction to lead



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## RATING AND CHARACTERISTIC CURVES

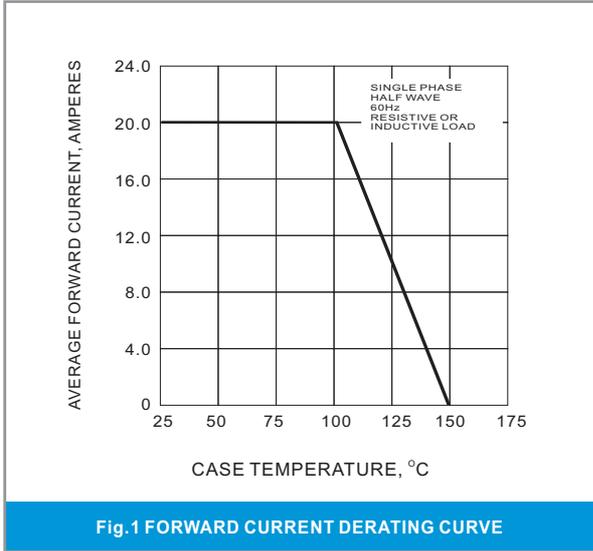


Fig.1 FORWARD CURRENT DERATING CURVE

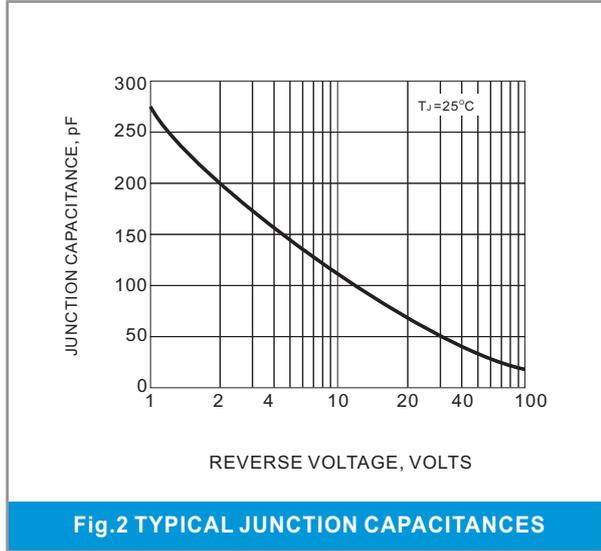


Fig.2 TYPICAL JUNCTION CAPACITANCES

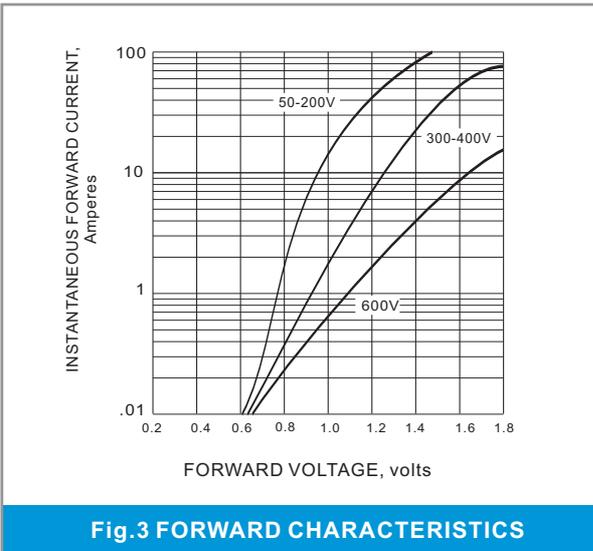


Fig.3 FORWARD CHARACTERISTICS

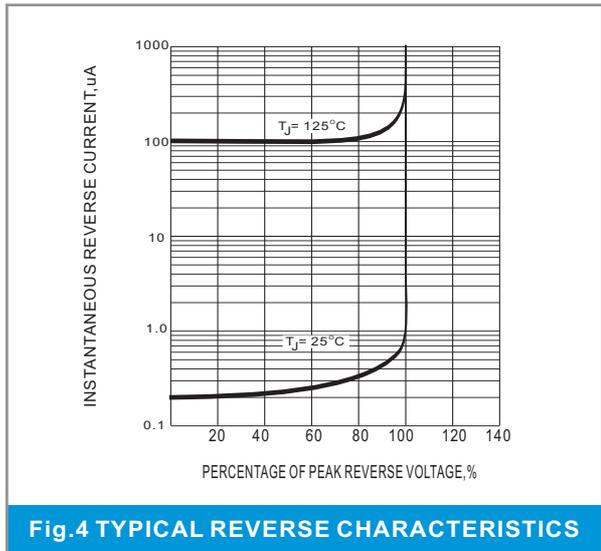


Fig.4 TYPICAL REVERSE CHARACTERISTICS

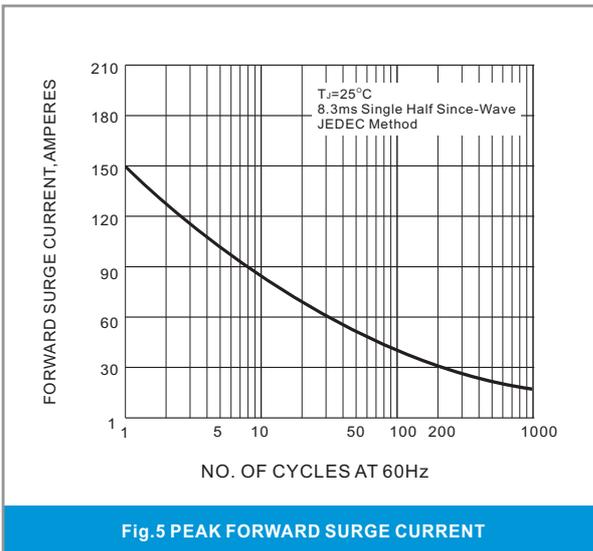


Fig.5 PEAK FORWARD SURGE CURRENT



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Part No\_packing code\_Version

UF2000CT\_T0\_00001

For example :

RB500V-40\_R2\_00001



| Packing Code XX                      |                      |                                  |                      | Version Code XXXXX |                      |                                       |
|--------------------------------------|----------------------|----------------------------------|----------------------|--------------------|----------------------|---------------------------------------|
| Packing type                         | 1 <sup>st</sup> Code | Packing size code                | 2 <sup>nd</sup> Code | HF or RoHS         | 1 <sup>st</sup> Code | 2 <sup>nd</sup> ~5 <sup>th</sup> Code |
| Tape and Ammunition Box (T/B)        | A                    | N/A                              | 0                    | HF                 | 0                    | serial number                         |
| Tape and Reel (T/R)                  | R                    | 7"                               | 1                    | RoHS               | 1                    | serial number                         |
| Bulk Packing (B/P)                   | B                    | 13"                              | 2                    |                    |                      |                                       |
| Tube Packing (T/P)                   | T                    | 26mm                             | X                    |                    |                      |                                       |
| Tape and Reel (Right Oriented) (TRR) | S                    | 52mm                             | Y                    |                    |                      |                                       |
| Tape and Reel (Left Oriented) (TRL)  | L                    | PANASERT T/B CATHODE UP (PBCU)   | U                    |                    |                      |                                       |
| FORMING                              | F                    | PANASERT T/B CATHODE DOWN (PBCD) | D                    |                    |                      |                                       |



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