



# ERT1602CT \ ERT1602FCT

## SUPERFAST RECOVERY RECTIFIERS

**Voltage**

**200 V**

**Current**

**16 A**

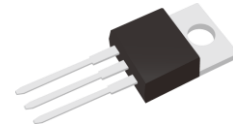
### Features

- Plastic package has Underwriters Laboratory. Flammability Classification 94V-O. Flame Retardant Epoxy Molding Compound.
- Hyperfast recovery time.
- Epitaxial construction.
- Low forward voltage, high current capability.
- Hermetically sealed.
- Low leakage.
- High surge capability.
- Lead free in compliance with EU RoHS 2011/65/EU directive.

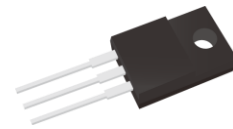
### Mechanical Data

- Case: Molded plastic, TO-220AB, ITO-220AB
- Terminals: Axial leads, solderable per MIL-STD-750, Method 2026
- TO-220AB Weight: 0.067 ounces, 1.89 grams.
- ITO-220AB Weight: 0.056 ounces, 1.6 grams.
- Marking: Part number

ERT1602CT TO-220AB



ERT1602FCT ITO-220AB



### Maximum Ratings ( $T_A=25^{\circ}\text{C}$ unless otherwise noted)

| PARAMETER   |            | SYMBOL      | LIMIT       | UNIT               |
|---|------------|-------------|-------------|--------------------|
| Maximum repetitive peak reverse voltage   |            | $V_{RRM}$   | 200         | V                  |
| Maximum rms voltage   |            | $V_{RMS}$   | 140         | V                  |
| Maximum dc blocking voltage   |            | $V_R$       | 200         | V                  |
| Maximum average forward rectified current   | per device | $I_{F(AV)}$ | 16          | A                  |
|   | per diode  |             | 8           |                    |
| Peak forward surge current : 8.3ms single half sine-wave superimposed on rated load per diode |            | $I_{FSM}$   | 125         | A                  |
| Maximum forward voltage at 8A per diode   |            | $V_F$       | 0.95        | V                  |
| Maximum dc reverse current at rated dc blocking voltage per diode                             |            | $I_R$       | 1           | $\mu\text{A}$      |
| Typical junction capacitance  | (Note 1)   | $C_J$       | 75          | pF                 |
| Operating junction temperature range  |            | $T_J$       | -55 to +150 | $^{\circ}\text{C}$ |
| Storage temperature range   |            | $T_{STG}$   | -55 to +150 | $^{\circ}\text{C}$ |

Note:1. Measured at 1 MHz and Applied Reverse Voltage of 4 Volts.



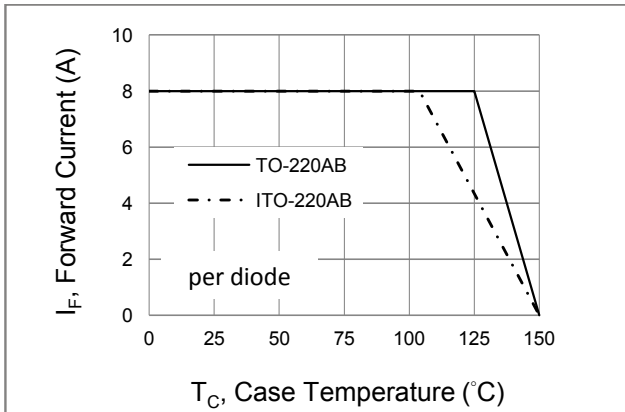
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Maximum Ratings ( $T_A=25^{\circ}\text{C}$  unless otherwise noted)

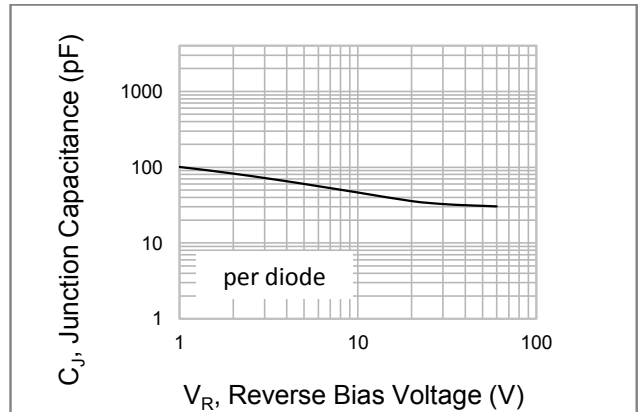
| PARAMETER                            |                    | SYMBOL          | LIMIT | UNIT                 |
|--------------------------------------|--------------------|-----------------|-------|----------------------|
| Maximum reverse recovery time        | (Note 2)           | $T_{RR}$        | 25    | ns                   |
| Typical thermal resistance per diode | TO-220AB (Note 3)  | $R_{\theta JC}$ | 1.5   | $^{\circ}\text{C/W}$ |
|                                      | ITO-220AB (Note 3) |                 | 5     |                      |

Note:2. Reverse Recovery Test Conditions :  $I_F=0.5\text{A}$ ,  $I_R=-1\text{A}$ , Recovery to  $-0.25\text{A}$

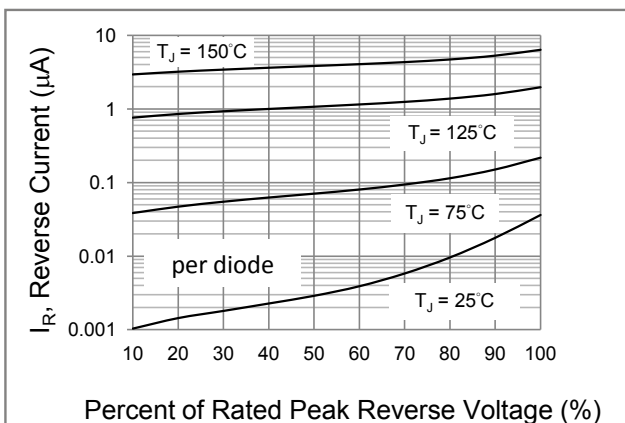
3. Device mounted on a infinite heatsink , then measured the center of the marking side.



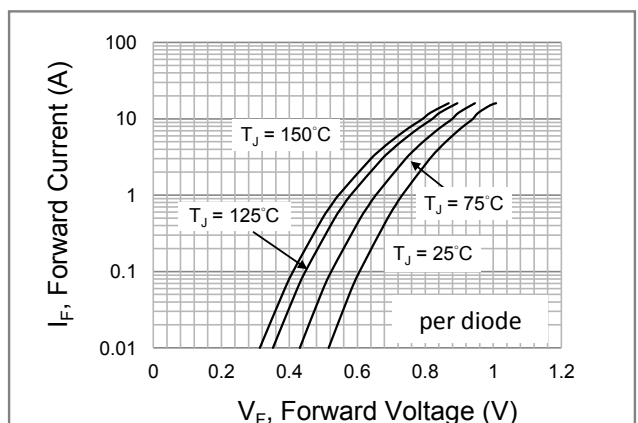
**Fig.1 Forward Current Derating Curve**



**Fig.2 Typical Junction Capacitance**



**Fig.3 Typical Reverse Characteristics**



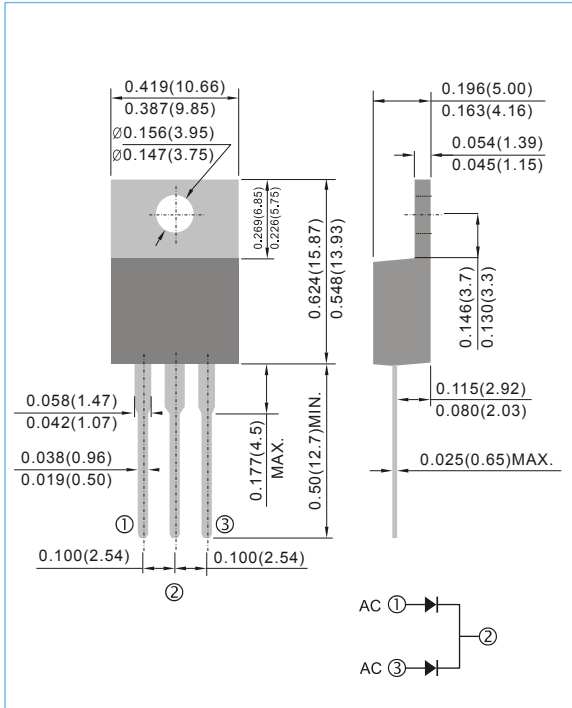
**Fig.4 Typical Forward Characteristics**



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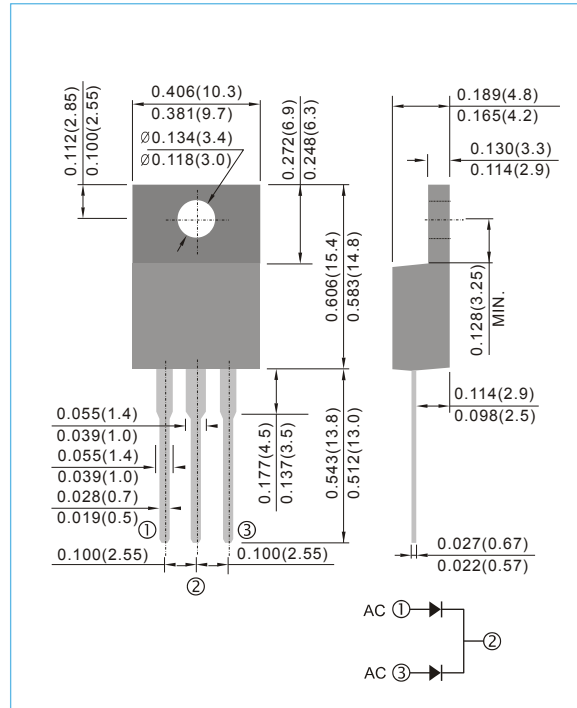
**TO-220AB**

Unit : inch(mm)



**ITO-220AB**

Unit : inch(mm)





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### Part No\_packing code\_Version

ERT1602CT\_T0\_00001

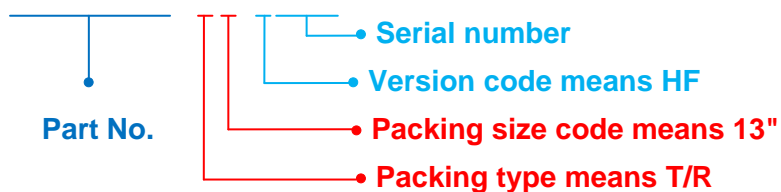
ERT1602CT\_T0\_10001

ERT1602FCT\_T0\_00001

ERT1602FCT\_T0\_10001

### For example :

**RB500V-40\_R2\_00001**



| Packing Code <b>XX</b>               |                      |                                  |                      | Version Code <b>XXXXX</b> |                      |                                       |
|--------------------------------------|----------------------|----------------------------------|----------------------|---------------------------|----------------------|---------------------------------------|
| 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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