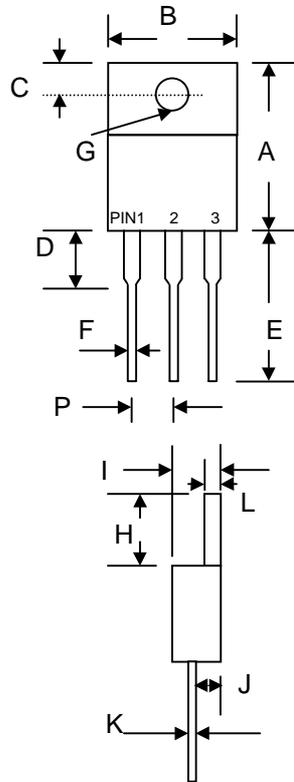


### Features

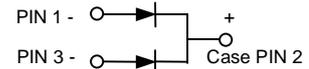
- Glass Passivated Die Construction
- Super-Fast Switching for High Efficiency
- High Current Capability
- Low Reverse Leakage Current
- High Surge Current Capability
- Plastic Material has UL Flammability Classification 94V-O

### Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 2.24 grams (approx.)
- Mounting Position: Any
- Marking: Type Number



| TO-220               |        |        |
|----------------------|--------|--------|
| Dim                  | Min    | Max    |
| A                    | 14.9   | 15.1   |
| B                    | —      | 10.5   |
| C                    | 2.62   | 2.87   |
| D                    | 3.56   | 4.06   |
| E                    | 13.46  | 14.22  |
| F                    | 0.68   | 0.94   |
| G                    | 3.74 Ø | 3.91 Ø |
| H                    | 5.84   | 6.86   |
| I                    | 4.44   | 4.70   |
| J                    | 2.54   | 2.79   |
| K                    | 0.35   | 0.64   |
| L                    | 1.14   | 1.40   |
| P                    | 2.41   | 2.67   |
| All Dimensions in mm |        |        |



### Maximum Ratings and Electrical Characteristics @ $T_A=25^\circ\text{C}$ unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

| Characteristic  | Symbol         | ER 1000CT   | ER 1001CT | ER 1001ACT | ER 1002CT | ER 1003CT | ER 1004CT | ER 1006CT | Unit             |
|---|----------------|-------------|-----------|------------|-----------|-----------|-----------|-----------|------------------|
| Peak Repetitive Reverse Voltage   | $V_{RRM}$      | 50          | 100       | 150        | 200       | 300       | 400       | 600       | V                |
| Working Peak Reverse Voltage  | $V_{RWM}$      |             |           |            |           |           |           |           |                  |
| DC Blocking Voltage   | $V_R$          |             |           |            |           |           |           |           |                  |
| RMS Reverse Voltage   | $V_{R(RMS)}$   | 35          | 70        | 105        | 140       | 210       | 280       | 420       | V                |
| Average Rectified Output Current @ $T_C = 100^\circ\text{C}$  | $I_o$          | 10          |           |            |           |           |           |           | A                |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$      | 150         |           |            |           |           |           |           | A                |
| Forward Voltage @ $I_F = 5.0\text{A}$   | $V_{FM}$       | 0.95        |           |            | 1.3       |           | 1.7       |           | V                |
| Peak Reverse Current @ $T_A = 25^\circ\text{C}$<br>At Rated DC Blocking Voltage @ $T_A = 100^\circ\text{C}$     | $I_{RM}$       | 10<br>400   |           |            |           |           |           |           | $\mu\text{A}$    |
| Reverse Recovery Time (Note 1)  | $t_{rr}$       | 35          |           |            | 50        |           |           |           | nS               |
| Typical Junction Capacitance (Note 2)   | $C_j$          | 70          |           |            | 50        |           |           |           | pF               |
| Operating and Storage Temperature Range   | $T_j, T_{STG}$ | -65 to +150 |           |            |           |           |           |           | $^\circ\text{C}$ |

Note: 1. Measured with  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$ ,  $IRR = 0.25\text{A}$ .  
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

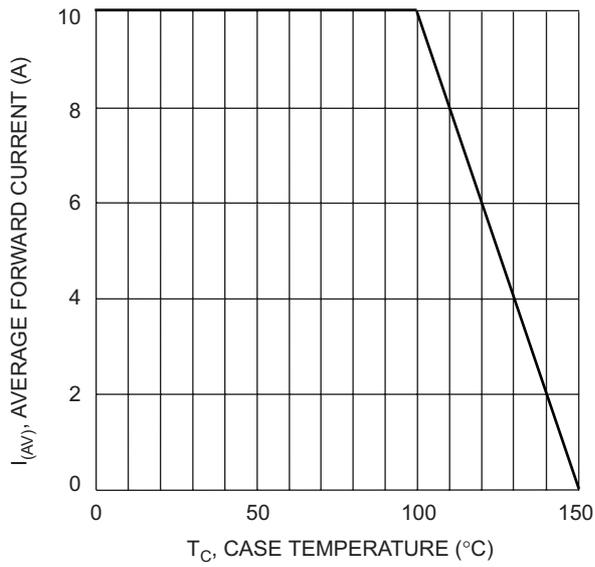


Fig. 1 Forward Current Derating Curve

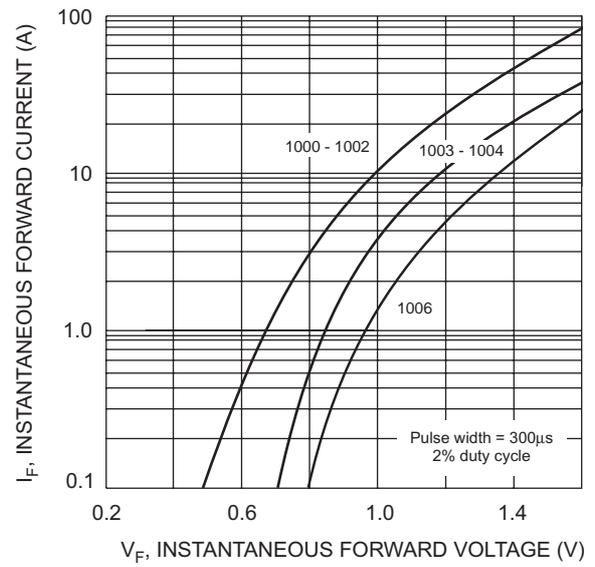


Fig. 2 Typical Forward Characteristics

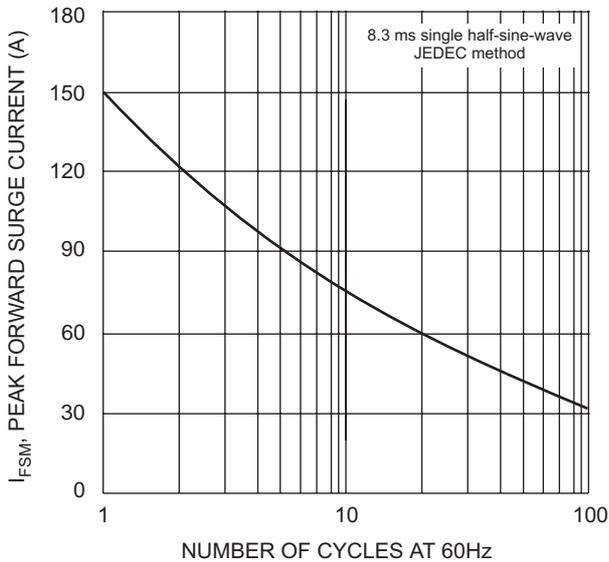


Fig. 3 Max Non-Repetitive Surge Current

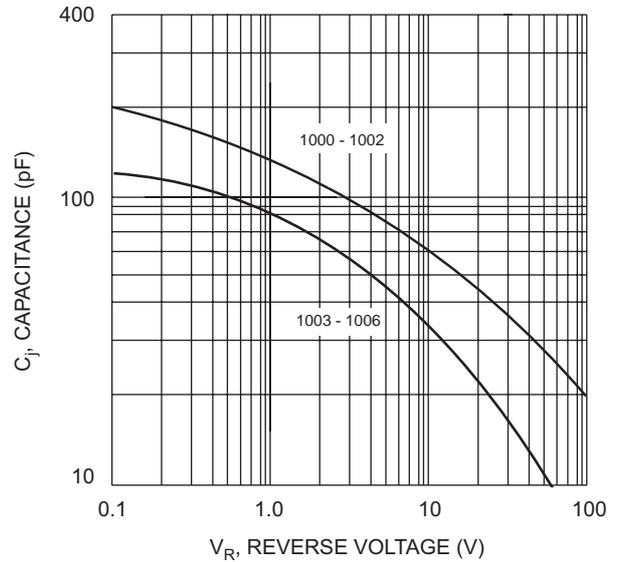


Fig. 4 Typical Junction Capacitance

## ORDERING INFORMATION

| Product No. | Package Type | Shipping Quantity |
|-------------|--------------|-------------------|
| ER1000CT    | TO-220       | 50 Units/Tube     |
| ER1001CT    | TO-220       | 50 Units/Tube     |
| ER1001ACT   | TO-220       | 50 Units/Tube     |
| ER1002CT    | TO-220       | 50 Units/Tube     |
| ER1003CT    | TO-220       | 50 Units/Tube     |
| ER1004CT    | TO-220       | 50 Units/Tube     |
| ER1006CT    | TO-220       | 50 Units/Tube     |

Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.

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**WARNING:** DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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*We power your everyday.*