# Zibo Seno Electronic Engineering Co., Ltd.

淄博圣诺

# ER800 – ER806

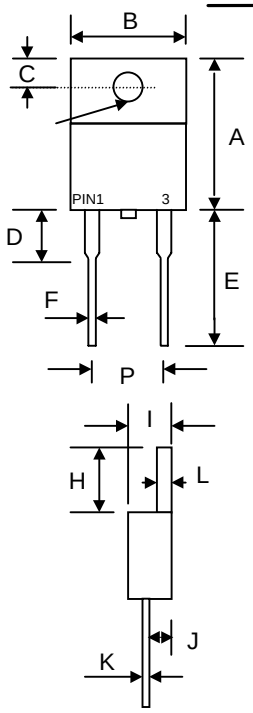
**8.0A GLASS PASSIVATED SUPERFAST RECTIFIER**

## Features

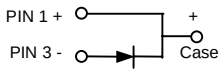
- Glass Passivated Die Construction
- Super-Fast Switching
- Low Forward Voltage Drop
- Low Reverse Leakage Current
- High Surge Current Capability
- Plastic Material has UL Flammability

- Case: TO-220AC, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 2.24 grams (approx.)
- Mounting Position: Any
- Mounting Torque: 11.5 cm-kg (10 in-lbs) Max.
- **Lead Free: For RoHS / Lead Free Version**

**TO-220AC**




| TO-220AC | | |
|---|---|---|
| **Dim** | **Min** | **Max** |
| **A** | 13.90 | 15.90 |
| **B** | 9.80 | 10.70 |
| **C** | 2.54 | 3.43 |
| **D** | 3.56 | 4.56 |
| **E** | 12.70 | 14.73 |
| **F** | 0.51 | 1.14 |
| **G** | 3.55 Ø | 4.09 Ø |
| **H** | 5.75 | 6.85 |
| **I** | 3.56 | 4.83 |
| **J** | 2.03 | 2.92 |
| **K** | 0.30 | 0.64 |
| **L** | 1.10 | 1.40 |
| **P** | 4.80 | 5.35 |
| **All Dimensions in mm** | | |




## Maximum Ratings and Electrical Characteristics @$T_A$=25°C unless otherwise specified

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

| Characteristic | Symbol | ER 800 | ER 801 | ER 801A | ER 802 | ER 803 | ER 804 | ER 806 | Unit |
|---|---|---|---|---|---|---|---|---|---|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 35 | 70 | 105 | 140 | 210 | 280 | 420 | V |
| Average Rectified Output Current @$T_C$ = 105°C | $I_O$ | 8.0 | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 125 | | | | | | | A |
| Forward Voltage @$I_F$ = 8.0A | $V_{FM}$ | 0.95 | | | | 1.3 | | 1.7 | V |
| Peak Reverse Current @$T_A$ = 25°C<br>At Rated DC Blocking Voltage @$T_A$ = 100°C | $I_{RM}$ | 5<br>400 | | | | | | | µA |
| Reverse Recovery Time (Note 1) | $t_{rr}$ | 35 | | | | 50 | | | nS |
| Typical Junction Capacitance (Note 2) | $C_j$ | 80 | | | | 50 | | | pF |
| Operating and Storage Temperature Range | $T_j$, $T_{STG}$ | -65 to +150 | | | | | | | °C |

Note: 1. Measured with IF = 0.5A, IR = 1.0A, IRR = 0.25A.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.



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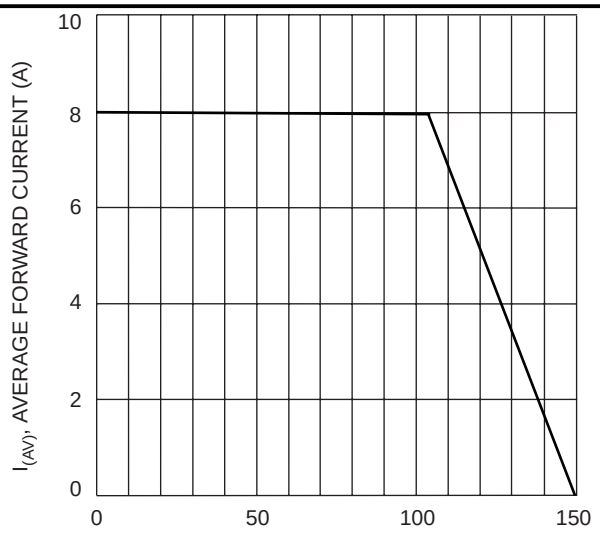



Fig. 1 Forward Current Derating Curve

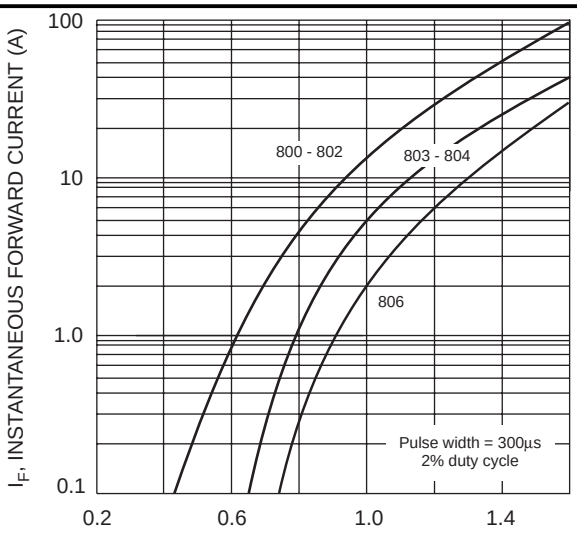



Fig. 2 Typical Forward Characteristics

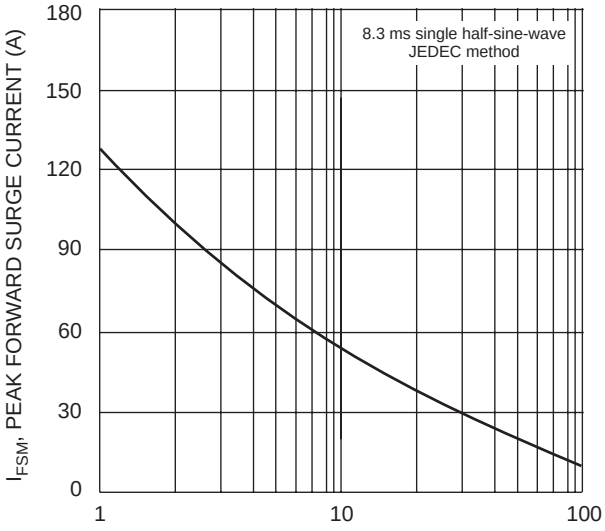



Fig. 3 Max Non-Repetitive Surge Current

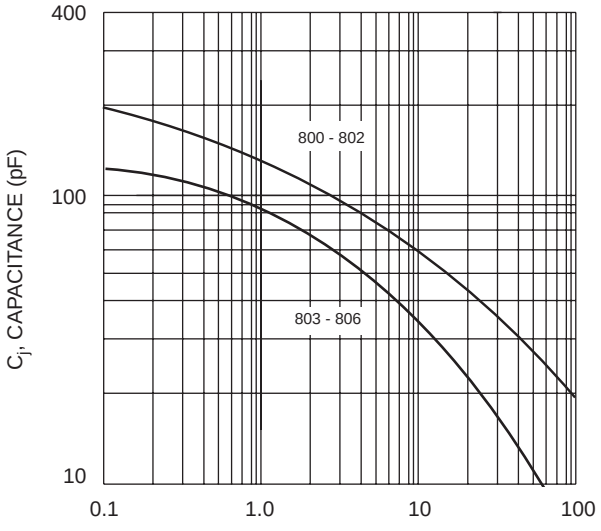
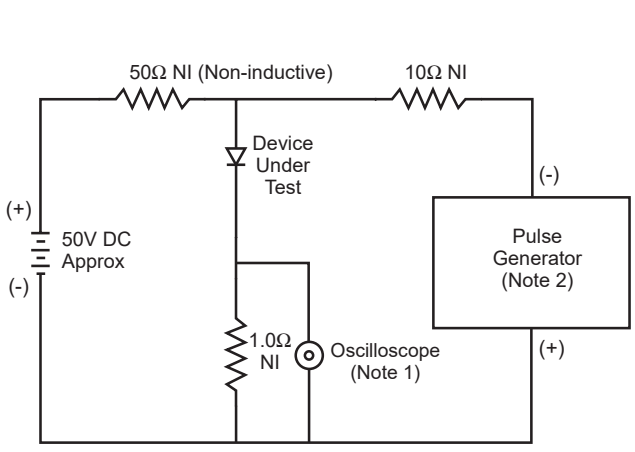
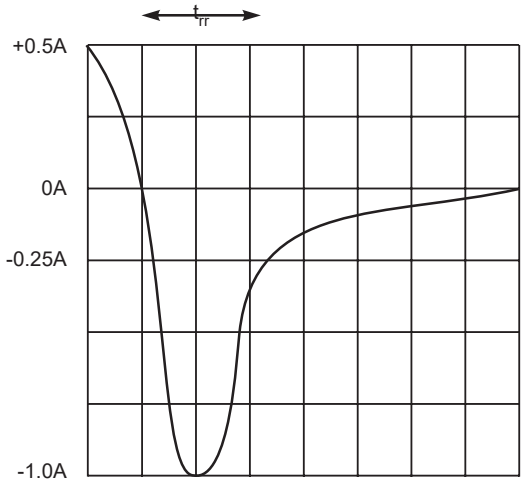



Fig. 4 Typical Junction Capacitance




Notes:
1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
2. Rise Time = 10ns max. Input Impedance = 50Ω.

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit



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