# Zibo Seno Electronic Engineering Co., Ltd.

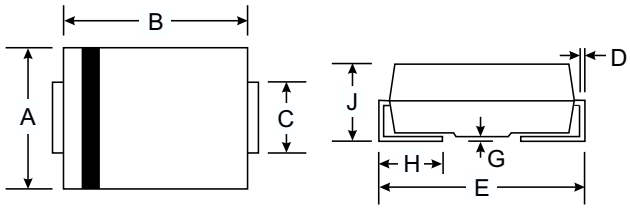
淄博圣诺

# UF3A – UF3M

**3.0A SURFACE MOUNT ULTRAFAST DIODE**

## Features

- Ideally Suited for Automatic Assembly
- Low Forward Voltage Drop, High Efficiency
- Surge Overload Rating to 1 0 0A Peak
- Low Power Loss
- Ultra-Fast Recovery Time
- Plastic Case Material has UL Flammability Classification Rating 94V-O




## Mechanical Data

- Case: SMB/DO-214AA,SMC/DO-214AB, Molded Plastic
- Terminals: Solder Plated, Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band or Cathode Notch
- Marking: Type Number
- Weight: SMB Weight: 0.093 grams (approx.)
  SMC Weight: 0.20 grams (approx.)
- **Lead Free: For RoHS / Lead Free Version**

| | SMB | | SMC | |
|---|---|---|---|---|
| **Dim** | **Min** | **Max** | **Min** | **Max** |
| **A** | 3.30 | 3.94 | 5.59 | 6.22 |
| **B** | 4.06 | 4.57 | 6.60 | 7.11 |
| **C** | 1.96 | 2.21 | 2.75 | 3.18 |
| **D** | 0.15 | 0.31 | 0.15 | 0.31 |
| **E** | 5.00 | 5.59 | 7.75 | 8.13 |
| **G** | 0.10 | 0.20 | 0.10 | 0.20 |
| **H** | 0.76 | 1.52 | 0.76 | 1.52 |
| **J** | 2.00 | 2.62 | 2.00 | 2.62 |
| **All Dimensions in mm** | | | | |

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

| Characteristic | Symbol | UF3A | UF3B | UF3D | UF3G | UF3J | UF3K | UF3M | Unit |
|---|---|---|---|---|---|---|---|---|---|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage | $V_{RRM}$<br>$V_{RWM}$<br>$V_R$ | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| RMS Reverse Voltage | $V_{R(RMS)}$ | 35 | 70 | 140 | 280 | 420 | 560 | 800 | V |
| Average Rectified Output Current @$T_L$ = 100°C | $I_O$ | 3.0 | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current<br>8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 100 | | | | | | | A |
| Forward Voltage @$I_F$ = 3.0A | $V_{FM}$ | 1.0 | | | 1.3 | 1.7 | | | V |
| Peak Reverse Current @$T_A$ = 25°C<br>At Rated DC Blocking Voltage @$T_A$ = 100°C | $I_{RM}$ | 10<br>500 | | | | | | | µA |
| Reverse Recovery Time (Note 1) | $t_{rr}$ | 50 | | | | 75 | | | nS |
| Typical Junction Capacitance (Note 2) | $C_j$ | 25 | | | | | | | pF |
| Typical Thermal Resistance (Note 3) | $R_{\theta JL}$ | 30 | | | | | | | °C/W |
| Operating and Storage Temperature Range | $T_j$, $T_{STG}$ | -65 to +150 | | | | | | | °C |

Note: 1. Measured with $I_F$ = 0.5A, $I_R$ = 1.0A, $I_{rr}$ = 0.25A. See figure 5.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0 V DC.
3. Mounted on P.C. Board with 8.0mm$^2$ land area.




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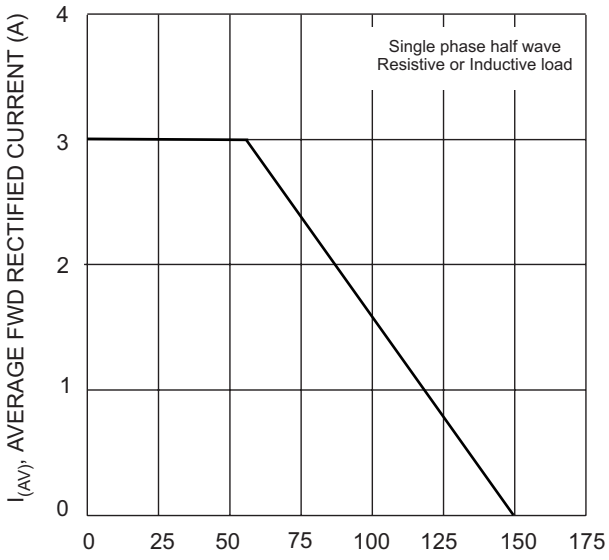



Fig. 1 Forward Current Derating Curve

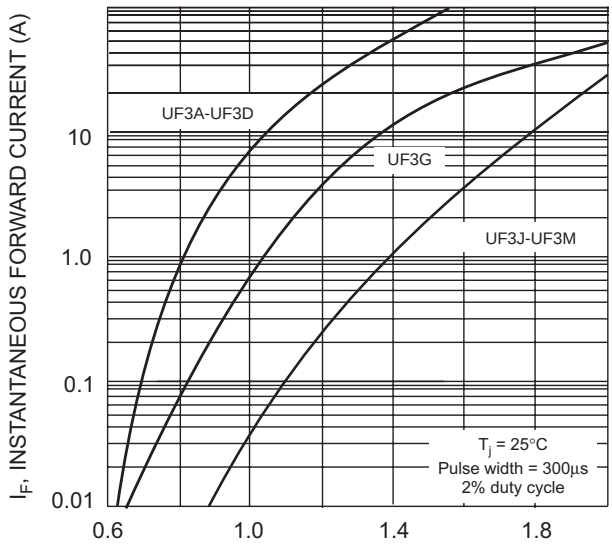



Fig. 2 Typical Forward Characteristics

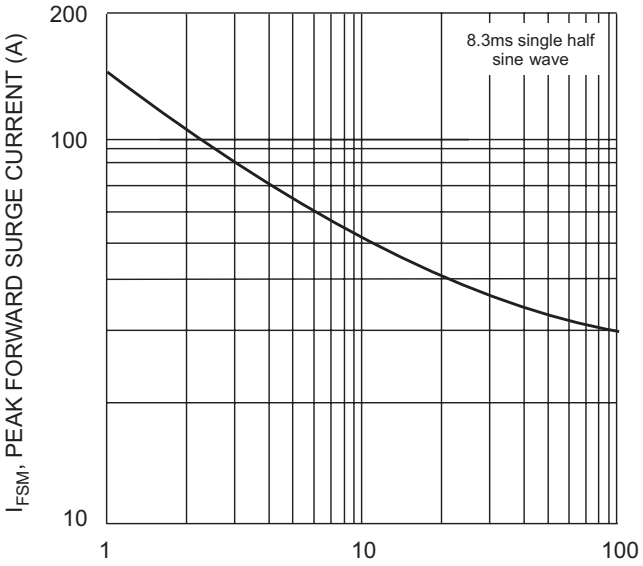



Fig. 3 Peak Forward Surge Current

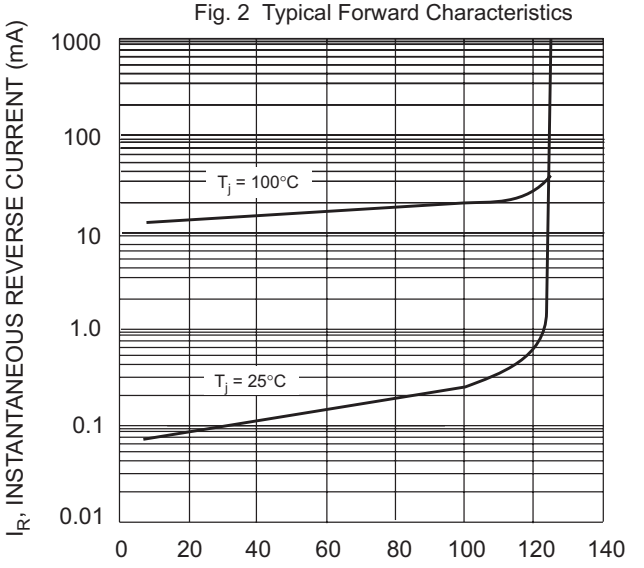
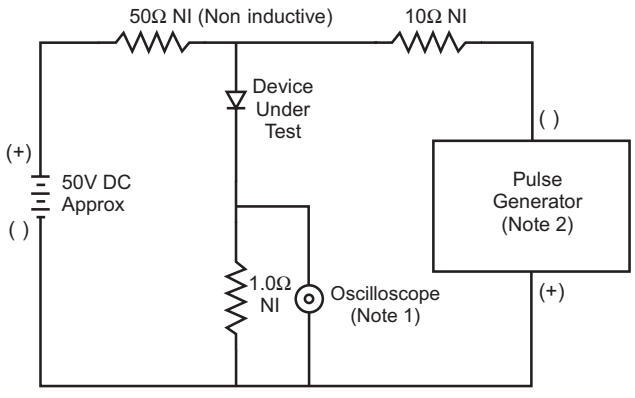



Fig. 4 Typical Reverse Characteristics




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

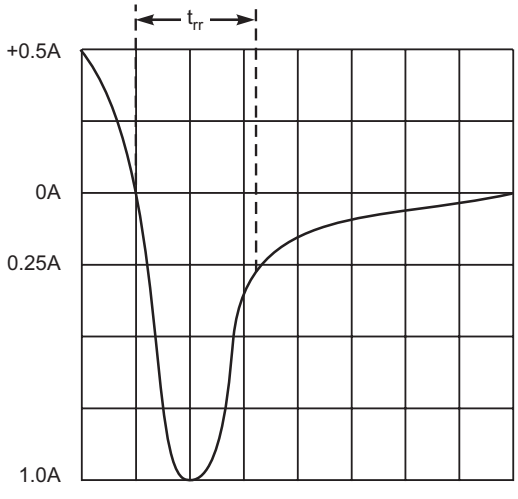



Fig. 5 Reverse Recovery Time Characteristic and Test Circuit



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