# Zibo Seno Electronic Engineering Co., Ltd.

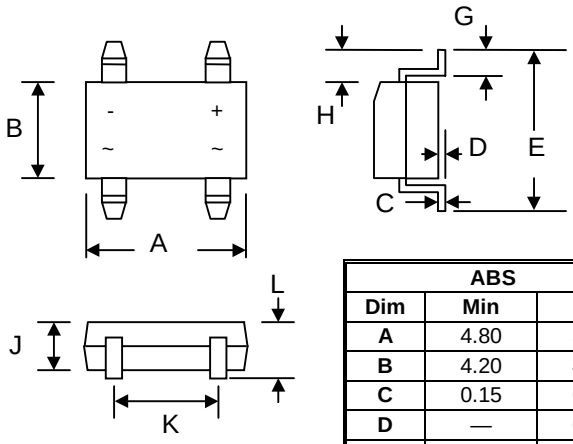
淄博圣诺

# UABS05 – UABS10

**0.8A ULTRA FAST SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER**

## Features

- Glass Passivated Die Construction
- Low Forward Voltage Drop
- High Current Capability
- High Surge Current Capability
- Designed for Surface Mount Application
- Plastic Material – UL Flammability 94V-O




| ABS | | |
|---|---|---|
| **Dim** | **Min** | **Max** |
| **A** | 4.80 | 5.30 |
| **B** | 4.20 | 4.60 |
| **C** | 0.15 | 0.25 |
| **D** | — | 0.20 |
| **E** | 6.00 | 6.80 |
| **G** | 0.30 | 0.70 |
| **H** | 0.90 | 1.10 |
| **J** | — | 1.50 |
| **K** | 3.80 | 4.20 |
| **L** | 1.22 | 1.72 |
| **All Dimensions in mm** | | |

## Mechanical Data

- Case: SOPA-4, ABS, Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Case
- Mounting Position: Any
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version**

## 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 | UABS 05 | UABS 1 | UABS 2 | UABS 4 | UABS 6 | UABS 8 | UABS 10 | 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 | 700 | V |
| Average Rectified Output Current (Note 1) @$T_A$ = 40°C<br>Average Rectified Output Current (Note 2) @$T_A$ = 40°C | $I_O$ | 0.5<br>0.8 | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 30 | | | | | | | A |
| $I^2t$ Rating for Fusing (t < 8.3ms) | $I^2t$ | 5.0 | | | | | | | $A^2s$ |
| Forward Voltage per element @$I_F$ = 0.8A | $V_{FM}$ | 1.0 | | | 1.3 | 1.7 | | | V |
| Peak Reverse Current @$T_A$ = 25°C<br>At Rated DC Blocking Voltage @$T_A$ = 125°C | $I_{RM}$ | 5.0<br>500 | | | | | | | µA |
| Reverse Recovery Time (Note 4) | $t_{rr}$ | 50 | | | | 75 | | | nS |
| Typical Junction Capacitance per leg (Note 3) | $C_j$ | 13 | | | | | | | pF |
| Typical Thermal Resistance per leg (Note 1) | $R_{\theta JA}$<br>$R_{\theta JL}$ | 62.5<br>25 | | | | | | | °C/W |
| Operating and Storage Temperature Range | $T_j$, $T_{STG}$ | -55 to +150 | | | | | | | °C |

Note: 1. Mounted on glass epoxy PC board with 1.3mm$^2$ solder pad.
2. Mounted on aluminum substrate PC board with 1.3mm$^2$ solder pad.
3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.
4. Measured with IF = 0.5A, IR = 1.0A, IRR = 0.25A. See figure 5.




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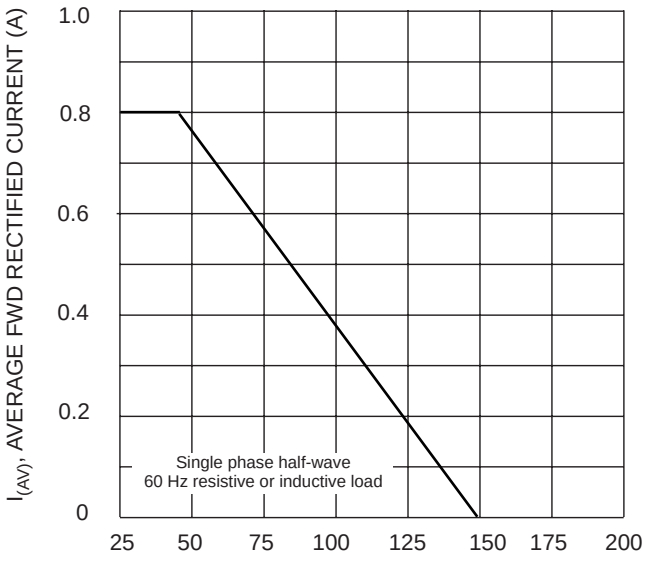



Fig. 1 Forward Derating Curve

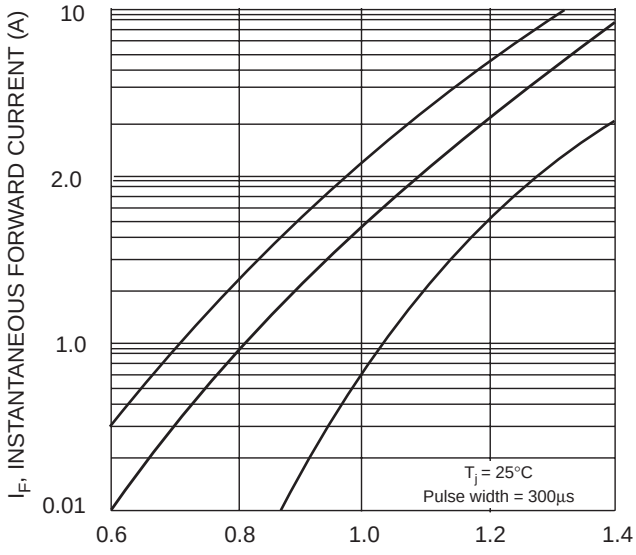



Fig. 2 Typical Forward Characteristics

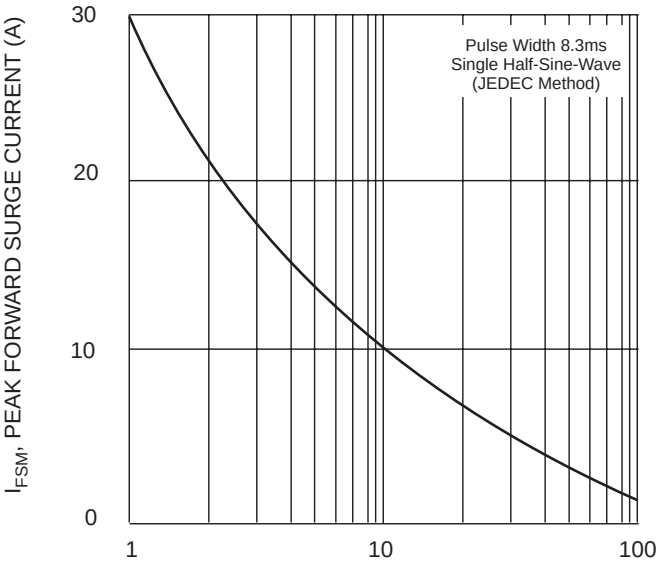



Fig. 3 Peak Forward Surge Current

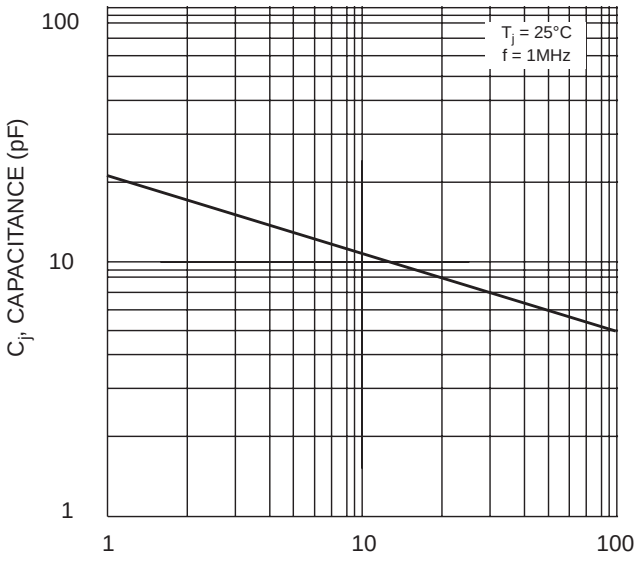
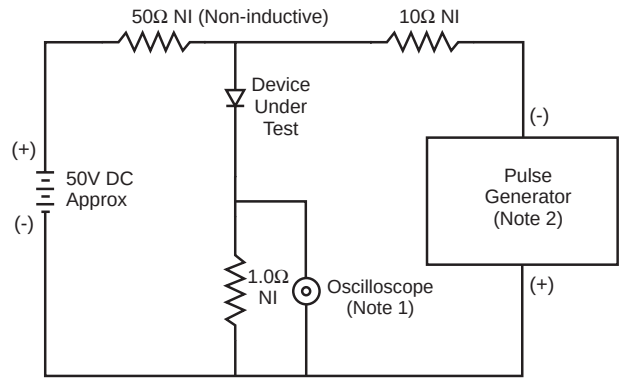
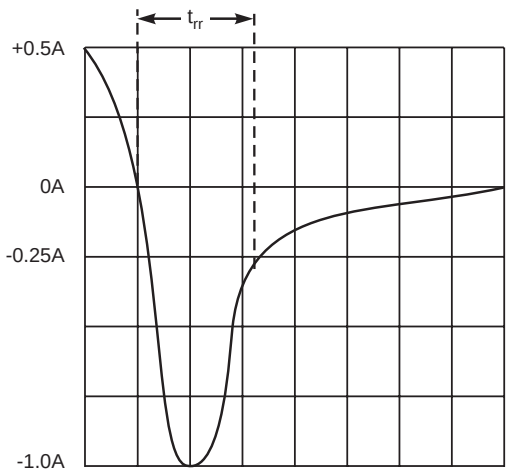



Fig. 4 Typical Junction Capacitance




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




Set time base for 5/10ns/cm

5 Reverse Recovery Time Characteristic and Test Circuit



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