

# Zibo Seno Electronic Engineering Co., Ltd.



## D5SB05 - D5SB100

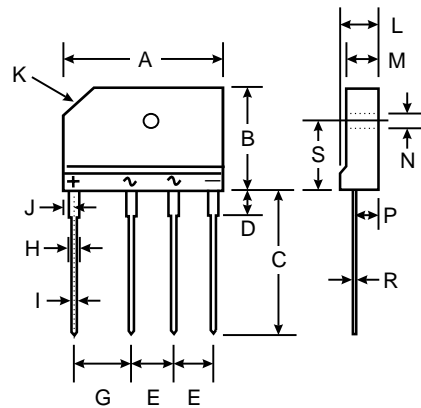
### 6.0A GLASS PASSIVATED BRIDGE RECTIFIER

#### Features

- Glass Passivated Die Construction
- High Case Dielectric Strength of 1500V<sub>RMS</sub>
- Low Reverse Leakage Current
- Surge Overload Rating to 170A Peak
- Ideal for Printed Circuit Board Applications
- Plastic Material - UL Flammability Classification 94V-0

#### Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads, Solderable per MIL-STD-202, Method 208
- Polarity: Molded on Body
- Mounting: Through Hole for #6 Screw
- Mounting Torque: 5.0 in-lbs Maximum
- Weight: 6.6 grams (approx)
- Marking: Type Number



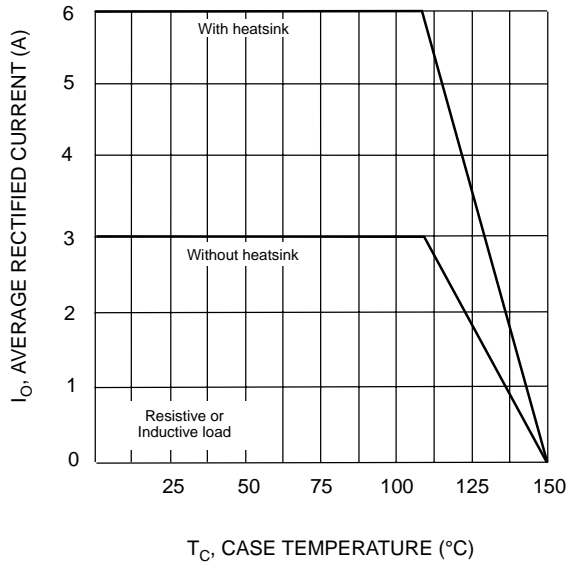
| 5S                   |           |       |
|----------------------|-----------|-------|
| Dim                  | Min       | Max   |
| A                    | 29.70     | 30.30 |
| B                    | 19.70     | 20.30 |
| C                    | 17.00     | 18.00 |
| D                    | 3.80      | 4.20  |
| E                    | 7.30      | 7.70  |
| G                    | 9.80      | 10.20 |
| H                    | 2.00      | 2.40  |
| I                    | 0.90      | 1.10  |
| J                    | 2.30      | 2.70  |
| K                    | 3.0 X 45° |       |
| L                    | 4.40      | 4.80  |
| M                    | 3.40      | 3.80  |
| N                    | 3.10      | 3.40  |
| P                    | 2.50      | 2.90  |
| R                    | 0.60      | 0.80  |
| S                    | 10.80     | 11.20 |
| All Dimensions in mm |           |       |

#### Maximum Ratings and Electrical Characteristics @ T<sub>A</sub> = 25°C unless otherwise specified

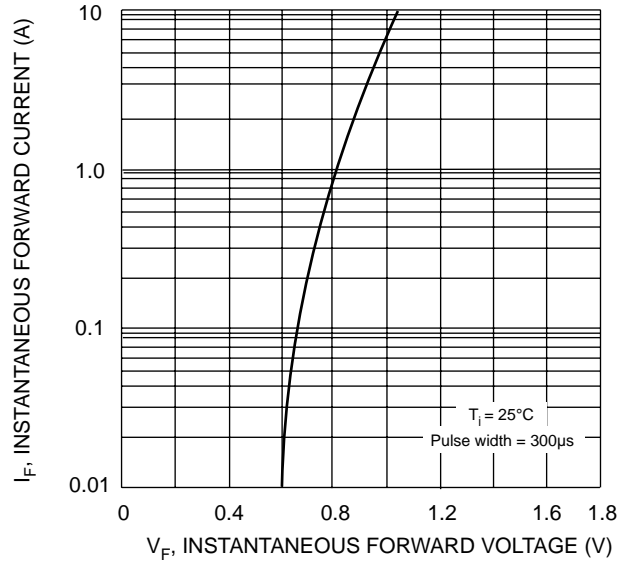
Single phase, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

| Characteristic  | Symbol                            | D5SB 05     | D5SB 10 | D5SB 20 | D5SB 40 | D5SB 60 | D5SB 80 | D5SB 100 | Unit             |
|---|-----------------------------------|-------------|---------|---------|---------|---------|---------|----------|------------------|
| Peak Repetitive Reverse Voltage   | V <sub>RRM</sub>                  | 50          | 100     | 200     | 400     | 600     | 800     | 1000     | V                |
| Working Peak Reverse Voltage  | V <sub>RWM</sub>                  |             |         |         |         |         |         |          |                  |
| DC Blocking Voltage   | V <sub>R</sub>                    |             |         |         |         |         |         |          |                  |
| RMS Reverse Voltage   | V <sub>R(RMS)</sub>               | 35          | 70      | 140     | 280     | 420     | 560     | 700      | V                |
| Average Forward Rectified Output Current @ T <sub>C</sub> = 110°C   | I <sub>O</sub>                    | 6.0         |         |         |         |         |         |          | A                |
| Non-Repetitive Peak Forward Surge Current, 8.3 ms single half-sine-wave superimposed on rated load (JEDEC method) | I <sub>FSM</sub>                  | 170         |         |         |         |         |         |          | A                |
| Forward Voltage per element @ I <sub>F</sub> = 3.0A   | V <sub>FM</sub>                   | 1.0         |         |         |         |         |         |          | V                |
| Peak Reverse Current @ T <sub>C</sub> = 25°C at Rated DC Blocking Voltage @ T <sub>C</sub> = 125°C                | I <sub>R</sub>                    | 5.0<br>500  |         |         |         |         |         |          | μA               |
| I <sup>2</sup> t Rating for Fusing (t < 8.3ms) (Note 1)   | I <sup>2</sup> t                  | 120         |         |         |         |         |         |          | A <sup>2</sup> s |
| Typical Junction Capacitance per Element (Note 2)   | C <sub>j</sub>                    | 55          |         |         |         |         |         |          | pF               |
| Typical Thermal Resistance Junction to Case (Note 3)  | R <sub>θJC</sub>                  | 1.8         |         |         |         |         |         |          | °C/W             |
| Operating and Storage Temperature Range   | T <sub>j</sub> , T <sub>STG</sub> | -65 to +150 |         |         |         |         |         |          | °C               |

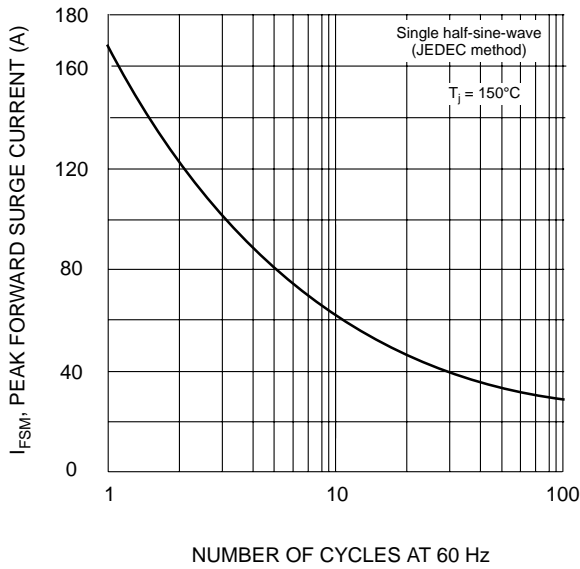
- Notes:
1. Non-repetitive, for t > 1ms and < 8.3 ms.
  2. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.
  3. Thermal resistance from junction to case per element. Unit mounted on 75 x 75 x 1.6mm aluminum plate heat sink.



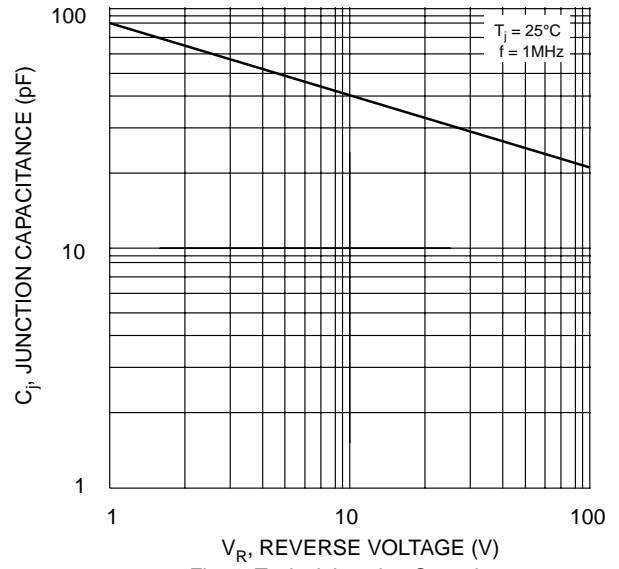
$T_C$ , CASE TEMPERATURE (°C)  
Fig. 1 Forward Current Derating Curve



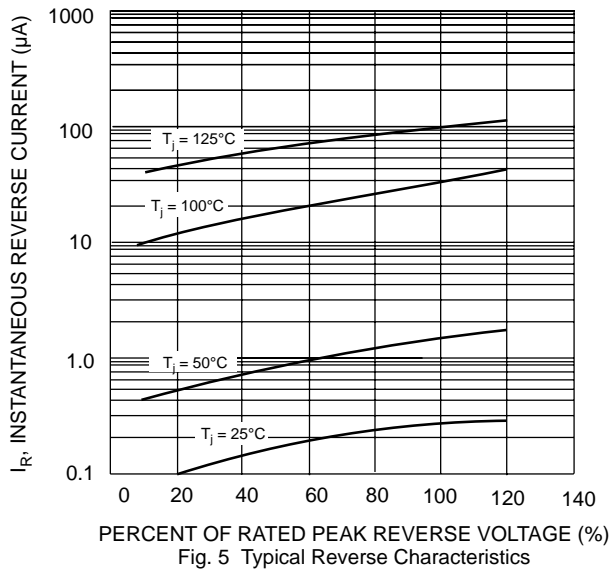
$V_F$ , INSTANTANEOUS FORWARD VOLTAGE (V)  
Fig. 2 Typical Forward Characteristics (per element)



NUMBER OF CYCLES AT 60 Hz  
Fig. 3 Maximum Non-Repetitive Surge Current



$V_R$ , REVERSE VOLTAGE (V)  
Fig. 4 Typical Junction Capacitance



PERCENT OF RATED PEAK REVERSE VOLTAGE (%)  
Fig. 5 Typical Reverse Characteristics