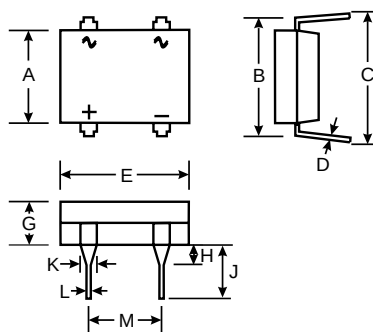


#### Features

- 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

#### Mechanical Data

- Case: DIP , Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Case
- Weight: 0.22 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- Lead Free: For RoHS / Lead Free Version



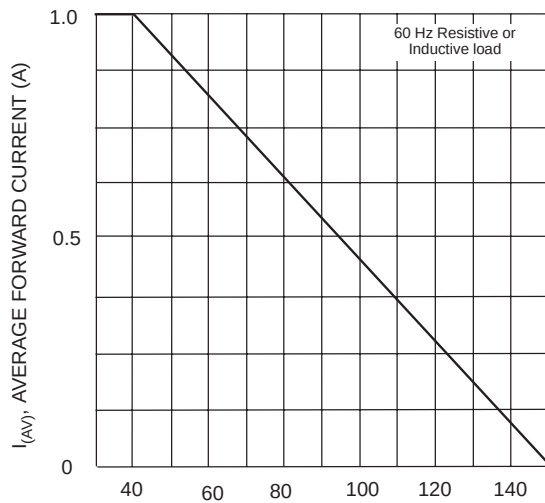
| DIP                  |      |      |
|----------------------|------|------|
| Dim                  | Min  | Max  |
| A                    | 6.20 | 6.50 |
| B                    | 6.80 | 8.40 |
| C                    | 7.24 | 8.70 |
| D                    | 0.20 | 0.38 |
| E                    | 8.12 | 8.80 |
| G                    | 2.15 | 3.40 |
| H                    | 1.30 | -    |
| J                    | 3.80 | 4.90 |
| K                    | 0.90 | 1.40 |
| L                    | 0.45 | 0.58 |
| M                    | 5.00 | 5.20 |
| All Dimensions in mm |      |      |

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

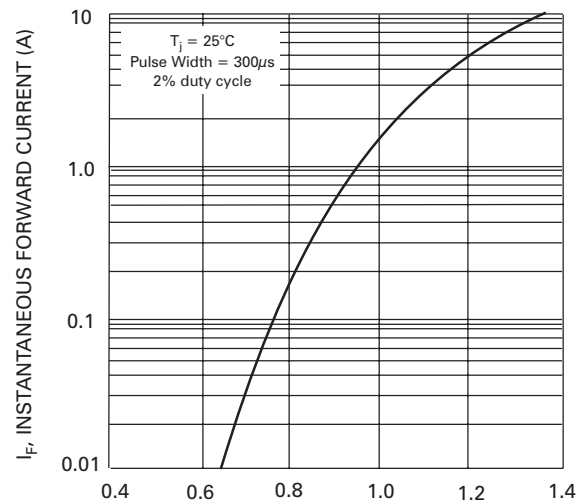
Single Phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

| Characteristic                                                                                                                       | Symbol                                                 | S1ZB<br>05  | S1ZB<br>10 | S1ZB<br>20 | S1ZB<br>40 | S1ZB<br>60 | S1ZB<br>80 | S1ZB<br>100 | Unit             |
|--------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------|------------|------------|------------|------------|------------|-------------|------------------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                                               | V <sub>RRM</sub><br>V <sub>RWM</sub><br>V <sub>R</sub> | 50          | 100        | 200        | 400        | 600        | 800        | 1000        | V                |
| RMS Reverse Voltage                                                                                                                  | V <sub>R(RMS)</sub>                                    | 35          | 70         | 140        | 280        | 420        | 560        | 700         | V                |
| Average Rectified Output Current (Note 1) @T <sub>A</sub> = 40°C<br>Average Rectified Output Current (Note 2) @T <sub>A</sub> = 40°C | I <sub>O</sub>                                         | 1.0         |            |            |            |            |            |             | A                |
| Non-Repetitive Peak Forward Surge Current 8.3ms<br>Single half sine-wave superimposed on rated load<br>(JEDEC Method)                | I <sub>FSM</sub>                                       | 50          |            |            |            |            |            |             | A                |
| I <sup>2</sup> t Rating for Fusing (t < 8.3ms)                                                                                       | I <sup>2</sup> t                                       | 5.0         |            |            |            |            |            |             | A <sup>2</sup> s |
| Forward Voltage per element @I <sub>F</sub> = 0.5A                                                                                   | V <sub>FM</sub>                                        | 1.0         |            |            |            |            |            |             | V                |
| Peak Reverse Current @T <sub>A</sub> = 25°C<br>At Rated DC Blocking Voltage @T <sub>A</sub> = 125°C                                  | I <sub>RM</sub>                                        | 2.0<br>500  |            |            |            |            |            |             | μA               |
| Typical Junction Capacitance per leg (Note 3)                                                                                        | C <sub>j</sub>                                         | 13          |            |            |            |            |            |             | pF               |
| Typical Thermal Resistance per leg (Note 1)                                                                                          | R <sub>θJA</sub><br>R <sub>θJL</sub>                   | 70<br>20    |            |            |            |            |            |             | °C/W             |
| Operating and Storage Temperature Range                                                                                              | T <sub>j</sub> , T <sub>STG</sub>                      | -55 to +150 |            |            |            |            |            |             | °C               |

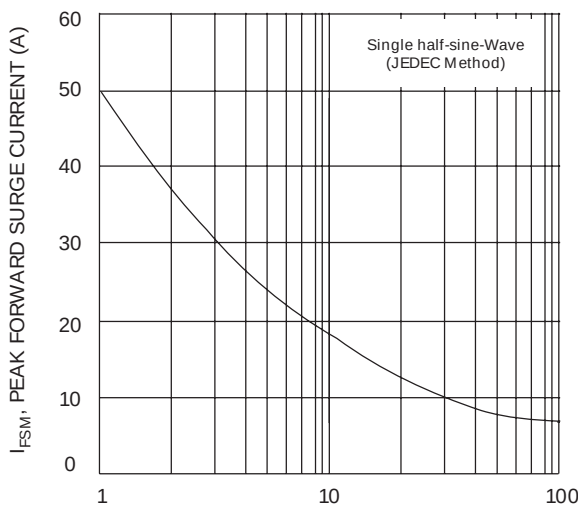
Note: 1. Mounted on glass epoxy PC board with 1.3mm<sup>2</sup> solder pad.  
2. Mounted on aluminum substrate PC board with 1.3mm<sup>2</sup> solder pad.  
3. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.



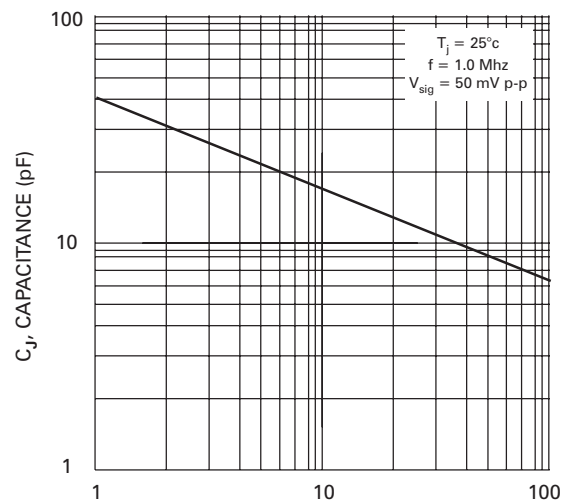
$T_A$ , AMBIENT TEMPERATURE ( $^{\circ}\text{C}$ )  
Fig. 1 Output Current Derating Curve



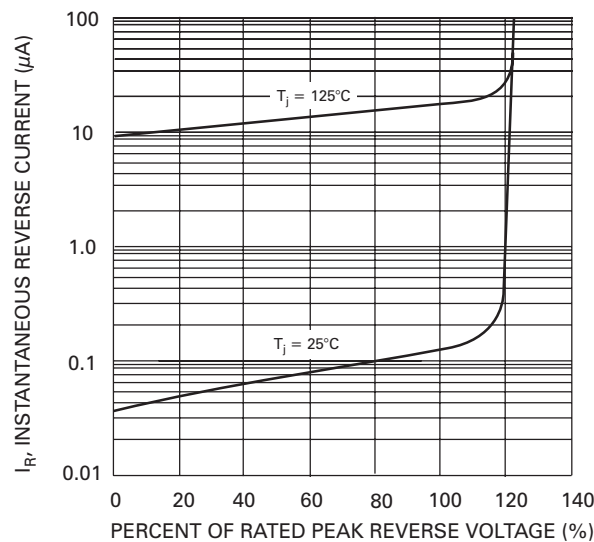
$V_F$ , INSTANTANEOUS FORWARD VOLTAGE (V)  
Fig. 2 Typ Forward Characteristics (per element)



NUMBER OF CYCLES AT 60 Hz  
Fig. 3 Max Non-Repetitive Peak Forward Surge Current



$V_R$ , REVERSE VOLTAGE (V)  
Fig. 4 Typ Junction Capacitance (per element)



PERCENT OF RATED PEAK REVERSE VOLTAGE (%)  
Fig. 5 Typ Reverse Characteristics (per element)