

## 1.0 A Single-Phase Glass Passivated Bridge Rectifiers

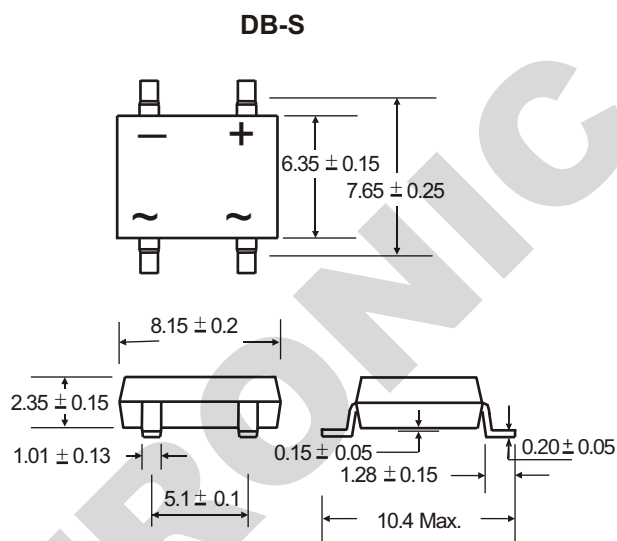
Rectifier Reverse Voltage 50 to 1000V

### Features

- The plastic material used carries Underwriters Laboratory flammability recognition 94V-0
- Surge overload ratings to 30 amperes
- Ideal for printed circuit board application
- High temperature soldering guaranteed 260 °C / 5 seconds at 5 lbs (2.3kg) tension

### Mechanical Data

Case: Molded plastic  
 Terminals: Plated leads solderable per MIL-STD-202, Method 208  
 Polarity: Marked on body  
 Mounting Position: Any  
 Weight: 0.33 grams (approx)



Dimensions in millimeters ( 1mm = 0.0394" )

### Maximum Ratings & Thermal Characteristics

Rating at 25°C ambient temperature unless otherwise specified, Resistive or Inductive load, 60 Hz.  
 For Capacitive load derate current by 20%.

| Parameter                                                                             | Symbol           | DB101S       | DB102S | DB103S | DB104S | DB105S | DB106S | DB107S | Unit               |
|---------------------------------------------------------------------------------------|------------------|--------------|--------|--------|--------|--------|--------|--------|--------------------|
| Maximum repetitive peak reverse voltage                                               | VRRM             | 50           | 100    | 200    | 400    | 600    | 800    | 1000   | V                  |
| Maximum RMS bridge input voltage                                                      | VRMS             | 35           | 70     | 140    | 280    | 420    | 560    | 700    | V                  |
| Maximum DC blocking voltage                                                           | VDC              | 50           | 100    | 200    | 400    | 600    | 800    | 1000   | V                  |
| Maximum average forward rectified output current at TA=40°C                           | IF(AV)           | 1.0          |        |        |        |        |        |        | A                  |
| Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) | IFSM             | 30           |        |        |        |        |        |        | A                  |
| Rating for fusing ( t<8.3ms)                                                          | I <sup>2</sup> t | 10           |        |        |        |        |        |        | A <sup>2</sup> sec |
| Typical thermal resistance per element (1)                                            | ReJA             | 110          |        |        |        |        |        |        | °C / W             |
| Typical junction capacitance per element (2)                                          | Cj               | 25.0         |        |        |        |        |        |        | pF                 |
| Operating junction and storage temperature range                                      | TJ, TSTG         | -55 to + 150 |        |        |        |        |        |        | °C                 |

### Electrical Characteristics

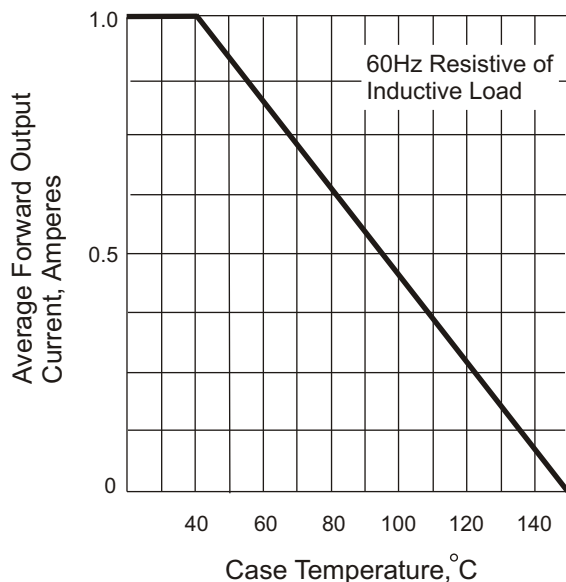
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 For Capacitive load derate by 20 %.

| Parameter                                                                                 | Symbol | DB101S    | DB102S | DB103S | DB104S | DB105S | DB106S | DB107S | Unit |
|-------------------------------------------------------------------------------------------|--------|-----------|--------|--------|--------|--------|--------|--------|------|
| Maximum instantaneous forward voltage drop per leg at 1.0A                                | VF     | 1.1       |        |        |        |        |        |        | V    |
| Maximum DC reverse current at rated TA =25°C<br>DC blocking voltage per element TA =125°C | IR     | 10<br>500 |        |        |        |        |        |        | μA   |

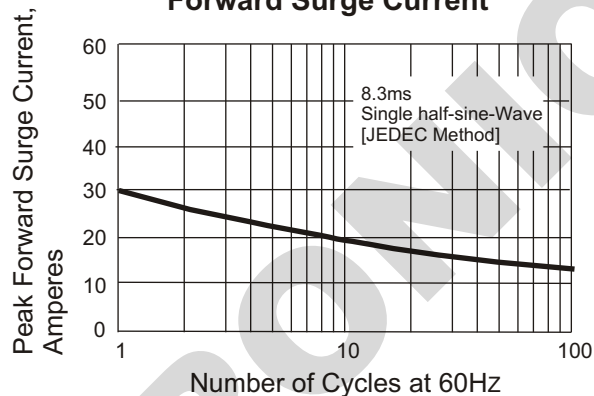
**Notes:** (1) Thermal resistance from Junction to Ambient on P.C. board mounting.  
 (2) Measured at 2.0MHz and applied reverse voltage of 4.0 volts.

### Rating and Characteristic Curves ( $T_A=25^{\circ}\text{C}$ Unless otherwise noted ) DB101S thru DB107S

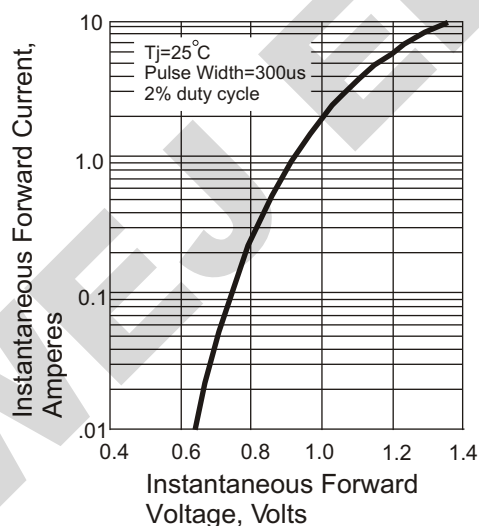
**Fig. 1 Derating Curve for Output Rectified Current**



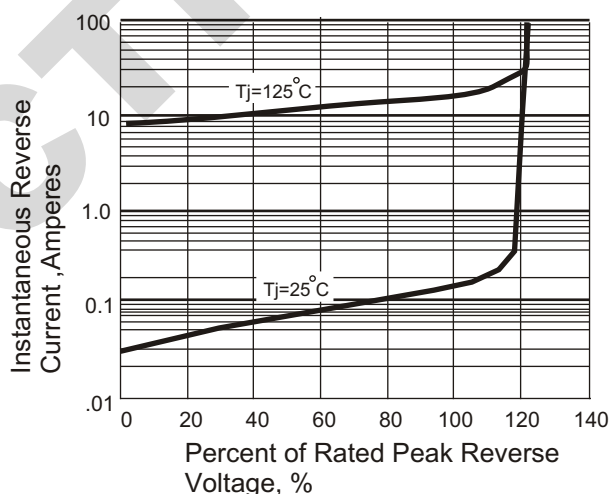
**Fig. 2 Maximum Non-repetitive Peak Forward Surge Current**



**Fig. 3 Typical Instantaneous Forward Characteristics**



**Fig. 4 Typical Revers Characteristics**



**Fig. 5 Typical Junction Capacitance**

