

# **DB101S THRU DB107S**

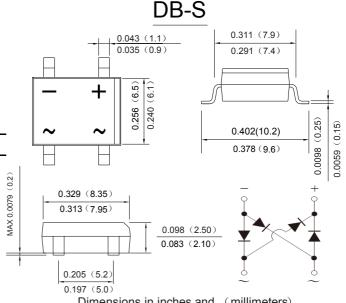
#### SINGLE PHASE 1.0AMP SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER

### **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-0

### **Mechanical Data**

- · Case: DB-S, 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



Dimensions in inches and (millimeters)

### **Maximum Ratings and Electrical Characteristics**

Rating at 25°C ambient temperature unless otherwise specified.

Single Phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

| TYPE NUMBER   | SYMBOL  | DB101S     | DB102S | DB103S | DB104S | DB105S | DB106S | DB107S | UNITS            |
|---|---------|------------|--------|--------|--------|--------|--------|--------|------------------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                                | VRRM    | 50         | 100    | 200    | 400    | 600    | 800    | 1000   | V                |
|   | VRWM    |            |        |        |        |        |        |        |                  |
|   | VDC     |            |        |        |        |        |        |        |                  |
| RMS Reverse Voltage   | VRMS    | 35         | 70     | 140    | 280    | 420    | 560    | 700    | V                |
| Average Rectified Output Current (Note 1)@Tc=100°C  | IF(AV)  | 1.0        |        |        |        |        |        |        | Α                |
| Non-Repetitive Peak Forward Surge Current 8.3ms<br>Single half sine-wave superimposed on rated load<br>(JEDEC Method) | IFSM    | 45         |        |        |        |        |        |        | Α                |
| I <sup>2</sup> t Rating for Fusing (t < 8.3ms)  | l²t     | 8.404      |        |        |        |        |        |        | A <sup>2</sup> s |
| Forward Voltage per element @IF=1.0A  | Vғм     | 1.0        |        |        |        |        |        |        | V                |
| Peak Reverse Current @Ta=25℃<br>At Rated DC Blocking Voltage @Ta=125℃   | lR      | 5.0<br>200 |        |        |        |        |        |        | uA               |
| Typical Junction Capacitance per leg (Note 2)   | СJ      | 25         |        |        |        |        |        |        | pF               |
| Typical Thermal Resistance per leg  | RөJA    | 40         |        |        |        |        |        |        | °C/W             |
|   | Rejl    | 15         |        |        |        |        |        |        |                  |
| Operating and Storage Temperature Range   | ТJ,Тsтg | -55to+150  |        |        |        |        |        |        | $^{\circ}$       |

Note: 1. Mounted on glass epoxy PC board with 1.3mm<sup>2</sup> solder pad.

2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

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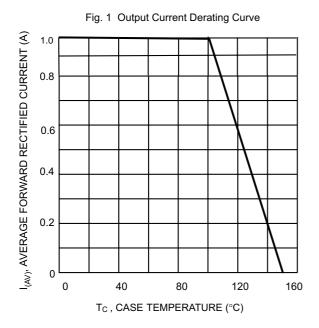


Fig. 2 Typical Forward Characteristics (per leg) 10 I<sub>F</sub>, INSTANTANEOUS FORWARD CURRENT (A) 1.0 0.1 T<sub>A</sub> = 25°C Pulse Width = 300µs 0.01 0.2 0.4 0.6 1.2 0.8 1.0 1.6 V<sub>F</sub>, INSTANTANEOUS FORWARD VOLTAGE (V)

Fig. 3 Maximum Peak Forward Surge Current (per leg)

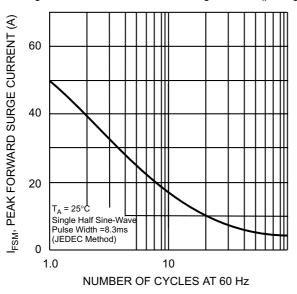


Fig. 4 Typical Reverse Characteristics (per element)

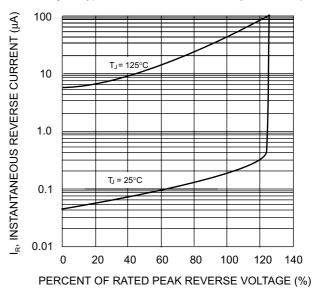
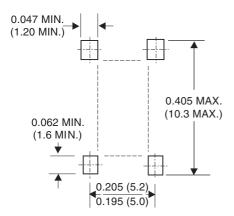


Fig. 5 Mounting Pad Layout



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