

# DB101 THRU DB107



## Glass Passivated Bridge Rectifiers

Reverse Voltage: 50 to 1000 Volts

Forward Current: 1.0 Ampere

RoHS Device

Halogen Free

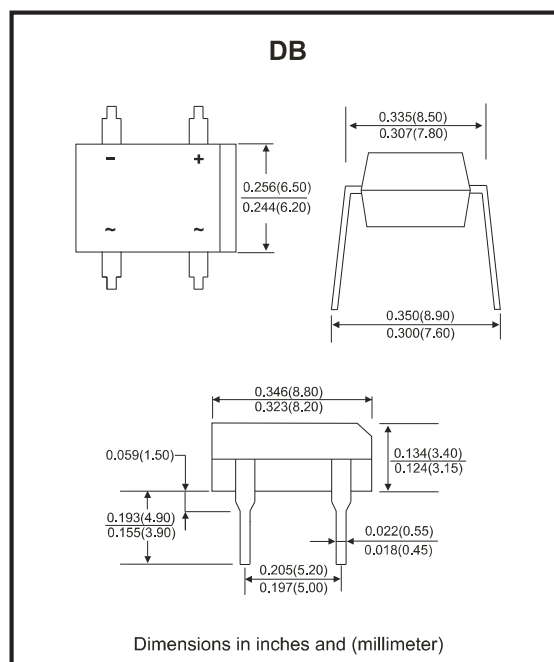


### Features

- Rating to 1000V PRV.
- Ideal for printed circuit board.
- Low forward voltage drop.
- High current capability.
- The plastic material has UL flammability classification 94V-0.

### Mechanical Data

- Polarity: As marked on Body.
- Weight: 0.38 grams.
- Mounting position: Any.



### 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%

| Parameter                                                                                           | Symbol          | DB101           | DB102 | DB103 | DB104 | DB105 | DB106 | DB107 | Unit          |
|-----------------------------------------------------------------------------------------------------|-----------------|-----------------|-------|-------|-------|-------|-------|-------|---------------|
| Maximum Recurrent Peak Reverse Voltage                                                              | $V_{RRM}$       | 50              | 100   | 200   | 400   | 600   | 800   | 1000  | V             |
| Maximum RMS Voltage                                                                                 | $V_{RMS}$       | 35              | 70    | 140   | 280   | 420   | 560   | 700   | V             |
| Maximum DC Blocking Voltage                                                                         | $V_{DC}$        | 50              | 100   | 200   | 400   | 600   | 800   | 1000  | V             |
| Maximum Average Forward Rectified Current @ $T_A=40^{\circ}C$                                       | $I_{(AV)}$      | 1.0             |       |       |       |       |       |       | A             |
| Peak Forward Surge Current , 8.3ms Single Half Sine-Wave Super Imposed On Rated Load (JEDEC Method) | $I_{FSM}$       | 30              |       |       |       |       |       |       | A             |
| $I^2t$ Rating For Fusing ( $t < 8.3ms$ )                                                            | $I^2t$          | 3.735           |       |       |       |       |       |       | $A^2s$        |
| Maximum Forward Voltage At 1.0A DC                                                                  | $V_F$           | 1.1             |       |       |       |       |       |       | V             |
| Maximum DC Reverse Current @ $T_J=25^{\circ}C$<br>At Rated DC Blocking Voltage @ $T_J=125^{\circ}C$ | $I_R$           | 10<br>500       |       |       |       |       |       |       | $\mu A$       |
| Typical Junction Capacitance (Note 1)                                                               | $C_J$           | 25              |       |       |       |       |       |       | pF            |
| Typical Thermal Resistance (Note 2)                                                                 | $R_{\theta JA}$ | 40              |       |       |       |       |       |       | $^{\circ}C/W$ |
| Operating Temperature Range                                                                         | $T_J$           | $-55 \sim +150$ |       |       |       |       |       |       | $^{\circ}C$   |
| Storage Temperature Range                                                                           | $T_{STG}$       | $-55 \sim +150$ |       |       |       |       |       |       | $^{\circ}C$   |

Notes:

1. Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

2. Thermal resistance from junction to ambient mounted on P.C.B with 0.5"×0.5" (13×13mm) copper pads.

Company reserves the right to improve product design , functions and reliability without notice.

Rev:1.0

## Rating and Characteristics Curves

Fig.1 - Forward Current Derating Curve

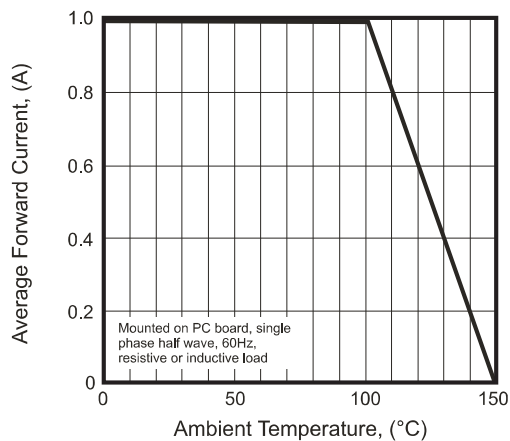


Fig.2 - Typical Forward Characteristics

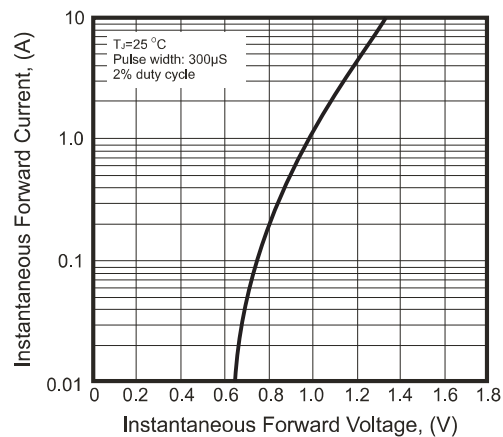


Fig.3 - Maximum Non-repetitive Surge Current

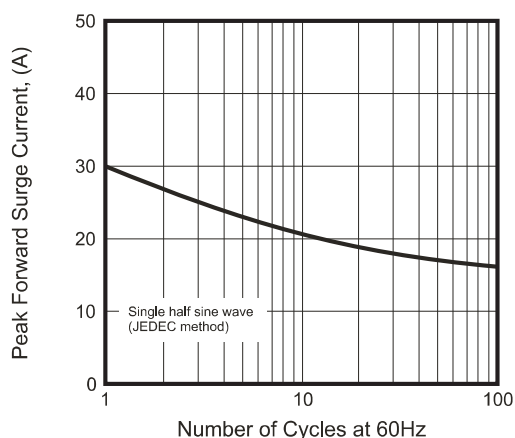


Fig.4 - Typical Junction Capacitance

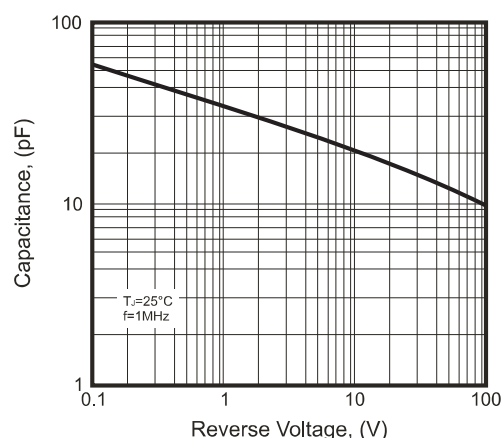
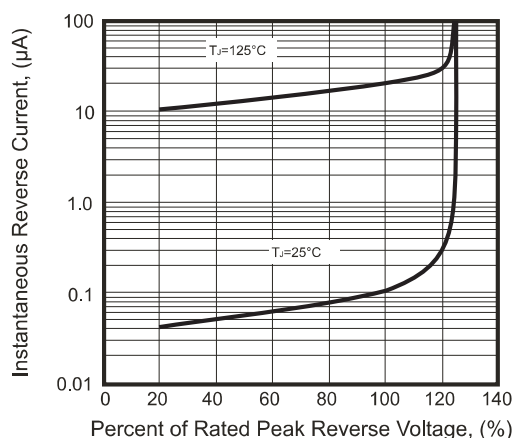
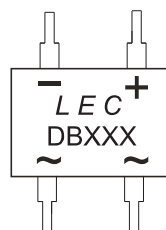


Fig.5 - Typical Reverse Characteristics



## Marking Code

| Part Number | Marking code |
|-------------|--------------|
| DB101       | DB101        |
| DB102       | DB102        |
| DB103       | DB103        |
| DB104       | DB104        |
| DB105       | DB105        |
| DB106       | DB106        |
| DB107       | DB107        |



XXX = Product type marking code  
LEC = Longmacro Logo

## Standard Packaging

| Case Type | TUBE PACK       |                |
|-----------|-----------------|----------------|
|           | TUBE<br>( pcs ) | BOX<br>( pcs ) |
| DB        | 50              | 2,500          |