

# DB301S THRU DB307S

## SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER

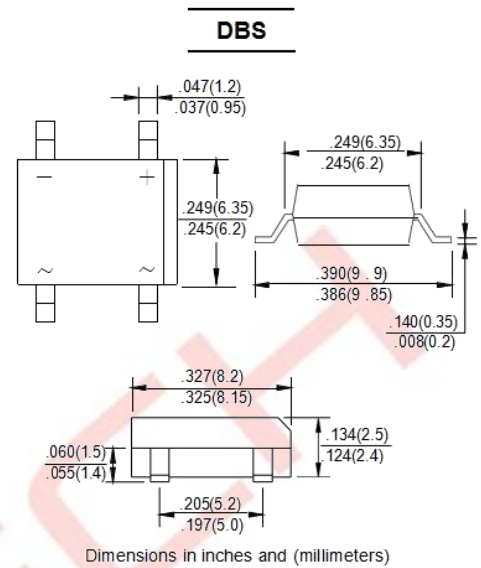
Reverse Voltage : 50 to 1000 V Rectified Output Current: 3A

### FEATURES

- ◆ Rating to 1000V PRV
- ◆ Ideal for printed circuit board
- ◆ Low forward voltage drop, high current capability
- ◆ Reliable low cost construction utilizing molded plastic technique results in inexpensive product
- ◆ The plastic material has UL flammability classification 94V-0

### MECHANICAL DATA

- ◆ Polarity: As marked on Body
- ◆ Weight: 0.02 ounces, 0.38 grams
- ◆ Mounting position: any



### Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.  
Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

| Parameter   | Symbols         | DB301S     | DB302S | DB303S | DB304S | DB305S | DB306S | DB307S | Units        |
|---|-----------------|------------|--------|--------|--------|--------|--------|--------|--------------|
| Maximum Repetitive 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            |
| Average Rectified Output Current at $T_A = 40\text{ }^\circ\text{C}$                              | $I_{(AV)}$      | 3          |        |        |        |        |        |        | A            |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) | $I_{FSM}$       | 60         |        |        |        |        |        |        | A            |
| Forward Voltage per element at $I_F = 3A$   | $V_F$           | 1.1        |        |        |        |        |        |        | V            |
| Maximum DC Reverse Current at Rated DC Blocking Voltage   | $I_R$           | 5.0<br>200 |        |        |        |        |        |        | $\mu A$      |
| Typical Junction Capacitance ( Note1 )  | $C_j$           | 25         |        |        |        |        |        |        | pF           |
| Typical Thermal Resistance ( Note2 )  | $R_{\theta JA}$ | 40         |        |        |        |        |        |        | $^\circ C/W$ |
| Operating and Storage Temperature Range   | $T_j, T_{stg}$  | -55 ~ +150 |        |        |        |        |        |        | $^\circ C$   |

Note: 1. Measured at 1MHz and applied reverse voltage of 4 V D.C.

2. Thermal Resistance test performed in accordance with JESD-51. Unit mounted on 15mm\*12mm\*1.6mm AL pad attach 195mm\*110mm\*10mm steel plate.

3. The typical data above is for reference only.

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## RATINGS AND CHARACTERISTIC CURVES

FIG.1-DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

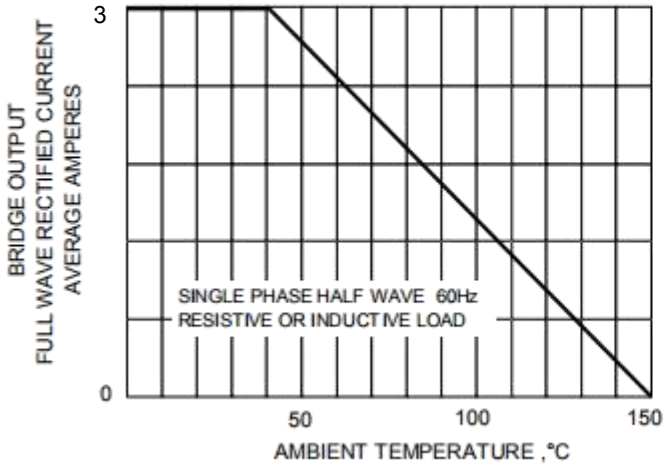


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

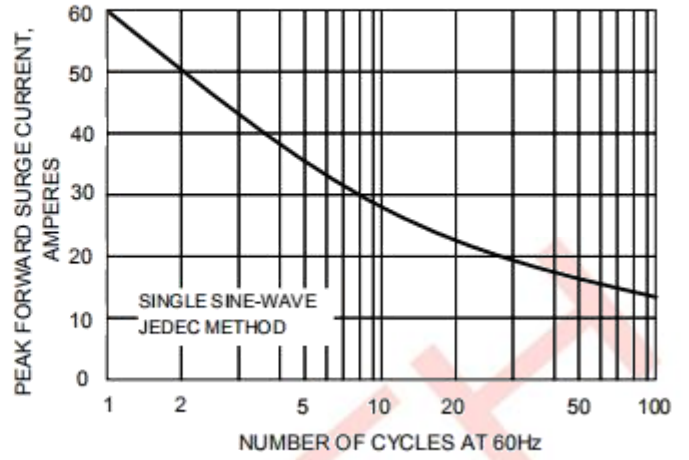


FIG.3-TYPICAL JUNCTION CAPACITANCE

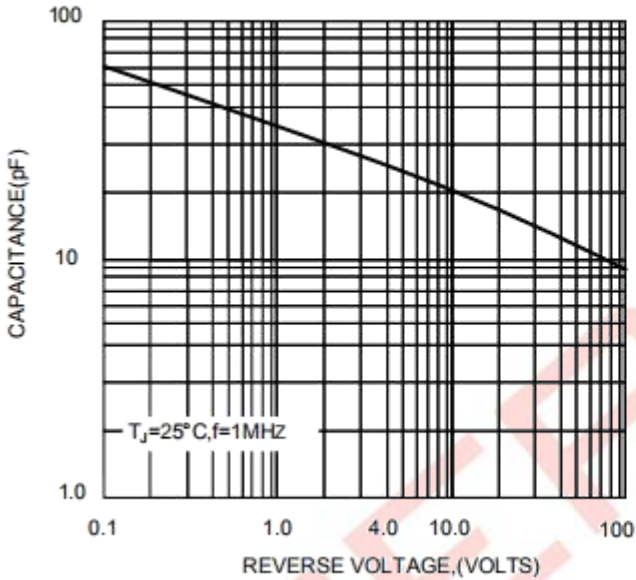


FIG.4-TYPICAL FORWARD CHARACTERISTICS

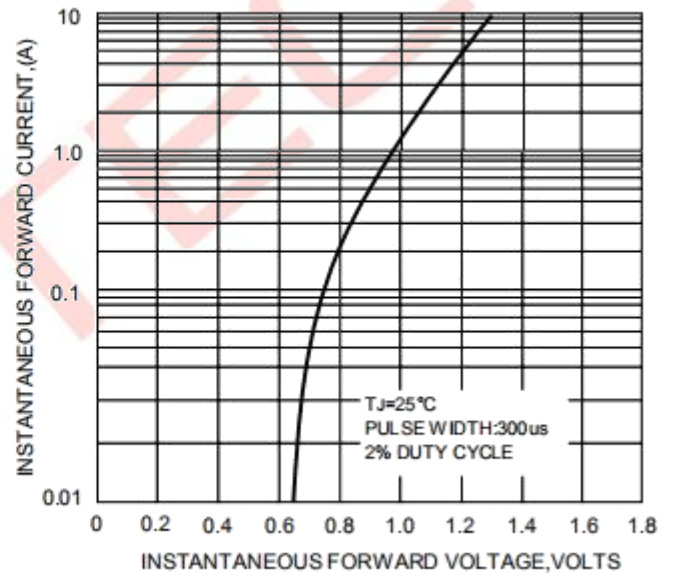
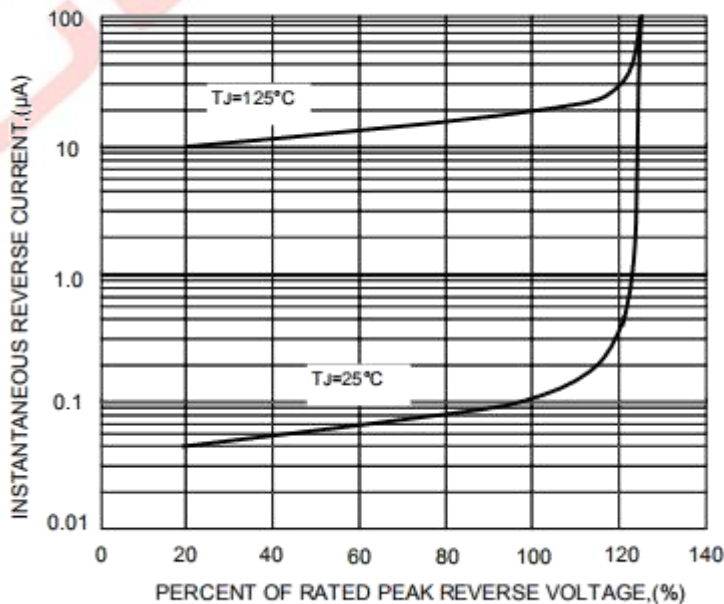


FIG.5-TYPICAL REVERSE CHARACTERISTICS



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