THINKI SEMICONDUCTOR ®

Pb Free Plating Product

# DB101 thru DB107

RoHS Pb

1.0 AMP.DIP GLASS PASSIVATED BRIDGE RECTIFIERS

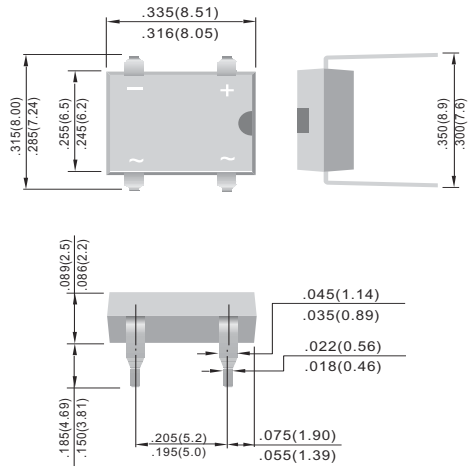
## Features

- Glass passivated chip junction
- Low forward voltage drop
- High surge overload rating of 50 A peak
- Ideal for printed circuit board

## Mechanical Data

- Case: Molded plastic, DB
- Epoxy: UL 94V-0 rate flame retardant
- Terminals: Leads solderable per MIL-STD-202, method 208 guaranteed
- Mounting position: Any

DB-1 Unit : inch (mm)




**Absolute Maximum Ratings and Characteristics**

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

| Parameter | | Symbols | DB101 | DB102 | DB103 | DB104 | DB105 | DB106 | DB107 | Units |
|---|---|---|---|---|---|---|---|---|---|---|
| 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 at $T_A$ = 40 °C | | $I_{(AV)}$ | 1 | | | | | | | A |
| Peak Forward Surge Current 8.3 ms Single Half-sine-wave Superimposed on Rated Load (JEDEC Method) | | $I_{FSM}$ | 50 | | | | | | | A |
| Maximum Forward Voltage at 1 A | | $V_F$ | 1.1 | | | | | | | V |
| Maximum Reverse Current at Rated DC Blocking Voltage | at $T_A$ = 25 °C | $I_R$ | 5 | | | | | | | μA |
| | at $T_A$ = 125 °C | | 500 | | | | | | | |
| Typical Junction Capacitance [1] | | $C_J$ | 25 | | | | | | | pF |
| Typical Thermal Resistance [2] | | $R_{\theta JA}$ | 40 | | | | | | | °C/W |
| Typical Thermal Resistance [2] | | $R_{\theta JL}$ | 15 | | | | | | | °C/W |
| Operating and Storage Temperature Range | | $T_J$ , $T_S$ | -55 to +150 | | | | | | | °C |

[1] Measured at 1 MHz and applied reverse voltage of 4 V

[2] Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B with 0.5 X 0.5" (13 X 13 mm) copper pads.

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

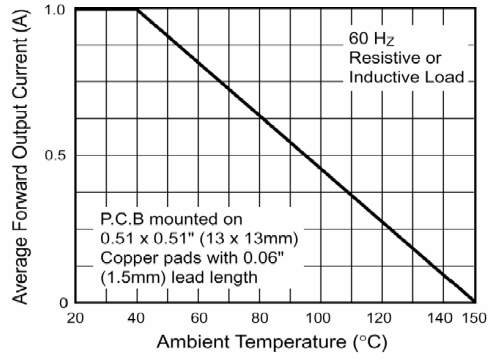



**Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Leg**

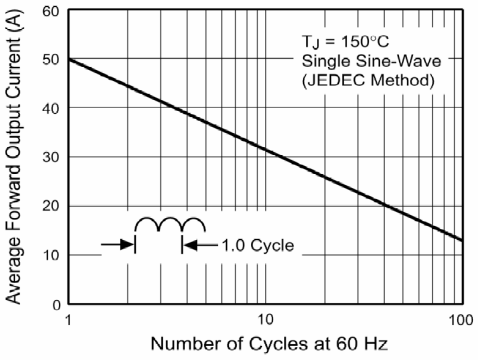



**Fig. 3 - Typical Forward Characteristics Per Leg**

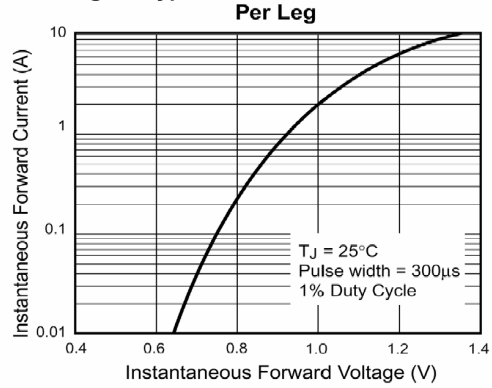



**Fig. 4 - Typical Reverse Leakage Characteristics Per Leg**

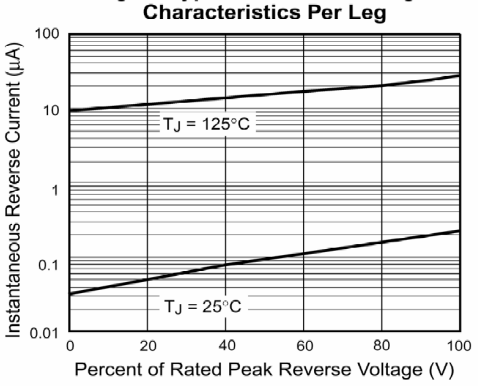



**Fig. 5 - Typical Junction Capacitance Per Leg**

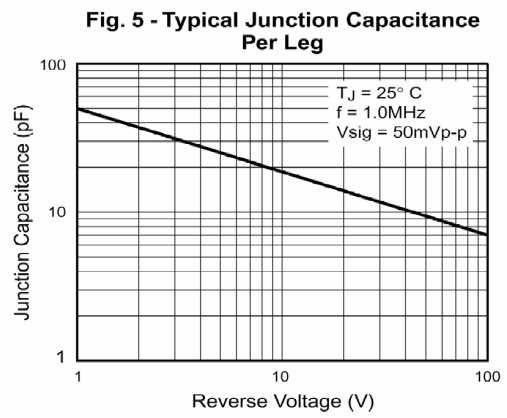



**Fig. 6 - Typical Transient Thermal Impedance**