

# DB101 THRU DB107

## SINGLE-PHASE GLASS PASSIVATED SILICON BRIDGE RECTIFIER

Reverse Voltage – 50 to 1000 V

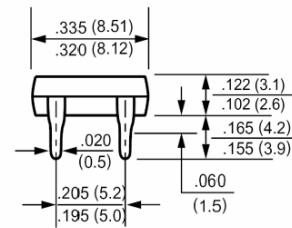
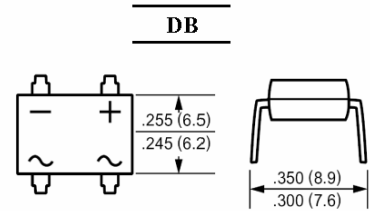
Forward Current – 1 A

### 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



Dimensions in inches and (millimeters)

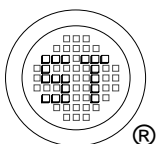
### Absolute Maximum Ratings and Characteristics

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 $T_A = 40\text{ }^\circ\text{C}$	$I_{(AV)}$	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 $T_A = 25\text{ }^\circ\text{C}$	5							$\mu\text{A}$
	at $T_A = 125\text{ }^\circ\text{C}$	500							
Typical Junction Capacitance <sup>1)</sup>	$C_J$	25							pF
Typical Thermal Resistance <sup>2)</sup>	$R_{\theta JA}$	40							$^\circ\text{C/W}$
Typical Thermal Resistance <sup>2)</sup>	$R_{\theta JL}$	15							$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_S$	-55 to +150							$^\circ\text{C}$

<sup>1)</sup> Measured at 1 MHz and applied reverse voltage of 4 V

<sup>2)</sup> 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.



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ISO/TS 16949 : 2002  
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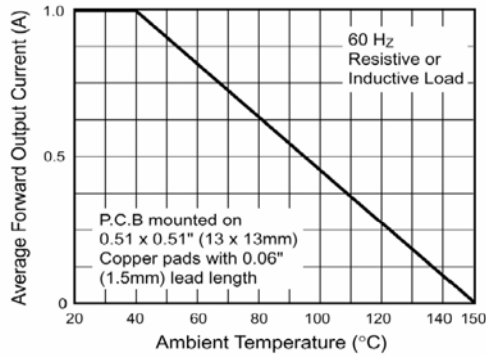


ISO 14001:2004  
Certificate No. 7116

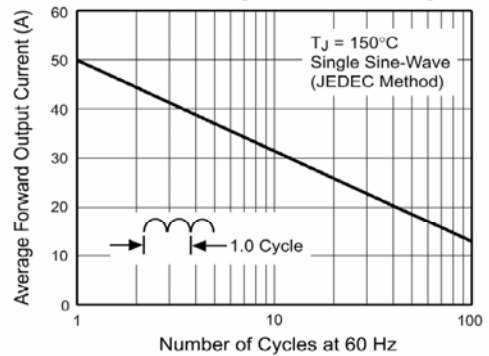


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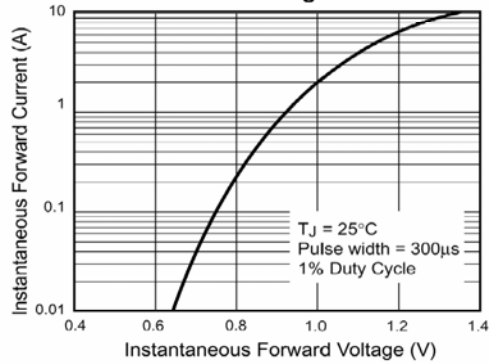
**Fig. 1 - Derating Curve Output Rectified Current**



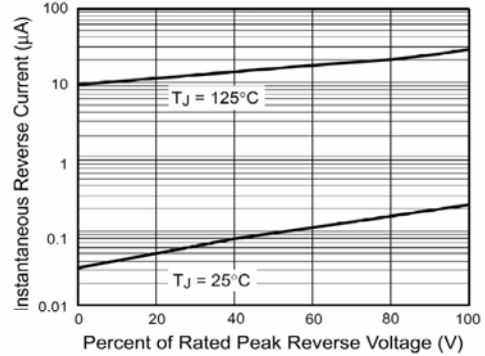
**Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Leg**



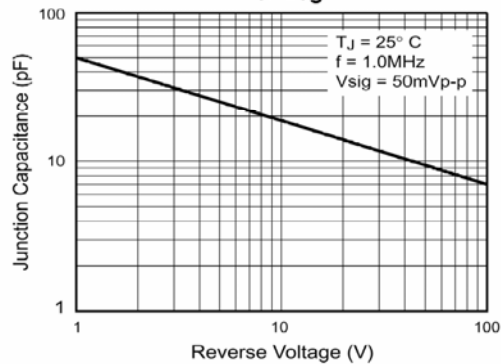
**Fig. 3 - Typical Forward Characteristics Per Leg**



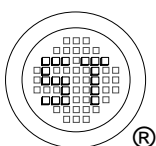
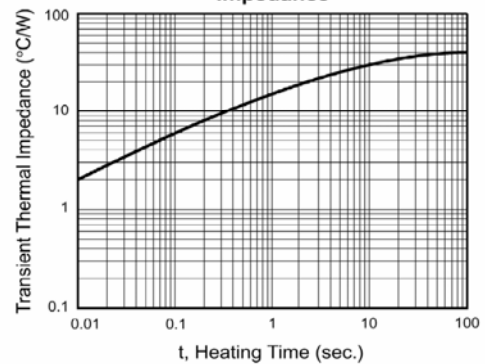
**Fig. 4 - Typical Reverse Leakage Characteristics Per Leg**



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



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



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