### **DB151 THRU DB157**

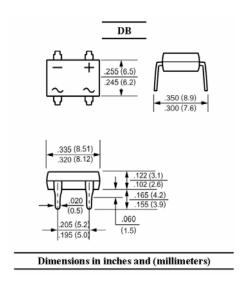
## SINGLE-PHASE GLASS PASSIVATED SILICON BRIDGE RECTIFIER Reverse Voltage – 50 to 1000 Volts Forward Current – 1.5 Ampere

#### **Features**

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

### Mechanical data

- · Case Molded plastic, DB
- Mounting position: Any



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

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

inductive load. I of capacitive loa	ad, derate edirent	<del>y 20</del> /0.	1					1		
Parameter		Symbols	DB151	DB152	DB153	DB154	DB155	DB156	DB157	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 $T_A = 40 {}^{\circ}\text{C}^{-2)}$		I <sub>(AV)</sub>	1.5							А
Peak forward surge current 8.3 ms single half- sine-wave superimposed on rated load (JEDEC method)		I <sub>FSM</sub>	50						Α	
Maximum forward voltage at 1.5A DC and 25 °C		V <sub>F</sub>	1.1						V	
Maximum reverse current at rated DC blocking voltage	@T <sub>A</sub> = 25°C	_	5							μΑ
	@T <sub>A</sub> =125°C	- I <sub>R</sub>	500							
Typical junction capacitance 1)		CJ	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 <sub>J</sub> ,T <sub>STG</sub>	-55 to +150							°C

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

<sup>&</sup>lt;sup>2)</sup> Thermal resistance from junction to ambient and junction to lead mounted on P.C.B. with 0.5 x 0.5" (13x13mm) copper pads.



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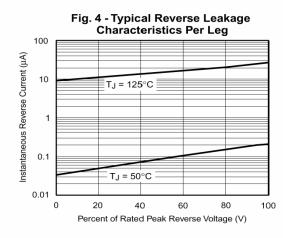
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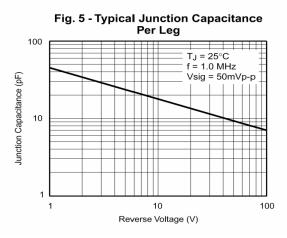
#### RATINGS AND CHARACTERISTIC CURVES

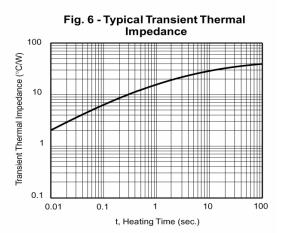
Fig. 1 - Derating Curve Output Rectified Current Average Forward Output Current (A) 60 Hz Resistive or Inductive Load P.C.B mounted on 0.51 x 0.51" (13 x 13mm) Copper pads with 0.06" (1.5mm) lead length 60 100 140 150 20 120 80 Ambient Temperature (°C)

Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Leg 60 T<sub>J</sub> = 150°C € 50 Single Sine-Wave (JEDEC Method) Peak Forward Surge Current 40 30 20 10 -1.0 Cycle 0 10 100 Number of Cycles at 60 Hz

Fig. 3 - Typical Forward Characteristics Per Leg 10 Instantaneous Forward Current (A) 0.1 TJ = 25°C Pulse width = 300μs 1% Duty Cycle 0.4 0.6 0.8 1.0 Instantaneous Forward Voltage (V)









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