

# DB151 THRU DB157

## SINGLE-PHASE GLASS PASSIVATED SILICON BRIDGE RECTIFIER

Reverse Voltage – 50 to 1000 Volts

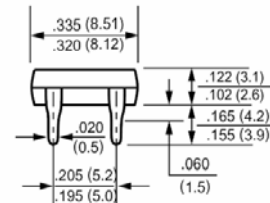
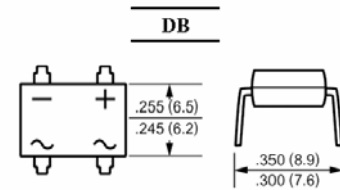
Forward Current – 1.5 Ampere

### 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



Dimensions in inches and (millimeters)

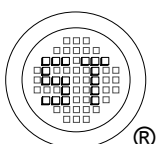
### Maximum Ratings and Electrical Characteristics

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%.

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 $T_A = 40^\circ\text{C}$ <sup>2)</sup>		$I_{(AV)}$	1.5							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 1.5A DC and 25 °C		$V_F$	1.1							V
Maximum reverse current at rated DC blocking voltage	@ $T_A = 25^\circ\text{C}$	$I_R$	5							$\mu\text{A}$
	@ $T_A = 125^\circ\text{C}$		500							
Typical junction capacitance <sup>1)</sup>		$C_J$	25							pF
Typical thermal resistance <sup>2)</sup>		$R_{\theta JA}$	40							°C/W
Typical thermal resistance <sup>2)</sup>		$R_{\theta JL}$	15							°C/W
Operating and storage temperature range		$T_J, T_{STG}$	-55 to +150							°C

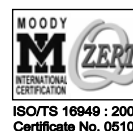
<sup>1)</sup> Measured at 1 MHz and applied reverse voltage of 4 VDC.

<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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ISO/TS 16949 : 2002  
Certificate No. 05103

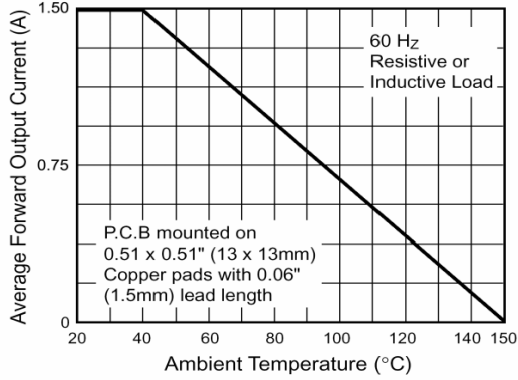
ISO 14001:2004  
Certificate No. 7116

ISO 9001:2000  
Certificate No. 0506098

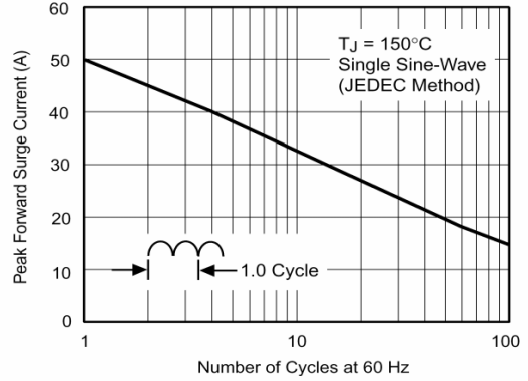
Dated : 01/12/2005 H

## RATINGS AND CHARACTERISTIC CURVES

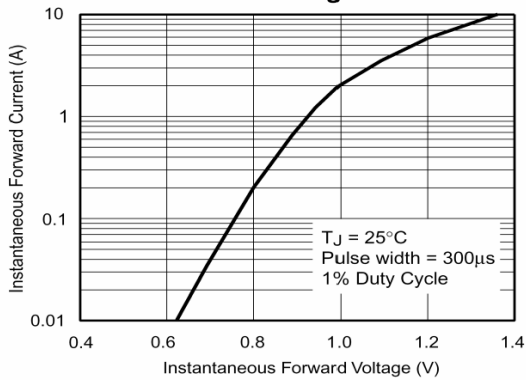
**Fig. 1 - Derating Curve Output Rectified Current**



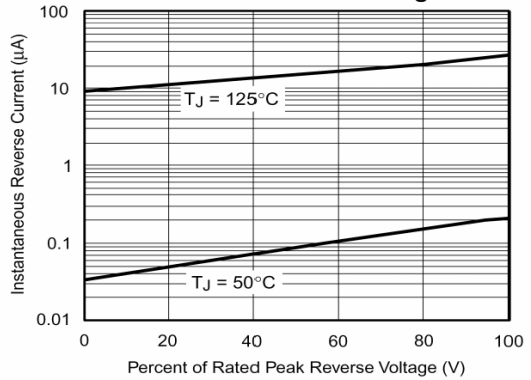
**Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Leg**



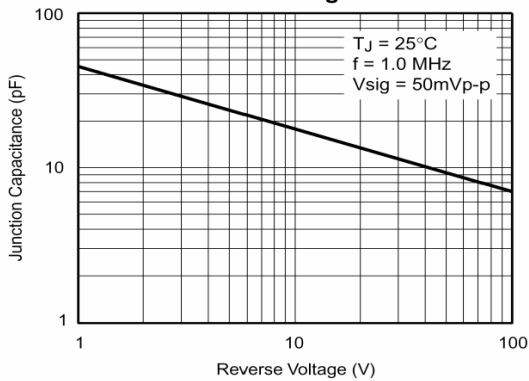
**Fig. 3 - Typical Forward Characteristics Per Leg**



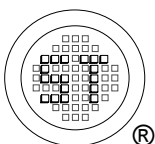
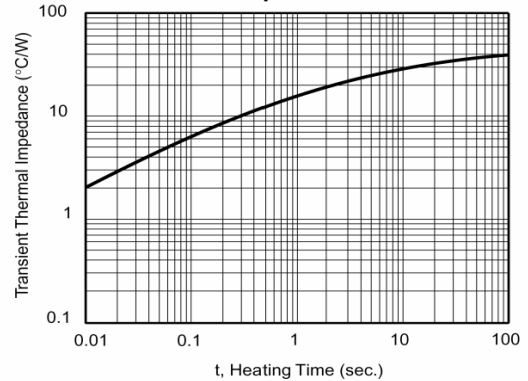
**Fig. 4 - Typical Reverse Leakage Characteristics Per Leg**



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



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



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