

# DB151S THRU DB157S

## SINGLE-PHASE GLASS PASSIVATED SILICON SURFACE MOUNT BRIDGE RECTIFIERS

Reverse Voltage – 50 to 1000 Volts

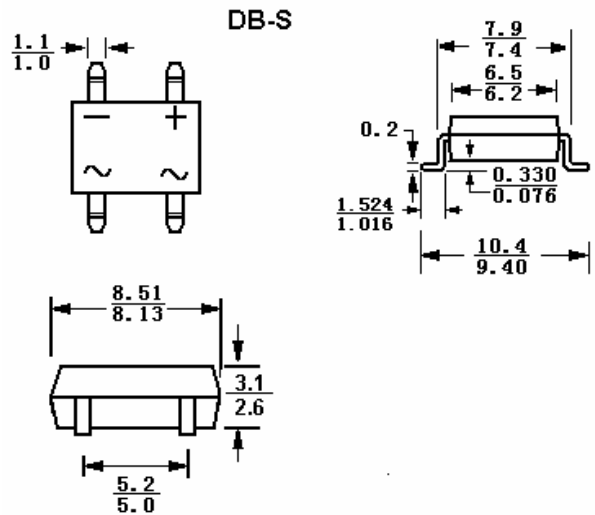
Forward Current – 1.5 Ampere

### Features

- High surge overload rating of 50 amperes peak
- Ideal for printed circuit board
- Plastic material has Underwriters Laboratory Flammability Classification 94V-O
- Glass passivated chip junction

### Mechanical data

- Case Molded plastic, DB-S
- Terminals: Leads solderable per MIL-STD-202, method 208 guaranteed
- Mounting position: Any



Dimensions in mm

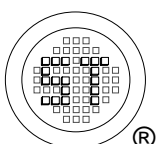
### Maximum Ratings and Electrical Characteristics

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%.

	Symbols	DB 151S	DB 152S	DB 153S	DB 154S	DB 155S	DB 156S	DB 157S	Units
Maximum recurrent peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum average forward rectified current at $T_A = 40^\circ\text{C}$ (Note 2)	$I_o$	1.5							Amps
Peak forward surge current 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	$I_{FSM}$	50							Amps
Maximum forward voltage at 1.5A DC and 25°C	$V_F$	1.1							Volts
Maximum reverse current at rated DC blocking voltage	@ $T_A = 25^\circ\text{C}$	5							$\mu\text{Amps}$
	@ $T_A = 125^\circ\text{C}$	500							mAmps
Typical junction capacitance(Note 1)	$C_J$	25							Pf
Typical thermal resistance(Note 2)	$R_{\theta JA}$	40							$^\circ\text{C}/\text{w}$
Typical thermal resistance(Note 2)	$R_{\theta JL}$	15							$^\circ\text{C}/\text{w}$
Operating and storage temperature range	$T_J, T_{STG}$	-55 to +150							$^\circ\text{C}$

NOTES: 1. Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2. Units mounted on P.C.B. with 0.5\*0.5”(13\*13mm) copper pads.



**SEMTECH ELECTRONICS LTD.**

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Dated : 10/12/2003

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FIG.1-Derating curve output rectified current

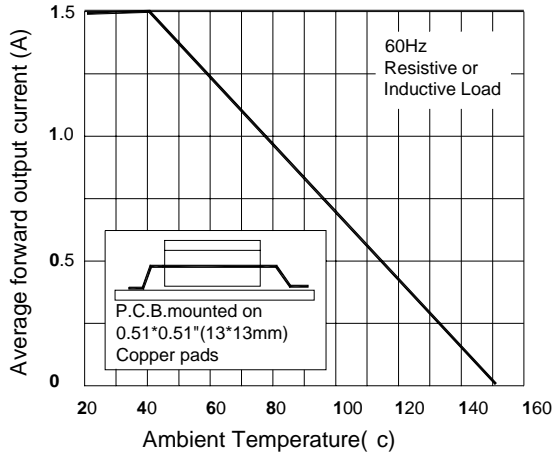


FIG.2-Maximum non-repetitive peak forward surge current per leg

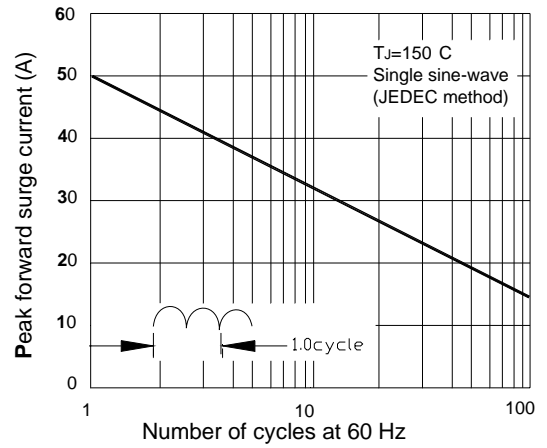


Fig.3-Typical forward characteristics per leg

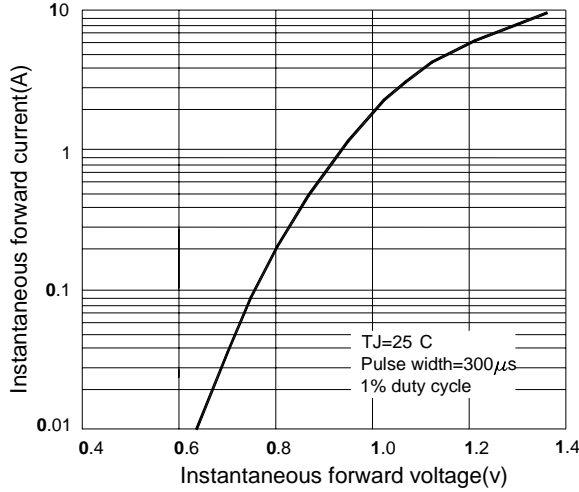


Fig.4-Typical reverse leakage characteristics per leg

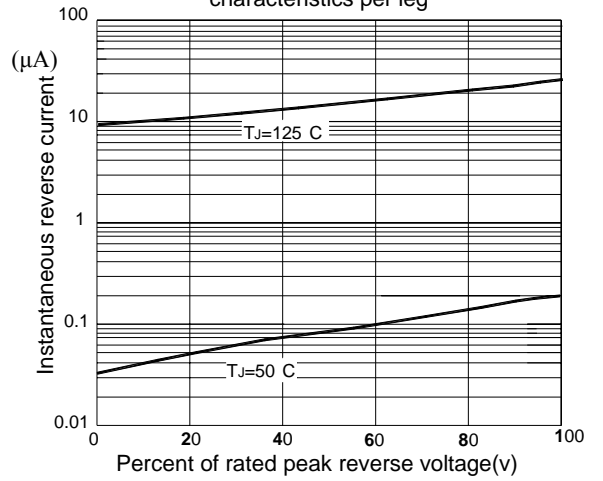


Fig.5-Typical junction capacitance per leg

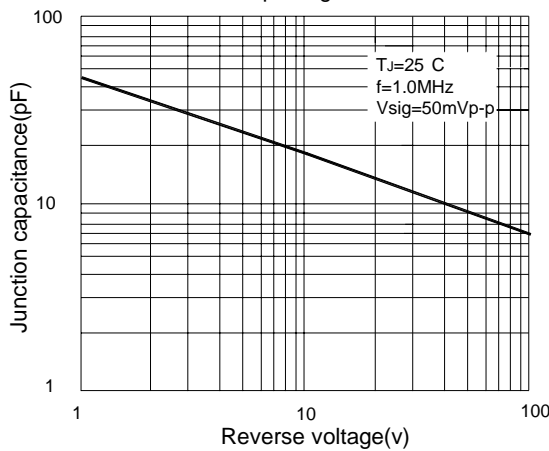
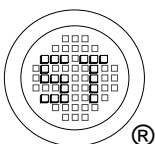
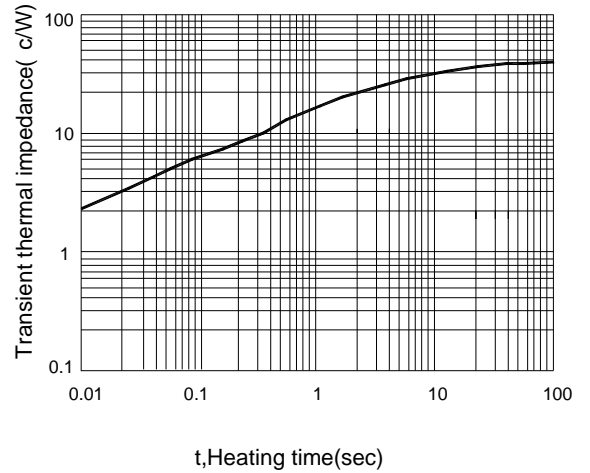


Fig.6-Typical transient thermal impedance



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