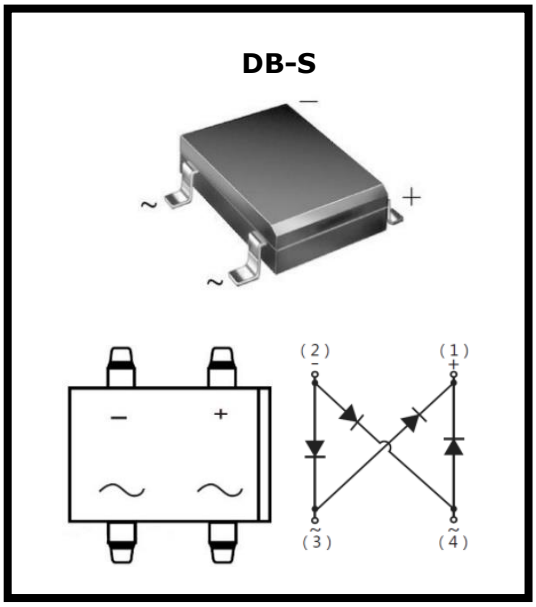
Semi
Advanced Power Semiconductor

DB101S THRU DB107S

A Glass Passivated Single-Phase Bridge Rectifier

Features

- Low Reverse Leakage Current
- High Surge Current Capability
- 150℃ Operating Junction Temperature
- Lead Free Finish, RoHS Compliant



Mechanical data

- Case: DBS plastic package
- Lead free finish, RoHS compliant
- Weight: About 0.38grams
- Case Material: "Green" molding compound, UL flammability classification 94V-0,"Halogen-free".

Application

- **DCDC Converter for LED lighting**
- **Battery charger**
- **SMPS**

Maximum Ratings Characteristics

(TA = 25℃ unless otherwise specified)

Parameter	Symbol	DB 101S	DB 102S	DB 103S	DB 104S	DB 105S	DB 106S	DB 107S	Units
Maximum repetitive 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
Average Forward Output Rectified Current @Ta=40℃	$I_{F(AV)}$	1							A
Forward Voltage Per Leg @ IFM=1.0A	V_F	1.1							V
Peak Forward Surge Current 8.3ms Single Half Sine-wave superimposed on rated load	I_{FSM}	45							A
Maximum DC reverse current at rated @Ta=25℃ DC Blocking voltage per leg @Ta=125℃	I_R	5 500							uA
Rating for fusing(t<8.3ms)	I^2t	10							A^2S
Typical junction capacitance VR=4.0V, f=1.0MHz	C_J	25							pF
Typical Thermal Resistance	$R_{\theta JC}$	40							℃/W
Operating Junction and storage temperature	T_J	-55 to +150							℃

Characteristics Curves

(TA = 25℃ unless otherwise specified)

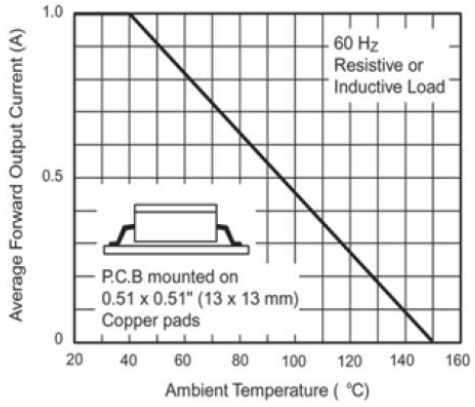


Figure 1. Derating Curve Output Rectified Current

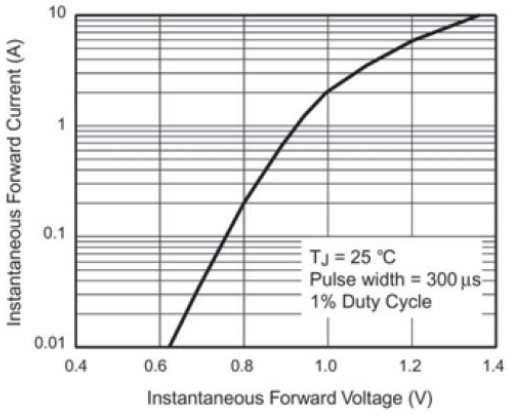
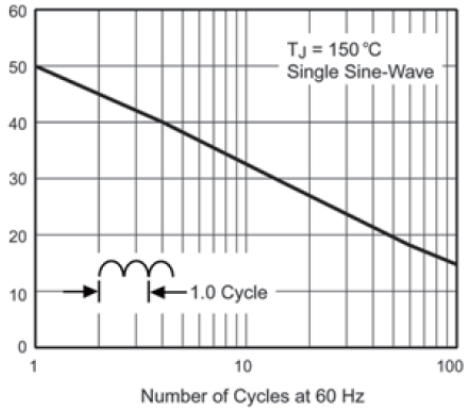


Figure 3. Typical Forward Characteristics Per Leg



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

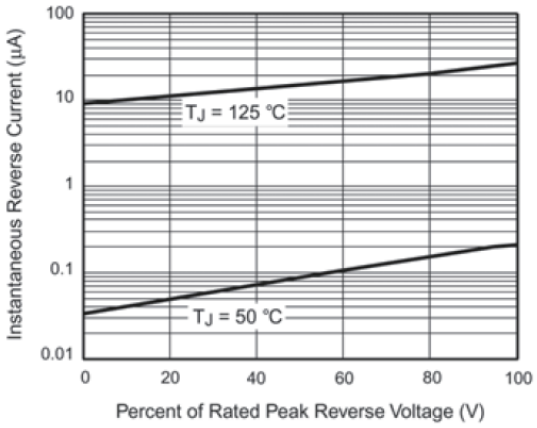


Figure 4. Typical Reverse Leakage Characteristics Per Leg

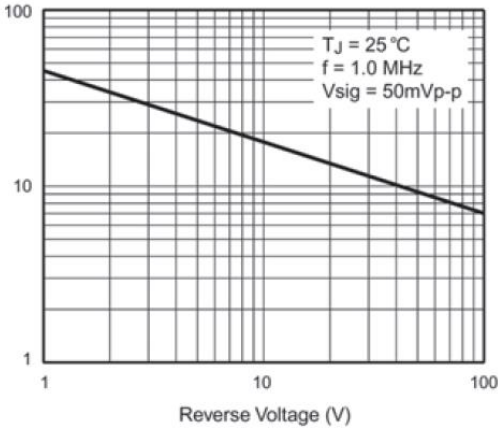


Figure 5. Typical Junction Capacitance Per Leg

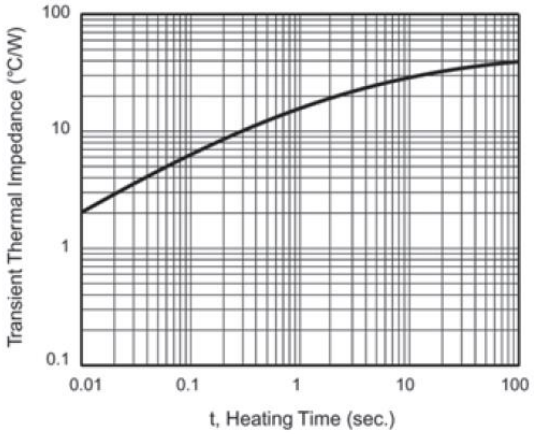
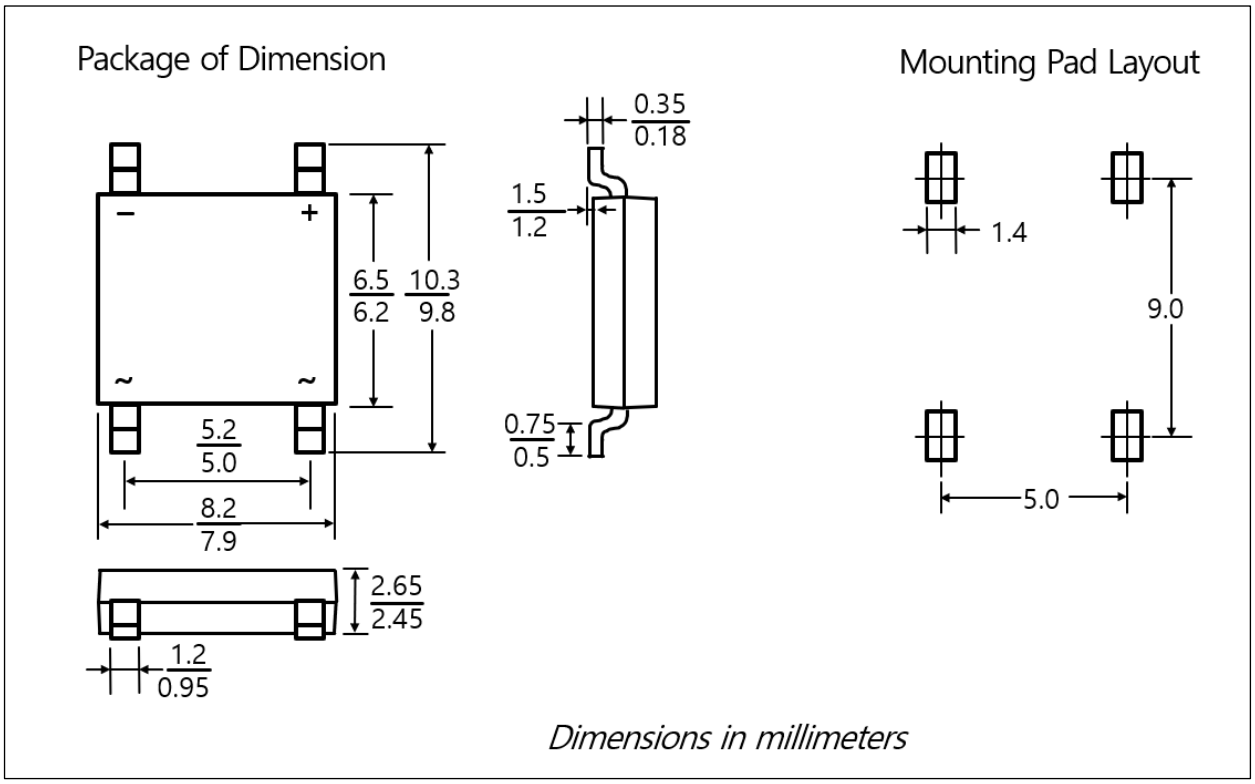


Figure 6. Typical Transient Thermal Impedance

Package Dimension

DBS/DFS-4L



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Revision History

No	Date	Contents
0	2024-05-03	Initial Brief Datasheet Release

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AP Semiconductor Co., Ltd

Contact. Tel 82.70.4693.2299 FAX 82.70.4000.4009

E-mail: sales@apsemi.com