VSIB10A20 thru VSIB10A80

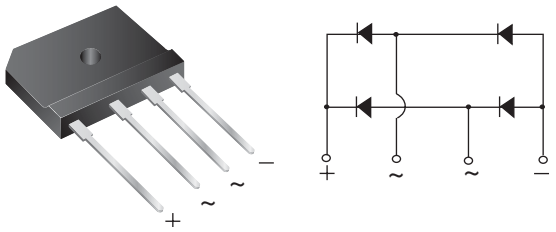
New Product **Vishay General Semiconductor**

Single-Phase Single In-Line Bridge Rectifiers

Major Ratings and Characteristics

$I_{F(AV)}$	10 A
V_{RRM}	200 V to 800 V
I_{FSM}	180 A
I_R	10 µA
V_F	1.0 V
T_j max.	150 °C

Case Style GSIB-5S



Features

- UL Recognition file number E54214
- Thin Single In-Line package
- Glass passivated chip junction
- High surge current capability
- High case dielectric strength of 1500 V_{RMS}
- Solder Dip 260 °C, 40 seconds

Typical Applications

General purpose use in ac-to-dc bridge full wave rectification for Switching Power Supply, Home Appliances, Office Equipment, Industrial Automation applications

Mechanical Data

Case: GSIB-5S

Epoxy meets UL-94V-0 Flammability rating

Terminals: Matte tin plated (E3 Suffix) leads, solderable per J-STD-002B and JESD22-B102D

Polarity: As marked on body

Mounting Torque: 10 cm-kg (8.8 inches-lbs) max.

Recommended Torque: 5.7cm-kg (5 inches-lbs)

Maximum Ratings

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbol	VSIB10A20	VSIB10A40	VSIB10A60	VSIB10A80	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	200	400	600	800	V
Maximum RMS voltage	V_{RMS}	140	280	420	560	V
Maximum DC blocking voltage	V_{DC}	200	400	600	800	V
Maximum average forward rectified output current at T_C = 110 °C	$I_{F(AV)}$	10(1)				A
Peak forward surge current single sine-wave superimposed on rated load	I_{FSM}	180				A
Rating for fusing (t < 8.3 ms)	I^2t	130				A^2sec
Operating junction and storage temperature range	T_J, T_{STG}	- 55 to + 150				°C

Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Test condition	Symbol	VSIB10A20	VSIB10A40	VSIB10A60	VSIB10A80	Unit
Maximum instantaneous forward voltage drop per leg	at 5.0 A	V_F	1.00				V
Maximum DC reverse current at rated DC blocking voltage per leg	T_A = 25 °C T_A = 125 °C	I_R	10 250				µA

Thermal Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbol	VSIB10A20	VSIB10A40	VSIB10A60	VSIB10A80	Unit
Typical thermal resistance per leg	$R_{\theta JC}$	1.4(1)				°C/W

Notes:

(1) Unit case mounted on Al plate heatsink

(2) Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw

Ratings and Characteristics Curves

(T_A = 25 °C unless otherwise noted)

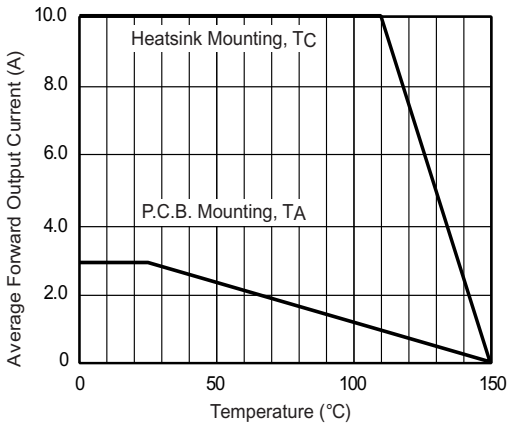


Figure 1. Derating Curve Output Rectified Current

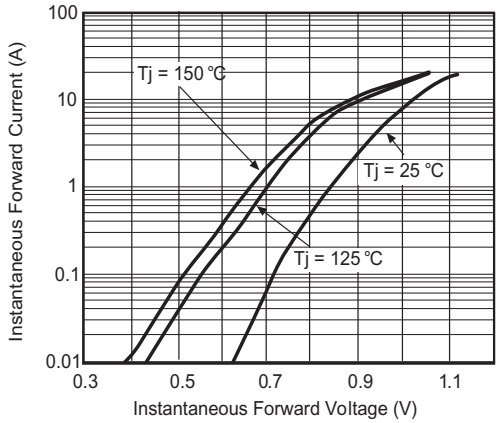


Figure 3. Typical Forward Characteristics Per Leg

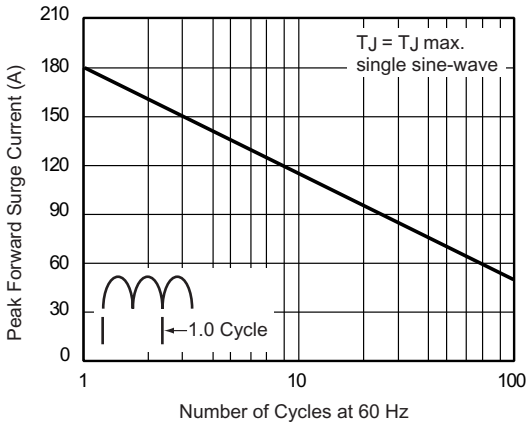


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

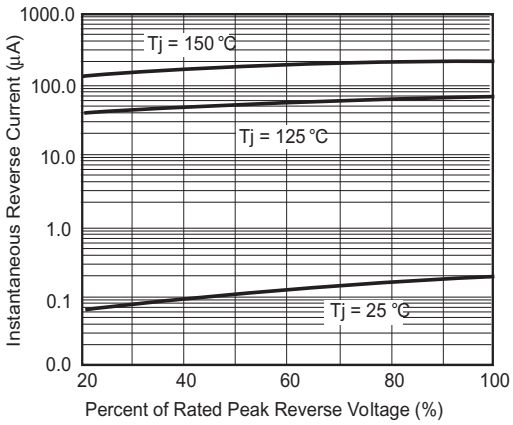


Figure 4. Typical Reverse Characteristics Per Leg

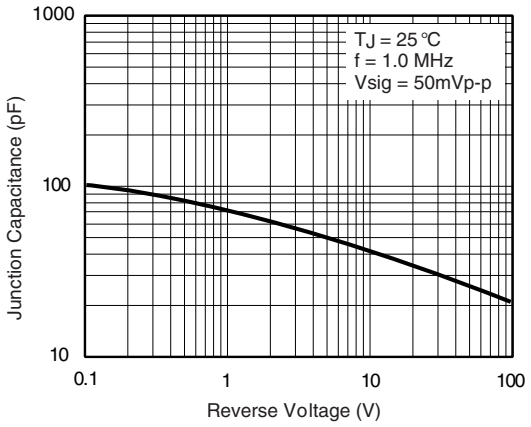


Figure 5. Typical Junction Capacitance Per Leg

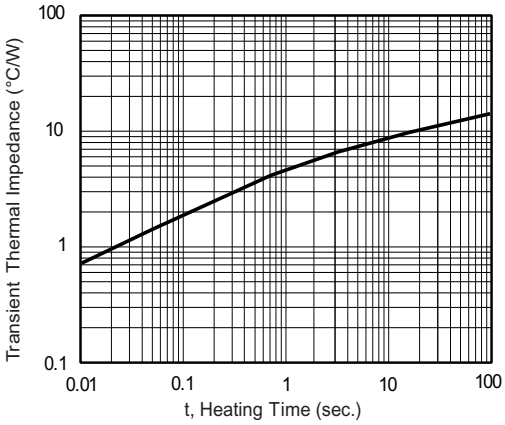
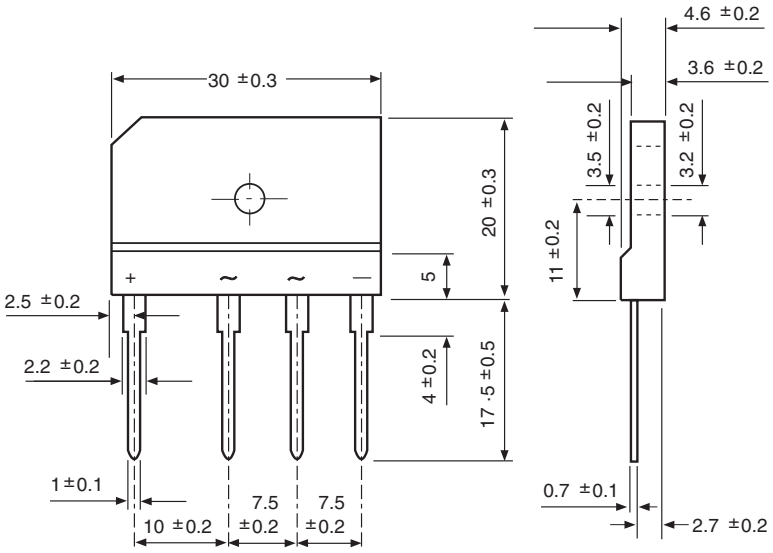


Figure 6. Typical Transient Thermal Impedance

Package outline dimensions in millimeters

Case Style GSIB-5S



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