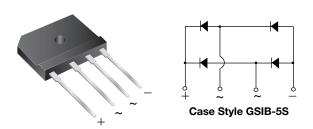
GSIB1520, GSIB1540, GSIB1560, GSIB1580

Vishay General Semiconductor

Single-Phase Single In-Line Bridge Rectifiers



LINKS TO ADDITIONAL RESOURCES



PRIMARY CHARACTERISTICS					
I _{F(AV)}	15 A				
V_{RRM}	200 V, 400 V, 600 V, 800 V				
I _{FSM}	300 A				
I _R	10 μΑ				
V _F at I _F = 7.5 V	0.95 V				
T _J max.	150 °C				
Package	GSIB-5S				
Circuit configuration	In-line				

FEATURES

- UL recognition file number E54214
- Thin single in-line package
- · Glass passivated chip junction
- High surge current capability
- High case dielectric strength of 2500 V_{RMS}
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

TYPICAL APPLICATIONS

General purpose use in AC/DC bridge full wave rectification for switching power supply, home appliances, office equipment, industrial automation applications.

MECHANICAL DATA

Case: GSIB-5S

Molding compound meets UL 94 V-0 flammability rating Base P/N-E3 - RoHS-compliant, commercial grade

Terminals: matte tin plated leads, solderable per

J-STD-002 and JESD 22-B102

E3 suffix meets JESD 201 class 1A whisker test

Polarity: as marked on body

Mounting Torque: 10 cm-kg (8.8 inches-lbs) max. **Recommended Torque:** 5.7 cm-kg (5 inches-lbs)

MAXIMUM RATINGS (T _A = 25 °C unless otherwise noted)						
PARAMETER	SYMBOL	GSIB1520	GSIB1540	GSIB1560	GSIB1580	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 $T_C = 107 ^{\circ}C^{(1)}$	I _{F(AV)}	15 3.5				А
Peak forward surge current single sine-wave superimposed on rated load				Α		
Rating for fusing (t < 8.3 ms)	I ² t	240			A ² s	
Operating junction and storage temperature range	T_J , T_{STG}	-55 to +150				°C

Notes

- (1) Unit case mounted on aluminum plate heatsink
- (2) Units mounted on PCB without heatsink

ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)							
PARAMETER	TEST CONDITIONS	SYMBOL	GSIB1520	GSIB1540	GSIB1560	GSIB1580	UNIT
Maximum instantaneous forward voltage drop per diode	7.5 A	V _F	0.95			V	
Maximum DC reverse current at	T _A = 25 °C		10			μA	
rated DC blocking voltage per diode	T _A = 125 °C		250				μΑ

GSIB1520, GSIB1540, GSIB1560, GSIB1580

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THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)						
PARAMETER	SYMBOL	GSIB1520	GSIB1540	GSIB1560	GSIB1580	UNIT
Typical thormal registance	R _{0JA} (2)		°C/W			
Typical thermal resistance	R ₀ JC (1)	1.5			5/ ٧٧	

Notes

- (1) Unit case mounted on aluminum plate heatsink
- (2) Units mounted on PCB without heatsink
- (3) Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw

ORDERING INFORMATION (Example)							
PREFERRED P/N	UNIT WEIGHT (g)	HT (g) PREFERRED PACKAGE CODE BASE QUANTITY DELIVERY MODE					
GSIB1560-E3/45	7.0	45	20	Tube			

RATINGS AND CHARACTERISTICS CURVES (T_A = 25 °C unless otherwise noted)

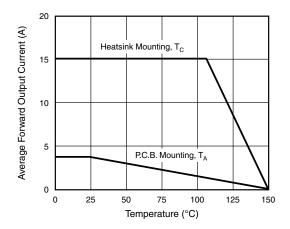


Fig. 1 - Derating Curve Output Rectified Current

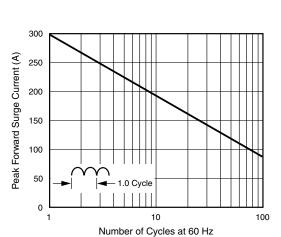


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

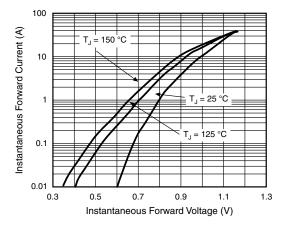


Fig. 3 - Typical Forward Characteristics Per Diode

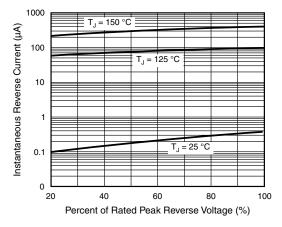


Fig. 4 - Typical Reverse Characteristics Per Diode

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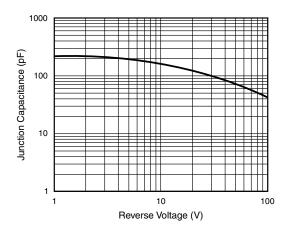


Fig. 5 - Typical Junction Capacitance Per Diode

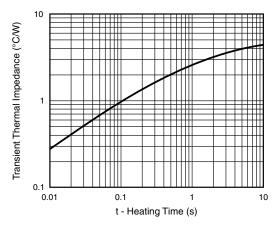


Fig. 6 - Typical Transient Thermal Impedance

PACKAGE OUTLINE DIMENSIONS in millimeters

Case Style GSIB-5S 4.6 ± 0.2 3.6 ± 0.2 30 ± 0.3 ± 0.2 ÷ 0 3.2 20 ± 0.3 က် 11 ± 0.2 2 2.5 ± 0.2 -2.7 ± 0.2 17.5 ± 0.5 4 ± 0.2 2.2 ± 0.2 1 ± 0.1 0.7 ± 0.1 7.5 7.5 10 ± 0.2 ±0.2 ±0.2



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