GSIB2520N, GSIB2540N, GSIB2560N, GSIB2580N

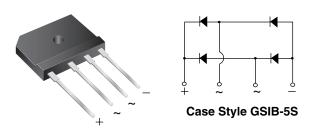
www.vishay.com

Vishay General Semiconductor

HALOGEN

FREE

Single-Phase Single In-Line Bridge Rectifiers



LINKS TO ADDITIONAL RESOURCES



PRIMARY CHARACTERISTICS					
$I_{F(AV)}$	25 A				
V_{RRM}	200 V, 400 V, 600 V, 800 V				
I _{FSM}	350 A				
I _R	10 μΑ				
V _F at I _F = 12.5 A	1.0 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.vishav.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-M3 - halogen-free, RoHS-compliant, and commercial grade

Terminals: matte tin plated leads, solderable per J-STD-002 and JESD 22-B102

M3 suffix meets JESD 201 class 1A whisker test

Polarity: as marked on body

Mounting Torque: 10 cm-kg (8.8 in-lbs) maximum **Recommended Torque:** 5.7 cm-kg (5 in-lbs)

MAXIMUM RATINGS (T _A = 25 °C unless otherwise noted)							
PARAMETER		SYMBOL	GSIB2520N	GSIB2540N	GSIB2560N	GSIB2580N	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 = 98 °C	I _{F(AV)} (1)	25			А	
	T _A = 25 °C	I _{F(AV)} (2)	3.5				
Peak forward surge current single sine-wave superimposed on rated load		I _{FSM}	350				Α
Rating for fusing (t < 8.3 ms)		I ² t	500				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	GSIB2520N	GSIB2540N	GSIB2560N	GSIB2580N	UNIT
Maximum instantaneous forward voltage drop per diode	I _F = 12.5 A	V_{F}	1.0			V	
Maximum DC reverse current at	T _A = 25 °C	1	10				
rated DC blocking voltage per diode	T _A = 125 °C		350				μA

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THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)					
PARAMETER	SYMBOL GSIB2520N GSIB2540N GSIB2560N GSIB2580N UNIT				UNIT
Maximum thermal resistance	R _{0JA} (2)	22			°C/W
Maximum thermal resistance	R ₀ JC (1)	1.0			C/VV

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	ED P/N UNIT WEIGHT (g) PREFERRED PACKAGE CODE BASE QUANTITY DELIVERY M						
GSIB2560N-M3/45	7.0	45	20	Tube			

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

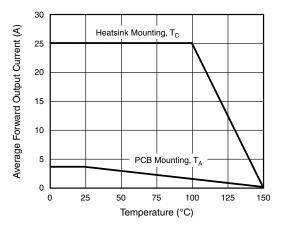


Fig. 1 - Derating Curve Output Rectified Current

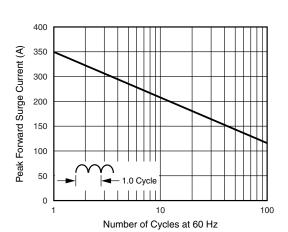


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

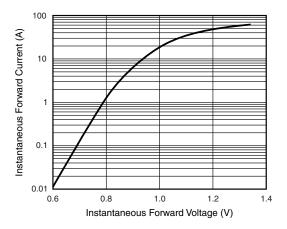


Fig. 3 - Typical Forward Characteristics Per Diode

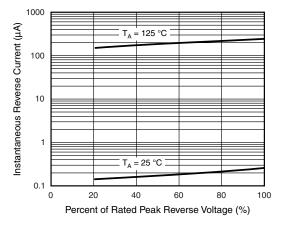


Fig. 4 - Typical Reverse Characteristics Per Diode

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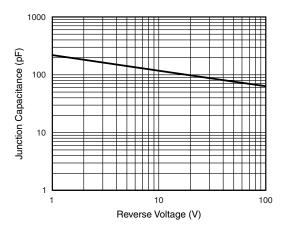


Fig. 5 - Typical Junction Capacitance Per Diode

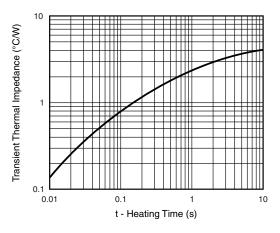
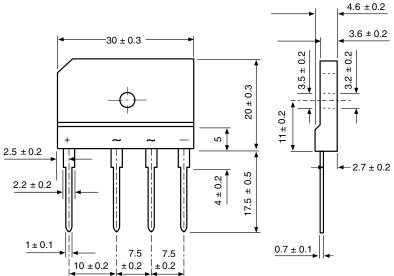


Fig. 6 - Typical Transient Thermal Impedance

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

Case Style GSIB-5S





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