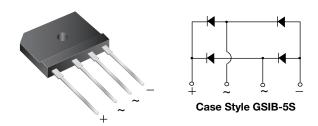
GSIB6A20, GSIB6A40, GSIB6A60, GSIB6A80

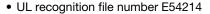
Vishay General Semiconductor

Single-Phase Single In-Line Bridge Rectifiers



PRIMARY CHARACTERISTICS					
I _{F(AV)}	6.0 A				
V _{RRM}	200 V, 400 V, 600 V, 800 V				
I _{FSM}	150 A				
I _R	10 μΑ				
V_F at $I_F = 3 V$	1.0 V				
T _J max.	150 °C				
Package	GSIB-5S				
Diode variations	In-Line				

FEATURES





- Thin single in-line package
- · Glass passivated chip junction
- High surge current capability
- High case dielectric strength of 1500 V_{RMS}
 - in case dielectric strength of 1500 V_{RMS}
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>

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	GSIB6A20	GSIB6A40	GSIB6A60	GSIB6A80	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 $T_C = 100 ^{\circ}C^{(1)}$		6.0				А
output current at $T_A = 25 ^{\circ}\text{C}$ (2)	I _{F(AV)}	2.8				
Peak forward surge current single sine-wave superimposed on rated load	I _{FSM}	150			Α	
Rating for fusing (t < 8.3 ms)	l ² t	93			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 with 0.5" x 0.5" (12 mm x 12 mm) copper pads and 0.375" (9.5 mm) lead length

ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)							
PARAMETER	TEST CONDITIONS	SYMBOL	GSIB6A20	GSIB6A40	GSIB6A60	GSIB6A80	UNIT
Maximum instantaneous forward voltage drop per diode	3.0 A	V _F	1.00			٧	
Maximum DC reverse current at T _A = 25 °C		I_	10			μA	
rated DC blocking voltage per diode	T _A = 125 °C	= 125 °C		250			μΑ

GSIB6A20, GSIB6A40, GSIB6A60, GSIB6A80

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THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)						
PARAMETER	SYMBOL	GSIB6A20	GSIB6A40	GSIB6A60	GSIB6A80	TINU
Maximum thermal resistance	$R_{\theta JA}$ (2)		°C/W			
Maximum thermal resistance	R ₀ JC (1)	3.4				C/VV

Notes

- (1) Unit case mounted on aluminum plate heatsink
- (2) Units mounted on PCB with 0.5" x 0.5" (12 mm x 12 mm) copper pads and 0.375" (9.5 mm) lead length
- (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)	PREFERRED PACKAGE CODE BASE QUANTITY DELIVERY MO					
GSIB6A60-E3/45	7.0	45	20	Tube			

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

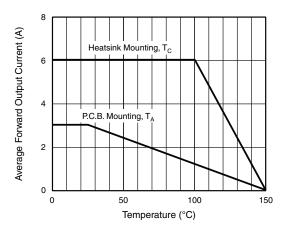


Fig. 1 - Derating Curve Output Rectified Current

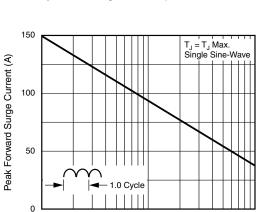


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

10

Number of Cycles at 60 Hz

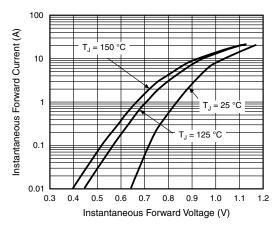


Fig. 3 - Typical Forward Characteristics Per Diode

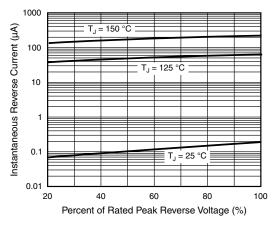


Fig. 4 - Typical Reverse Characteristics Per Diode



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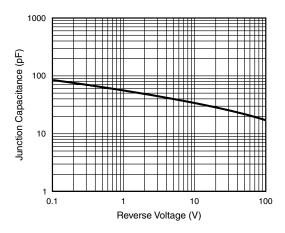


Fig. 5 - Typical Junction Capacitance Per Diode

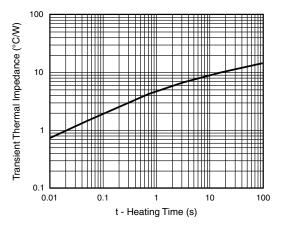
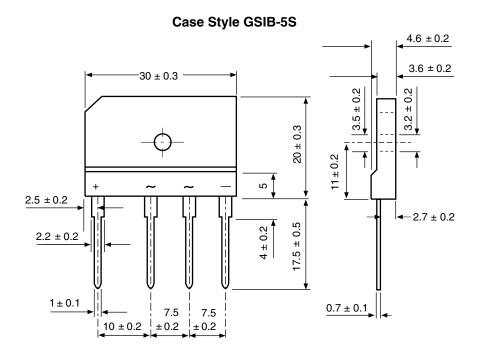


Fig. 6 - Typical Transient Thermal Impedance

PACKAGE OUTLINE DIMENSIONS in millimeters





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