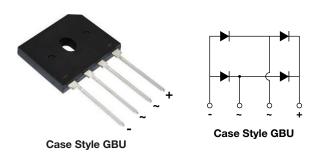
HALOGEN



Vishay General Semiconductor

Single In-Line Bridge Rectifier



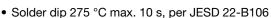
LINKS TO ADDITIONAL RESOURCES



PRIMARY CHARACTERISTICS				
I _{F(AV)}	25 A			
V_{RRM}	800 V			
I _{FSM}	350 A			
V _F at I _F = 12.5 A (125 °C)	0.86 V			
T _J max.	175 °C			
Package	GBU			
Circuit configuration	In-line			

FEATURES

- UL recognition file number E312394
- · Glass passivated chip junction



- Ideal for printed circuit boards
- High surge current capability
- High case dielectric strength of 2000 V_{RMS}, 1 minute
- Material categorization: for definitions of compliance please see <u>www.vishav.com/doc?99912</u>

TYPICAL APPLICATIONS

General purpose use in AC/DC bridge full wave rectification for switching power supply, home applications, and white-goods applications specially or telecom power supply, game PC

MECHANICAL DATA

Case: GBU

Molding compound meets UL 94 V-0 flammability rating Base P/N-M3 - halogen-free, RoHS-compliant, and industrial grade

Terminals: matte tin plated leads, solderable per J-STD-002 and JESD22-B102

M3 suffix meet 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)

PARAMETER	SYMBOL	GBU25H08	UNIT	
Device marking code		GBU25H08		
Maximum repetitive peak reverse voltage	V_{RRM}	800	V	
Maximum RMS voltage	V _{RMS}	560	V	
Maximum DC blocking voltage		V _{DC}	800	V
Maximum average forward rectified output current at	T _C = 120 °C	I _O ⁽¹⁾	25	
	T _A = 25 °C	I _O ⁽²⁾	4.5	A
Non-repetitive peak forward surge current 8.3 ms single sine-wave, T _J = 25 °C		I _{FSM}	350	А
Non-repetitive peak forward surge current 1.0 ms single sine-wave, T _J = 25 °C		I _{FSM}	700	А
Rating for fusing (t < 8.3 ms)		I ² t	508	A ² s
Operating junction and storage temperature range		T _J , T _{STG}	-55 to +175	°C

Notes

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



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ELECTRICAL CHARACTERISTICS (T _J = 25 °C unless otherwise noted)						
PARAMETER	TEST CONDITIONS		SYMBOL	TYP.	MAX.	UNIT
Maximum instantaneous forward voltage drop	I _F = 12.5 A	T _J = 25 °C	V _F ⁽¹⁾	0.97	1.05	V
per diode	IF = 12.5 A	T _J = 125 °C	v F \.,	0.86	-	V
Maximum DC reverse current at rated DC	V _R = 800 V	T _J = 25 °C	I _R ⁽²⁾	-	10	
blocking voltage per diode	v _R = 600 v	T _J = 125 °C	IR (−/	45	-	μΑ
Typical reverse recovery time	$I_F = 0.5 \text{ A}, I_R = 1.0 \text{ A}, I_{rr} = 0.25 \text{ A}$		t _{rr}	3500	-	ns
Typical junction capacitance per diode	4.0 V, 1 MHz		CJ	100	-	pF

Notes

 $^{(1)}$ Pulse test: 300 μs pulse width, 1 % duty cycle

(2) Pulse test: pulse width ≤ 40 ms

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)				
PARAMETER	SYMBOL GBU25H08			
Typical thermal registance	R _{0JA} (1)	24	- °C/W	
Typical thermal resistance	R ₀ JC (2)	4	C/VV	

Notes

- (1) Without heatsink, free air
- (2) With heatsink

ORDERING INFORMATION						
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE		
GBU25H08-M3/P	3.87	Р	20	Tube		

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

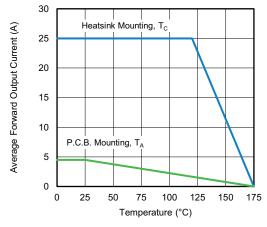


Fig. 1 - Derating Curve Output Rectified Current

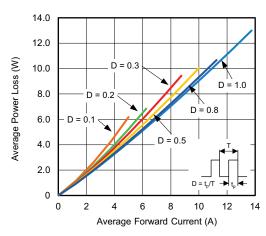


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode



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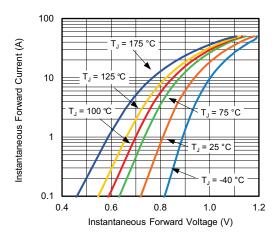


Fig. 3 - Typical Forward Characteristics Per Diode

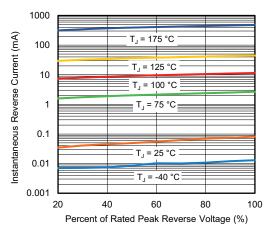


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

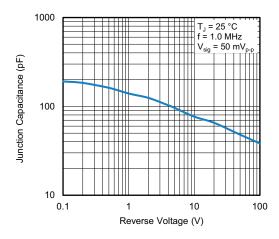


Fig. 5 - Typical Junction Capacitance Per Diode

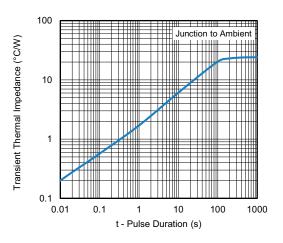


Fig. 6 - Typical Transient Thermal Impedance Per Diode

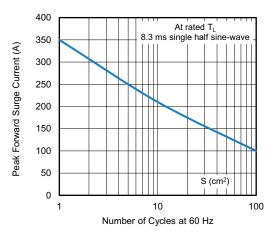
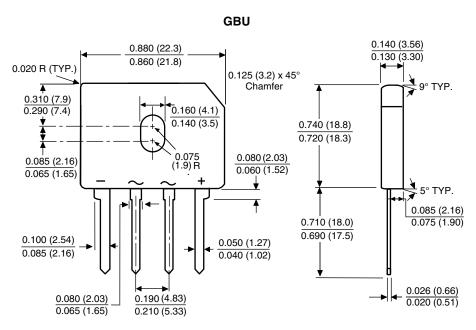


Fig. 7 - Peak Forward Surge Current

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PACKAGE OUTLINE DIMENSIONS in inches (millimeters)



Polarity shown on front side of case, positive lead by beveled corner



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