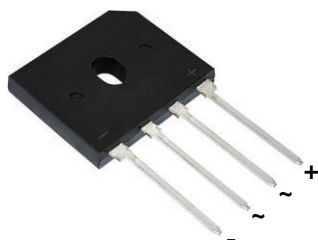
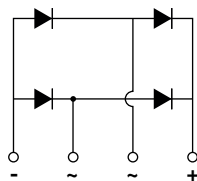


## Single In-Line Bridge Rectifier



Case Style GBU



Case Style GBU

### FEATURES

- UL recognition file number E312394
- Glass passivated chip junction
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Ideal for printed circuit boards
- High surge current capability
- High case dielectric strength of 2000 V<sub>RMS</sub>, 1 minute
- Material categorization: for definitions of compliance please see [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)



**RoHS**  
COMPLIANT  
HALOGEN  
**FREE**

### 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

### LINKS TO ADDITIONAL RESOURCES



3D Models

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

### 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)

MAXIMUM RATINGS ( $T_A = 25$ °C unless otherwise noted)			
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	$I_O^{(1)}$	A
	$T_A = 25$ °C	$I_O^{(2)}$	
Non-repetitive peak forward surge current 8.3 ms single sine-wave, $T_J = 25$ °C	$I_{FSM}$	350	A
Non-repetitive peak forward surge current 1.0 ms single sine-wave, $T_J = 25$ °C	$I_{FSM}$	700	A
Rating for fusing ( $t < 8.3$ ms)	$I^2t$	508	A <sup>2</sup> 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

ELECTRICAL CHARACTERISTICS (T <sub>J</sub> = 25 °C unless otherwise noted)						
PARAMETER	TEST CONDITIONS		SYMBOL	TYP.	MAX.	UNIT
Maximum instantaneous forward voltage drop per diode	I <sub>F</sub> = 12.5 A	T <sub>J</sub> = 25 °C	V <sub>F</sub> <sup>(1)</sup>	0.97	1.05	V
		T <sub>J</sub> = 125 °C		0.86	-	
Maximum DC reverse current at rated DC blocking voltage per diode	V <sub>R</sub> = 800 V	T <sub>J</sub> = 25 °C	I <sub>R</sub> <sup>(2)</sup>	-	10	μA
		T <sub>J</sub> = 125 °C		45	-	
Typical reverse recovery time	I <sub>F</sub> = 0.5 A, I <sub>R</sub> = 1.0 A, I <sub>rr</sub> = 0.25 A		t <sub>rr</sub>	3500	-	ns
Typical junction capacitance per diode	4.0 V, 1 MHz		C <sub>J</sub>	100	-	pF

**Notes**

(1) Pulse test: 300  $\mu\text{s}$  pulse width, 1 % duty cycle

(2) Pulse test: pulse width  $\leq 40\text{ ms}$

<b>THERMAL CHARACTERISTICS</b> ( $T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)			
PARAMETER	SYMBOL	GBU25H08	UNIT
Typical thermal resistance	$R_{\theta JA}^{(1)}$	24	$^{\circ}\text{C/W}$
	$R_{\theta JC}^{(2)}$	4	

**Notes**

(1) Without heatsink, free air

(2) With heatsink

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

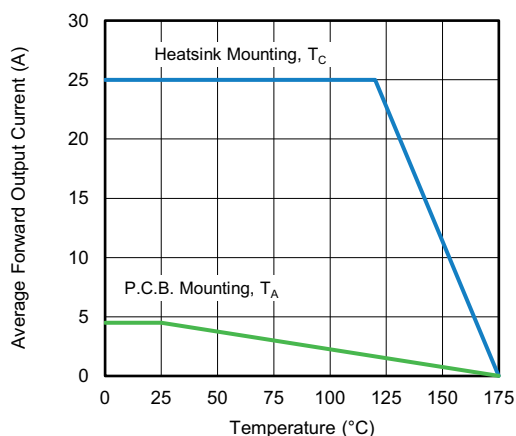
**RATINGS AND CHARACTERISTICS CURVES** ( $T_A = 25\text{ }^{\circ}\text{C}$  unless otherwise noted)


Fig. 1 - Derating Curve Output Rectified Current

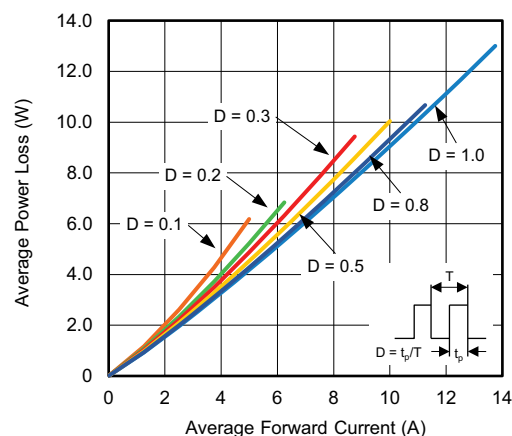


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

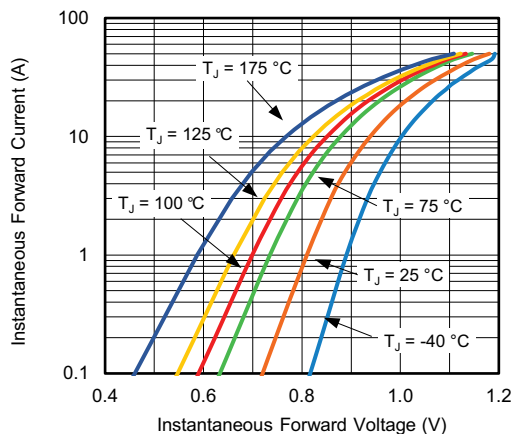


Fig. 3 - Typical Forward Characteristics Per Diode

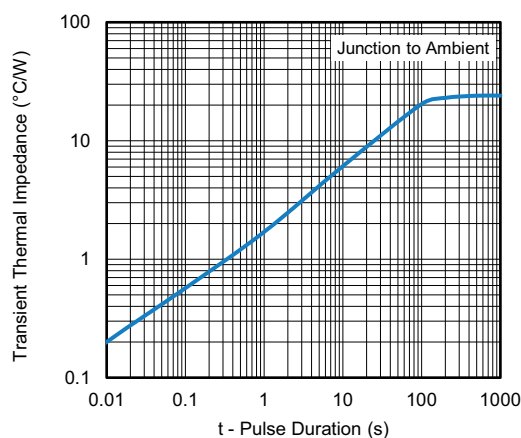


Fig. 6 - Typical Transient Thermal Impedance Per Diode

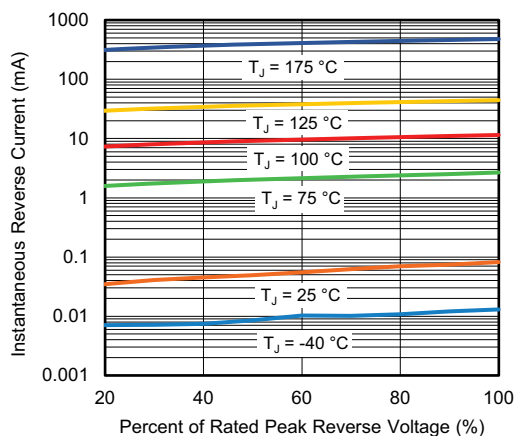


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

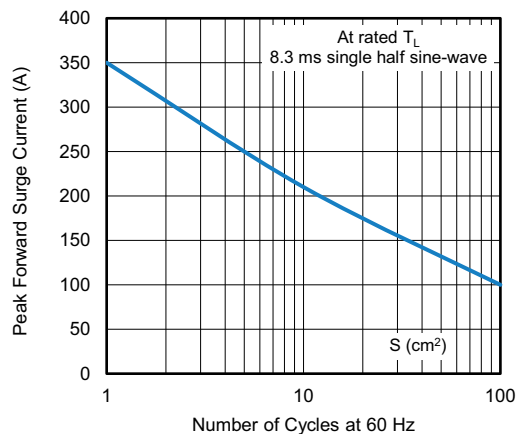


Fig. 7 - Peak Forward Surge Current

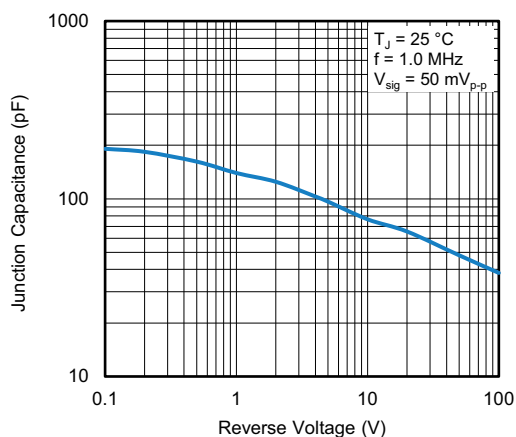
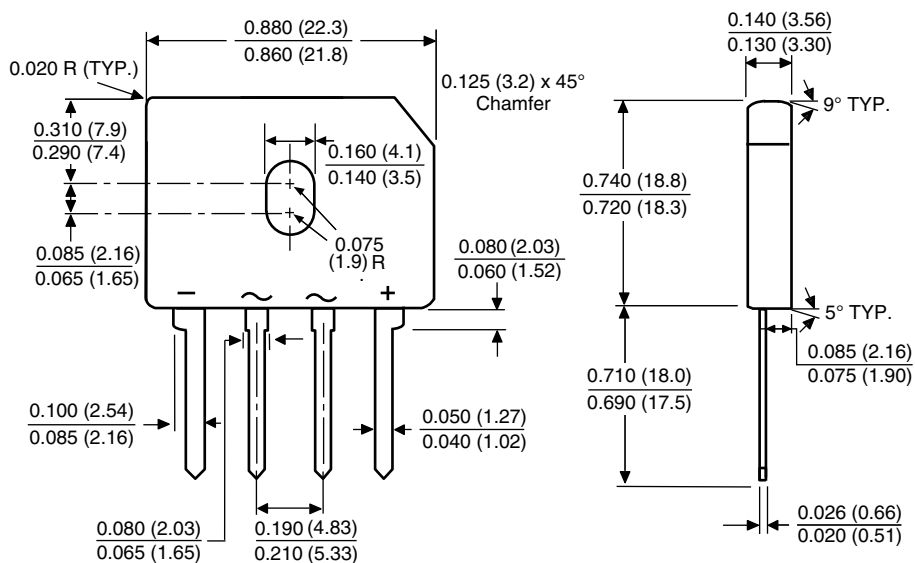


Fig. 5 - Typical Junction Capacitance Per Diode

**PACKAGE OUTLINE DIMENSIONS** in inches (millimeters)

**GBU**


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



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