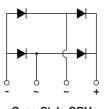
GBU8A, GBU8B, GBU8D, GBU8G, GBU8J, GBU8K, GBU8M

www.vishay.com

Vishay General Semiconductor

Glass Passivated Single-Phase Bridge Rectifier





Case Style GBU

Case Style GBU

PRIMARY CHARACTERISTICS							
Package	GBU						
I _{F(AV)}	8.0 A						
V _{RRM}	50 V, 100 V, 200 V, 400 V, 600 V, 800 V, 1000 V						
I _{FSM}	200 A						
I _R	5 μΑ						
V_F at $I_F = 8.0$ A	1.0 V						
T _J max.	150 °C						
Diode variations	In-Line						

FEATURES

- UL recognition file number E54214
- · Ideal for printed circuit boards
- High surge current capability
- High case dielectric strength of 1500 V_{RMS}
- RoHS Solder dip 275 °C max. 10 s, per JESD 22-B106 COMPLIANT
- · 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 monitor, TV, printer, power supply, switching mode power supply, adapter, audio equipment, and home appliances applications.

MECHANICAL DATA

Case: GBU

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 ($T_A = 25 \text{ °C}$ unless otherwise noted)										
PARAMETER		SYMBOL	GBU8A	GBU8B	GBU8D	GBU8G	GBU8J	GBU8K	GBU8M	UNIT
Maximum repetitive peak revers	se voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage		V _{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage		V _{DC}	50	100	200	400	600	800	1000	V
Maximum average forward $T_{\rm C} = 60 ^{\circ}{\rm C}$		I _{F(AV)} ⁽¹⁾	8.0							Α
rectified output current at	T _A = 40 °C	I _{F(AV)} ⁽²⁾	3.9							~
Peak forward surge current single sine-wave super-imposed on rated load		I _{FSM}	200							А
Rating for fusing (t < 8.3 ms)		l ² t	166							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



GBU8A, GBU8B, GBU8D, GBU8G, GBU8J, GBU8K, GBU8M

www.vishay.com

Vishay General Semiconductor

ELECTRICAL CHARACTERISTICS ($T_A = 25$ °C unless otherwise noted)										
PARAMETER	TEST CONDITIONS	SYMBOL	GBU8A	GBU8B	GBU8D	GBU8G	GBU8J	GBU8K	GBU8M	UNIT
Maximum instantaneous forward voltage drop per diode	8.0 A	V _F				1.0				V
Maximum DC reverse	T _A = 25 °C	1_				5.0				
blocking voltage per diode	T _A = 125 °C	I _R	500							μΑ
Typical junction capacitance per diode	4 V, 1 MHz	CJ	68					pF		

THERMAL CHARACTERISTICS ($T_A = 25 \text{ °C}$ unless otherwise noted)									
PARAMETER SYMBOL GBU8A GBU8B GBU8D GBU8G GBU8J GBU8K GBU8M UN								UNIT	
Typical thermal resistance	R _{0JA} ⁽²⁾	20							°C/W
Typical memai resistance	R _{0JC} (1)(3)	4.0						0/11	

Notes

/ISHAY

⁽¹⁾ Units case mounted on aluminum plate heatsink

⁽²⁾ Units mounted in free air, no heatsink on PCB, 0.5" x 0.5" (12 mm x 12 mm) copper pads, 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 screws

ORDERING INFORMATION									
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE					
GBU8J-E3/45	3.857	45	20	Tube					
GBU8J-E3/51	3.857	51	250	Paper tray					

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

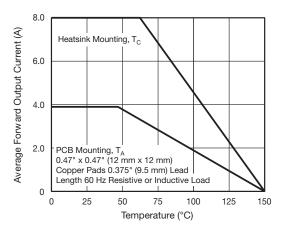


Fig. 1 - Derating Curve Output Rectified Current

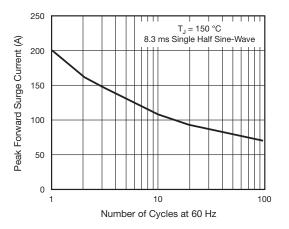
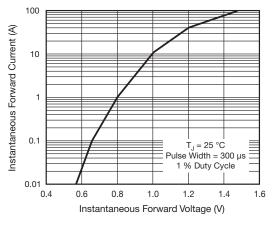


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge **Current Per Diode**

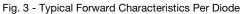
GBU8A, GBU8B, GBU8D, GBU8G, GBU8J, GBU8K, GBU8M

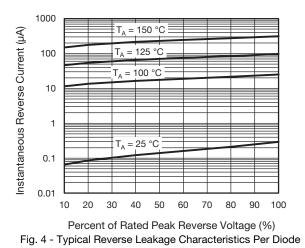
Vishay General Semiconductor

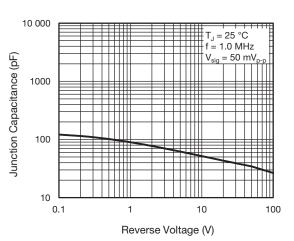


www.vishay.com

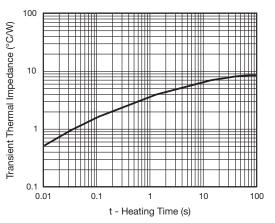
ISHAY

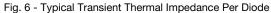




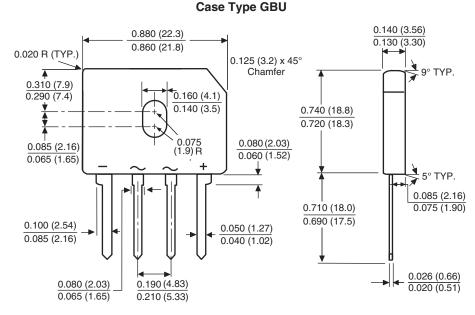








PACKAGE OUTLINE DIMENSIONS in inches (millimeters)



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

 Revision: 02-Apr-15
 3
 Document Number: 88616

 For technical questions within your region: DiodesAmericas@vishay.com, DiodesAsia@vishay.com, DiodesEurope@vishay.com
 THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE. THE PRODUCTS DESCRIBED HEREIN AND THIS DOCUMENT ARE SUBJECT TO SPECIFIC DISCLAIMERS, SET FORTH AT www.vishay.com/doc?91000



Vishay

Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and / or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Vishay:

 GBU8J-E3/51
 GBU8A-E3/45
 GBU8B-E3/45
 GBU8D-E3/45
 GBU8G-E3/45
 GBU8G-E3/72
 GBU8J-E3/45
 GBU8J-E3/45
 GBU8J-E3/45
 GBU8J-E3/45
 GBU8J-E3/45
 GBU8J-E3/45
 GBU8J-E3/51
 GBU8G-E3/51
 GBU8G-E3/51