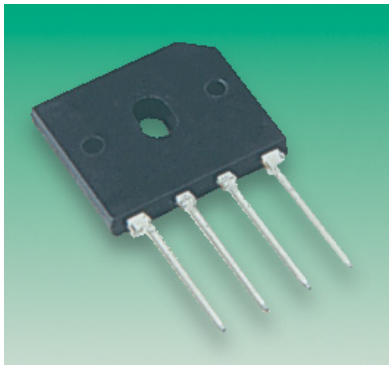
GBU8 Series

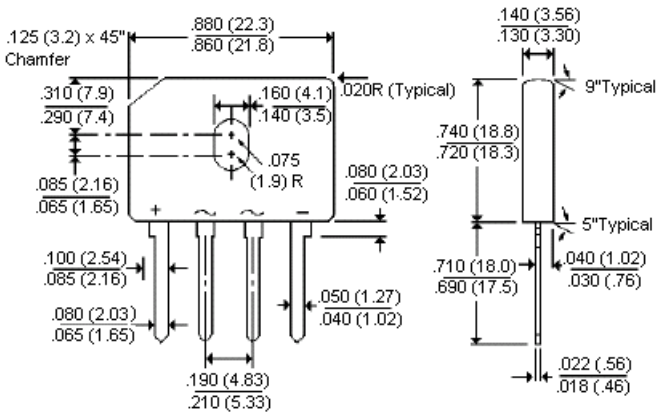
Single Phase Bridge Rectifier



Features:

- Glass passivated device offering greater reliability at higher operating temperatures and improved moisture resistance capability.
- High case dielectric strength of 1500V_{RMS}.
- Ideal for printed circuit board.
- Typical I_R less than 0.5μA.
- Surge overload rating : 200 Amperes peak.
- High temperature soldering guaranteed : 260°C/10 seconds, 0.375" (9.5mm) lead length at 5lbs (2.3kg) tension.

GBU



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

Dimensions : Inches (Millimetres)

Body		
Height	**Width**	**Depth**
18.8	22.3	3.56

Dimensions : Millimetres

Mechanical Data:

Case :

GBU8G - Moulded plastic body over passivated junctions.

GBUB, GBUJ, GBUK - Reliable low cost construction utilizing moulded plastic technique.

Terminals :

GBU8G - Plated leads solderable per MIL-STD-750, Method 2026.

GBUB, GBUJ, GBUK - Leads solderable per MIL-STD-202, Method 208.

Mounting position : Any (Note 3).

Mounting torque : 5 in. lb. Maximum.

Weight : 0.15 ounce, 4 grams.

Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

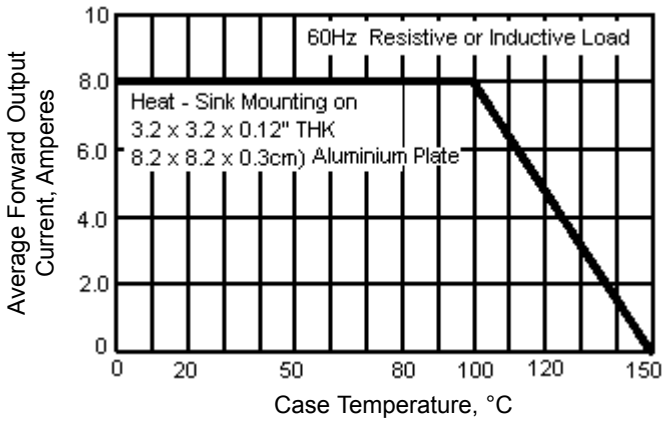
Parameters	Symbols	GBU8B	GBU8G	GBU8J	GBU8K	Units
Maximum repetitive peak reverse voltage	V_{RRM}	100	400	600	800	Volts
Maximum RMS voltage	V_{RMS}	70	280	420	560	
Maximum DC blocking voltage	V dc	100	400	600	800	
Maximum average forward rectified output current at T_C = 100°C (Note 1)	$I_{(AV)}$	8.0				Amps
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) T_J = 150°C	I_{FSM}	200				
Rating for fusing (t<8.3ms)	I^2t	166				A^2 seconds
Maximum instantaneous forward voltage drop per leg at 8.0A	V_F	1.0				Volts
Maximum DC reverse at rated T_A = 25°C DC blocking voltage per leg T_A = 100°C	I_R	5.0 500				µA
Typical junction capacitance (Note 2)	C_J	211		94.0		pF
Typical thermal resistance per leg (Note 1) (Note 2) (Note 3) (Note 4)	RθJC RθJA RθJL RθJA	2.2 18.0 3.0 21.0				°C/W
Operating and Storage temperature range	T_J, T_{STG}	-55 to +150				°C

Notes:

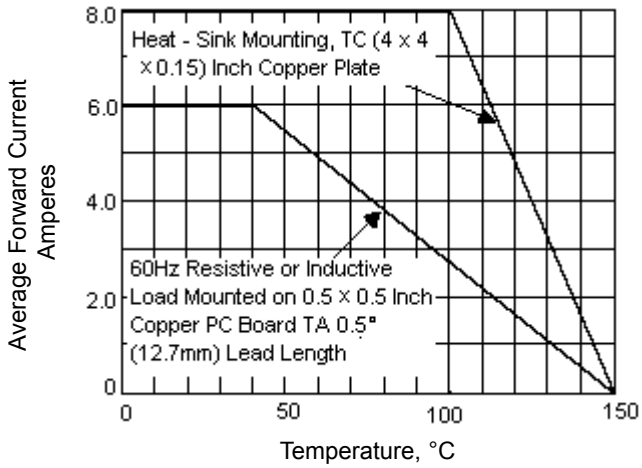
1. Units case mounted on 3.2 x 3.2 x 0.12” thick (8.2 x 8.2 x 0.3cm) Aluminium plate heatsink - **GU8G.**
   Units mounted on 3.0 x 3.0 x 0.11” thick (7.5 x 7.5 x 0.3cm) Aluminium plate heatsink - **GU8B, GU8J, GU8K.**
2. Measured at 1.0MHz and applied reverse voltage of 4.0 Volts.
3. Recommended mounting position is to bolt down on to a heatsink with silicone thermal compound for maximum heat transfer with number 6 screw.
4. Units mounted in free air, no heatsink on PCB, 0.5 x 0.5” (12 x 12mm) copper pads, at 0.375” (9.5mm) lead length.

Rating and Characteristics Curves

Figure 1 - Derating Curve for Output Rectified Current

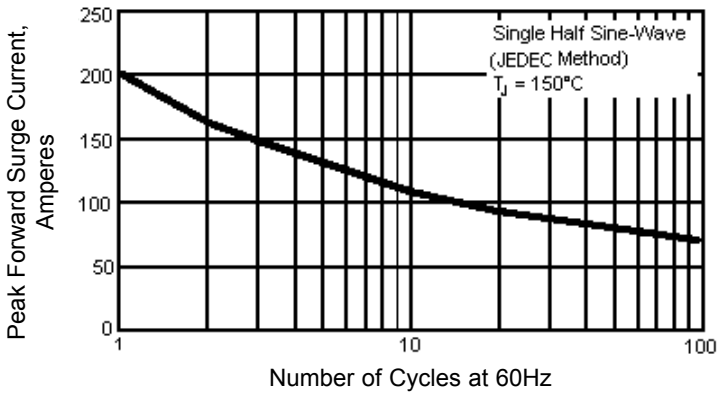


GBU8G



GBU8B, GBU8J, GBU8K

Figure 2 - Maximum Non-Repetitive Peak Forward Surge Current per Leg



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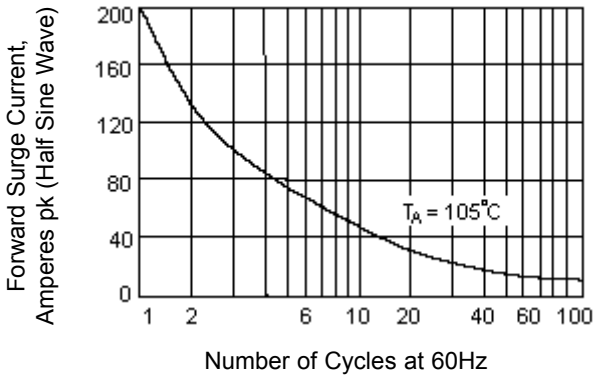
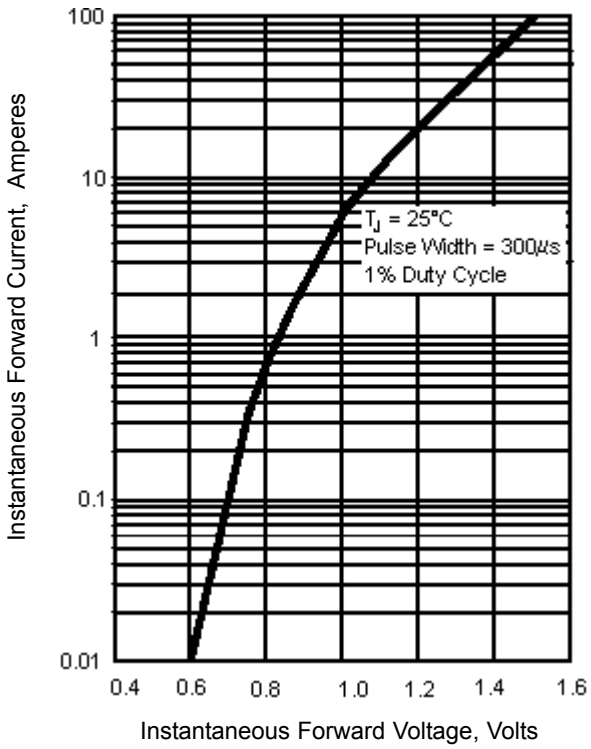


GBU8B, GBU8J, GBU8K

Figure 3 - Typical Instantaneous Forward Characteristics per Element



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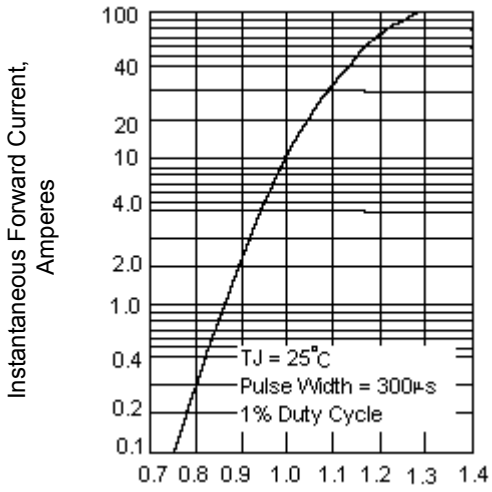
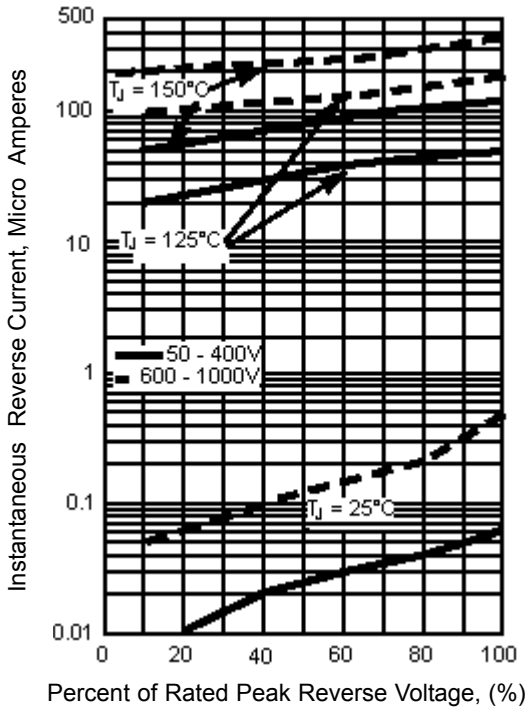


GBU8B, GBU8J, GBU8K

Figure 4 - Typical Reverse Leakage Characteristics per Leg



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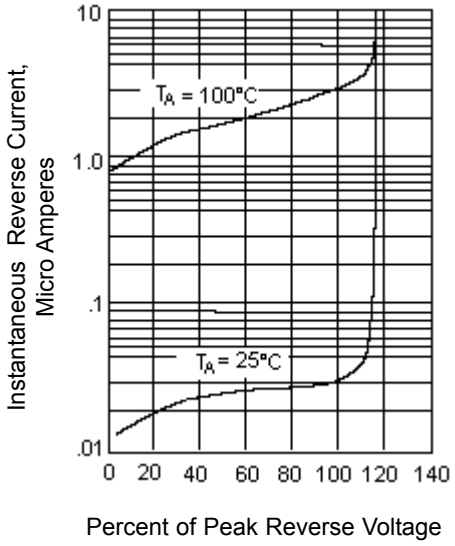
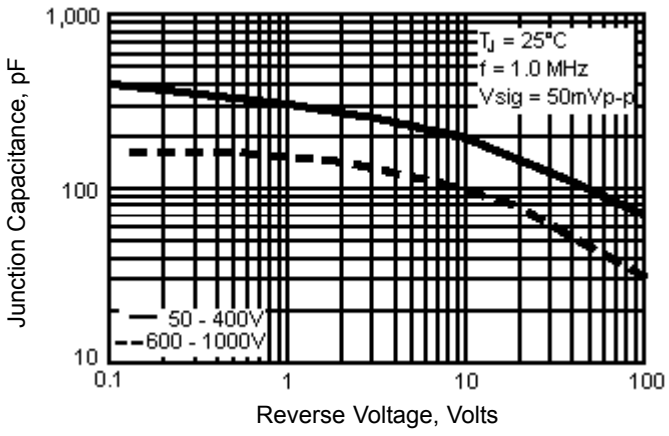


GBU8B, GBU8J, GBU8K

Figure 5 - Typical Junction Capacitance per Leg



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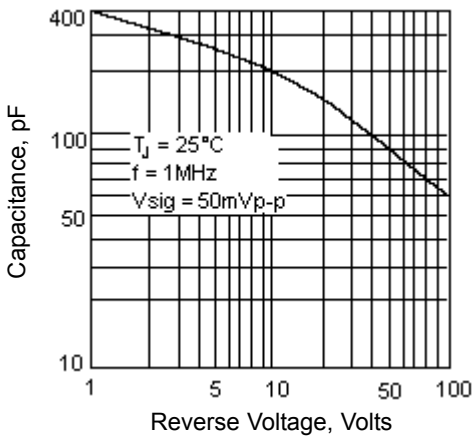
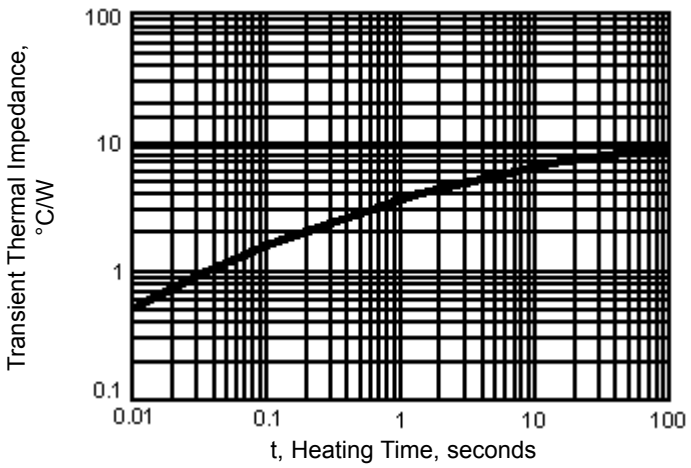


GBU8B, GBU8J, GBU8K

Figure 6 - Typical Transient Thermal Impedance



GBU8G

Specifications

V_{RRM} (V)	Maximum Input Voltage (V ac)	I_O at 40°C (A)	I_{FSM} (A)	Current Rating (A)	Part Number
100	70	8	200	8	GBU8B
400	280				GBU8G
600	420				GBU8J
800	560				GBU8K

Notes:

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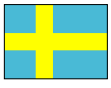

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