

# GBU8A - GBU8M Bridge Rectifiers

## Features

- Glass-Passivated Junction
- Surge Overload Rating: 200 A Peak
- Reliable Low-Cost Construction Utilizing Molded Plastic Technique
- Ideal for Printed Circuit Board
- UL Certified: UL #E258596



## Ordering Informations

Part Number	Marking	Package	Packing Method
GBU8A	GBU8A	GBU 4L	Rail
GBU8B	GBU8B	GBU 4L	Rail
GBU8D	GBU8D	GBU 4L	Rail
GBU8G	GBU8G	GBU 4L	Rail
GBU8J	GBU8J	GBU 4L	Rail
GBU8K	GBU8K	GBU 4L	Rail
GBU8M	GBU8M	GBU 4L	Rail

## Absolute Maximum Ratings

Stresses exceeding the absolute maximum ratings may damage the device. The device may not function or be operable above the recommended operating conditions and stressing the parts to these levels is not recommended. In addition, extended exposure to stresses above the recommended operating conditions may affect device reliability. The absolute maximum ratings are stress ratings only. Values are at  $T_A = 25^\circ\text{C}$  unless otherwise noted.

Symbol	Parameter	Value							Units
		8A	8B	8D	8G	8J	8K	8M	
$V_{RRM}$	Maximum Repetitive Reverse Voltage	50	100	200	400	600	800	1000	V
$V_{RMS}$	Maximum RMS Bridge Input Voltage	35	70	140	280	420	560	700	V
$V_R$	DC Reverse Voltage (Rated $V_R$ )	50	100	200	400	600	800	1000	V
$I_{F(AV)}$	Average Rectified Forward Current	$T_C = 100^\circ\text{C}$		8.0					
		$T_A = 45^\circ\text{C}$		6.0					
$I_{FSM}$	Non-Repetitive Peak Forward Surge Current 8.3 ms Single Half-Sine-Wave	200							A
$T_{STG}$	Storage Temperature Range	-55 to +150							°C
$T_J$	Operating Junction Temperature	-55 to +150							°C

## Thermal Characteristics

Values are at  $T_A = 25^\circ\text{C}$  unless otherwise noted.

Symbol	Parameter	Value	Units
$P_D$	Power Dissipation	16	W
$R_{\theta JA}$	Thermal Resistance per Leg, Junction to Ambient <sup>(1)</sup>	18	°C/W
$R_{\theta JC}$	Thermal Resistance per Leg, Junction to Case <sup>(2)</sup>	3	°C/W

**Notes:**

1. Device mounted on PCB with  $0.5 \times 0.5$  inch ( $12 \times 12$  mm).
2. Heat-sink mounting,  $4 \times 4 \times 0.15$  inch copper plate.

## Electrical Characteristics

Values are at  $T_A = 25^\circ\text{C}$  unless otherwise noted.

Symbol	Parameter	Value	Units
$V_F$	Forward Voltage, per Element	8.0 A	1.0
$I_R$	Reverse Current, per Element at Rated $V_R$	$T_A = 25^\circ\text{C}$	5.0
		$T_A = 100^\circ\text{C}$	500
$I^2t$	$I^2t$ Rating for Fusing	$t < 8.35$ ms	$\text{A}^2\text{s}$

## Typical Performance Characteristics

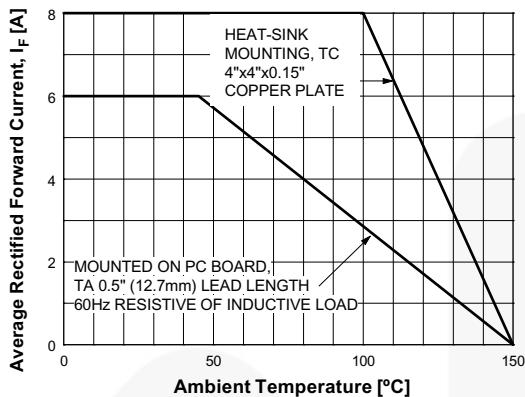


Figure 1. Forward Current Derating Curve

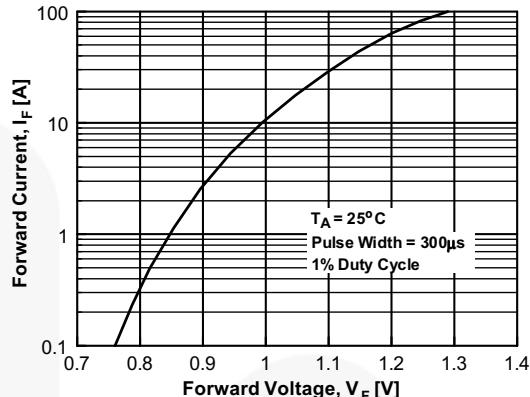


Figure 2. Forward Voltage Characteristics

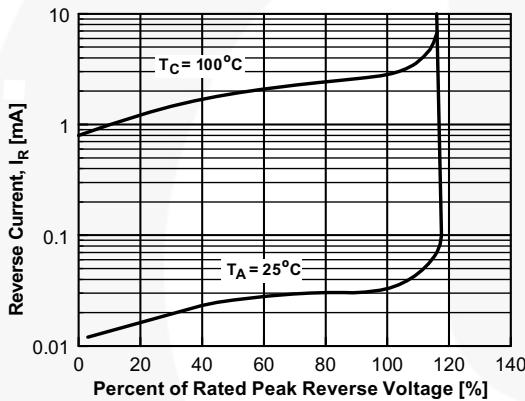


Figure 3. Reverse Current vs. Reverse Voltage

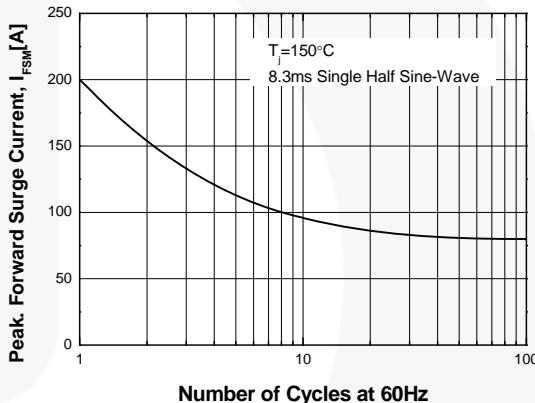


Figure 4. Non-Repetitive Surge Current

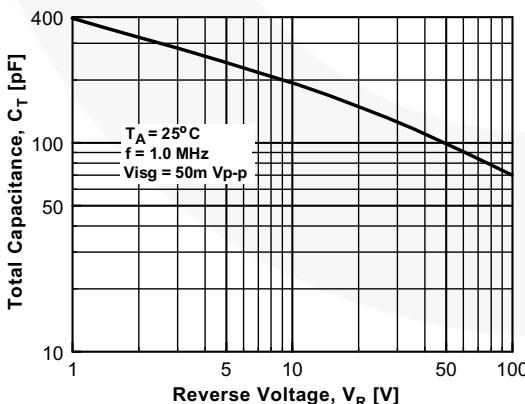
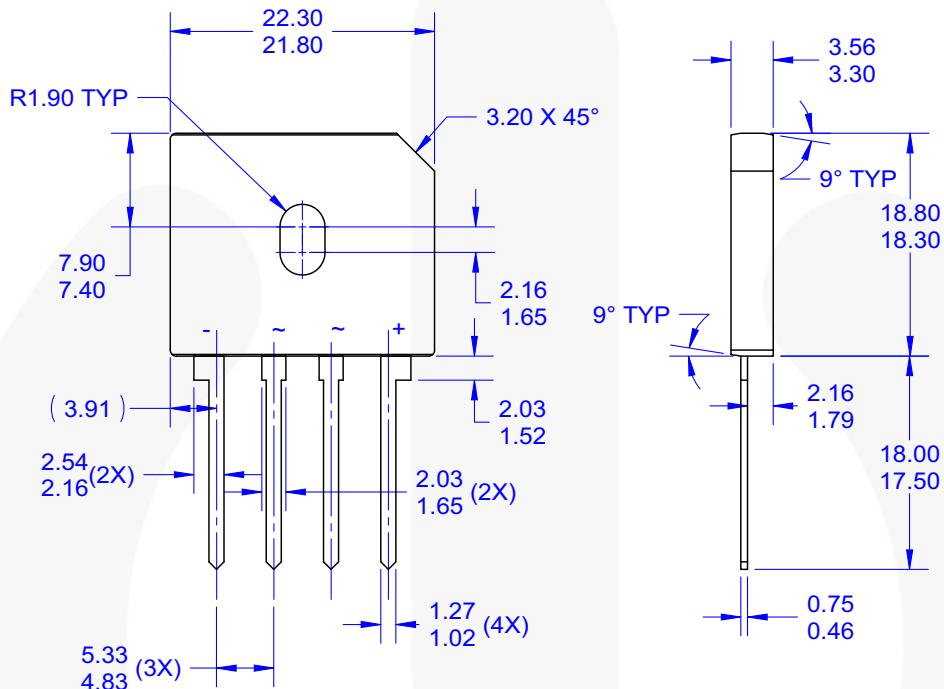


Figure 5. Total Capacitance

## Physical Dimension

**GBU-4L**



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- C. DIMENSIONS ARE EXCLUSIVE OF BURRS, MOLD FLASH AND TIE BAR PROTRUSIONS.
- E. DIMENSION AND TOLERANCE AS PER ASME Y14.5-1994.
- F. DRAWING FILE NAME: GBU04AREV1

Figure 6. 4-LEAD, GBU, THROUGH-HOLE, MOLDED PACKAGE (ACTIVE)

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