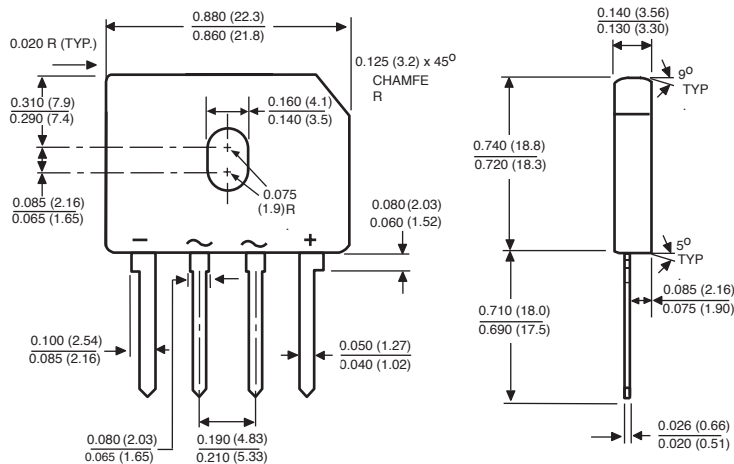


Glass Passivated Single-Phase Bridge Rectifier

Reverse Voltage 50 and 1000V
Forward Current 4.0A

Case Style GBU



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

Dimensions in inches and (millimeters)

Features

- This series is UL listed under the Recognized Component Index, file number E54214
- High case dielectric strength of 1500 VRMS
- Ideal for printed circuit boards
- Glass passivated chip junction
- High surge current capability
- High temperature soldering guaranteed:
260°C/10 seconds, 0.375 (9.5mm) lead length,
5lbs. (2.3kg) tension

Mechanical Data

Case: Molded plastic body over passivated junctions

Terminals: Plated leads solderable per MIL-STD-750, Method 2026

Mounting Position: Any (NOTE 3)

Mounting Torque: 10 cm-kq (8.8 inches.-lbs) max.

Recommended Torque: 5.7 cm-kg (5 inches.-lbs)

Weight: 0.15 oz., 4.0 g

Epoxy meets UL 94V-0 Flammability rating

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

	Symbols	GBU 4A	GBU 4B	GBU 4D	GBU 4G	GBU 4J	GBU 4K	GBU 4M	Units
Maximum repetitive peak reverse 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 rectified output current at $T_C=100^{\circ}C^{(1)}$ $T_A=40^{\circ}C^{(2)}$	$I_{F(AV)}$	4.0 3.0							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) $T_J=150^{\circ}C$	I_{FSM}	150							A
Rating for fusing ($t<8.3ms$)	I^2t	93							A ² sec
Typical thermal resistance per leg ⁽²⁾ ₍₁₎	$R_{\theta JA}$ $R_{\theta JC}$	22 4.2							$^{\circ}C/W$
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							$^{\circ}C$

Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Maximum instantaneous forward drop per leg at 4.0 Amperes	V_F	1.0		V
Maximum DC reverse current at rated $T_A=25^{\circ}\text{C}$ DC blocking voltage per leg $T_A=125^{\circ}\text{C}$	I_R	5.0 500		μA
Typical junction capacitance per leg at 4.0V, 1MHz	C_J	100	45	pF

Notes:

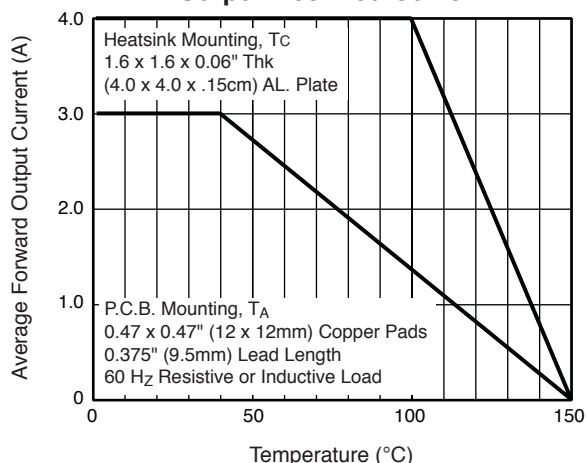
(1) Unit case mounted on 1.6 x 1.6 x 0.06" thick (4.0 x 4.0 x 0.15cm) Al. Plate

(2) Units mounted on P.C.B. with 0.5 x 0.5" (12 x 12mm) copper pads and 0.375" (9.5mm) lead length

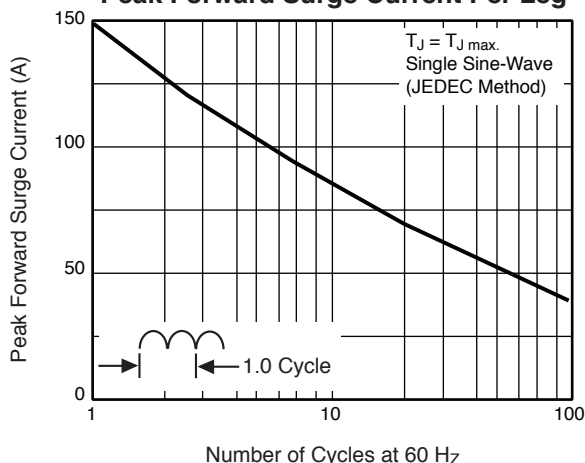
(3) Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw

Ratings and Characteristic Curves ($T_A = 25^\circ\text{C}$ unless otherwise noted)

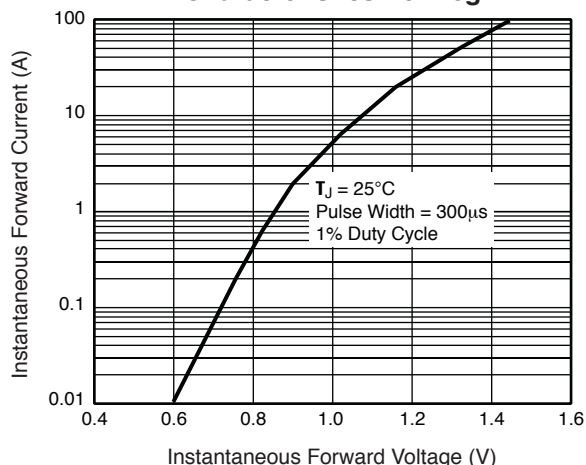
**Fig. 1 – Derating Curve
Output Rectified Current**



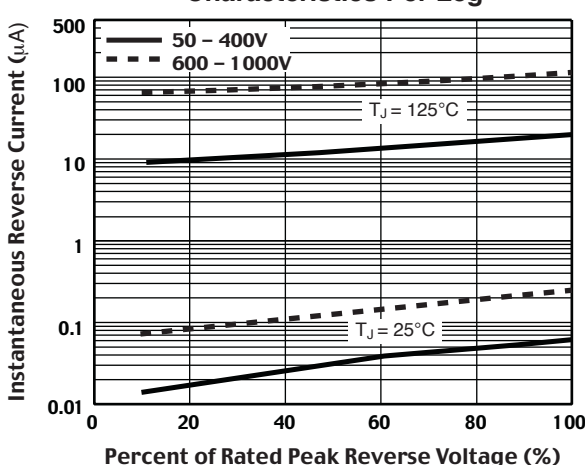
**Fig. 2 – Maximum Non-Repetitive
Peak Forward Surge Current Per Leg**



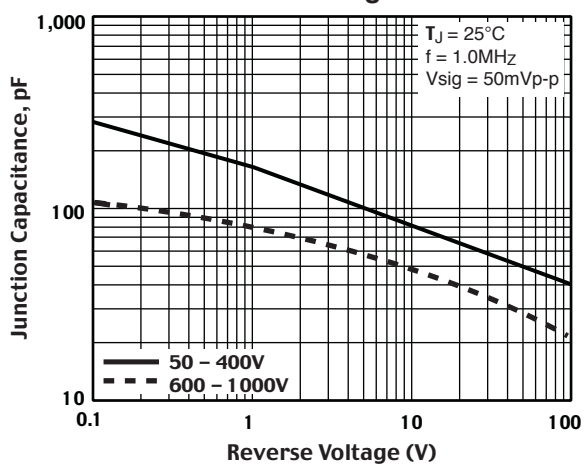
**Fig. 3 – Typical Forward
Characteristics Per Leg**



**Fig. 4 – Typical Reverse Leakage
Characteristics Per Leg**



**Fig. 5 – Typical Junction Capacitance
Per Leg**



**Fig. 6 – Typical Transient Thermal
Impedance**

