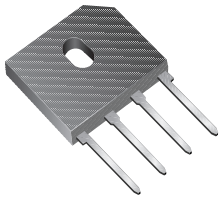




GBU4A thru GBU4M

Vishay Semiconductors
formerly General Semiconductor



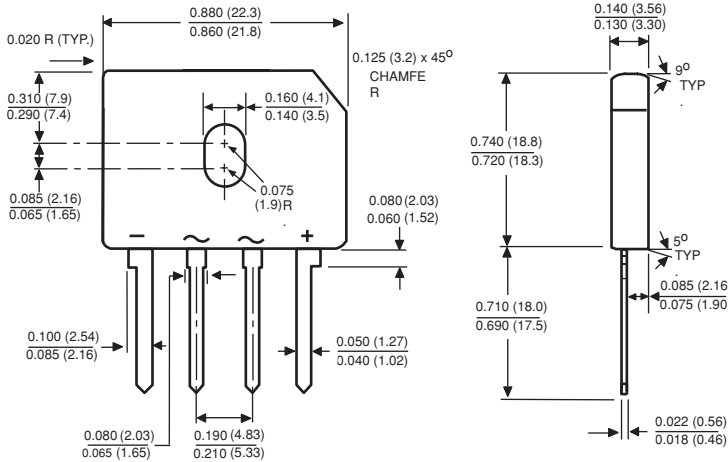
Glass Passivated Single-Phase Bridge Rectifier

Reverse Voltage 50 and 1000V
Forward Current 4.0A

Case Style GBU

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- 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



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

Dimensions in inches and (millimeters)

Mechanical Data

Case: Molded plastic body over passivated junctions
Terminals: Plated leads solderable per MIL-STD-750, Method 2026

Mounting Position: Any (NOTE 4)

Weight: 0.15 oz., 4.0 g

Packaging codes/options:
1/250 EA. per Bulk Tray Stack

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 $T_C=100^\circ\text{C}$ (1) $T_A=40^\circ\text{C}$ (2)	$I_{F(AV)}$	4.0				3.0			A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) $T_J=150^\circ\text{C}$	I_{FSM}	150							A
Rating for fusing ($t<8.3\text{ms}$)	I^2t	93							A ² sec
Typical thermal resistance per leg (2) (1)	$R_{\theta JA}$ $R_{\theta JC}$	22				4.2			°C/W
Operating junction and storage temperature range	T_J, T_{STG}	-55 to +150							°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 DC blocking voltage per leg $T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	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

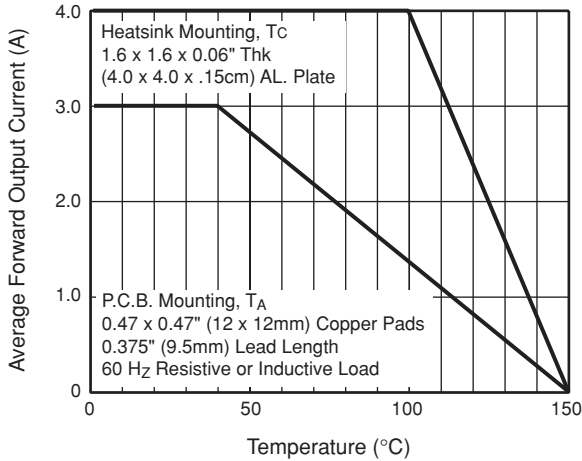


Fig. 2 — Maximum Non-Repetitive Peak Forward Surge Current Per Leg

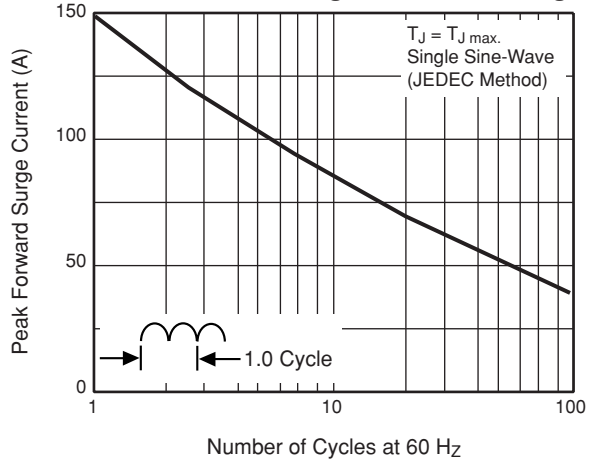


Fig. 3 — Typical Forward Characteristics Per Leg

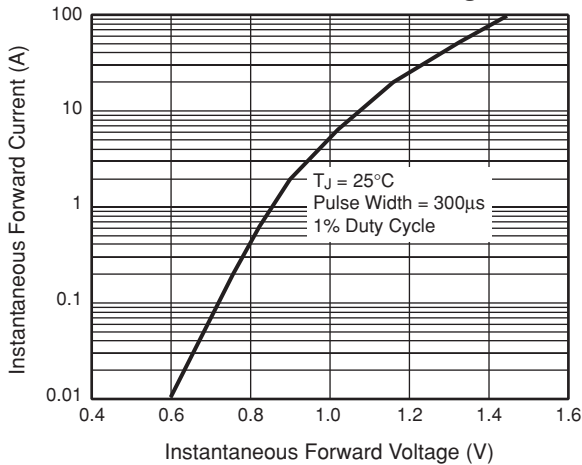


Fig. 4 — Typical Reverse Leakage Characteristics Per Leg

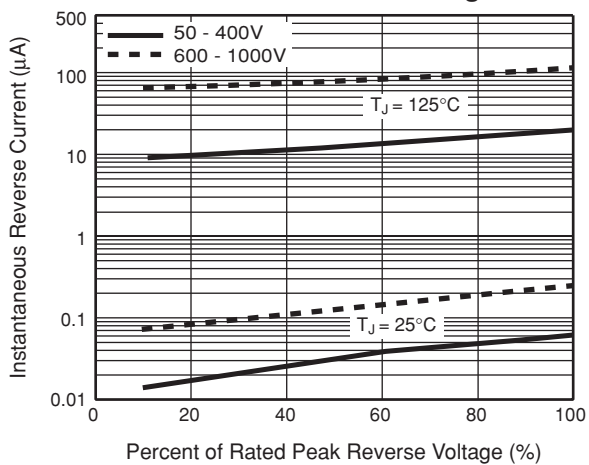


Fig. 5 — Typical Junction Capacitance Per Leg

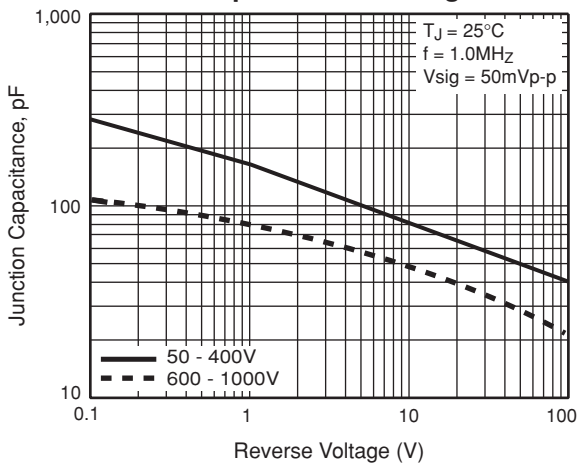


Fig. 6 — Typical Transient Thermal Impedance

