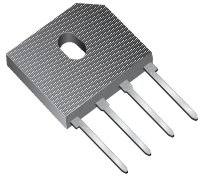




GBU8A thru GBU8M

Vishay Semiconductors
formerly General Semiconductor



Glass Passivated Single-Phase Bridge Rectifier

Case Style GBU

Reverse Voltage 50 and 1000V
Forward Current 8.0A

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 overload rating
- High temperature soldering guaranteed: 260°C/10 seconds, 0.375 (9.5mm) lead length, 5lbs. (2.3kg) tension

Mechanical Data

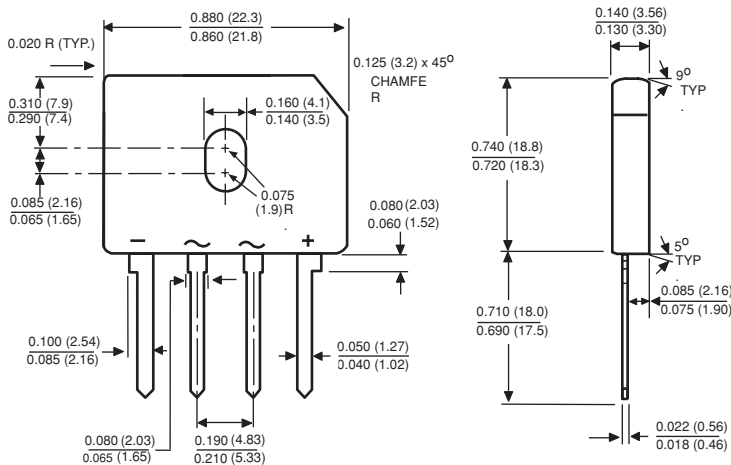
Case: Molded plastic body over passivated junctions
Terminals: Plated leads solderable per MIL-STD-750, Method 2026

Mounting Position: Any (Note 2)

Mounting Torque: 5 in-lbs max.

Weight: 0.15 oz., 4.0 g

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



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

Dimensions in inches and (millimeters)

Maximum Ratings & Thermal Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

Parameter	Symbol	GBU8A	GBU8B	GBU8D	GBU8G	GBU8J	GBU8K	GBU8M	Unit
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 $T_C = 100^\circ\text{C}$ (Note 1)	$I_{F(AV)}$	8.0							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) $T_J = 150^\circ\text{C}$	I_{FSM}	200							A
Rating for fusing ($t < 8.3\text{ms}$)	I^2t	166							A ² sec
Typical thermal resistance per leg (Note 3)	$R_{\theta JA}$ $R_{\theta JC}$	21 2.2							°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.

Parameter	Symbol	GBU8A	GBU8B	GBU8D	GBU8G	GBU8J	GBU8K	GBU8M	Unit
Maximum instantaneous forward voltage drop per leg at 8.0 A	V_F	1.0							V
Maximum DC reverse current at $T_A = 25^\circ\text{C}$ rated DC blocking voltage per leg $T_A = 125^\circ\text{C}$	I_R	5.0 500							μA
Typical junction capacitance per leg at 4V, 1MHz	C_J	211				94			pF

- Notes:** (1) Units case mounted on 3.2 x 3.2 x 0.12" thick (8.2 x 8.2 x 0.3cm) Al plate heatsink
(2) Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screws
(3) Units mounted in free air, no heatsink on P.C.B., 0.5 x 0.5" (12 x 12mm) copper pads, 0.375" lead length

Ratings and Characteristic Curves (T_A = 25°C unless otherwise noted)

Fig. 1 – Derating Curve Output Rectified Current

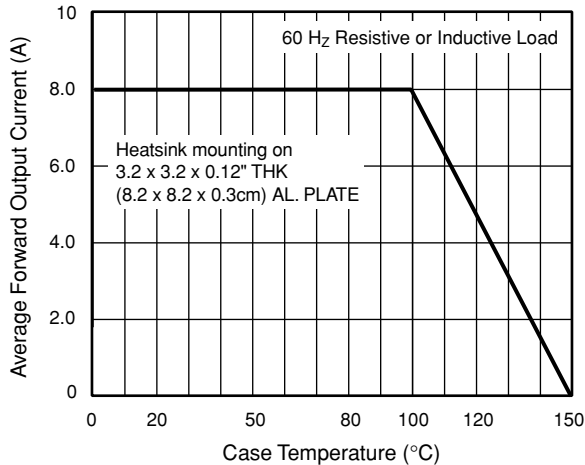


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current Per Leg

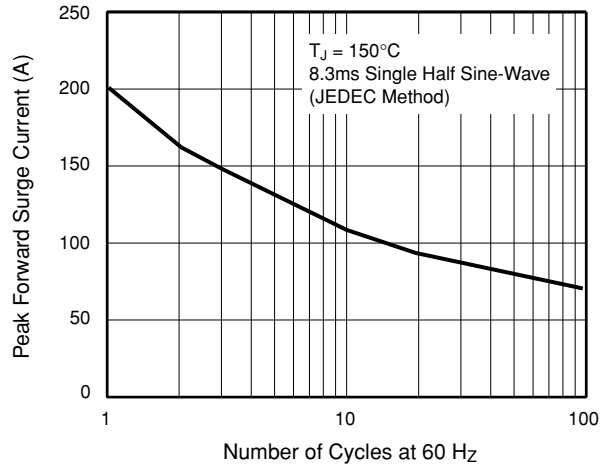


Fig. 3 – Typical Forward Characteristics Per Leg

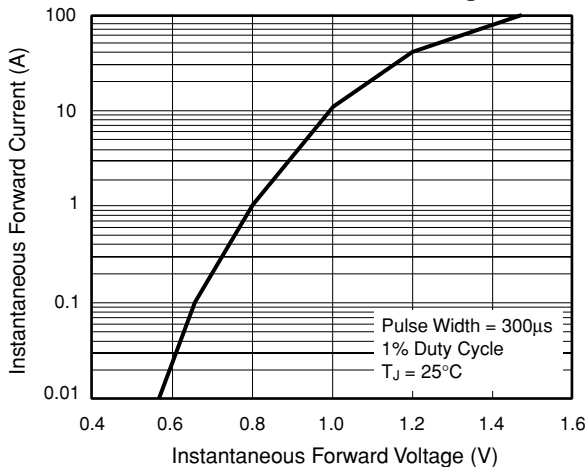


Fig. 4 – Typical Reverse Characteristics Per Leg

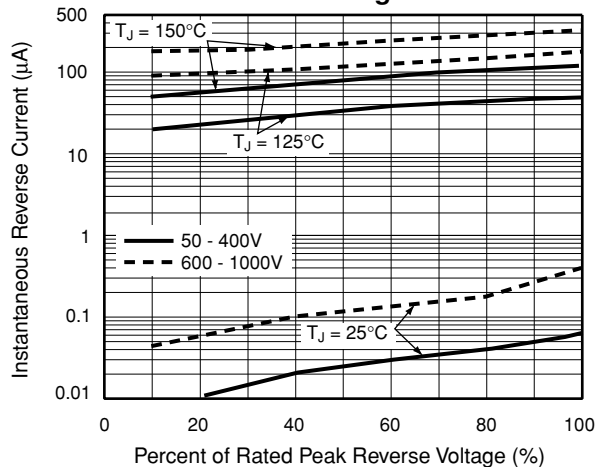


Fig. 5 – Typical Junction Capacitance Per Leg

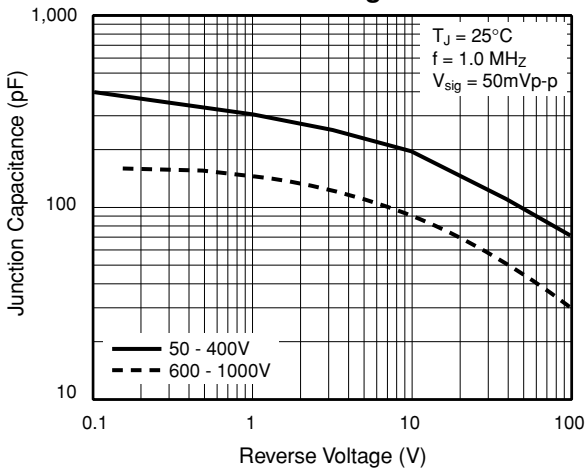


Fig. 6 – Typical Transient Thermal Impedance Per Leg

