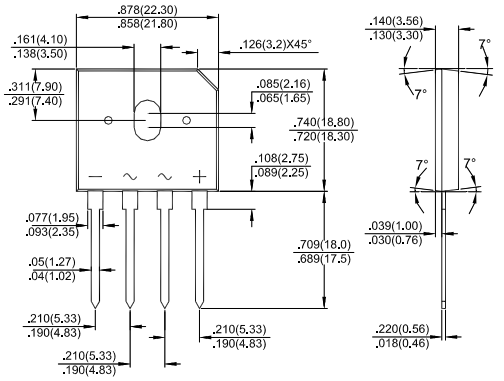
GBU8A THRU GBU8M

GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIERS
Reverse Voltage – 50 to 1000 V
Forward Current – 8.0 A

GBU

Features
- Glass passivated chip junction
- Reliable low cost construction utilizing molded plastic technique
- Ideal for printed circuit board
- Low forward voltage drop
- Low reverse leakage current
- High surge current capability



Dimensions in inches and (millimeters)

Mechanical Data
- **Case:** Molded plastic, GBU
- **Epoxy:** UL 94V-0 rate flame retardant
- **Terminals:** leads solderable per MIL-STD-202, Method 208 guaranteed
- **Mounting Position:** Any

Absolute Maximum Ratings and Characteristics

Ratings at 25 ℃ ambient temperature unless otherwise specified. Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbols	GBU8A	GBU8B	GBU8D	GBU8G	GBU8J	GBU8K	GBU8M	Units
Maximum recurrent 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 current at T_C = 100 ℃ [1]	$I_{F(AV)}$	8							A
Peak forward surge current , 8.3 ms single half-sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	200							A
Maximum forward voltage at 4A DC and 25℃	V_F	1							V
Maximum reverse current at T_A = 25 ℃ at rated DC blocking voltage T_A = 125 ℃	I_R	5 500							μA
Typical junction capacitance [3]	C_J	255				125			pF
Typical thermal resistance [4]	$R_{\theta JA}$	21							℃/W
Typical thermal resistance [4]	$R_{\theta JC}$	2.2							℃/W
Operating and storage temperature range	T_J, T_{Stg}	-55 to +150							℃

[1] Units case mounted on 3.2 X 3.2 X 0.12" thick (8.2 X 8.2 X 0.3 cm) 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] Measured at 1 MHz and applied reverse voltage of 4 VDC.

[4] Units mounted in free air, no heatsink on P.C.B., 0.5 X 0.5" (12 X 12 mm) copper pads, 0.375" lead length.

Fig. 1 – Derating Curve Output Rectified Current

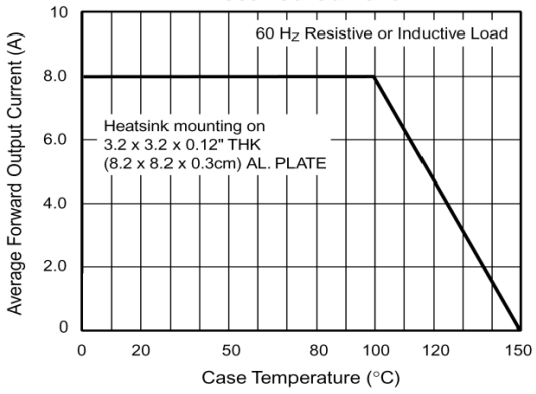


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current Per Leg

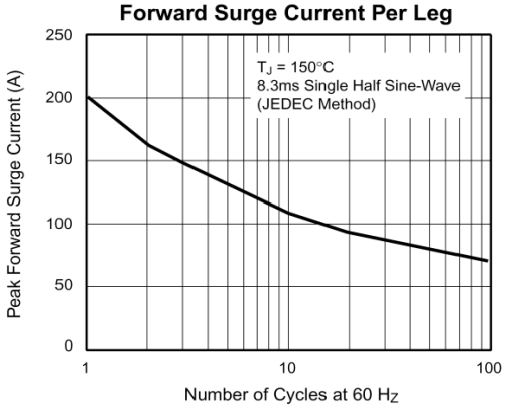


Fig. 3 – Typical Forward Characteristics Per Leg

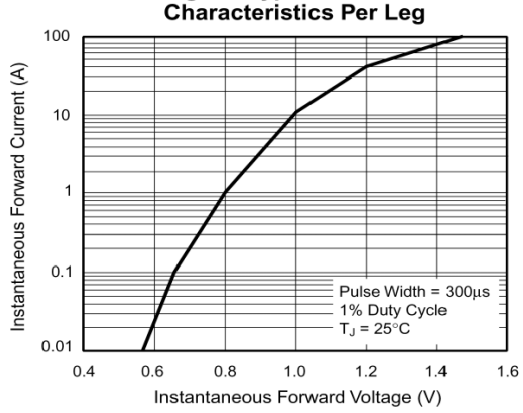


Fig. 4 – Typical Reverse Characteristics Per Leg

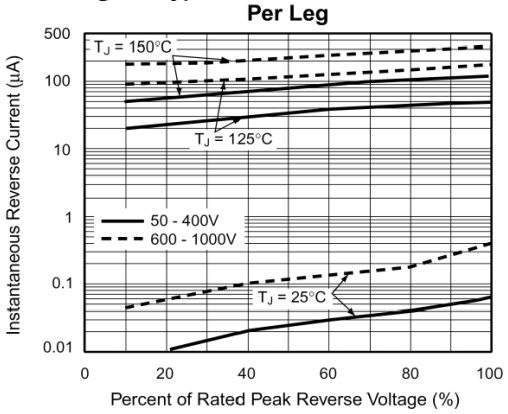


Fig. 5 – Typical Junction Capacitance Per Leg

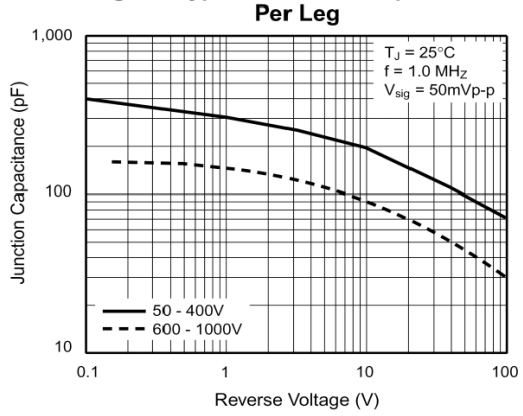


Fig. 6 – Typical Transient Thermal Impedance Per Leg