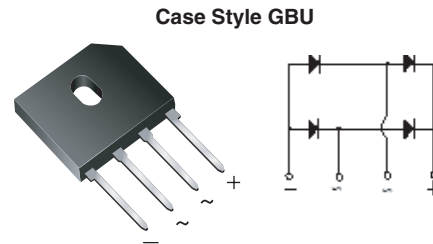




Glass Passivated Single-Phase Bridge Rectifier

Major Ratings and Characteristics

$I_{F(AV)}$	4 A
V_{RRM}	50 V to 1000 V
I_{FSM}	150 A
I_R	5 μ A
V_F	1.0 V
T_j max.	150 °C



Features

- UL Recognition file number E54214
- Ideal for printed circuit boards
- High surge current capability
- High case dielectric strength of 1500 V_{RMS}
- Solder Dip 260 °C, 40 seconds



Mechanical Data

Case: GBU

Epoxy meets UL-94V-0 Flammability rating

Terminals: Matte tin plated (E3 Suffix) leads, solderable per J-STD-002B and JESD22-B102D

Polarity: As marked on body

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

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

Typical Applications

General purpose use in ac-to-dc bridge full wave rectification for Monitor, TV, Printer, Power supply, Switching Mode Power Supply, Adapter, Audio equipment, and Home Appliances applications.

Maximum Ratings

$T_A = 25$ °C, 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	$I_{F(AV)}$	$T_C = 60$ °C ⁽¹⁾							8.0	A
		$T_A = 25$ °C ⁽²⁾							3.0	
Peak forward surge current single sine-wave superimposed on rated load	I_{FSM}	200								A
Rating for fusing ($t < 8.3$ ms)	I^2t	166								A ² sec
Operating junction and storage temperature range	T_J, T_{STG}	- 55 to + 150								°C

Note:

(1) Unit case mounted on Al plate heatsink

(2) Units mounted in free air, no heatsink on P.C.B., 0.5 x 0.5" (12 x 12 mm) copper pads, 0.375" (9.5 mm) lead length

Electrical Characteristics

$T_A = 25\text{ }^\circ\text{C}$, unless otherwise specified

Parameter	Test condition	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 rated DC blocking voltage per leg	$T_A = 25\text{ }^\circ\text{C}$ $T_A = 125\text{ }^\circ\text{C}$	I_R	5.0 500								μA
Typical junction capacitance per leg	at 4 V, 1 MHz	C_J	211			94					pF

Thermal Characteristics

$T_A = 25\text{ }^\circ\text{C}$, unless otherwise specified

Parameter	Symbol	GBU8A	GBU8B	GBU8D	GBU8G	GBU8J	GBU8K	GBU8M	Unit	
Typical thermal resistance per leg	$R_{\theta JA}^{(2)}$ $R_{\theta JC}^{(1,3)}$	20 4.0								$^\circ\text{C/W}$

Notes:

- (1) Units case mounted on Al plate heatsink
- (2) Units mounted in free air, no heatsink on P.C.B., 0.5 x 0.5" (12 x 12 mm) copper pads, 0.375" (9.5 mm) lead length
- (3) Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screws

Ratings and Characteristics Curves

($T_A = 25\text{ }^\circ\text{C}$ unless otherwise specified)

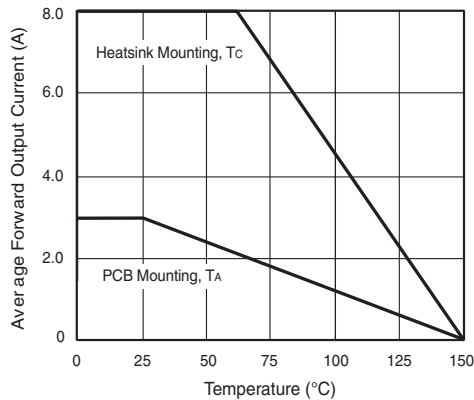


Figure 1. Derating Curve Output Rectified Current

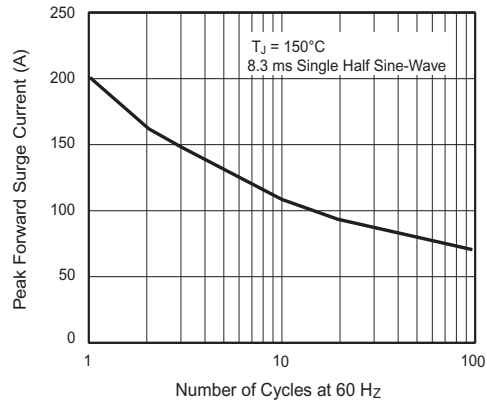


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

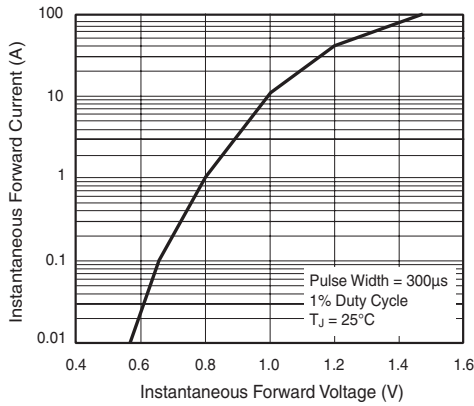


Figure 3. Typical Forward Characteristics Per Leg

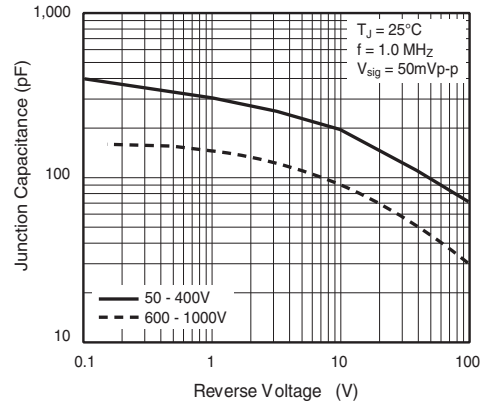


Figure 5. Typical Junction Capacitance Per Leg

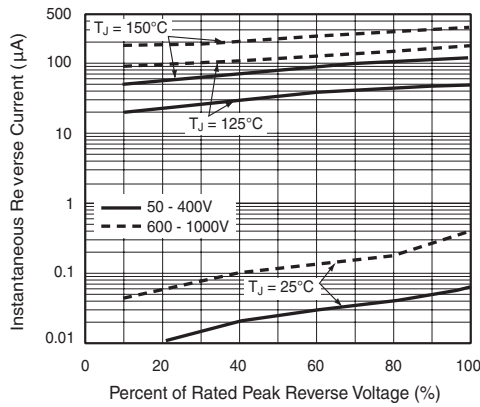


Figure 4. Typical Reverse Leakage Characteristics Per Leg

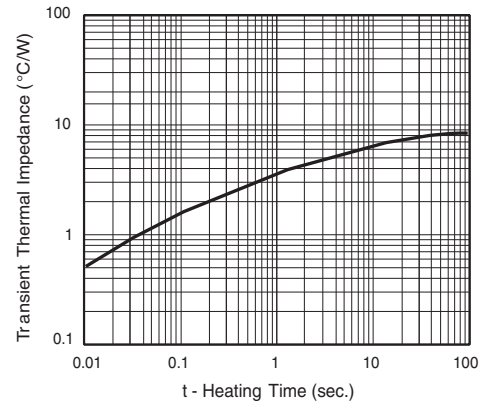
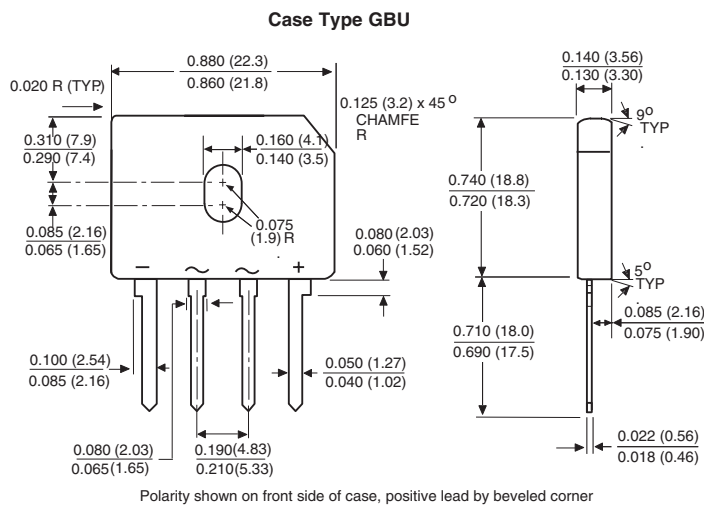


Figure 6. Typical Transient Thermal Impedance Per Leg

Package outline dimensions in inches (millimeters)





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