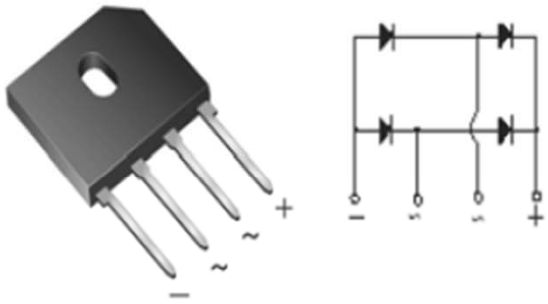
GBU4A thru GBU4M

Glass passivated Single Phase Bridge Rectifiers
Reverse Voltage 50~1000V Output Current 4.0A

Features

- Ideal for printed circuit boards
- High surge current capability
- High case dielectric strength of 1500V_{RMS}
- Solder dip 260 °C, 40 s



Mechanical Data

- Case:GBU
  Expoxy meers UL-94V-0 Flammability rating
- Teminals:Matte tin plated(E3 Suffix) leads,solderable per J-STD-002B and JESD22-B102D
- Polarity:As marked on body
- Mounting torquw: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, Switching Mode Power Supply, Adapter, Audio equipment, and Home Appliances applications.

Maximum Ratings (TA = 25 °C unless otherwise noted)

Parameter	Symbol	GBU4A	GBU4B	GBU4D	GBU4G	GBU4J	GBU4K	GBU4M	Unit
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	V
Maximum average forward rectified output current at T_C=100℃ (1)	IF(AV)	4.0							A
Maximum average forward rectified output current at T_A=40℃ (2)	IF(AV)	3.0							A
Peak forward surge current 8.3 ms single half sine-wave superimposed on rated load	IFSM	150							A
Rating for fusing(t<8.3ms)	I^2t	93							A^2sec
Operating junction and storage temperature range	TJ, TSTG	- 55 to + 150							°C

Electrical Characteristics (TA = 25 °C unless otherwise noted)

Parameter	Test Conditions	Symbol	GBU4A	GBU4B	GBU4D	GBU4G	GBU4J	GBU4K	GBU4M	Unit
Maximum instantaneous forward voltage drop per leg at 2.0A		V_F	1.00							Volts
Maximum DC reverse current at rated DC blocking voltage per leg	TA=25℃	I_R	5.0							μA
	TA=125℃	I_R	500							μA
Typical junction capacitance per leg	4.0 V, 1 MHz	C_J	100				45			pF

Thermal Characteristics

Parameter	Symbol	GBU4A	GBU4B	GBU4D	GBU4G	GBU4J	GBU4K	GBU4M	Unit
Typical thermal resistance per leg	$R_{\theta JA}$ (2)	22							℃/W
	$R_{\theta JC}$ (1,3)	4.2							℃/W

Notes: 1. Unit case mounted on 5.1*5.1*0.15 cm thick AL plate heatsink

2. Units mounted in free air, no heatsink on P.C.B. with 0.5*0.5" (12.7*12.7mm) 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 screws

Ratings and Characteristics Curves

(TA = 25℃ unless otherwise noted)

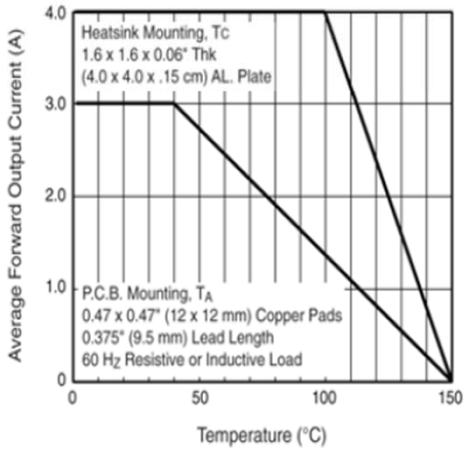


Figure 1. Derating Curve Output Rectified Current

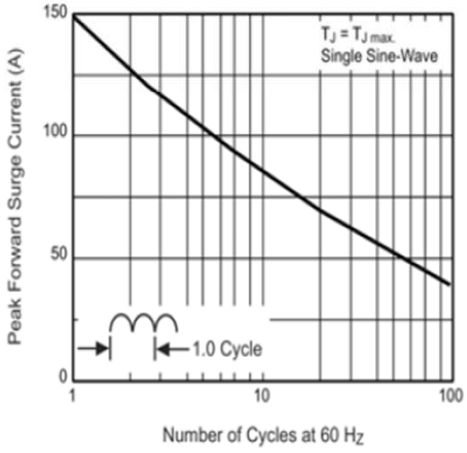


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Leg

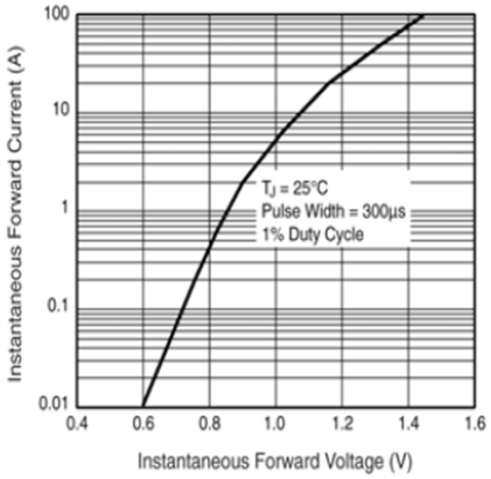


Figure 3. Typical Forward Characteristics Per Leg

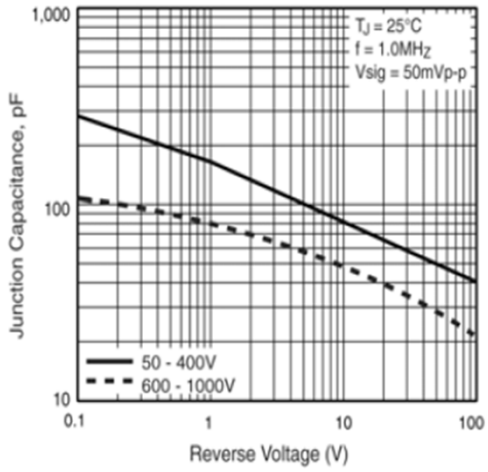


Figure 5. Typical Junction Capacitance Per Leg

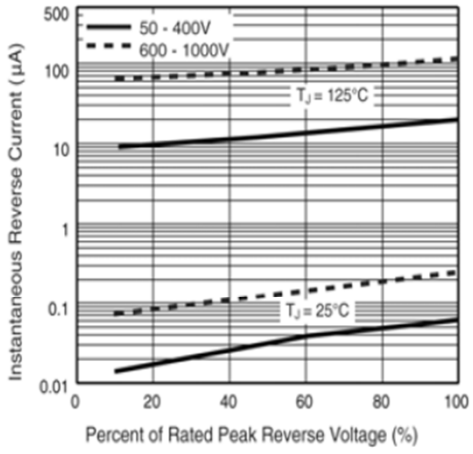


Figure 4. Typical Reverse Leakage Characteristics Per Leg

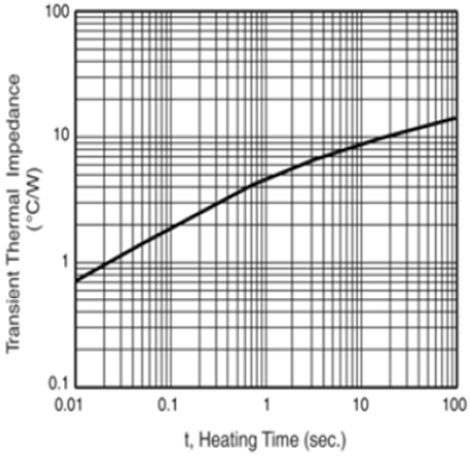
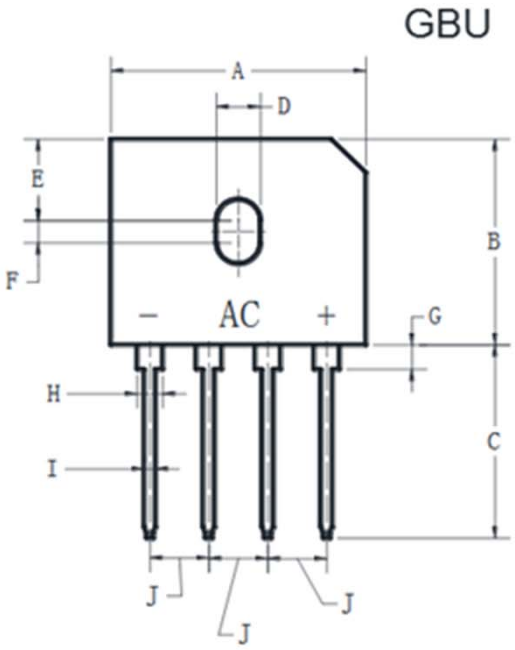
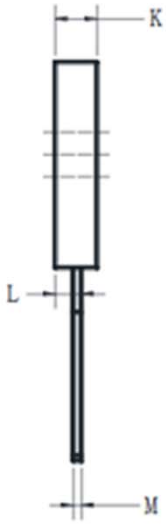


Figure 6. Typical Transient Thermal Impedance

Package Outline Dimensions





GBU		
Dim	Min	Max
A	21.70	22.30
B	18.20	19.10
C	17.27	18.29
D	3.40	4.10
E	7.40	7.90
F	1.65	2.30
G	1.52	2.54
H	1.65	2.54
I	0.90	1.27
J	4.80	5.30
K	3.20	3.80
L	1.70	2.20
M	0.40	0.60

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