

GBL2A THRU GBL2M

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GBL2A THRU GBL2M

2.0A Glass Passivated Single-Phase Bridge Rectifiers-50-1000V

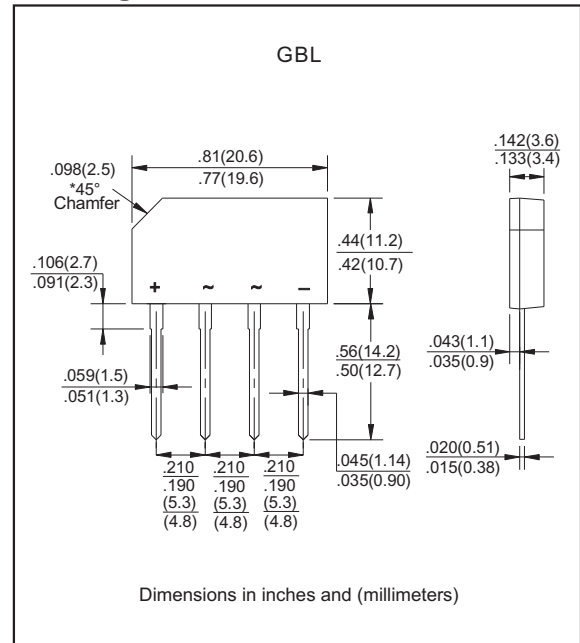
Features

- Recommended for non-automatic applications.
- Ideal for & save space on printed circuit board.
- Applicable for automatic insertion.
- Reliable low cost construction utilizing molded plastic technology results in inexpensive product.
- Glass passivated chip junctions.
- Lead-free parts meet RoHS requirements.
- UL recognized file # E321971
- Suffix "-H" indicates Halogen-free part, ex. GBL2A-H.

Mechanical data

- Epoxy: UL94-V0 rated flame retardant
- Case : Molded plastic, GBL
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : marked on body
- Mounting Position : Any
- Weight : Approximated 2.00 gram

Package outline



Maximum ratings and Electrical Characteristics (AT $T_A=25^\circ\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	SYMBOL	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig. 1	$I_{F(AV)}$			2.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC methode)	I_{FSM}			60	A
Reverse current	$V_R = V_{RRM} \quad T_J = 25^\circ\text{C}$	I_R			10.0	μA
	$V_R = V_{RRM} \quad T_J = 125^\circ\text{C}$				1000	
Rating for fusing	$t < 8.3 \text{ ms}$	I^2t			15	A^2s
Storage temperature		T_{STG}	-65		+175	$^\circ\text{C}$

SYMBOLS	V_{RRM}^{*1} (V)	V_{RMS}^{*2} (V)	V_R^{*3} (V)	V_F^{*4} (V)	Operating temperature $T_J, (^\circ\text{C})$
GBL2A	50	35	50	1.10	-55 to +150
GBL2B	100	70	100		
GBL2D	200	140	200		
GBL2G	400	280	400		
GBL2J	600	420	600		
GBL2K	800	560	800		
GBL2M	1000	700	1000		

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage per bridge element@ $I_F=2.0\text{A}$

Rating and characteristic curves (GBL2A THRU GBL2M)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

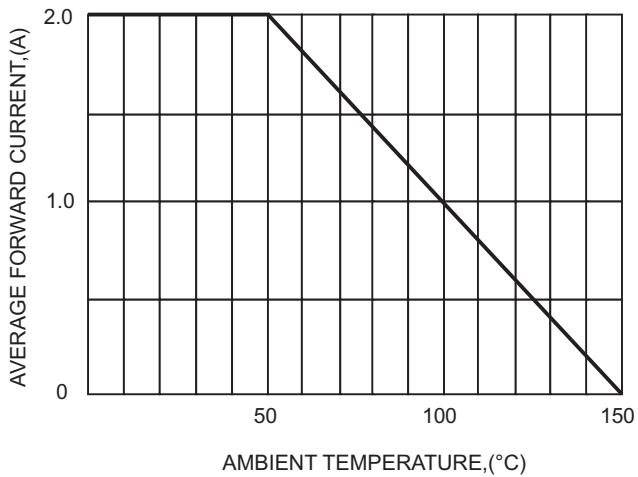


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

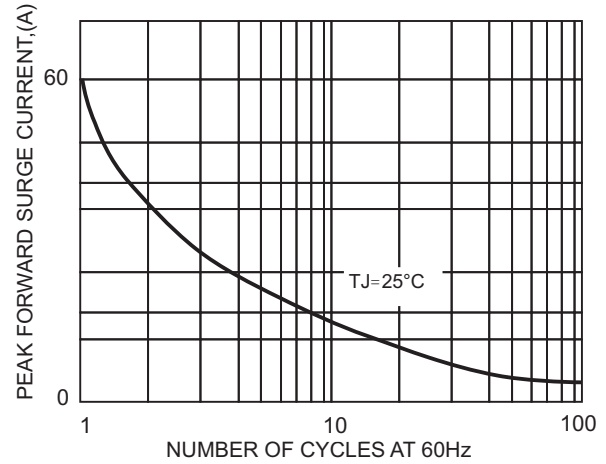


FIG.3-TYPICAL FORWARD CHARACTERISTICS

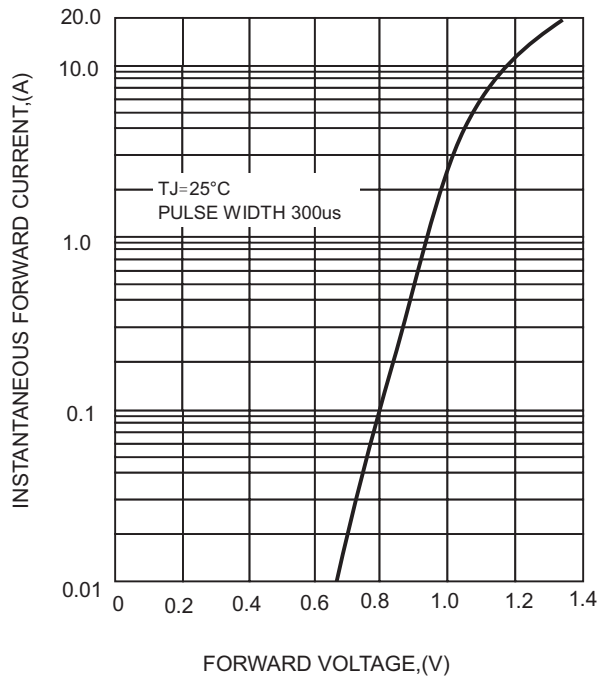
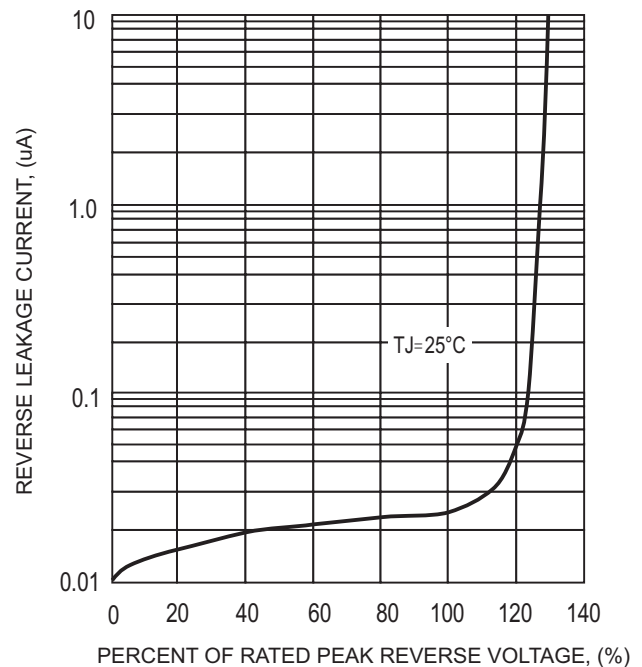
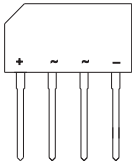
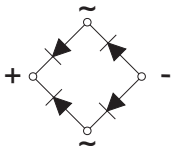


FIG.4-TYPICAL REVERSE CHARACTERISTICS



GBL2A THRU GBL2M

Pinning information

Simplified outline	Symbol
	

Marking

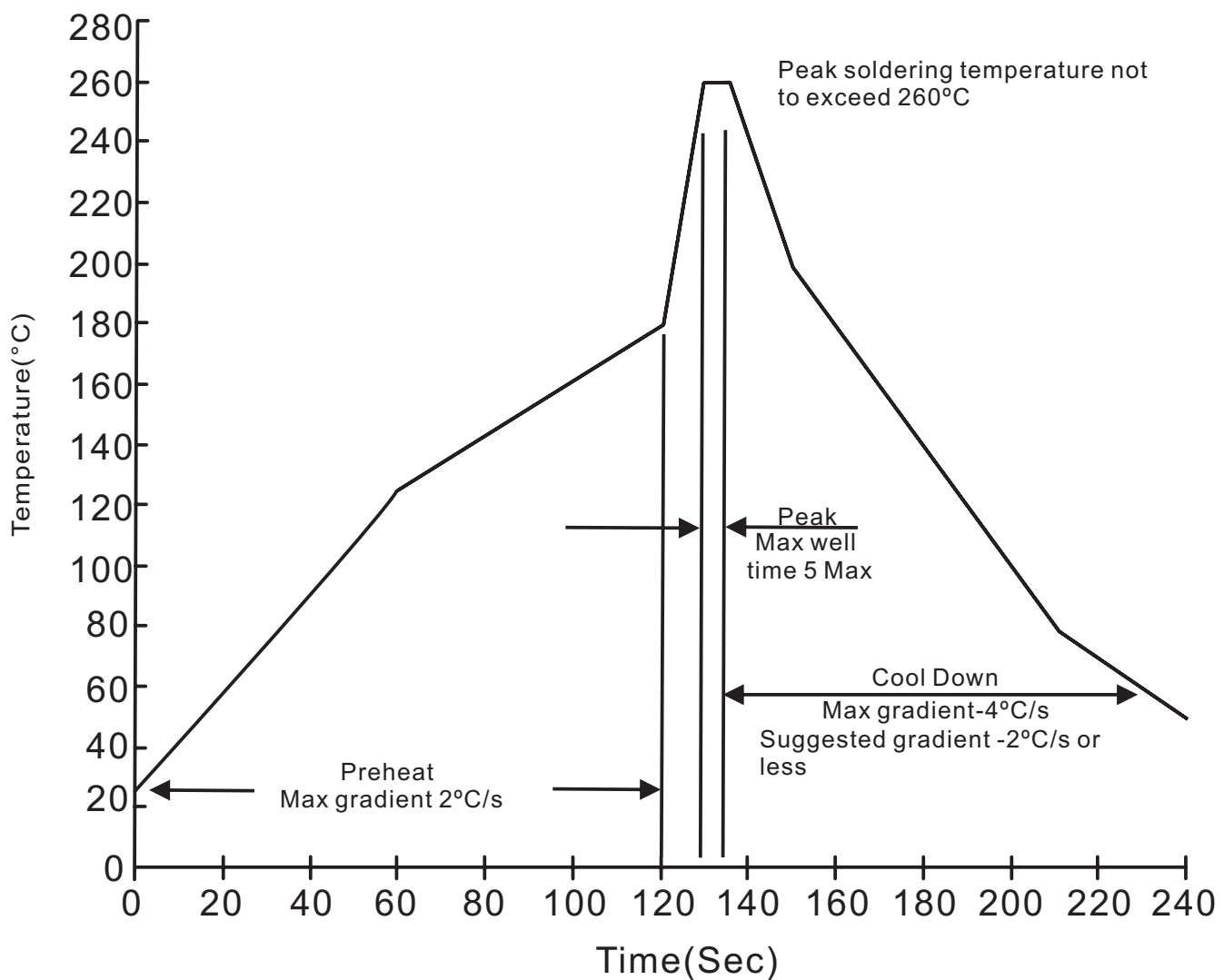
Type number	Marking code
GBL2A	GBL2A
GBL2B	GBL2B
GBL2D	GBL2D
GBL2G	GBL2G
GBL2J	GBL2J
GBL2K	GBL2K
GBL2M	GBL2M

Tube packing

PACKAGE	TUBE (pcs)	TUBE SIZE (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
GBL	20	430*28.8*5.8	448*129*137	2,000	7.2

Bulk packing

PACKAGE	Q'TY (PCS / BOX)	INNER BOX (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
GBL	960	350*337*44	375*360*213	3,840	13.1

GBL2A THRU GBL2M**Suggested thermal profiles for soldering processes****1. Lead free temperature profile wave-soldering**

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High reliability test capabilities

Item Test	Conditions	Reference
1. Solder Resistance	at $260 \pm 5^{\circ}\text{C}$ for $10 \pm 2\text{sec.}$ immerse body into solder $1/16" \pm 1/32"$	MIL-STD-750D METHOD-2031
2. Solderability	at $245 \pm 5^{\circ}\text{C}$ for 5 sec.	MIL-STD-202F METHOD-208
3. High Temperature Reverse Bias	$V_R = 80\%$ rate at $T_J = 150^{\circ}\text{C}$ for 168 hrs.	MIL-STD-750D METHOD-1038
4. Forward Operation Life	Rated average rectifier current at $T_A = 25^{\circ}\text{C}$ for 500hrs.	MIL-STD-750D METHOD-1027
5. Intermittent Operation Life	$T_A = 25^{\circ}\text{C}$, $I_F = I_O$ On state: power on for 5 min. off state: power off for 5 min. on and off for 500 cycles.	MIL-STD-750D METHOD-1036
6. Pressure Cooker	$15P_{SIG}$ at $T_A = 121^{\circ}\text{C}$ for 4 hrs.	JESD22-A102
7. Temperature Cycling	-55°C to $+125^{\circ}\text{C}$ dwelled for 30 min. and transferred for 5min. total 10 cycles.	MIL-STD-750D METHOD-1051
8. Thermal Shock	0°C for 5 min. rise to 100°C for 5 min. total 10 cycles.	MIL-STD-750D METHOD-1056
9. Forward Surge	8.3ms single half sine-wave superimposed on rated load, one surge.	MIL-STD-750D METHOD-4066-2
10. Humidity	at $T_A = 85^{\circ}\text{C}$, RH=85% for 1000hrs.	MIL-STD-750D METHOD-1021
11. High Temperature Storage Life	at 175°C for 1000 hrs.	MIL-STD-750D METHOD-1031