GBP2A THRU GBP2M

List

GBP2A THRU GBP2M

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

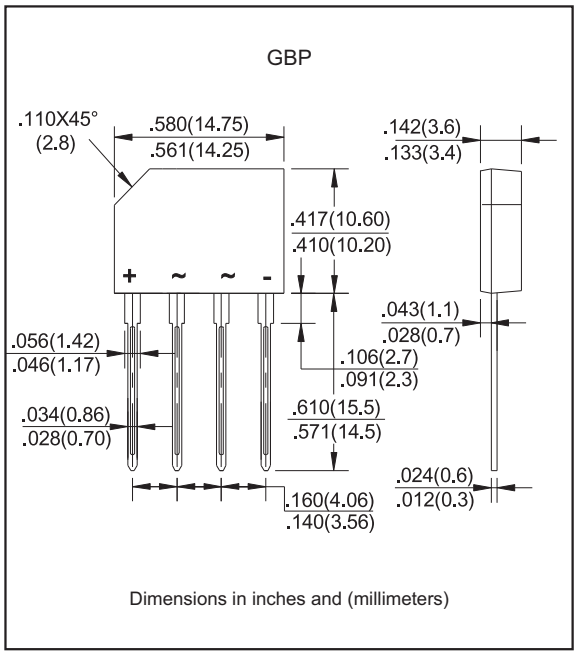
Features

- Surge overload rating - 60 amperes peak.
- Ideal for 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 requirments.
- UL recognized file # E321971
- Suffix "-H" indicates Halogen-free part, ex.GBP2A-H.

Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, GBP
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : marked on body
- Mounting Position : Any
- Weight : Approximated 1.453gram

Package outline



Maximum ratings and Electrical Characteristics (AT T_A=25°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} T_J = 25°C	I_R			10.0	μA
	V_R = V_{RRM} T_J = 125°C				1000	
Rating for fusing	t < 8.3 ms	I^2t			15	A^2s
Storage temperature		T_{STG}	-65		+175	°C

SYMBOLS	V_{RRM} *1 (V)	V_{RMS} *2 (V)	V_R *3 (V)	V_F *4 (V)	Operating temperature T_J, (°C)
GBP2A	50	35	50	1.10	-55 to +150
GBP2B	100	70	100		
GBP2D	200	140	200		
GBP2G	400	280	400		
GBP2J	600	420	600		
GBP2K	800	560	800		
GBP2M	1000	700	1000		

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage per bridge element@I_F=2.0A

Rating and characteristic curves (GBP2A THRU GBP2M)

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

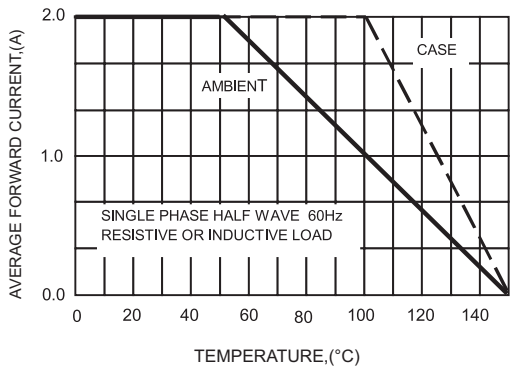


FIG.2-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

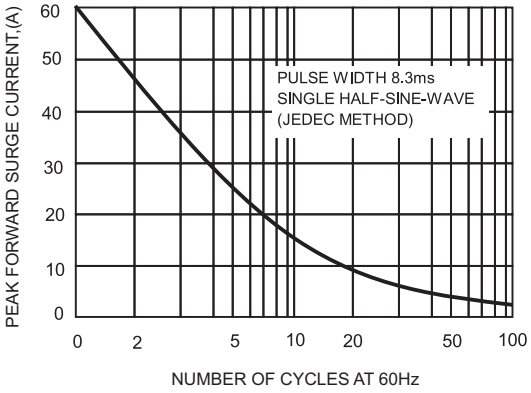


FIG.3-TYPICAL FORWARD CHARACTERISTICS

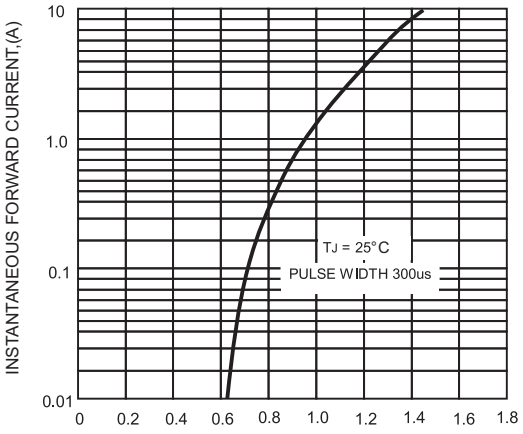


FIG.4-TYPICAL REVERSE CHARACTERISTICS

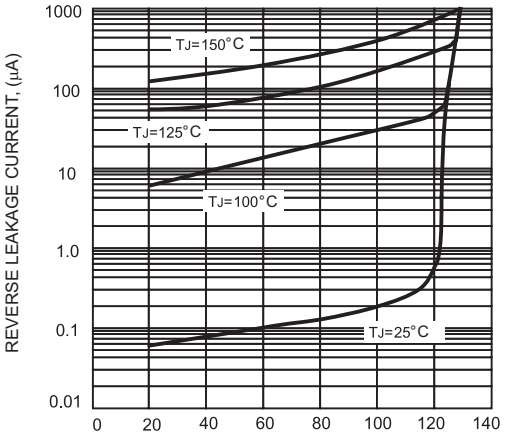
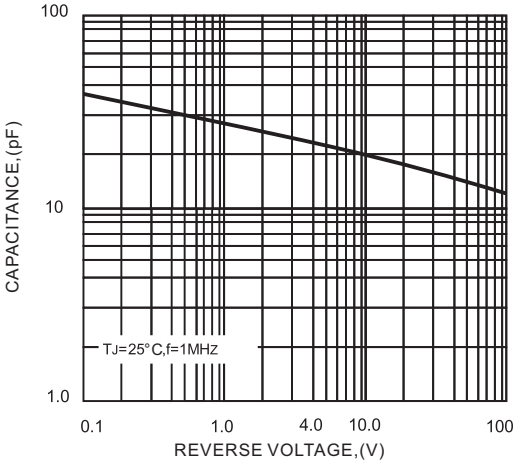


FIG.5-TYPICAL JUNCTION CAPACITANCE



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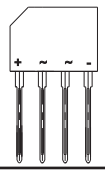
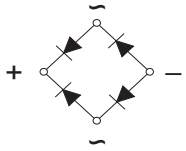
Pinning information

Simplified outline	Symbol
	

Marking

Type number	Marking code
GBP2A	GBP2A
GBP2B	GBP2B
GBP2D	GBP2D
GBP2G	GBP2G
GBP2J	GBP2J
GBP2K	GBP2K
GBP2M	GBP2M

Tube packing

PACKAGE	TUBE (pcs)	TUBE SIZE (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
GBP	25	390*28.8*5.8	408*187*128	3,000	7.7

Bulk packing

PACKAGE	Q'TY (PCS / BOX)	INNER BOX (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
GBP	1,120	350*337*44	375*360*213	4,480	10.9

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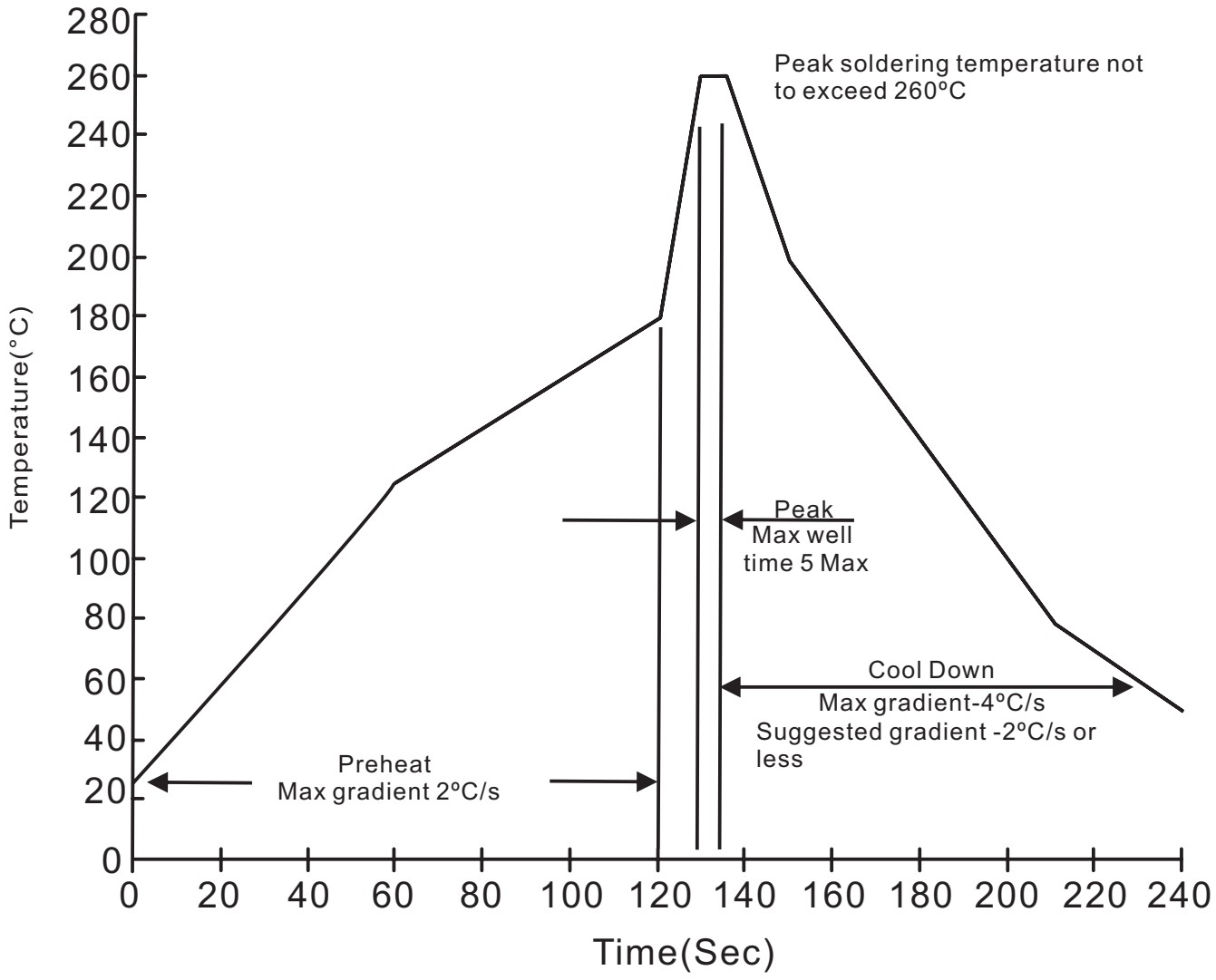
Suggested thermal profiles for soldering processes

1.Lead free temperature profile wave-soldering



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High reliability test capabilities

Item Test	Conditions	Reference
1. Solder Resistance	at 260±5°C for 10±2sec. immerse body into solder 1/16"±1/32"	MIL-STD-750D METHOD-2031
2. Solderability	at 245±5°C for 5 sec.	MIL-STD-202F METHOD-208
3. High Temperature Reverse Bias	V_R=80% rate at T_J=150°C for 168 hrs.	MIL-STD-750D METHOD-1038
4. Forward Operation Life	Rated average rectifier current at T_A=25°C for 500hrs.	MIL-STD-750D METHOD-1027
5. Intermittent Operation Life	T_A = 25°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°C for 4 hrs.	JESD22-A102
7. Temperature Cycling	-55°C to +125°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°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