KBP3005G THRU KBP310G

List

Formosa MS

KBP3005G THRU KBP310G

3.0A Glass Passivated Single Phase Bridge Rectifiers-50-1000V

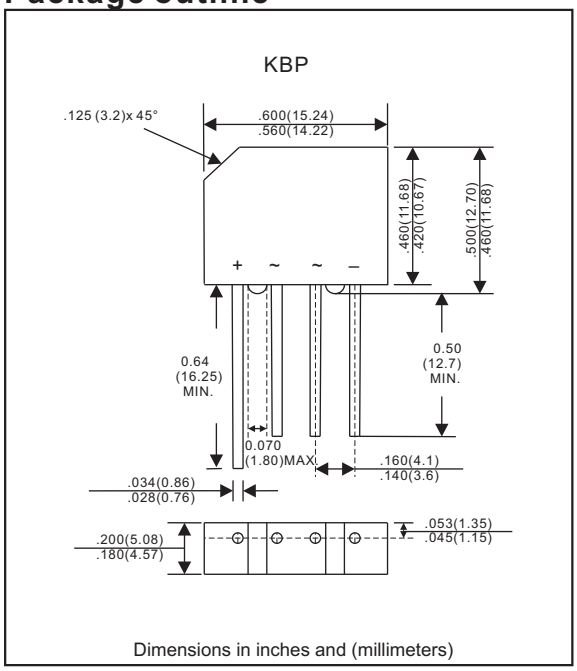
Features

- Surge overload ratings to 80 amperes peak
- Ideal for printed circuit board
- Reliable low cost construction technique
- Lead-free parts for green partner, meet RoHS requirements
- UL recognized file # E321971.
- Suffix "-H" indicates Halogen free parts, ex. KBP3005G-H.

Mechanical data

- Case: Potted plastic round body KBP
- Epoxy: UL94-V0 rated flame retardant
- Terminals: Solderable per MIL-STD-750 Method 2026
- Polarity: As marked
- Mounting Position: Any
- Weight: Approximated 1.70 grams

Package outline



Dimensions in inches and (millimeters)

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_O			3.0	A
Forward surge current	8.3ms single half sine-wave (JEDEC methode)	I_{FSM}			80	A
Reverse current	V_R = V_{RRM} T_J = 25°C	I_R			5.0	uA
	V_R = V_{RRM} T_J = 125°C				500	
I^2t Rating for fusing	t < 8.3 ms	I^2t			27	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)
KBP3005G	50	35	50	1.10	-55 to +150
KBP301G	100	70	100		
KBP302G	200	140	200		
KBP304G	400	280	400		
KBP306G	600	420	600		
KBP308G	800	560	800		
KBP310G	1000	700	1000		

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage @I_F=3.0A

Rating and characteristic curves (KBP3005G THRU KBP310G)

FIG.1-DERATING CURVE
OUTPUT RECTIFIED CURRENT

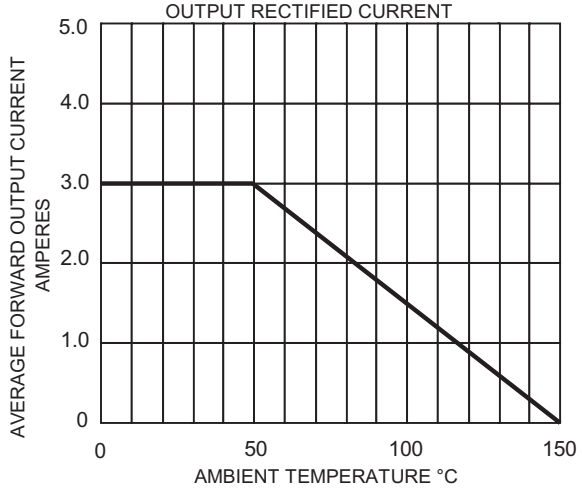


FIG.2-TYPICAL FORWARD
CHARACTERISTICS

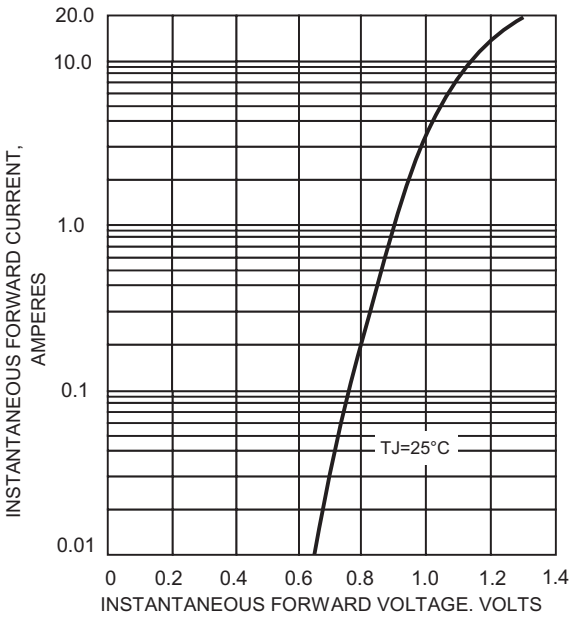


FIG.3-TYPIACL REVERSE CHARACTERISTICS

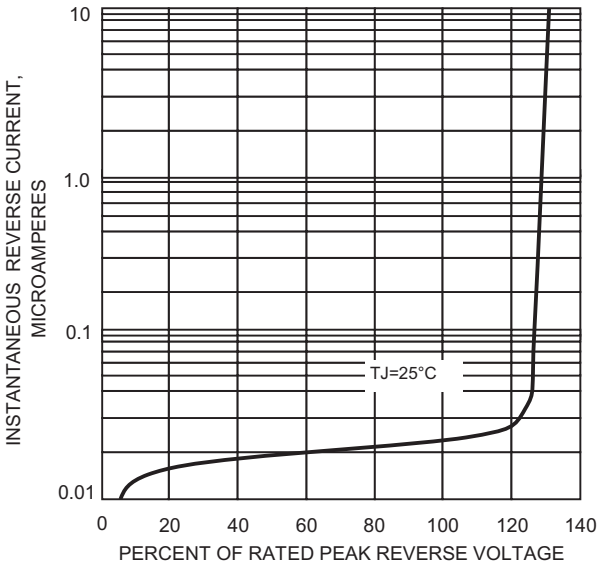
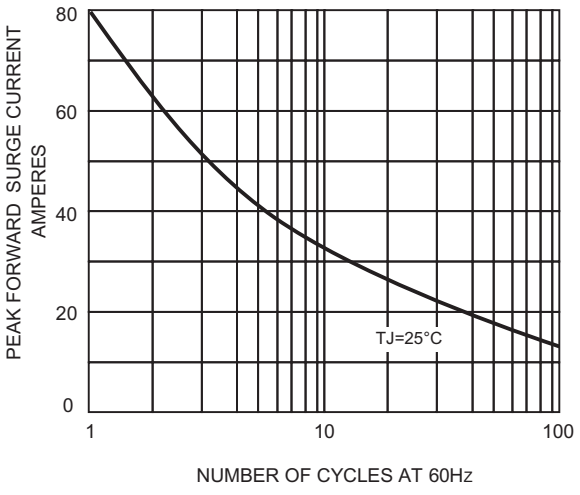


FIG.4-MAXIMUM FORWARD SURGE CURRENT



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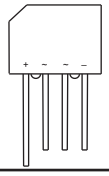
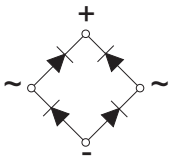
Pinning information

Simplified outline	Symbol
	

Marking

Type number	Marking code
KBP3005G	KBP3005G
KBP301G	KBP301G
KBP302G	KBP302G
KBP304G	KBP304G
KBP306G	KBP306G
KBP308G	KBP308G
KBP310G	KBP310G

Tube packing

PACKAGE	TUBE (pcs)	TUBE SIZE (m/m)	BOX (pcs)	INNER BOX (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
KBP	30	470*37.4*7.4	1,200	490*145*85	505*325*195	4,800	17.2

Bulk packing

PACKAGE	BOX (pcs)	INNER BOX (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
KBP	500	180*180*35	390*190*200	5,000	11.4

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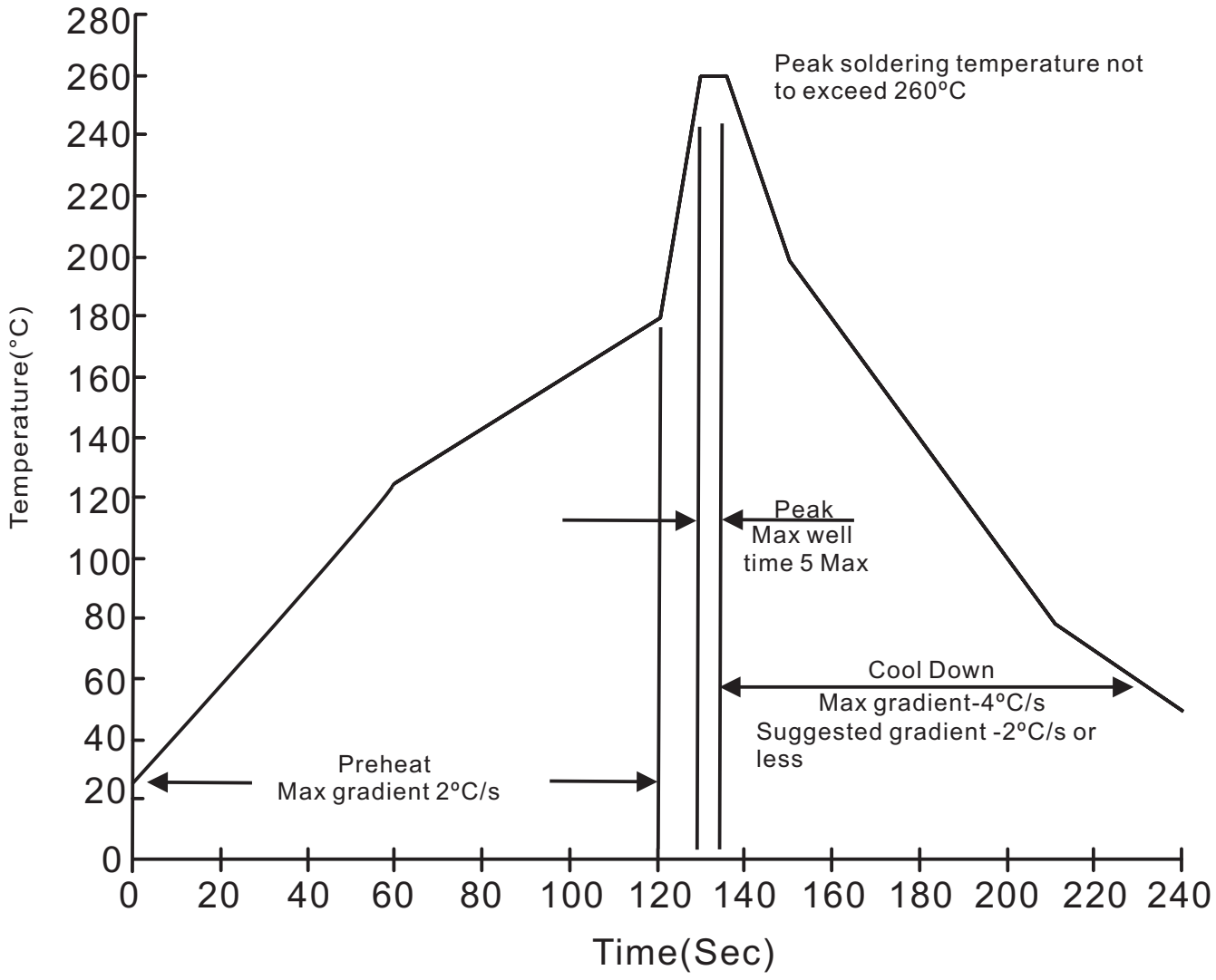
Suggested thermal profiles for soldering processes

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. Forward Surge	8.3ms single half sine-wave, one surge.	MIL-STD-750D METHOD-4066-2
9. Humidity	at T_A=85°C, RH=85% for 1000hrs.	MIL-STD-750D METHOD-1021
10. High Temperature Storage Life	at 175°C for 1000 hrs.	MIL-STD-750D METHOD-1031