THE DATASHEET OF

KBP310G-BP

	E502650

Features

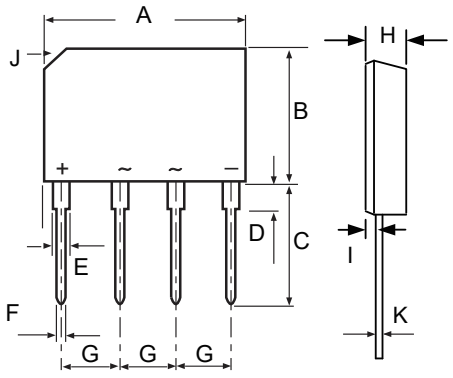
- Halogen Free. “Green” Device (Note 1)
- Glass Passivated Chip Junction
- High Surge Forward Current Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note 2)("P" Suffix Designates RoHS Compliant. See Ordering Information)

3 Amp Bridge Rectifier 50 to 1000 Volts

Maximum Ratings @ 25°C (Unless Otherwise Specified)

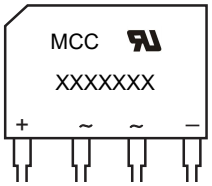
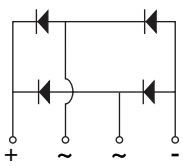
Parameter	Symbol	Value							Unit
		KBP 3005G	KBP 301G	KBP 302G	KBP 304G	KBP 306G	KBP 308G	KBP 310G	
Peak Repetitive Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Working Peak Reverse Voltage	V_{RWM}								
DC Blocking Voltage	V_R								
RMS Reverse Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Average Rectified Forward Current	$I_{F(AV)}$	3							A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	I_{FSM}	80							A
Non-Repetitive Peak Surge Current @ 1ms Square Wave		160							
I^2t Rating for Fusing @1ms≤t≤8.3ms	I^2t	26							A^2s
Dielectric strength @Terminals to Case, AC 1 Minute	V_{dis}	2							KV

GBP



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.561	0.580	14.25	14.75	
B	0.406	0.417	10.10	10.60	
C	0.561	0.581	14.25	14.73	
D	0.071	0.087	1.80	2.20	
E	0.046	0.056	1.17	1.42	
F	0.030	0.034	0.76	0.86	
G	0.140	0.160	3.56	4.06	
H	0.131	0.161	3.35	4.10	
I	0.031	0.043	0.80	1.10	
J	0.106 X 45°		2.70 X 45°		
K	0.012	0.025	0.30	0.64	

Part Number	Marking Code
KBP3005G	KBP3005G
KBP301G	KBP301G
KBP302G	KBP302G
KBP304G	KBP304G
KBP306G	KBP306G
KBP308G	KBP308G
KBP310G	KBP310G

Marking Diagram	Internal Structure
	

Note:
1.Halogen free "Green” products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
2.High temperature solder exemption applied, see EU directive annex 7a.

Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
T_J	Operating Junction Temperature Range		-55		150	°C
T_{stg}	Storage Temperature Range		-55		150	°C
$Rth_{(J-C)}$	Thermal Resistance from Junction to Case	Note 1		5		°C/W
$Rth_{(J-A)}$	Thermal Resistance from Junction to Ambient	Without Heatsink		45		°C/W

Note:

1.Device mounted on 75mm x 45mm x 5.5mm Aluminum Plate Heatsink.

Electrical Characteristics @ 25°C Unless Otherwise Specified(Per Diode)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	V_F	I_F=1.5A;T_J=25°C			1.0	V
Reverse Current	I_R	at Rated V_R;T_J=25°C at Rated V_R;T_J=125°C			5 100	μA
Junction Capacitance	C_J	V_R=4V;f=1MHz;T_J=25°C		27		pF

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

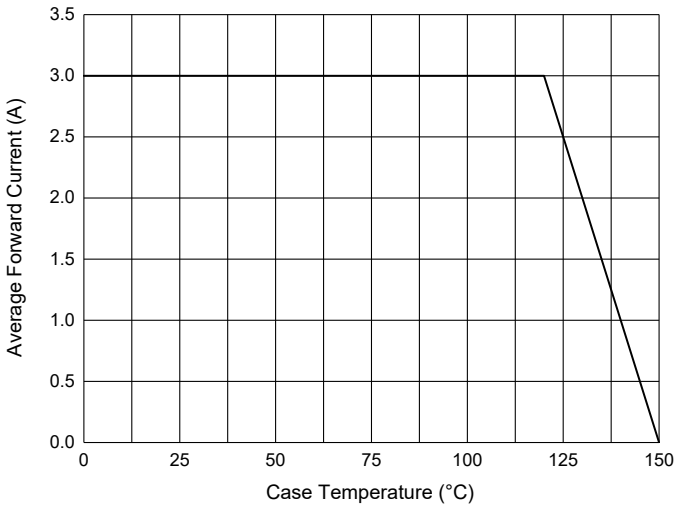


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

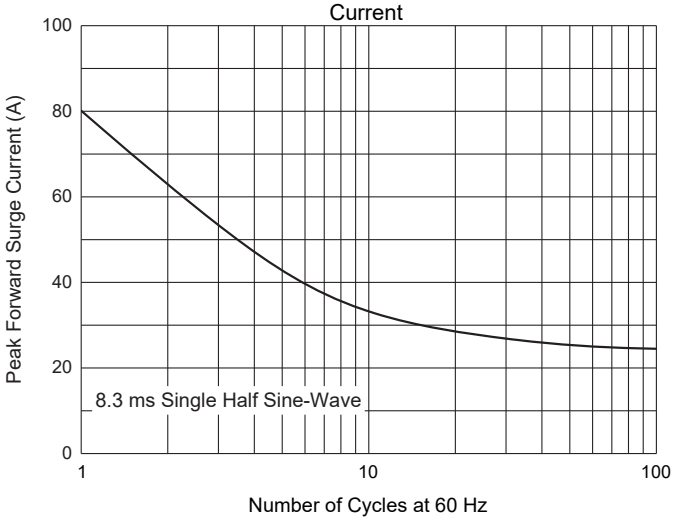


Fig. 3 - Typical Forward Characteristics

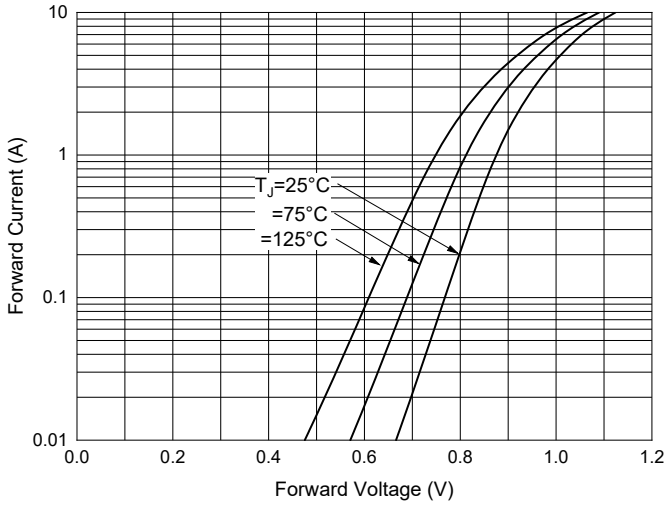


Fig. 4 - Typical Reverse Leakage Characteristics

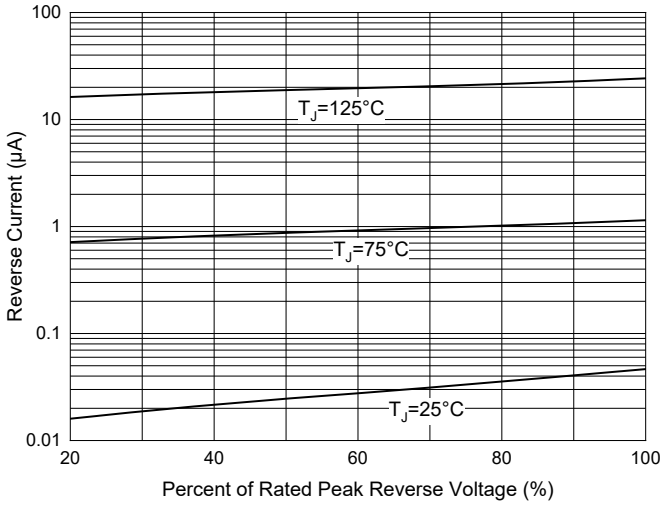
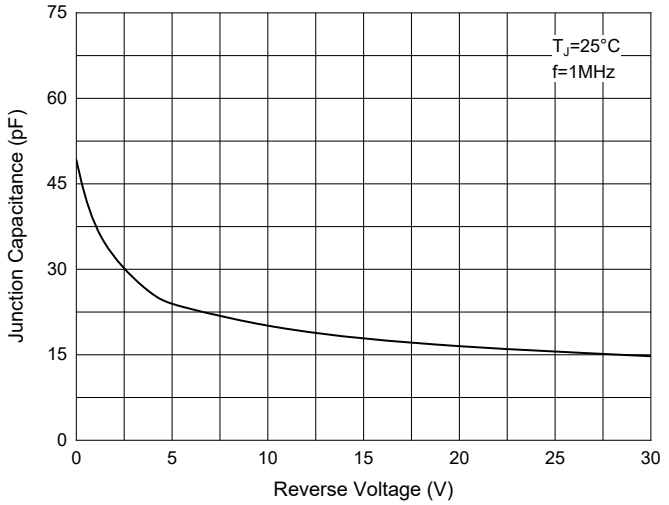


Fig. 5 - Typical Capacitance Characteristics



Ordering Information

Device	Packing
Part Number-BP	Bulk:35pcs/Tube,2.1Kpcs/Box,4.2Kpcs/Carton

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