SENSITRON SEMICONDUCTOR

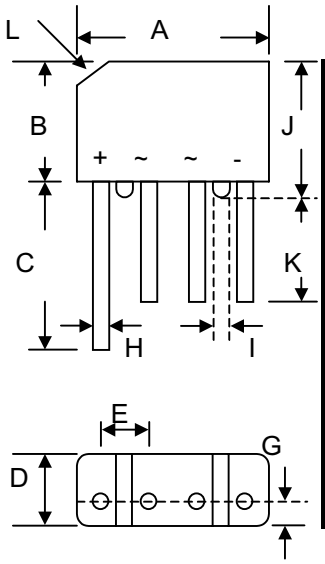
KBP005M – KBP10M

1.5A GLASS PASSIVATED BRIDGE RECTIFIER

Data Sheet 1343, Rev. A

Features

- Glass Passivated Die Construction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- Ideal for Printed Circuit Boards
- UL Recognized File # E223064



KBP				
Dim	Min	Max	Min	Max
A	14.22	15.24	0.560	0.6
B	10.67	11.68	0.420	0.460
C	15.2	—	0.598	—
D	4.57	5.08	0.180	0.2
E	3.60	4.10	0.142	0.161
G	2.16	2.67	0.085	0.105
H	0.76	0.86	0.030	0.034
I	1.52	—	0.060	—
J	11.68	12.7	0.460	0.5
K	12.7	—	0.5	—
L	3.2 X 45°C Typical		0.126 X 45°C Typical	
	In mm		In inch	

Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Body
- Weight: 1.7 grams (approx.)
- Mounting Position: Any
- Marking: Type Number

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	KBP 005M	KBP 01M	KBP 02M	KBP 04M	KBP 06M	KBP 08M	KBP 10M	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	50	100	200	400	600	800	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1) @T_A = 50°C	I_O	1.5							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	50							A
Forward Voltage (per element) @I_F = 1.5A	V_{FM}	1.1							V
Peak Reverse Current @T_A = 25°C At Rated DC Blocking Voltage @T_A = 100°C	I_{RM}	10 500							μA
Rating for Fusing (t<8.3ms)	I^2t	10							A^2s
Typical Junction Capacitance per element (Note 2)	C_j	15							pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	28							K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +150							°C

Note: 1. Leads maintained at ambient temperature at a distance of 9.5mm from the case.
2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.
3. Thermal resistance junction to ambient mounted on PC board with 12mm^2 copper pad.

• 221 West Industry Court ▯ Deer Park, NY 11729-4681 ▯ (631) 586-7600 FAX (631) 242-9798 •
• World Wide Web Site - http://www.sensitron.com • E-Mail Address - sales@sensitron.com •

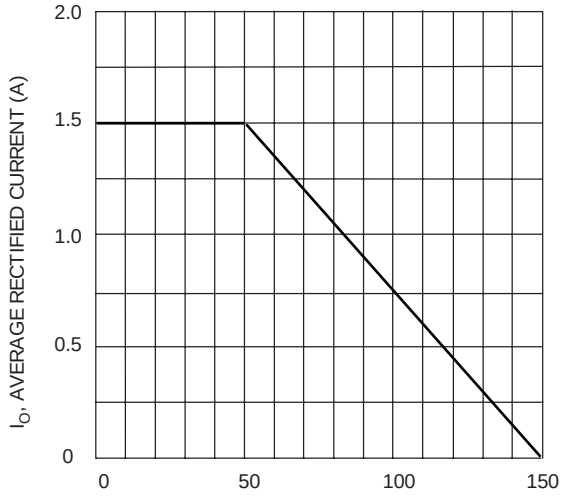


Fig. 1 Forward Current Derating Curve

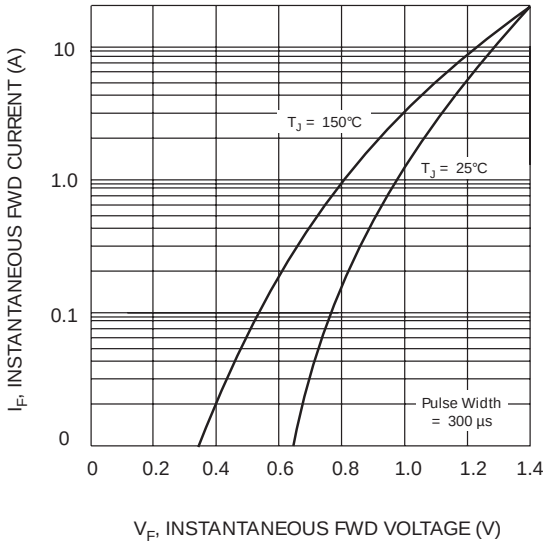


Fig. 2 Typical Fwd Characteristics

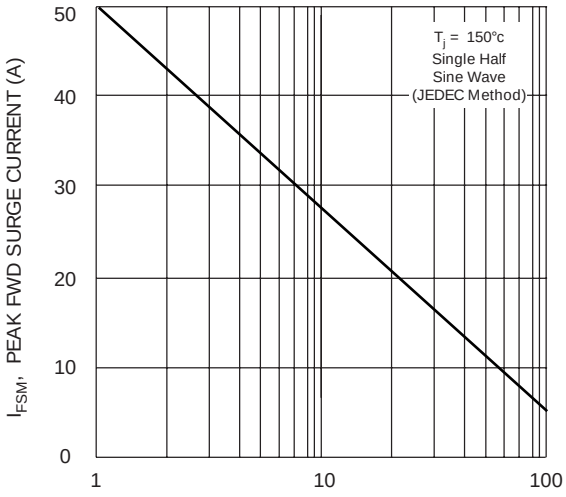


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

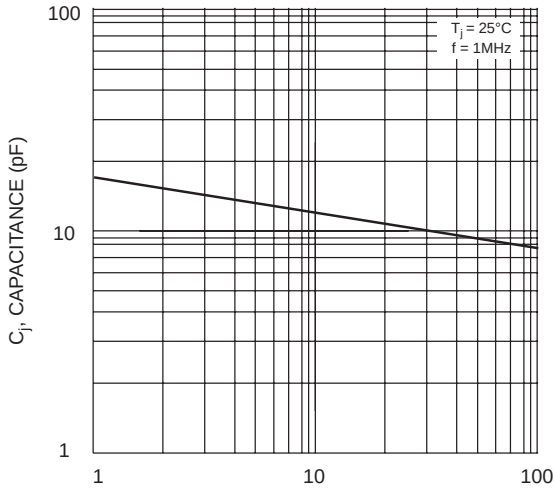


Fig. 4 Typical Junction Capacitance

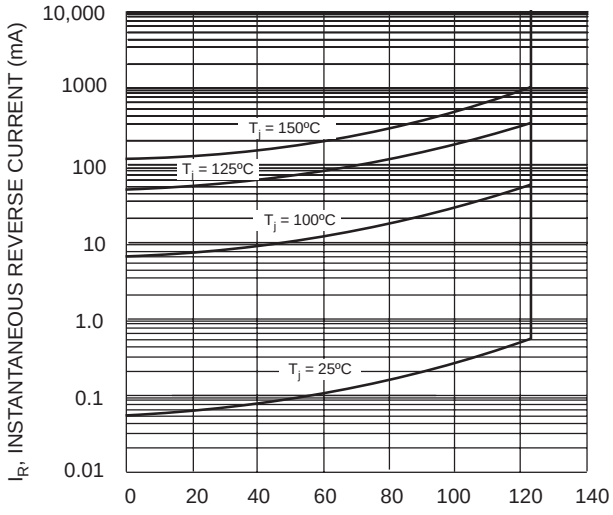


Fig. 5 Typical Reverse Characteristics

TECHNICAL DATA

DISCLAIMER:

1- The information given herein, including the specifications and dimensions, is subject to change without prior notice to improve product characteristics. Before ordering, purchasers are advised to contact the Sensitron Semiconductor sales department for the latest version of the datasheet(s).
2- In cases where extremely high reliability is required (such as use in nuclear power control, aerospace and aviation, traffic equipment, medical equipment, and safety equipment), safety should be ensured by using semiconductor devices that feature assured safety or by means of users' fail-safe precautions or other arrangement.
3- In no event shall Sensitron Semiconductor be liable for any damages that may result from an accident or any other cause during operation of the user's units according to the datasheet(s). Sensitron Semiconductor assumes no responsibility for any intellectual property claims or any other problems that may result from applications of information, products or circuits described in the datasheets.
4- In no event shall Sensitron Semiconductor be liable for any failure in a semiconductor device or any secondary damage resulting from use at a value exceeding the absolute maximum rating.
5- No license is granted by the datasheet(s) under any patents or other rights of any third party or Sensitron Semiconductor.
6- The datasheet(s) may not be reproduced or duplicated, in any form, in whole or part, without the expressed written permission of Sensitron Semiconductor.
7- The products (technologies) described in the datasheet(s) are not to be provided to any party whose purpose in their application will hinder maintenance of international peace and safety nor are they to be applied to that purpose by their direct purchasers or any third party. When exporting these products (technologies), the necessary procedures are to be taken in accordance with related laws and regulations.