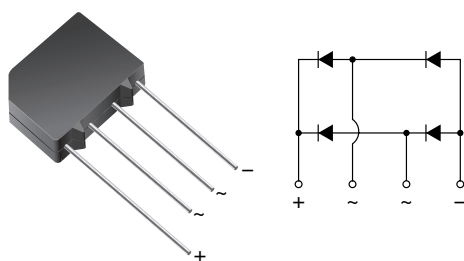




Glass Passivated Single-Phase Bridge Rectifier



Case Style KBPM

PRIMARY CHARACTERISTICS

$I_{F(AV)}$	1.5 A
V_{RRM}	50 V to 1000 V
I_{FSM}	60 A
I_R	5 μ A
V_F	1.0 V
T_J max.	150 °C

FEATURES

- UL recognition file number E54214
- Ideal for printed circuit board
- High surge current capability
- High case dielectric strength
- Solder dip 260 °C, 40 s
- Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC



RoHS
COMPLIANT

TYPICAL APPLICATIONS

General purpose use in ac-to-dc bridge full wave rectification for switching power supply, home appliances, office equipment, and telecommunication applications.

MECHANICAL DATA

Case: KBPM

Epoxy meets UL 94V-0 flammability rating

Terminals: Silver plated leads, solderable per J-STD-002 and JESD22-B102

E4 suffix for consumer grade

Polarity: As marked on body

MAXIMUM RATINGS ($T_A = 25$ °C unless otherwise noted)

PARAMETER	SYMBOL	KBP 005M	KBP 01M	KBP 02M	KBP 04M	KBP 06M	KBP 08M	KBP 10M	UNIT
		3N246	3N247	3N248	3N249	3N250	3N251	3N252	
Maximum repetitive peak reverse voltage ⁽¹⁾	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage ⁽¹⁾	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC blocking voltage ⁽¹⁾	V_{DC}	50	100	200	400	600	800	1000	V
Maximum average forward output rectified current at $T_A = 40$ °C	$I_{F(AV)}$	1.5							A
Peak forward surge current single half sine-wave ⁽¹⁾	I_{FSM}	60 40							A
Rating for fusing ($t < 8.3$ ms)	I^2t	10							A ² s
Operating junction and storage temperature range ⁽¹⁾	T_J, T_{STG}	- 55 to + 150							°C

Note:

(1) JEDEC registered values

ELECTRICAL CHARACTERISTICS ($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)										
PARAMETER	TEST CONDITIONS	SYMBOL	KBP 005M	KBP 01M	KBP 02M	KBP 04M	KBP 06M	KBP 08M	KBP 10M	UNIT
			3N246	3N247	3N248	3N249	3N250	3N251	3N252	
Maximum instantaneous forward voltage drop per diode ⁽¹⁾	1.0 A 1.57 A	V_F	1.0 1.3							V
Maximum DC reverse current at rated DC blocking voltage per diode ⁽¹⁾	$T_A = 25\text{ }^{\circ}\text{C}$ $T_A = 125\text{ }^{\circ}\text{C}$	I_R	5.0 500							μA
Typical junction capacitance per diode	4.0 V, 1 MHz	C_J	15							pF

Note:

(1) JEDEC registered values

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)									
PARAMETER	SYMBOL	KBP 005M	KBP 01M	KBP 02M	KBP 04M	KBP 06M	KBP 08M	KBP 10M	UNIT
		3N246	3N247	3N248	3N249	3N250	3N251	3N252	
Typical thermal resistance ⁽¹⁾	R _{θJA}	40							°C/W
	R _{θJL}	13							

Note:

(1) Thermal resistance from junction to ambient and from junction to lead mounted on P.C.B. with, 0.47 x 0.47" (12 x 12 mm) copper pads

ORDERING INFORMATION (Example)				
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE
KBP06M-E4/45	1.895	45	30	Tube
KBP06M-E4/51	1.895	51	600	Anti-static PVC tray
3N250-E4/45	1.895	45	30	Tube
3N250-E4/51	1.895	51	600	Anti-static PVC tray

RATINGS AND CHARACTERISTICS CURVES

($T_A = 25\text{ }^{\circ}\text{C}$ unless otherwise noted)

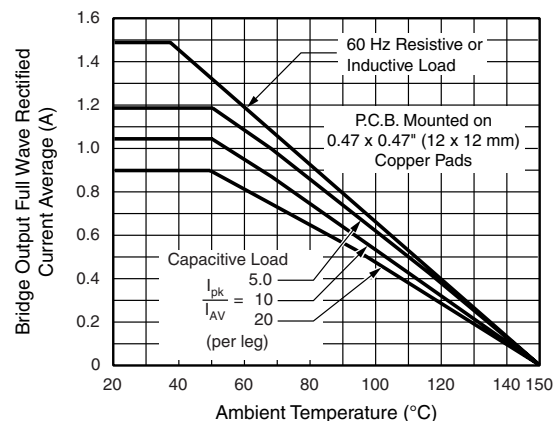


Figure 1. Derating Curve Output Rectified Current

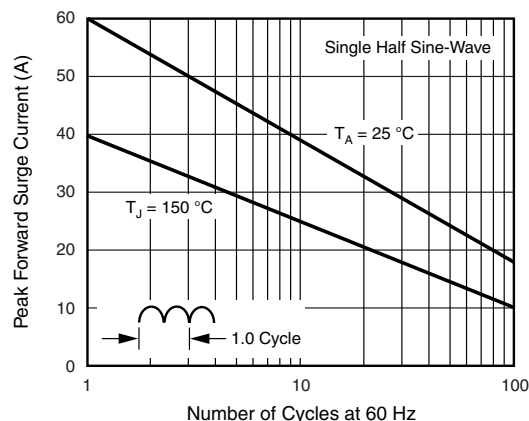


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

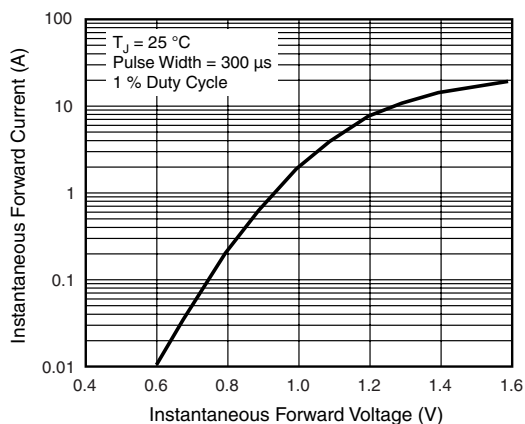


Figure 3. Typical Forward Characteristics Per Diode

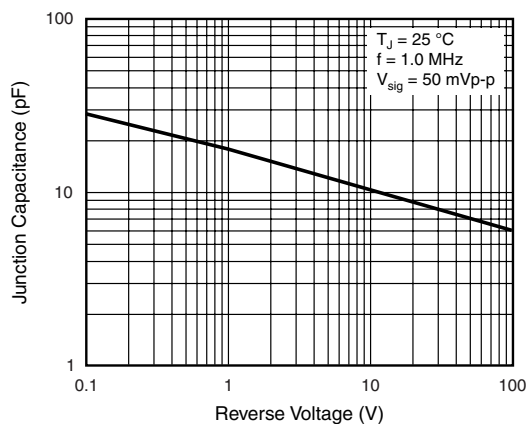


Figure 5. Typical Junction Capacitance Per Diode

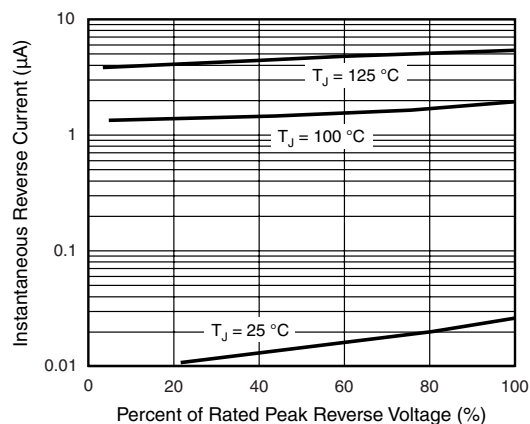
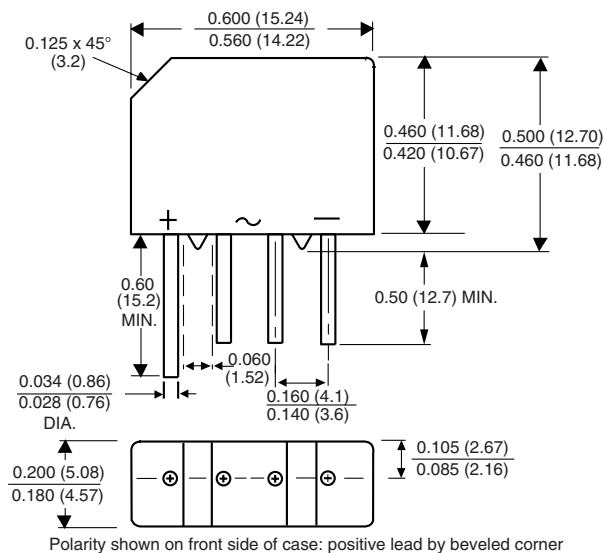


Figure 4. Typical Reverse Leakage Characteristics Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)

Case Style KBPM





Disclaimer

ALL PRODUCT, PRODUCT SPECIFICATIONS AND DATA ARE SUBJECT TO CHANGE WITHOUT NOTICE TO IMPROVE RELIABILITY, FUNCTION OR DESIGN OR OTHERWISE.

Vishay Intertechnology, Inc., its affiliates, agents, and employees, and all persons acting on its or their behalf (collectively, "Vishay"), disclaim any and all liability for any errors, inaccuracies or incompleteness contained in any datasheet or in any other disclosure relating to any product.

Vishay makes no warranty, representation or guarantee regarding the suitability of the products for any particular purpose or the continuing production of any product. To the maximum extent permitted by applicable law, Vishay disclaims (i) any and all liability arising out of the application or use of any product, (ii) any and all liability, including without limitation special, consequential or incidental damages, and (iii) any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.

Statements regarding the suitability of products for certain types of applications are based on Vishay's knowledge of typical requirements that are often placed on Vishay products in generic applications. Such statements are not binding statements about the suitability of products for a particular application. It is the customer's responsibility to validate that a particular product with the properties described in the product specification is suitable for use in a particular application. Parameters provided in datasheets and/or specifications may vary in different applications and performance may vary over time. All operating parameters, including typical parameters, must be validated for each customer application by the customer's technical experts. Product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein.

Except as expressly indicated in writing, Vishay products are not designed for use in medical, life-saving, or life-sustaining applications or for any other application in which the failure of the Vishay product could result in personal injury or death. Customers using or selling Vishay products not expressly indicated for use in such applications do so at their own risk and agree to fully indemnify and hold Vishay and its distributors harmless from and against any and all claims, liabilities, expenses and damages arising or resulting in connection with such use or sale, including attorneys fees, even if such claim alleges that Vishay or its distributor was negligent regarding the design or manufacture of the part. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

No license, express or implied, by estoppel or otherwise, to any intellectual property rights is granted by this document or by any conduct of Vishay. Product names and markings noted herein may be trademarks of their respective owners.