

MSKSEMI 美森科

SEMICONDUCTOR



ESD



TVS



TSS



MOV



GDT



PLED

KBP2005-MS THRU KBP210-MS

Product specification

VOLTAGE RANGE: 50 - 1000V
CURRENT: 2.0 A

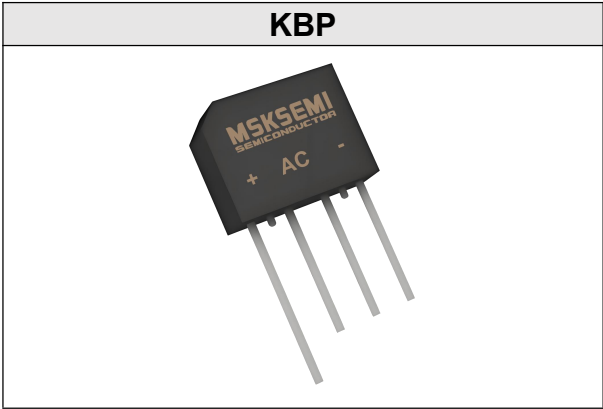
FEATURES

- Diffused Junction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- Ideal for Printed Circuit Boards

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

REFERENCE NEWS



Marking

KBP2005-MS	KBP201-MS	KBP202-MS	KBP204-MS
<div>MSKSEMI KBP2005 + AC -</div>	<div>MSKSEMI KBP201 + AC -</div>	<div>MSKSEMI KBP202 + AC -</div>	<div>MSKSEMI KBP204 + AC -</div>
KBP206-MS	KBP208-MS	KBP210-MS	
<div>MSKSEMI KBP206 + AC -</div>	<div>MSKSEMI KBP208 + AC -</div>	<div>MSKSEMI KBP210 + AC -</div>	

Maximum Ratings and Electrical Characteristics $T_A = 25^\circ\text{C}$ unless otherwise specified

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

Characteristic	Symbol	KBP 200-MS	KBP 201-MS	KBP 202-MS	KBP 204-MS	KBP 206-MS	KBP 208-MS	KBP 210-MS	Unit
Peak Repetitive Reverse Voltage	V_{RRM}								
Working Peak Reverse Voltage	V_{RWM}	50	100	200	400	600	800	1000	V
DC Blocking Voltage	V_R								
RMS Reverse Voltage	$V_{R(RMS)}$	35	70	140	280	420	560	700	V
Average Rectified Output Current (Note 1) $@T_A = 50^\circ\text{C}$	I_o	2.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	60							A
Forward Voltage (per element) $@I_F = 2.0\text{A}$	V_{FM}	1.1							V
Peak Reverse Current $@T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage $@T_A = 100^\circ\text{C}$	I_{RM}	10 500							μA
Rating for Fusing ($t < 8.3\text{ms}$)	I^2t	15							A^2s
Typical Junction Capacitance per element (Note 2)	C_j	25							pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	30							K/W
Operating and Storage Temperature Range	T_j, T_{STG}	-55 to +165							$^\circ\text{C}$

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 12mm² copper pad.

RATING AND CHARACTERISTIC CURVES (KBP200-MS THRU KBP210-MS)

FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

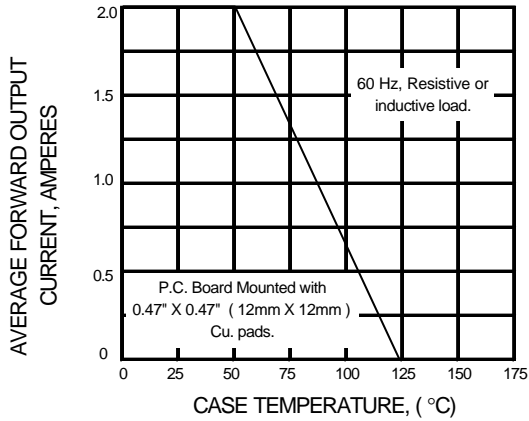


FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

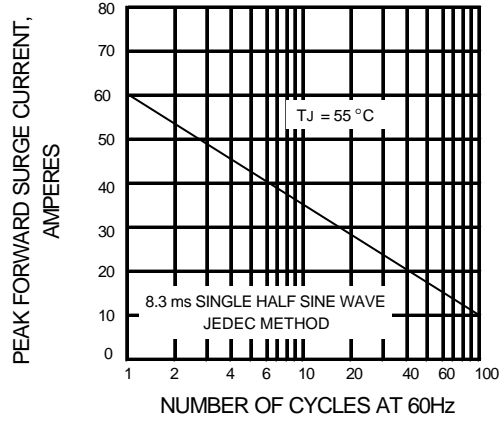


FIG.3 - TYPICAL FORWARD CHARACTERISTICS PER DIODE

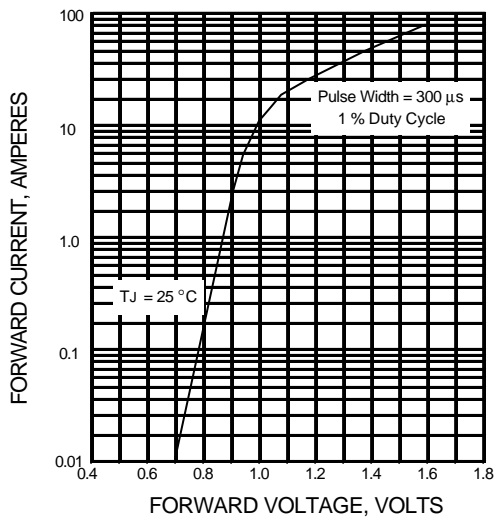
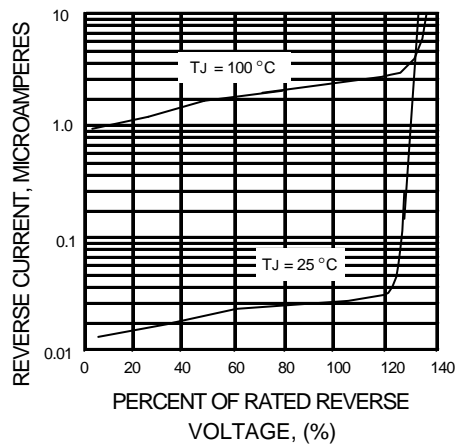
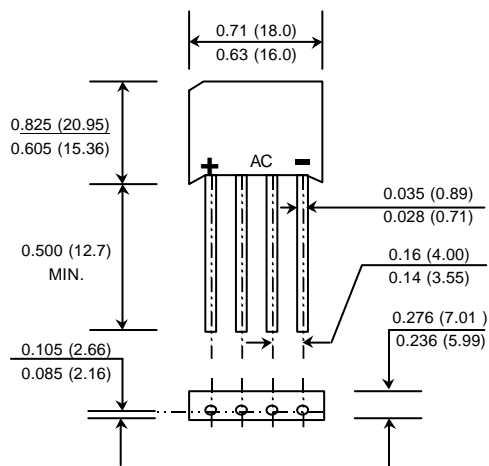


FIG.4 - TYPICAL REVERSE CHARACTERISTICS



PACKAGE MECHANICAL DATA


Dimensions in inches and (millimeter)

REELSPECIFICATION

P/N	PKG	QTY
KBP2005-MS THRU KBP210-MS	KBP	500

Attention

■ Any and all MSKSEMI Semiconductor products described or contained herein do not have specifications that can handle applications that require extremely high levels of reliability, such as life-support systems, aircraft's control systems, or other applications whose failure can be reasonably expected to result in serious physical and/or material damage. Consult with your MSKSEMI Semiconductor representative nearest you before using any MSKSEMI Semiconductor products described or contained herein in such applications.

■ MSKSEMI Semiconductor assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specification of any and all MSKSEMI Semiconductor products described or contained herein.

■ Specifications of any and all MSKSEMI Semiconductor products described or contained herein stipulate the performance, characteristics, and functions of the described products in the independent state, and are not guarantees of the performance, characteristics, and functions of the described products as mounted in the customer's products or equipment. To verify symptoms and states that cannot be evaluated in an independent device, the customer should always evaluate and test devices mounted in the customer's products or equipment.

■ MSKSEMI Semiconductor strives to supply high-quality high-reliability products. However, any and all semiconductor products fail with some probability. It is possible that these probabilistic failures could give rise to accidents or events that could endanger human lives, that could give rise to smoke or fire, or that could cause damage to other property. When designing equipment, adopt safety measures so that these kinds of accidents or events cannot occur. Such measures include but are not limited to protective circuits and error prevention circuits for safe design, redundant design, and structural design.

■ In the event that any or all MSKSEMI Semiconductor products (including technical data, services) described or contained herein are controlled under any of applicable local export control laws and regulations, such products must not be exported without obtaining the export license from the authorities concerned in accordance with the above law.

■ No part of this publication may be reproduced or transmitted in any form or by any means, electronic or mechanical, including photocopying and recording, or any information storage or retrieval system, or otherwise, without the prior written permission of MSKSEMI Semiconductor.

■ Information (including circuit diagrams and circuit parameters) herein is for example only ; it is not guaranteed for volume production. MSKSEMI Semiconductor believes information herein is accurate and reliable, but no guarantees are made or implied regarding its use or any infringement of intellectual property rights or other rights of third parties.

■ Any and all information described or contained herein are subject to change without notice due to product/technology improvement, etc. When designing equipment, refer to the "Delivery Specification" for the MSKSEMI Semiconductor product that you intend to use.