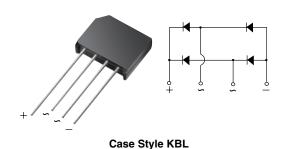


# Vishay General Semiconductor

# **Single-Phase Bridge Rectifier**



PRIMARY CHARACTERISTICS							
I <sub>F(AV)</sub> 4 A							
$V_{RRM}$	50 V to 1000 V						
I <sub>FSM</sub>	200 A						
I <sub>R</sub>	5 μΑ						
V <sub>F</sub>	1.1 V						
T <sub>J</sub> max.	150 °C						

### **FEATURES**





- · Ideal for printed circuit boards
- High surge current capability
- High case dielectric strength of 1500 V<sub>RMS</sub>



Solder dip 260 °C, 40 s

Component in accordance to RoHS 2002/95/EC and WEEE 2002/96/EC

### **TYPICAL APPLICATIONS**

General purpose use in ac-to-dc bridge full wave rectification for monitor, TV, printer, SMPS, adapter, audio equipment, and home appliances applications.

### **MECHANICAL DATA**

Case: KBL

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

**Mounting Torque:** 10 cm-kg (8.8 inches-lbs) max. **Recommended Torque:** 5.7 cm-kg (5 inches-lbs)

MAXIMUM RATINGS (T <sub>A</sub> = 25 °C unless otherwise noted)									
PARAMETER	SYMBOL	KBL005	KBL01	KBL02	KBL04	KBL06	KBL08	KBL10	UNIT
Maximum repetitive peak reverse voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	>
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	>
Maximum average forward current at $T_A = 50$ °C	I <sub>F(AV)</sub>	4.0					Α		
Peak forward surge current single sine-wave superimposed on rated load	I <sub>FSM</sub>	200					Α		
Operating junction and storage temperature range	T <sub>J</sub> , T <sub>STG</sub>	- 50 to + 150					°C		

<b>ELECTRICAL CHARACTERISTICS</b> (T <sub>A</sub> = 25 °C unless otherwise noted)										
PARAMETER	TEST CONDITIONS	SYMBOL	KBL005	KBL01	KBL02	KBL04	KBL06	KBL08	KBL10	UNIT
Maximum instantaneous forward drop per diode	4.0 A	V <sub>F</sub>	1.1						٧	
Maximum DC reverse current at rated DC blocking voltage per diode	T <sub>A</sub> = 25 °C T <sub>A</sub> = 125 °C	I <sub>R</sub>	5.0 1.0						μA mA	

Document Number: 88655 Revision: 15-Apr-08

### Vishay General Semiconductor



THERMAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)							
PARAMETER	SYMBOL	SYMBOL KBL005 KBL01 KBL02 KBL04 KBL06 KBL08 KBL10					UNIT
Typical thermal resistance	$R_{ hetaJA} \ R_{ hetaJL}$	19 <sup>(1)</sup> 2.4 <sup>(2)</sup>		°C/W			

#### Notes:

- (1) Thermal resistance from junction to ambient with units mounted on 3.0 x 3.0 x 0.11" thick (7.5 x 7.5 x 0.3 cm) aluminum plate
- (2) Thermal resistance from junction to lead with units mounted on P.C.B. at 0.375" (9.5 mm) lead length and 0.5 x 0.5" (12 x 12 mm) copper pads

ORDERING INFORMATION (Example)							
PREFERRED P/N	UNIT WEIGHT (g)	PREFERRED PACKAGE CODE	BASE QUANTITY	DELIVERY MODE			
KBL06-E4/51	6.0	51	300	Anti-static PVC tray			

### **RATINGS AND CHARACTERISTICS CURVES**

(T<sub>A</sub> = 25 °C unless otherwise noted)

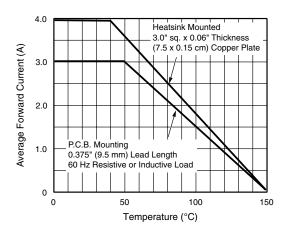


Figure 1. Derating Curve Output Rectified Current

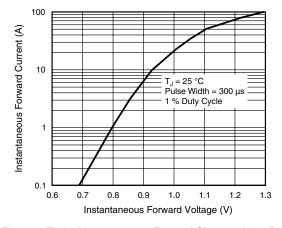


Figure 3. Typical Instantaneous Forward Characteristics Per Diode

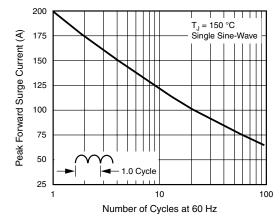


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode

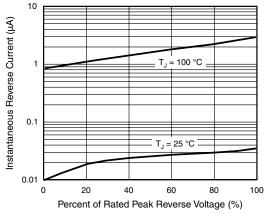


Figure 4. Typical Reverse Leakage Characteristics Per Diode



## Vishay General Semiconductor

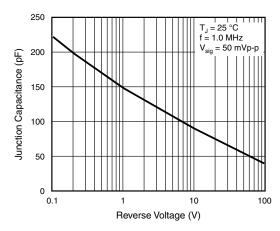
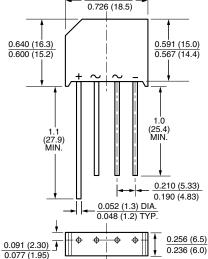


Figure 5. Typical Junction Capacitance Per Diode

### **PACKAGE OUTLINE DIMENSIONS** in inches (millimeters)

# 0.768 (19.5) 0.726 (18.5)

Case Style KBL







Vishay

### **Disclaimer**

All product specifications and data are subject to change without notice.

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 herein or in any other disclosure relating to any product.

Vishay disclaims any and all liability arising out of the use or application of any product described herein or of any information provided herein to the maximum extent permitted by law. The product specifications do not expand or otherwise modify Vishay's terms and conditions of purchase, including but not limited to the warranty expressed therein, which apply to these products.

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.

The products shown herein are not designed for use in medical, life-saving, or life-sustaining applications unless otherwise expressly indicated. Customers using or selling Vishay products not expressly indicated for use in such applications do so entirely at their own risk and agree to fully indemnify Vishay for any damages arising or resulting from such use or sale. Please contact authorized Vishay personnel to obtain written terms and conditions regarding products designed for such applications.

Product names and markings noted herein may be trademarks of their respective owners.

Revision: 18-Jul-08

Document Number: 91000 www.vishay.com