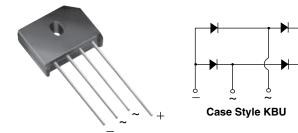
KBU8A, KBU8B, KBU8D, KBU8G, KBU8J, KBU8K, KBU8M

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Vishay General Semiconductor

# Single-Phase Bridge Rectifier



## LINKS TO ADDITIONAL RESOURCES



PRIMARY CHARACTERISTICS							
Package	KBU						
I <sub>F(AV)</sub>	8 A						
V <sub>RRM</sub>	50 V, 100 V, 200 V, 400 V, 600 V, 800 V, 1000 V						
I <sub>FSM</sub>	300 A						
I <sub>R</sub>	10 µA						
$V_F$ at $I_F = 8 A$	1.0 V						
T <sub>J</sub> max.	150 °C						
Circuit configuration	In-line						

### FEATURES

- UL recognition, file number E54214
- · Ideal for printed circuit boards
- High surge current capability
- Plastic-passivated junction
- High case dielectric strength of 1500  $V_{\text{RMS}}$
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: for definitions of compliance please see <u>www.vishay.com/doc?99912</u>

## **TYPICAL APPLICATIONS**

General purpose use in AC/DC bridge full wave rectification for monitor, TV, printer, SMPS, adapter, audio equipment, and home appliances applications.

## **MECHANICAL DATA**

#### Case: KBU

Molding compound meets UL 94 V-0 flammability rating Base P/N-E4 - RoHS-compliant, commercial grade

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

Polarity: as marked on body

Mounting Torque: 10 cm-kg (8.8 inches-lbs) max.

Recommended Torque: 5.7 cm-kg (5 inches-lbs)

<b>MAXIMUM RATINGS</b> (T <sub>A</sub> = 25 °C unless otherwise noted)										
PARAMETER		SYMBOL	KBU8A	KBU8B	KBU8D	KBU8G	KBU8J	KBU8K	KBU8M	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	V
Maximum DC blocking voltage		V <sub>DC</sub>	50	100	200	400	600	800	1000	V
Maximum average forward	$T_{C} = 100 \ ^{\circ}C \ ^{(1)(3)}$	I <sub>F(AV)</sub>	8.0							A
rectified output current at	$T_A = 40 \ ^{\circ}C \ ^{(2)}$		6.0							
Peak forward surge current single sine-wave superimposed on rated load		I <sub>FSM</sub>	300							A
Operating junction and storage temperature range		T <sub>J</sub> , T <sub>STG</sub>	-50 to +150							°C

#### Notes

<sup>(1)</sup> Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw

(2) Units mounted in free air, no heatsink, PCB at 0.375" (9.5 mm) lead length with 0.5" x 0.5" (12 mm x 12 mm) copper pads

<sup>(3)</sup> Units mounted on a 3.0" x 3.0" x 0.11" thick (7.5 cm x 7.5 cm x 0.3 cm) aluminum plate heatsink

ELECTRICAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)										
PARAMETER	TEST CONDITIONS	SYMBOL	KBU8A	KBU8B	KBU8D	KBU8G	KBU8J	KBU8K	KBU8M	UNIT
Maximum instantaneous forward drop per diode	I <sub>F</sub> = 8.0 A	V <sub>F</sub>	1.0						V	
Maximum DC reverse current at rated DC blocking	T <sub>A</sub> = 25 °C	· I <sub>B</sub>	10					μA		
voltage per diode	0		1.0						mA	

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RoHS

COMPLIANT

🔨 KBU8A, KBU8B, KBU8D, KBU8G, KBU8J, KBU8K, KBU8M

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<b>THERMAL CHARACTERISTICS</b> (T <sub>A</sub> = 25 °C unless otherwise noted)									
PARAMETER	SYMBOL	L KBU8A KBU8B KBU8D KBU8G KBU8J KBU8K KBU8M UNIT							
Typical thermal resistance	R <sub>0JA</sub> <sup>(1)</sup>		18						°C/W
Typical mermai resistance	R <sub>0JC</sub> <sup>(2)</sup>	3.0						0/10	

#### Notes

<sup>(1)</sup> Units mounted in free air, no heatsink, PCB at 0.375" (9.5 mm) lead length with 0.5" x 0.5" (12 mm x 12 mm) copper pads

<sup>(2)</sup> Units mounted on a 3.0" x 3.0" x 0.11" thick (7.5 cm x 7.5 cm x 0.3 cm) aluminum plate heatsink

ORDERING INFORMATION (Example)								
PREFERRED P/N UNIT WEIGHT (g) PREFERRED PACKAGE CODE BASE QUANTITY DELIVERY MODE								
KBU8J-E4/51	8.0	51	250	Anti-static PVC tray				

## **RATINGS AND CHARACTERISTICS CURVES** (T<sub>A</sub> = 25 °C unless otherwise noted)

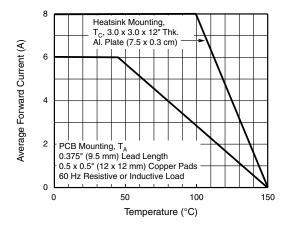


Fig. 1 - Derating Curve Output Rectified Current

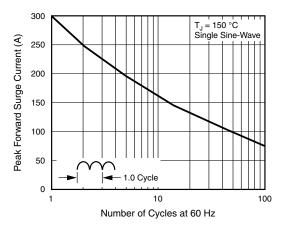


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

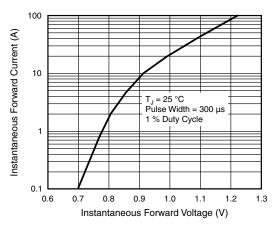


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

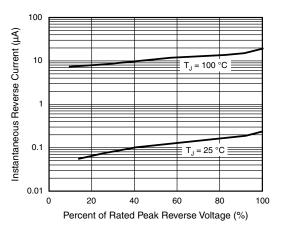


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

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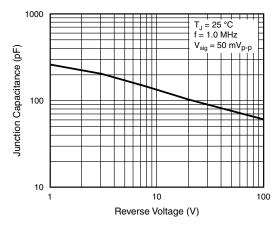
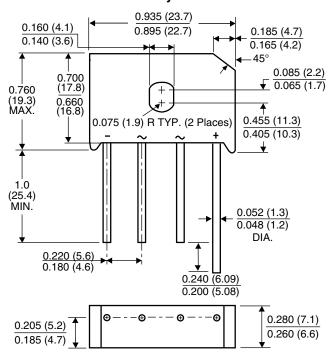


Fig. 5 - Typical Junction Capacitance Per Diode

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



**Case Style KBU** 



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