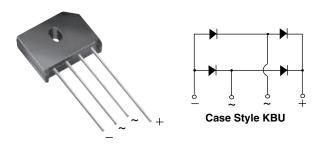


# KBU4A, KBU4B, KBU4D, KBU4G, KBU4J, KBU4K, KBU4M

Vishay General Semiconductor

## **Single-Phase Bridge Rectifier**



#### **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<sub>RMS</sub>
- Solder dip 275 °C max. 10 s, per JESD 22-B106
- Material categorization: for definitions of compliance please see <a href="https://www.vishav.com/doc?99912">www.vishav.com/doc?99912</a>

#### **LINKS TO ADDITIONAL RESOURCES**



PRIMARY CHARACTERISTICS							
Package	KBU						
I <sub>F(AV)</sub>	4 A						
V <sub>RRM</sub>	50 V, 100 V, 200 V, 400 V, 600 V, 800 V, 1000 V						
I <sub>FSM</sub>	200 A						
I <sub>R</sub>	5 μΑ						
$V_F$ at $I_F = 4 A$	1.0 V						
T <sub>J</sub> max.	150 °C						
Circuit configuration	In-line						

## **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)

MAXIMUM RATINGS (T <sub>A</sub> = 25 °C unless otherwise noted)										
PARAMETER		SYMBOL	KBU4A	KBU4B	KBU4D	KBU4G	KBU4J	KBU4K	KBU4M	UNIT
Maximum repetitive peak reverse voltage		$V_{RRM}$	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		$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward rectified output current at $T_C = 100 ^{\circ}C^{(1)}$ $T_A = 30 ^{\circ}C^{(2)}$			4.0							А
		I <sub>F(AV)</sub>	4.0							
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

## Notes

- (1) Units mounted on a 2.0" x 1.6" x 0.3" thick (5 cm x 4 cm x 0.8 cm) aluminum plate
- $^{(2)}$  Units mounted on PCB with 0.5" x 0.5" (12 mm x 12 mm) copper pads and 0.375" (9.5 mm) lead length

<b>ELECTRICAL CHARACTERISTICS</b> (T <sub>A</sub> = 25 °C unless otherwise noted)										
PARAMETER	TEST CONDITIONS	SYMBOL	KBU4A	KBU4B	KBU4D	KBU4G	KBU4J	KBU4K	KBU4M	UNIT
Maximum instantaneous forward drop per diode	I <sub>F</sub> = 4.0 A	V <sub>F</sub>	1.0					V		
Maximum DC reverse current at rated DC blocking	T <sub>A</sub> = 25 °C	5.0					μΑ			
voltage per diode	T <sub>A</sub> = 125 °C	I <sub>R</sub> 1.0						mA		



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THERMAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)									
PARAMETER	R SYMBOL KBU4A KBU4B KBU4D KBU4G KBU4J KBU4K KBU4M UNIT								
Typical thermal resistance	$R_{\theta JA}$	19 (2)							°C/W
Typical thermal resistance	$R_{\theta JL}$	4.0 (1)						C/VV	

#### **Notes**

- $^{(1)}$  Units mounted on a 2.0" x 1.6" x 0.3" thick (5 cm x 4 cm x 0.8 cm) aluminum plate
- $^{(2)}$  Units mounted on PCB with 0.5" x 0.5" (12 mm x 12 mm) copper pads and 0.375" (9.5 mm) lead length

ORDERING INFORMATION (Example)								
PREFERRED P/N	P/N UNIT WEIGHT (g) PREFERRED PACKAGE CODE BASE QUANTITY DELIVERY MODE							
KBU4J-E4/51	8.0	51	250	Anti-static PVC tray				

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

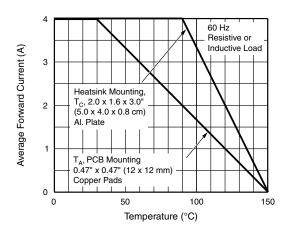


Fig. 1 - Derating Curve Output Rectified Current

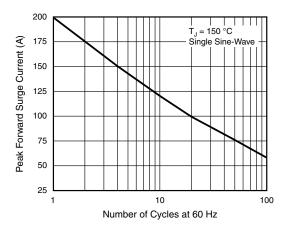


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

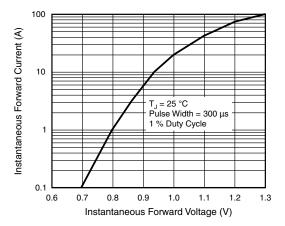


Fig. 3 - Typical Forward Characteristics Per Diode

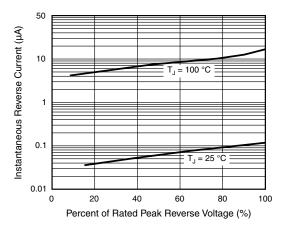


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

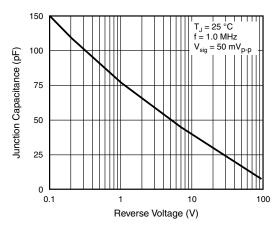
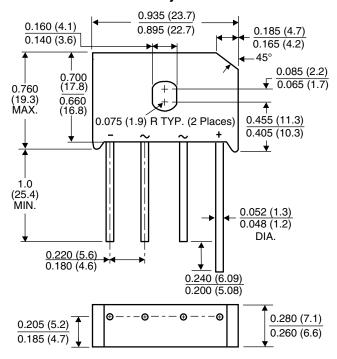


Fig. 5 - Typical Junction Capacitance Per Diode

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

### Case Style KBU





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