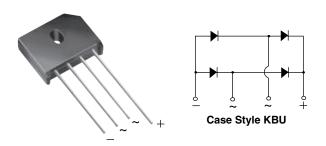


KBU6A, KBU6B, KBU6D, KBU6G, KBU6J, KBU6K, KBU6M

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Vishay General Semiconductor

Single-Phase Bridge Rectifier



PRIMARY CHARACTERISTICS							
Package	KBU						
I _{F(AV)}	6 A						
V _{RRM}	50 V, 100 V, 200 V, 400 V, 600 V, 800 V, 1000 V						
I _{FSM}	200 A						
I _R	5 μΑ						
V_F at $I_F = 6$ A	1.0 V						
T _J max.	150 °C						
Diode variations	In-Line						

FEATURES





- Ideal for printed circuit boards
- · High surge current capability
- . I liab acce dialoctuio etucuente ef 1500 l
- High case dielectric strength of 1500 V_{RMS}
- Solder dip 275 °C max. 10 s, per JESD 22-B106

 Material categorization: for definitions of compliance please see www.vishay.com/doc?99912

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 _A = 25 °C unless otherwise noted)										
PARAMETER		SYMBOL	KBU6A	KBU6B	KBU6D	KBU6G	KBU6J	KBU6K	KBU6M	UNIT
Maximum repetitive peak reverse voltage		V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage		V _{RMS}	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	$T_C = 100 ^{\circ}C ^{(1)(3)}$	1	6.0							A
rectified output current at	$T_A = 40 ^{\circ}C^{(2)}$	I _{F(AV)}	6.0							
Peak forward surge current single sine-wave superimposed on rated load		I _{FSM}	250							Α
Operating junction and storage temperature range		T _J , T _{STG}	-50 to +150							°C

Notes

- (1) Recommended mounted position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw
- (2) Thermal resistance from junction to ambient with units in free air, PCB mounted on 0.5" x 0.5" (12 mm x 12 mm) copper pads, 0.375" (9.5 mm) lead length
- (3) Thermal resistance from junction to case with units mounted on a 2.6" x 1.4" x 0.06" thick (6.5 cm x 3.5 cm x 0.15 cm) aluminum plate

ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)										
PARAMETER	TEST CONDITIONS	SYMBOL	KBU6A	KBU6B	KBU6D	KBU6G	KBU6J	KBU6K	KBU6M	UNIT
Maximum instantaneous forward drop per diode	I _F = 6.0 A	V _F	1.0						V	
Maximum DC reverse current at rated DC blocking	T _A = 25 °C	I _R	5.0					μA		
voltage per diode			1.0						mA	



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THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)									
PARAMETER	SYMBOL	KBU6A KBU6B KBU6D KBU6G KBU6J KBU6K KBU6M UNIT							UNIT
Typical thermal resistance	R _{0JA} (1)	8.6							°C/W
R _{BJC} ⁽²⁾ 3.1							C/VV		

Notes

⁽²⁾ Thermal resistance from junction to case with units mounted on a 2.6" x 1.4"x 0.06" thick (6.5 cm x 3.5 cm x 0.15 cm) Al. plate

ORDERING INFORMATION (Example)								
PREFERRED P/N	UNIT WEIGHT (g) PREFERRED PACKAGE CODE BASE QUANTITY DELIVERY MODE							
KBU6J-E4/51	8.0	51	250	Anti-static PVC tray				

RATINGS AND CHARACTERISTICS CURVES (T_A = 25 °C unless otherwise noted)

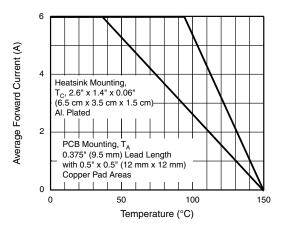


Fig. 1 - Derating Curve Output Rectified Current

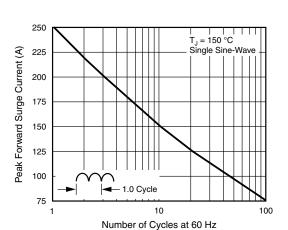


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

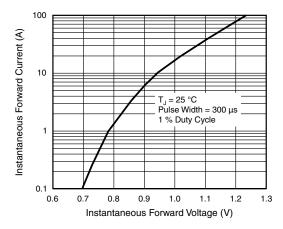


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

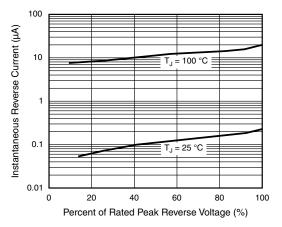


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

⁽¹⁾ Thermal resistance from junction to ambient with units in free air, PCB mounted on 0.5" x 0.5" (12 mm x 12 mm) copper pads, 0.375" (9.5 mm) lead length

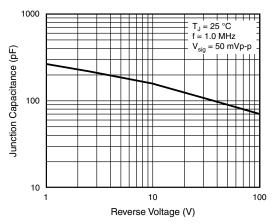
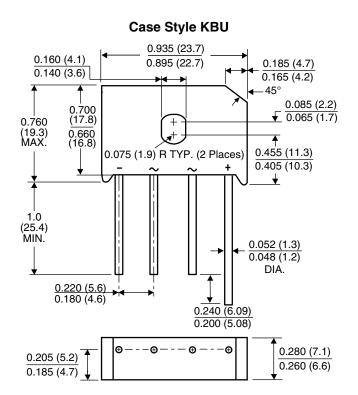


Fig. 5 - Typical Junction Capacitance Per Diode

PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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