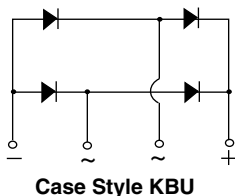
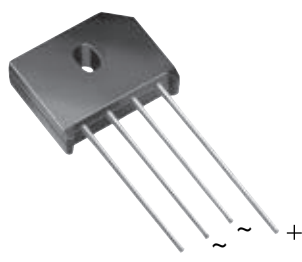




## Single-Phase Bridge Rectifier



## 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 [www.vishay.com/doc?99912](http://www.vishay.com/doc?99912)

RoHS  
COMPLIANT

## LINKS TO ADDITIONAL RESOURCES



## 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)

## 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 $\mu$ A
$V_F$ at $I_F = 6$ A	1.0 V
$T_J$ max.	150 °C
Circuit configurations	In-line

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 rectified output current at $T_C = 100$ °C <sup>(1)(3)</sup> $T_A = 40$ °C <sup>(2)</sup>	$I_{F(AV)}$	6.0						A	
Peak forward surge current single sine-wave superimposed on rated load	$I_{FSM}$	250						A	
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 voltage per diode	$T_A = 25$ °C	$I_R$	5.0						$\mu$ A	
	$T_A = 125$ °C		1.0						mA	



THERMAL CHARACTERISTICS (T <sub>A</sub> = 25 °C unless otherwise noted)									
PARAMETER	SYMBOL	KBU6A	KBU6B	KBU6D	KBU6G	KBU6J	KBU6K	KBU6M	UNIT
Typical thermal resistance	R <sub>θJA</sub> <sup>(1)</sup>	8.6							°C/W
	R <sub>θJC</sub> <sup>(2)</sup>	3.1							

**Notes**

- (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
- (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

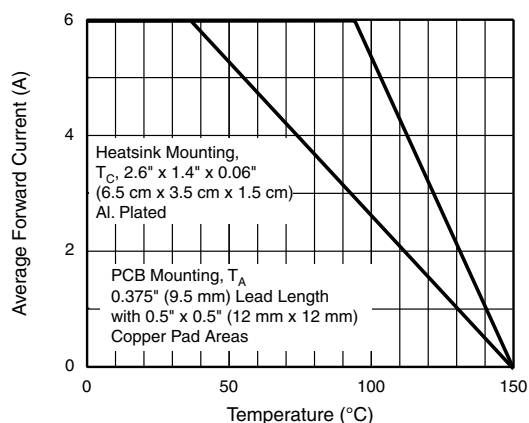
**RATINGS AND CHARACTERISTICS CURVES** ( $T_A = 25\text{ }^{\circ}\text{C}$  unless otherwise noted)

Fig. 1 - Derating Curve Output Rectified Current

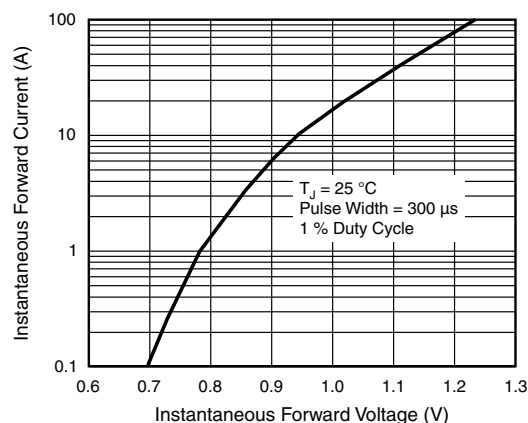


Fig. 3 - Typical Instantaneous Forward Characteristics Per Diode

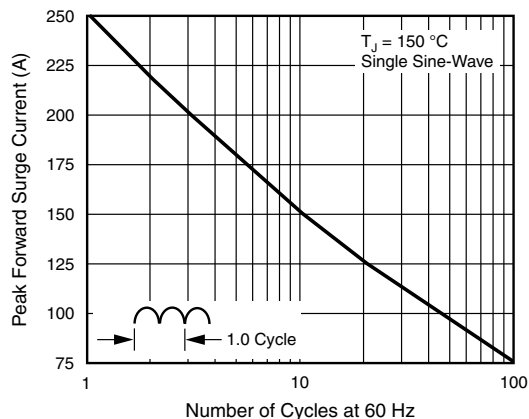


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current Per Diode

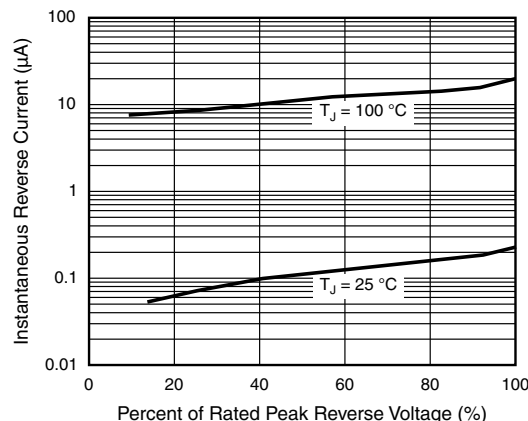


Fig. 4 - Typical Reverse Leakage Characteristics Per Diode

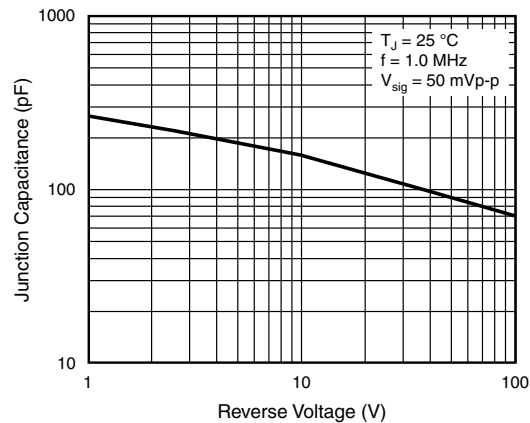
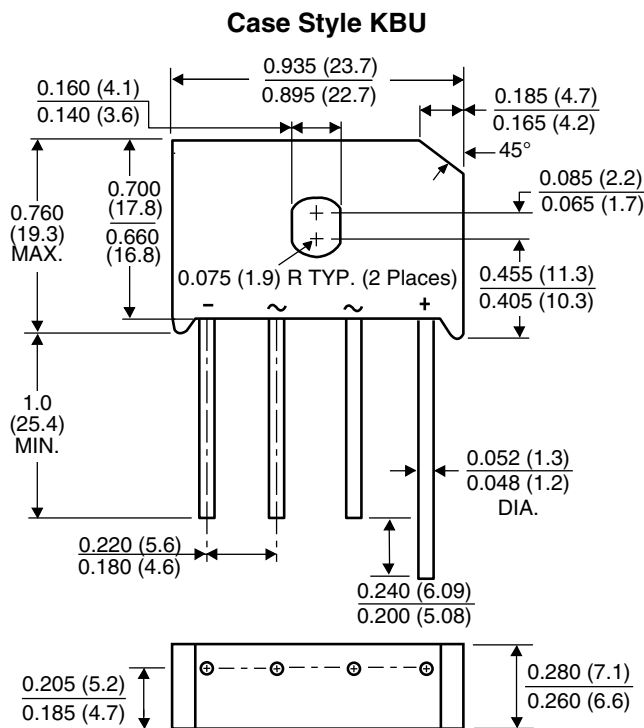


Fig. 5 - Typical Junction Capacitance Per Diode

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



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