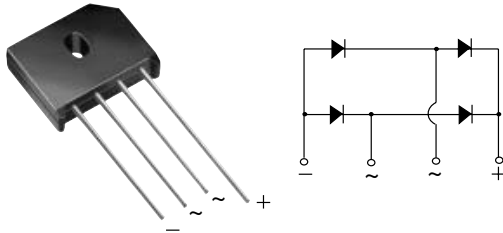


## Single-Phase Bridge Rectifier



Case Style KBU

### FEATURES

- UL recognition file number E54214
- 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


**RoHS**  
COMPLIANT

### 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.

### PRIMARY CHARACTERISTICS

$I_{F(AV)}$	8 A
$V_{RRM}$	50 V to 1000 V
$I_{FSM}$	300 A
$I_R$	10 $\mu$ A
$V_F$	1.0 V
$T_J$ max.	150 °C

### MECHANICAL DATA

**Case:** KBU

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 ( $T_A = 25$ °C unless otherwise noted)

PARAMETER	SYMBOL	KBU8A	KBU8B	KBU8D	KBU8G	KBU8J	KBU8K	KBU8M	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>	$I_{F(AV)}$	8.0 6.0							A
Peak forward surge current single sine-wave superimposed on rated load	$I_{FSM}$	300							A
Operating junction and storage temperature range	$T_J, T_{STG}$	- 50 to + 150							°C

#### Notes:

- (1) 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, P.C.B. at 0.375" (9.5 mm) lead length with 0.5 x 0.5" (12 x 12 mm) copper pads
- (3) Units mounted on a 3.0 x 3.0" x 0.11" thick (7.5 x 7.5 x 0.3 cm) aluminum plate heatsink

<b>ELECTRICAL CHARACTERISTICS</b> ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)										
PARAMETER	TEST CONDITIONS	SYMBOL	KBU8A	KBU8B	KBU8D	KBU8G	KBU8J	KBU8K	KBU8M	UNIT
Maximum instantaneous forward drop per diode	8.0 A	$V_F$				1.0				V
Maximum DC reverse current at rated DC blocking voltage per diode	$T_A = 25\text{ }^\circ\text{C}$	$I_R$				10				$\mu\text{A}$
	$T_A = 125\text{ }^\circ\text{C}$					1.0				mA

<b>THERMAL CHARACTERISTICS</b> ( $T_A = 25\text{ }^\circ\text{C}$ unless otherwise noted)										
PARAMETER	SYMBOL	KBU8A	KBU8B	KBU8D	KBU8G	KBU8J	KBU8K	KBU8M	UNIT	
Typical thermal resistance	$R_{\theta JA}$				18 <sup>(2)</sup>				$^\circ\text{C/W}$	
	$R_{\theta JC}$				3.0 <sup>(3)</sup>					

**Notes:**

- (1) Units mounted in free air, no heatsink, P.C.B. at 0.375" (9.5 mm) lead length with 0.5 x 0.5" (12 x 12 mm) copper pads
- (2) Units mounted on a 3.0 x 3.0" x 0.11" thick (7.5 x 7.5 x 0.3 cm) aluminum plate heatsink

<b>ORDERING INFORMATION</b> (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

( $T_A = 25\text{ }^\circ\text{C}$  unless otherwise noted)

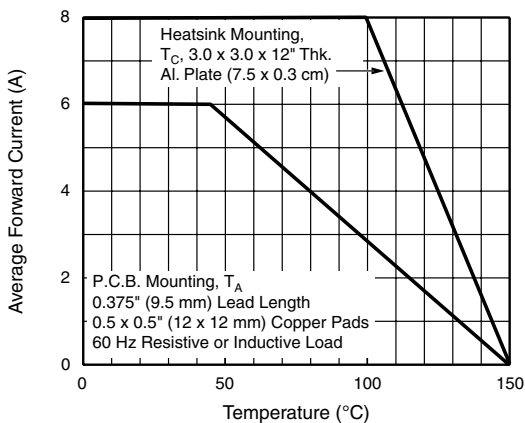


Figure 1. Derating Curve Output Rectified Current

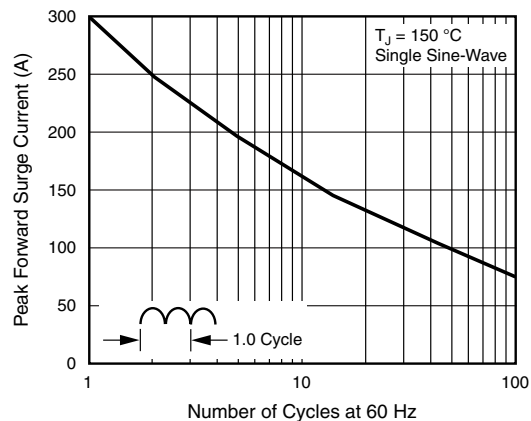


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current

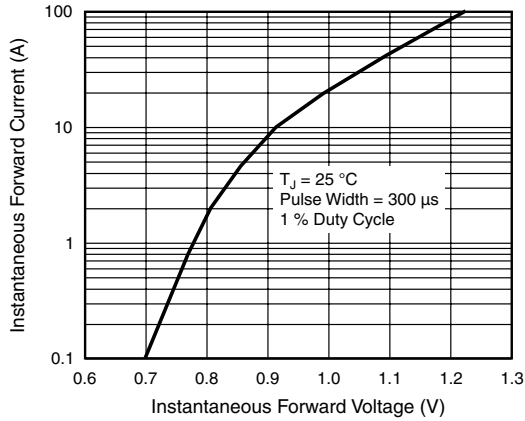


Figure 3. Typical Instantaneous Forward Characteristics Per Diode

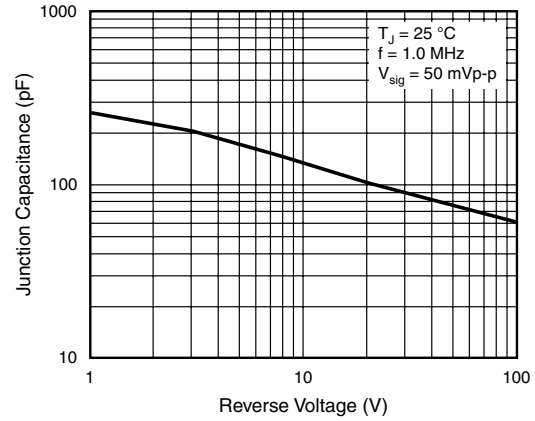


Figure 5. Typical Junction Capacitance Per Diode

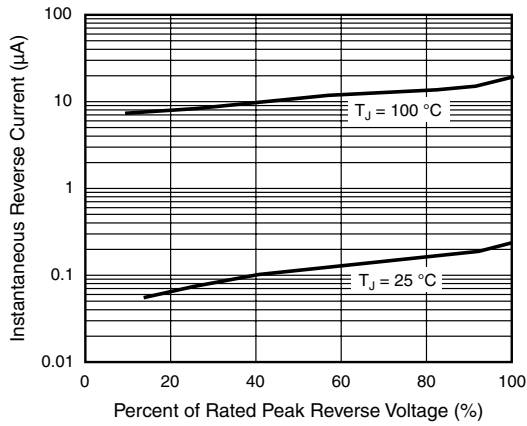


Figure 4. Typical Reverse Leakage Characteristics Per Diode

## PACKAGE OUTLINE DIMENSIONS in inches (millimeters)





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