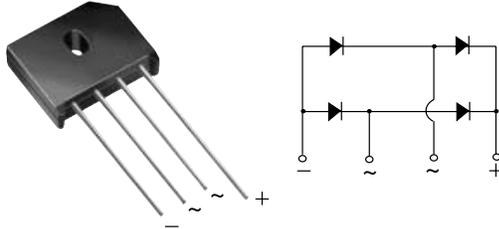


Single-Phase Bridge Rectifier



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_{RMS}
- 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.

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)

PRIMARY CHARACTERISTICS	
$I_{F(AV)}$	4 A
V_{RRM}	50 V to 1000 V
I_{FSM}	200 A
I_R	5 μ A
V_F	1.0 V
T_J max.	150 °C

MAXIMUM RATINGS ($T_A = 25$ °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_{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 ⁽¹⁾ $T_A = 30$ °C ⁽²⁾	$I_{F(AV)}$	4.0						A	
Peak forward surge current single sine-wave superimposed on rated load	I_{FSM}	200						A	
Operating junction and storage temperature range	T_J, T_{STG}	- 50 to + 150						°C	

Notes:

(1) Units mounted on a 2.0 x 1.6 x 0.3" thick (5 x 4 x 0.8 cm.) aluminum plate

(2) Units mounted on P.C.B. with 0.5 x 0.5" (12 x 12 mm) copper pads and 0.375" (9.5 mm) lead length

ELECTRICAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)										
PARAMETER	TEST CONDITIONS	SYMBOL	KBU4A	KBU4B	KBU4D	KBU4G	KBU4J	KBU4K	KBU4M	UNIT
Maximum instantaneous forward drop per diode	4.0 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				μA
	T _A = 125 °C					1.0				mA

THERMAL CHARACTERISTICS (T _A = 25 °C unless otherwise noted)										
PARAMETER	SYMBOL	KBU4A	KBU4B	KBU4D	KBU4G	KBU4J	KBU4K	KBU4M	UNIT	
Typical thermal resistance	R _{θJA}				19 ⁽²⁾				°C/W	
	R _{θJL}				4.0 ⁽¹⁾					

Notes:

- (1) Units mounted on a 2.0 x 1.6 x 0.3" thick (5 x 4 x 0.8 cm.) aluminum plate
- (2) Units mounted on P.C.B. with 0.5 x 0.5" (12 x 12 mm) copper pads and 0.375" (9.5 mm) lead length
- (3) Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw

ORDERING INFORMATION (Example)				
PREFERRED 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_A = 25 °C unless otherwise noted)

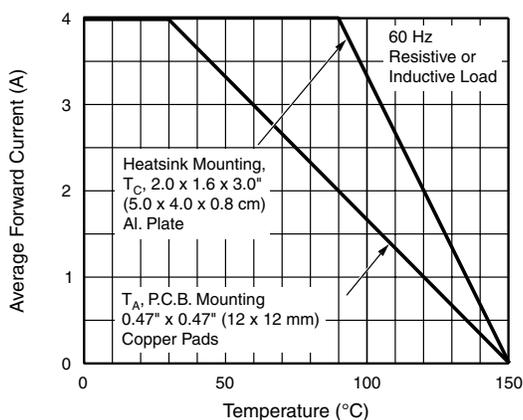


Figure 1. Derating Curve Output Rectified Current

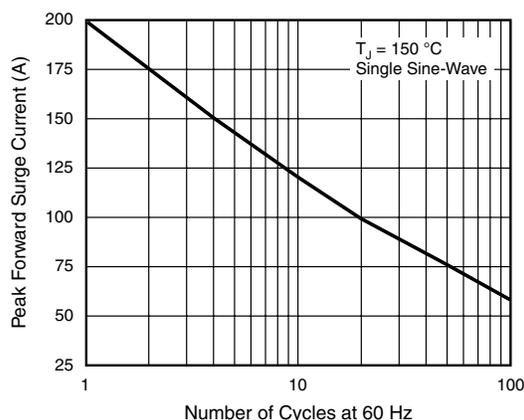


Figure 2. Maximum Non-Repetitive Peak Forward Surge Current Per Diode



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