



# DATA SHEET

## KBU4A~KBU4K

### SILICON SINGLE-PHASE BRIDGE RECTIFIER

**VOLTAGE** 50 to 800 Volts **CURRENT** 4.0 Amperes

KBU

Unit: inch (mm)

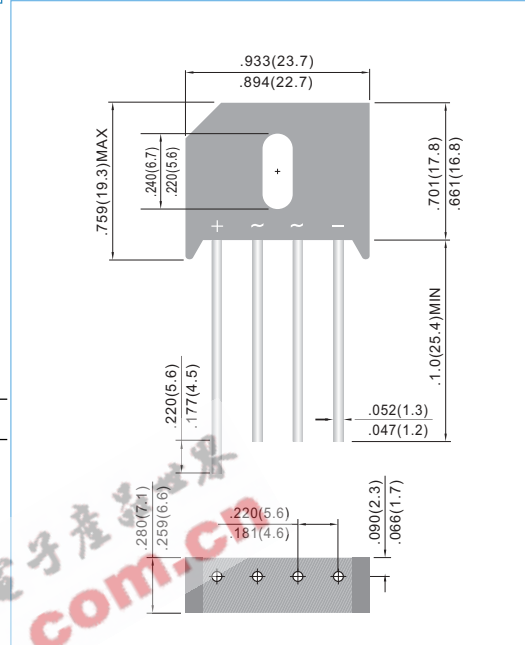
**Reconnized File # E111753**

#### FEATURES

- Plastic material has Underwriters Laboratory Flammability Classification 94V-O
- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique.
- High temperature soldering guaranteed:  
260°C/10 seconds/.375"(9.5mm) lead length at 5 lbs. (2.3kg) tension
- Both normal and Pb free product are available :  
Normal : 80~95% Sn, 5~20% Pb  
Pb free: 98.5% Sn above

#### MECHANICAL DATA

Case: Reliable low cost construction utilizing molded plastic technique  
 Terminals: Leads solderable per MIL-STD-202, Method 208  
 Mounting position: Any  
 Mounting torque: 5 in. lb. Max.  
 Weight: 0.3 ounce, 8.0 grams



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified. Resistive or inductive load, 60Hz.  
 For Capacitive load derate current by 20%.

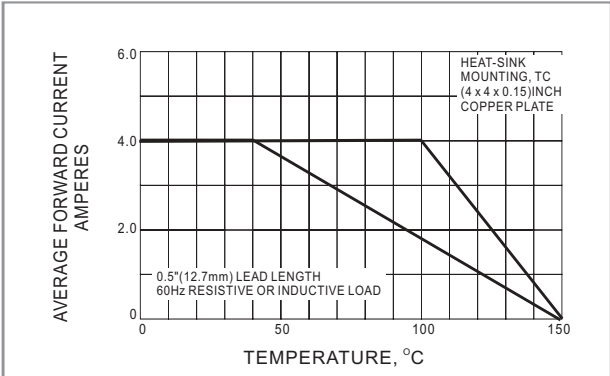
PARAMETER	SYMBOL	KBU4A	KBU4B	KBU4D	KBU4G	KBU4J	KBU4K	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	V
Maximum RMS Bridge Input Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	V
Maximum Average Forward TC=100 °C Rectified Output Current at TA=40 °C	I <sub>AV</sub>	4.0						A
I <sup>2</sup> t Rating for fusing ( t<8.3ms)	I <sup>2</sup> t	93						A <sup>2</sup> sec
Peak Forward Surge Current single sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	150						A <sub>pk</sub>
Maximum Forward Voltage Drop per Bridge Element at 4.0A	V <sub>F</sub>	1.0						V <sub>pk</sub>
Maximum Reverse Leakage Current at Rated @ TA=25°C Dc Blocking Voltage @ TA=100°C	I <sub>R</sub>	5 1000						uA
Typical Thermal Resistance per leg (Note 2) (Note 3)	R <sub>θJA</sub> R <sub>θJC</sub>	8.6 3.1						°C/W
Operating Junction and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to + 150						°C

#### NOTES:

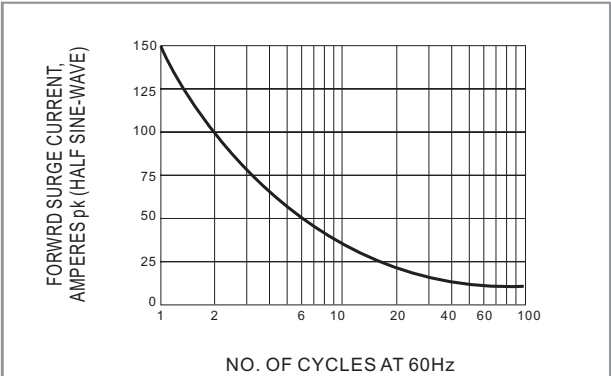
1. Recommended mounting position is to bolt down on heatsink with silicone thermal compound for maximum heat transfer with #6 screw.
2. Units Mounted in free air, no heatsink, P.C.B at 0.375"(9.5mm) lead length with 0.5 x 0.5"(12 x 12mm)copper pads.
3. Units Mounted on a 2.0 x 1.6" x 0.3" thick (5 x 4 x 0.8cm) AL plate.



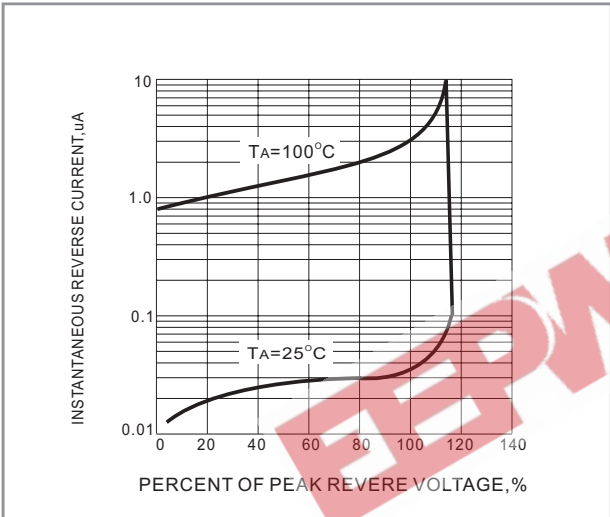
**RATING AND CHARACTERISTIC CURVES**



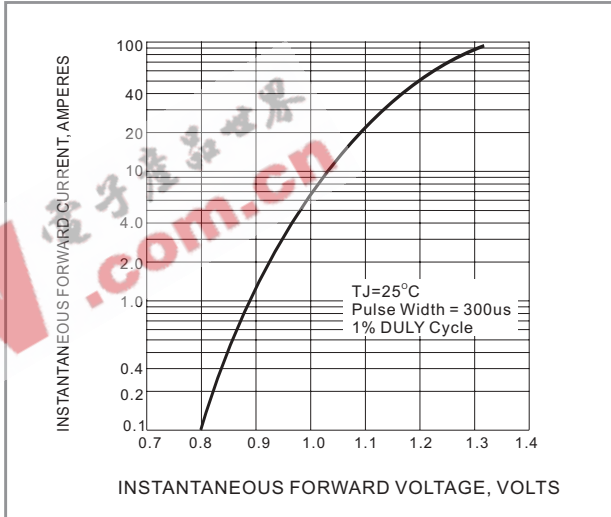
**Fig.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



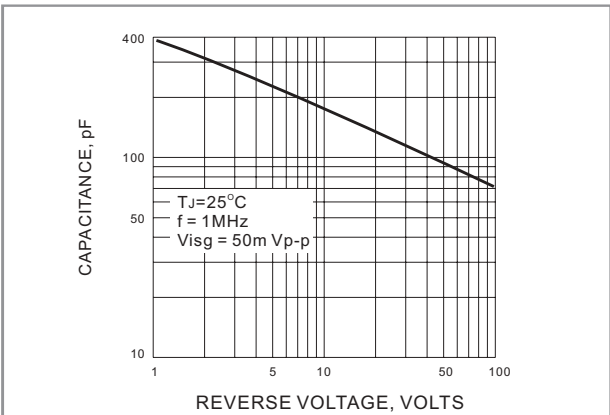
**Fig.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**Fig.3 - TYPICAL REVERSE CHARACTERISTICS**



**Fig.4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER ELEMENT**



**Fig.5 - TYPICAL JUNCTION CAPACITANCE**