



DATA SHEET

KBU4A~KBU4K

SILICON SINGLE-PHASE BRIDGE RECTIFIER

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

KBU

Unit: inch (mm)

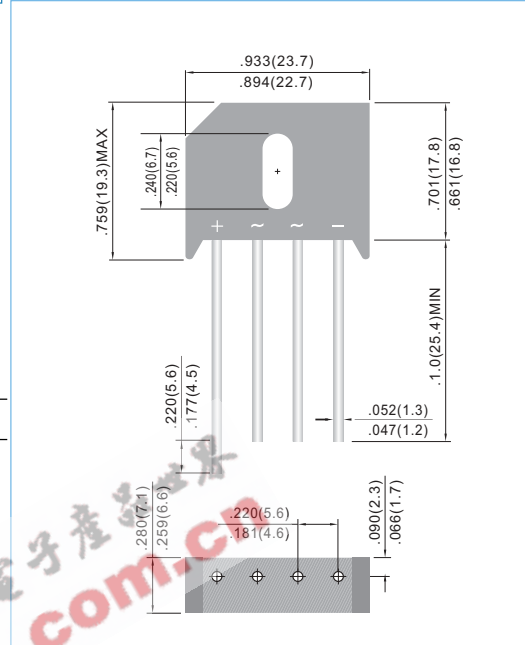
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FEATURES

- 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 _{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | V |
| Maximum RMS Bridge Input Voltage | V _{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | V |
| Maximum DC Blocking Voltage | V _{DC} | 50 | 100 | 200 | 400 | 600 | 800 | V |
| Maximum Average Forward TC=100 °C Rectified Output Current at TA=40 °C | I _{AV} | 4.0 | | | | | | A |
| I ² t Rating for fusing (t<8.3ms) | I ² t | 93 | | | | | | A ² sec |
| Peak Forward Surge Current single sine-wave superimposed on rated load (JEDEC method) | I _{FSM} | 150 | | | | | | A _{pk} |
| Maximum Forward Voltage Drop per Bridge Element at 4.0A | V _F | 1.0 | | | | | | V _{pk} |
| Maximum Reverse Leakage Current at Rated @ TA=25°C Dc Blocking Voltage @ TA=100°C | I _R | 5 1000 | | | | | | uA |
| Typical Thermal Resistance per leg (Note 2) (Note 3) | R _{θJA} R _{θJC} | 8.6 3.1 | | | | | | °C/W |
| Operating Junction and Storage Temperature Range | T _J , T _{STG} | -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

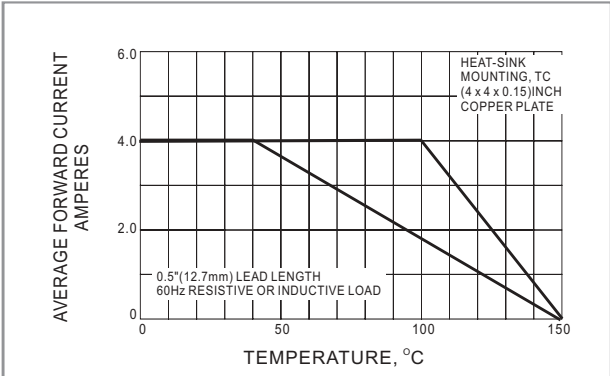


Fig.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

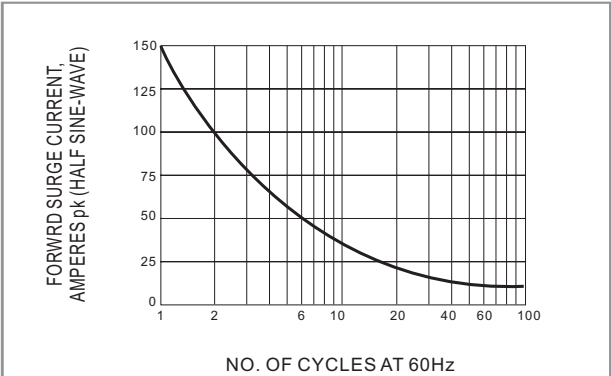


Fig.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

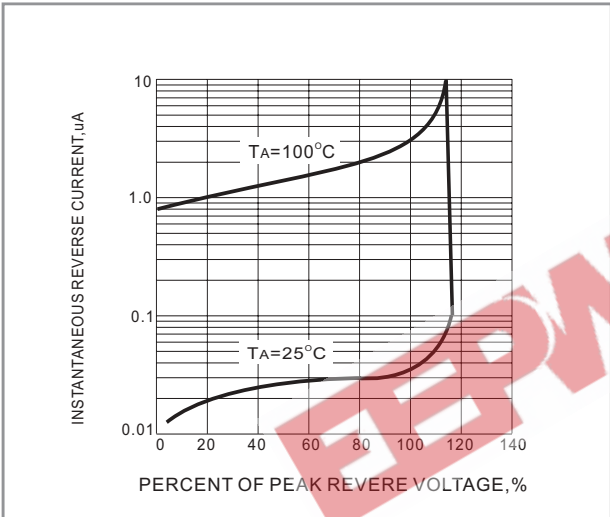


Fig.3 - TYPICAL REVERSE CHARACTERISTICS

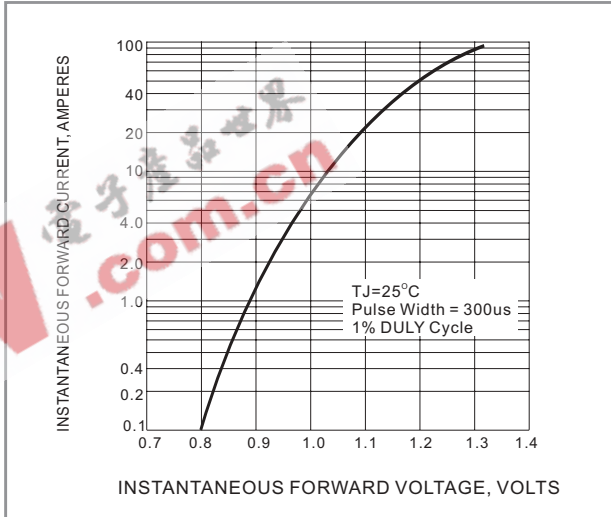


Fig.4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER ELEMENT

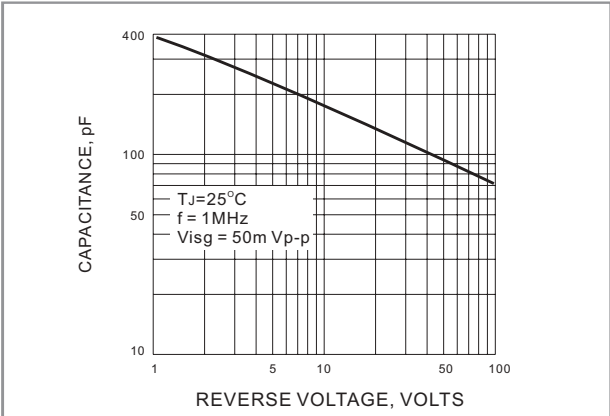


Fig.5 - TYPICAL JUNCTION CAPACITANCE