

# KBU8005 THRU KBU810

## SINGLE PHASE SILICON BRIDGE RECTIFIERS

Reverse Voltage - 50 to 1000 V

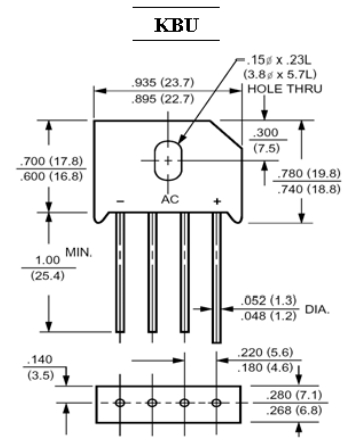
Forward Current - 8 A

### Features

- High surge current capability
- Ideal for printed circuit board
- Plastic material has Underwriters Laboratory Flammability Classification 94V-0
- Reliable low cost construction utilizing molded plastic technique

### Mechanical Data

- Case: Molded plastic, KBU
- Epoxy: UL 94V-0 rate flame retardant
- Terminals: Leads solderable per MIL-STD-202 method 208 guaranteed
- Mounting position: Any



Dimensions in inches and (millimeters)

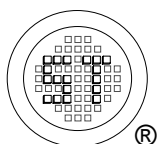
### Maximum Ratings and Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| Parameter   | Symbols         | KBU8005       | KBU801 | KBU802 | KBU804 | KBU806 | KBU808 | KBU810 | Units              |
|---|-----------------|---------------|--------|--------|--------|--------|--------|--------|--------------------|
| Maximum Recurrent 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 Current<br>0.375" (9.5 mm) Leaded Length at $T_A = 65^\circ\text{C}$        | $I_{F(AV)}$     | 8             |        |        |        |        |        |        | A                  |
| Peak Forward Surge Current, 8.3 ms Single Half-Sine-wave Superimposed on Rated Load (JEDEC Method)            | $I_{FSM}$       | 300           |        |        |        |        |        |        | A                  |
| Maximum Forward Voltage at 8 A  | $V_F$           | 1.1           |        |        |        |        |        |        | V                  |
| Maximum Reverse Current at Rated DC Blocking Voltage<br>$T_A = 25^\circ\text{C}$<br>$T_A = 100^\circ\text{C}$ | $I_R$           | 10<br>500     |        |        |        |        |        |        | $\mu\text{A}$      |
| Typical Thermal Resistance <sup>1)</sup>  | $R_{\theta JA}$ | 18            |        |        |        |        |        |        | $^\circ\text{C/W}$ |
| Typical Thermal Resistance <sup>2)</sup>  | $R_{\theta JC}$ | 3             |        |        |        |        |        |        | $^\circ\text{C/W}$ |
| Operating and Storage Temperature Range   | $T_j, T_{stg}$  | - 55 to + 125 |        |        |        |        |        |        | $^\circ\text{C}$   |

<sup>1)</sup> 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.

<sup>2)</sup> Units mounted on a 3 X 3" X 0.11" thick (7.5 X 7.5 X 0.3 cm) Al. Plate heatsink.



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FIG.1- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER BRIDGE ELEMENT

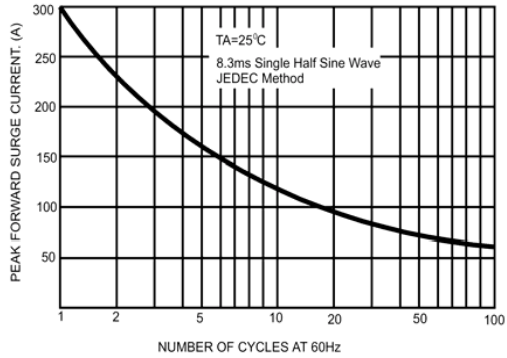


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

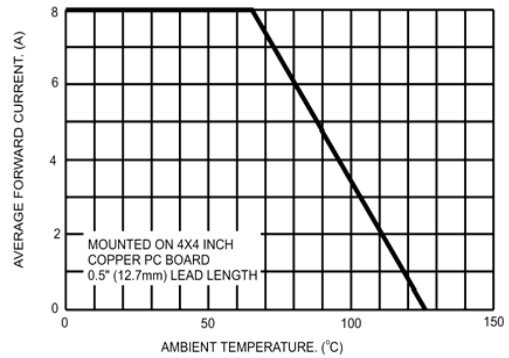


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

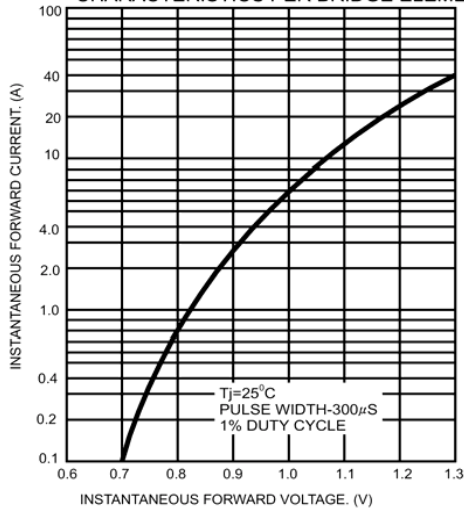
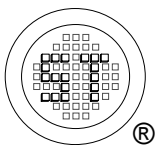
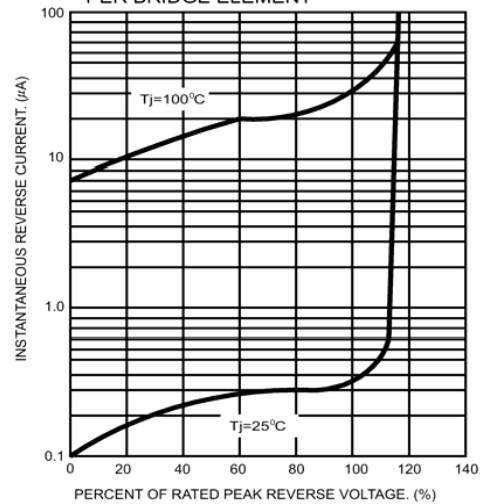


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT



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