

# KBU6005/RS601/KBU6A THRU KBU610/RS607/KBU6M

## SINGLE-PHASE SILICON BRIDGE RECTIFIER

VOLTAGE: 50-1000V

CURRENT: 6.0A

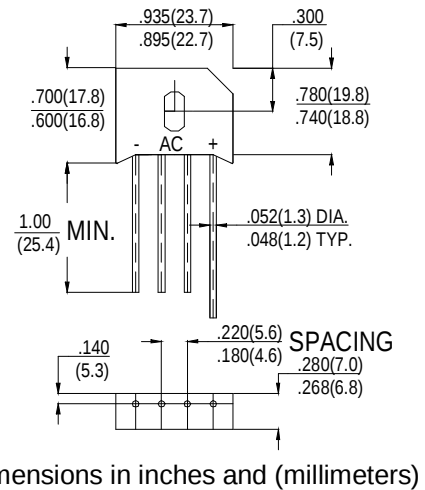
### FEATURES

- Low leakage
- Low forward voltage
- Surge overload ratings-250 Amperes
- Molded structure

### MECHANICAL DATA

- **Case:** Molded plastic
- **Epoxy:** UL 94V-0 rate flame retardant
- **Lead:** MIL-STD- 202E, Method 208 guaranteed
- **Polarity:** Symbols molded or marked on body
- **Mounting position:** Any
- **Weight:** 8.0 grams

### KBU



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

|                                                                                                 |                         | SYMBOL                 | KBU6005 | KBU601 | KBU602 | KBU604 | KBU606 | KBU608 | KBU610 | units                              |
|-------------------------------------------------------------------------------------------------|-------------------------|------------------------|---------|--------|--------|--------|--------|--------|--------|------------------------------------|
|                                                                                                 |                         |                        | RS601   | RS602  | RS603  | RS604  | RS605  | RS606  | RS607  |                                    |
|                                                                                                 |                         |                        | KBU6A   | KBU6B  | KBU6D  | KBU6G  | KBU6J  | KBU6K  | KBU6M  |                                    |
| Maximum Recurrent Peak Reverse Voltage                                                          |                         | <b>V<sub>RRM</sub></b> | 50      | 100    | 200    | 400    | 600    | 800    | 1000   | <b>V</b>                           |
| Maximum RMS Bridge Input Voltage                                                                |                         | <b>V<sub>RMS</sub></b> | 35      | 70     | 140    | 280    | 420    | 560    | 700    | <b>V</b>                           |
| Maximum DC Blocking Voltage                                                                     |                         | <b>V<sub>DC</sub></b>  | 50      | 100    | 200    | 400    | 600    | 800    | 1000   | <b>V</b>                           |
| Maximum Average Forward rectified Output Current at T <sub>C</sub> =75°C                        |                         | <b>I<sub>o</sub></b>   | 6.0     |        |        |        |        |        |        | <b>A</b>                           |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rate load (JEDEC method) |                         | <b>I<sub>FSM</sub></b> | 200     |        |        |        |        |        |        | <b>A</b>                           |
| Maximum Forward Voltage Drop per element at 3.0A DC                                             |                         | <b>V<sub>F</sub></b>   | 1.0     |        |        |        |        |        |        | <b>V</b>                           |
| Maximum DC Reverse Current at Rated DC Blocking Voltage per element                             | @ T <sub>A</sub> =25°C  | <b>I<sub>R</sub></b>   | 10      |        |        |        |        |        |        | <b>µA</b>                          |
|                                                                                                 | @ T <sub>A</sub> =100°C |                        | 500     |        |        |        |        |        |        |                                    |
| I <sup>2</sup> t Rating for Fusing (t<8.3ms)                                                    |                         | <b>I<sup>2</sup>t</b>  | 127     |        |        |        |        |        |        | <b>A<sup>2</sup>S<sub>ec</sub></b> |
| Typical Junction Capacitance (Note 1)                                                           |                         | <b>C<sub>J</sub></b>   | 186     |        |        |        |        |        |        | <b>pF</b>                          |
| Typical Thermal Resistance (Note 2)                                                             |                         | <b>R<sub>θJA</sub></b> | 10      |        |        |        |        |        |        | <b>°C/W</b>                        |

Notes: 1. Measured at 1MHz and applied reverse voltage of 4.0 volts

2. Thermal Resistance from Junction to Ambient with units mounted on 0.47×0.47" (12×12mm) copper pads