

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

## SINGLE-PHASE SILICON BRIDGE RECTIFIER

VOLTAGE: 50-1000V

CURRENT: 6.0A

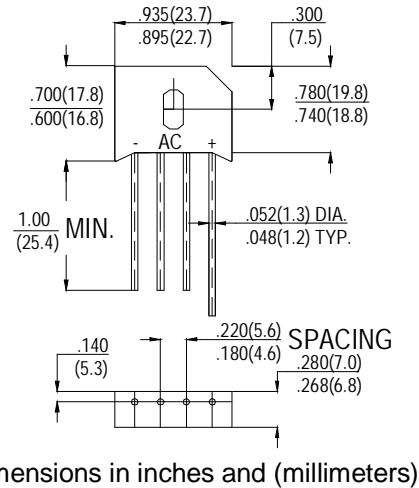
### FEATURES

- 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  | $V_{RRM}$       | 50                  | 100    | 200    | 400    | 600    | 800    | 1000   | V            |         |
| Maximum RMS Bridge Input 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 $T_C=75^\circ C$                            | $I_o$           | 6.0                 |        |        |        |        |        |        | A            |         |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rate load (JEDEC method) | $I_{FSM}$       | 200                 |        |        |        |        |        |        | A            |         |
| Maximum Forward Voltage Drop per element at 3.0A DC   | $V_F$           | 1.0                 |        |        |        |        |        |        | V            |         |
| Maximum DC Reverse Current at Rated DC Blocking Voltage per element                             | $I_R$           | @ $T_A=25^\circ C$  | 10     |        |        |        |        |        |              | $\mu A$ |
|   |                 | @ $T_A=100^\circ C$ | 500    |        |        |        |        |        |              |         |
| $I^2t$ Rating for Fusing ( $t<8.3ms$ )  | $I^2t$          | 127                 |        |        |        |        |        |        | $A^2S_{ec}$  |         |
| Typical Junction Capacitance (Note 1)   | $C_J$           | 186                 |        |        |        |        |        |        | pF           |         |
| Typical Thermal Resistance (Note 2)   | $R_{\theta JA}$ | 10                  |        |        |        |        |        |        | $^\circ C/W$ |         |

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