



**DC COMPONENTS CO., LTD.**  
RECTIFIER SPECIALISTS

**KBK10A  
THRU  
KBK10M**

**TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER**  
VOLTAGE RANGE - 50 to 1000 Volts      CURRENT - 10 Amperes

**FEATURES**

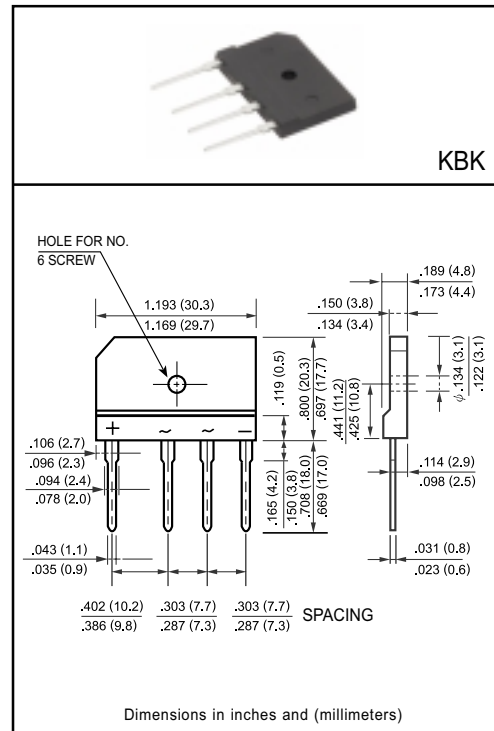
- \* Low leakage
- \* Low forward voltage
- \* Surge overload rating: 170 Amperes peak
- \* Ideal for printed circuit boards
- \* High forward surge current capability

**MECHANICAL DATA**

- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: MIL-STD-202E, Method 208 guaranteed
- \* Polarity: Symbols molded or marked on body
- \* Mounting position: Any
- \* Weight: 6.6 grams

**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%.



|                                                                                                   | SYMBOL                          | KBK10A       | KBK10B | KBK10D | KBK10G | KBK10J | KBK10K | KBK10M | UNITS              |
|---------------------------------------------------------------------------------------------------|---------------------------------|--------------|--------|--------|--------|--------|--------|--------|--------------------|
| Maximum Recurrent Peak Reverse Voltage                                                            | V <sub>RRM</sub>                | 50           | 100    | 200    | 400    | 600    | 800    | 1000   | Volts              |
| Maximum RMS Bridge Input Voltage                                                                  | V <sub>RMS</sub>                | 35           | 70     | 140    | 280    | 420    | 560    | 700    | Volts              |
| Maximum DC Blocking Voltage                                                                       | V <sub>DC</sub>                 | 50           | 100    | 200    | 400    | 600    | 800    | 1000   | Volts              |
| Maximum Average Forward Output Current at T <sub>c</sub> = 75 °C                                  | I <sub>o</sub>                  | 10           |        |        |        |        |        |        | Amps               |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) | I <sub>FSM</sub>                | 170          |        |        |        |        |        |        | Amps               |
| Maximum Forward Voltage Drop per Element at 5.0A DC                                               | V <sub>F</sub>                  | 1.1          |        |        |        |        |        |        | Volts              |
| Maximum DC Reverse Current at Rated DC Blocking Voltage per element                               | @TA = 25 °C                     | 10           |        |        |        |        |        |        | uAmps              |
|                                                                                                   | @TA = 100 °C                    | 500          |        |        |        |        |        |        |                    |
| I <sup>2</sup> t Rating for Fusing (t<8.3ms)                                                      | I <sup>2</sup> t                | 120          |        |        |        |        |        |        | A <sup>2</sup> Sec |
| Typical Junction Capacitance ( Note1)                                                             | C <sub>J</sub>                  | 55           |        |        |        |        |        |        | pF                 |
| Typical Thermal Resistance (Note 2)                                                               | R <sub>θJA</sub>                | 15           |        |        |        |        |        |        | °C/W               |
| Operating Temperature Range                                                                       | T <sub>J</sub> T <sub>STG</sub> | -55 to + 150 |        |        |        |        |        |        | °C                 |

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

2. Thermal Resistance from Junction to Case per element Unit mounted on 300x300x1.6mm Aluminum plate heat-sink.

RATING AND CHARACTERISTIC CURVES (KBK10A THRU KBK10M)

