



**DC COMPONENTS CO., LTD.**

RECTIFIER SPECIALISTS

**KBK20A  
THRU  
KBK20M**

**TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER**

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 20 Amperes

**FEATURES**

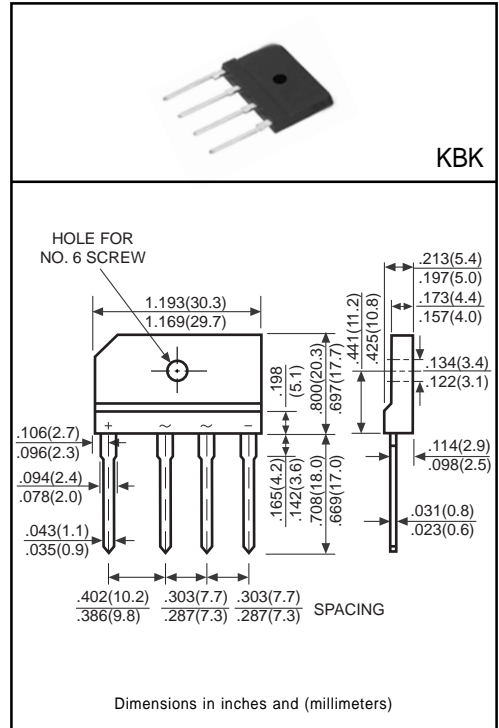
- \* Low leakage
- \* Low forward voltage
- \* Surge overload rating: 240 Amperes peak
- \* Ideal for printed circuit board
- \* High forward surge current capability

**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, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.



|   | SYMBOL                  | KBK20A      | KBK20B | KBK20D | KBK20G | KBK20J | KBK20K | KBK20M | 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 Rectified Current @T <sub>c</sub> =100°C                                  | I <sub>o</sub>          | 20          |        |        |        |        |        |        | Amps               |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) | I <sub>FSM</sub>        | 240         |        |        |        |        |        |        | Amps               |
| Maximum Forward Voltage Drop per element at 4.0A DC   | V <sub>F</sub>          | 1.1         |        |        |        |        |        |        | Volts              |
| Maximum DC Reverse Current at Rated DC Blocking Voltage per element                               | @T <sub>J</sub> = 25°C  | 10          |        |        |        |        |        |        | μAmps              |
|   | @T <sub>J</sub> = 125°C | 500         |        |        |        |        |        |        |                    |
| I <sup>2</sup> t Rating for Fusing (t<8.3ms)  | I <sup>2</sup> t        | 240         |        |        |        |        |        |        | A <sup>2</sup> Sec |
| Typical Junction Capacitance ( Note1)   | C <sub>J</sub>          | 60          |        |        |        |        |        |        | pF                 |
| Typical Thermal Resistance ( Note 2)  | R <sub>θJC</sub>        | 0.8         |        |        |        |        |        |        | °C/W               |
| Operating Temperature Range   | T <sub>J</sub>          | -55 to +150 |        |        |        |        |        |        | °C                 |
| Storage Temperature Range   | 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 100x100x1.6mm Cu plate heat-sink.

# RATING AND CHARACTERISTIC CURVES (KBK20A THRU KBK20M)

