



# KBPC10005 THRU KBPC1010

## SINGLE PHASE SILICON BRIDGE RECTIFIER

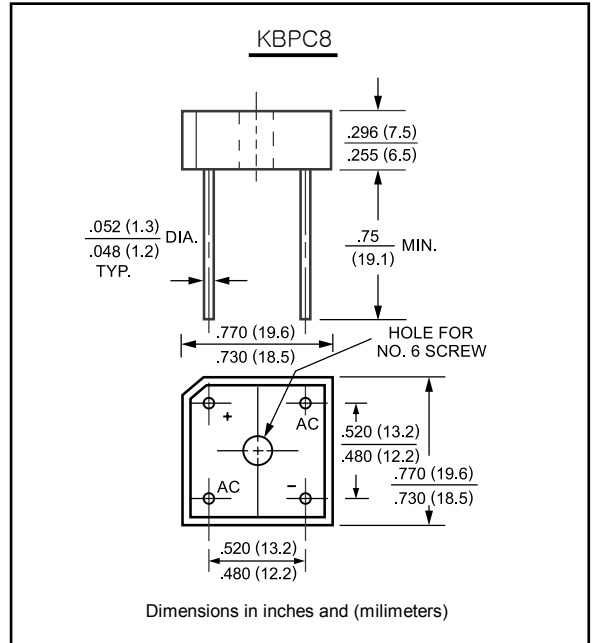
Reverse Voltage - 50 to 1000 Volts      Forward Current - 10.0 Ampere

### FEATURES

- Diffused Junction
- Surge overload rating: 200A peak

### MECHANICAL DATA

- Case: UL-94 Class V-0 recognized Flame Retardant Epoxy
- Terminals: Plated leads solderable per MIL-STD 202, method 208
- Mounting Position: Any
- Marking: Type Number



### 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 current derate by 20%.

| Characteristic                                                                                    |                         | SYMBOL           | KBPC 10005   | KBPC 1001 | KBPC 1002 | KBPC 1004 | KBPC 1006 | KBPC 1008 | KBPC 1010 | UNITS              |
|---------------------------------------------------------------------------------------------------|-------------------------|------------------|--------------|-----------|-----------|-----------|-----------|-----------|-----------|--------------------|
| Maximum Recurrent Peak Reverse Voltage                                                            |                         | V <sub>RRM</sub> | 50           | 100       | 200       | 400       | 600       | 800       | 1000      | Volts              |
| Maximum RMS 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 Output Current at T <sub>c</sub> = 50°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> | 200          |           |           |           |           |           |           | Amps               |
| Maximum Forward Voltage Drop per element at 5.0A DC                                               |                         | V <sub>F</sub>   | 1.1          |           |           |           |           |           |           | Volts              |
| Maximum DC Reverse Current at Rated                                                               | @T <sub>A</sub> = 25°C  | I <sub>R</sub>   | 10           |           |           |           |           |           |           | uAmps              |
| DC Blocking Voltage per element                                                                   | @T <sub>C</sub> = 100°C |                  | 500          |           |           |           |           |           |           |                    |
| I <sup>2</sup> t Rating for Fusing (t<8.3ms)                                                      |                         | I <sup>2</sup> t | 166          |           |           |           |           |           |           | A <sup>2</sup> Sec |
| Typical Junction Capacitance ( Note1)                                                             |                         | C <sub>J</sub>   | 200          |           |           |           |           |           |           | pF                 |
| Typical Thermal Resistance (Note 2)                                                               |                         | R <sub>θJA</sub> | 21           |           |           |           |           |           |           | °C/W               |
| Operating Temperature Range                                                                       |                         | T <sub>J</sub>   | -55 to + 125 |           |           |           |           |           |           | °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 Ambient and from junction to lead mounted on P.C.B. with 0.5 x 0.5" (13x13mm) copper pads.



# KBPC10005 THRU KBPC1010

## RATINGS AND CHARACTERISTIC CURVES

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

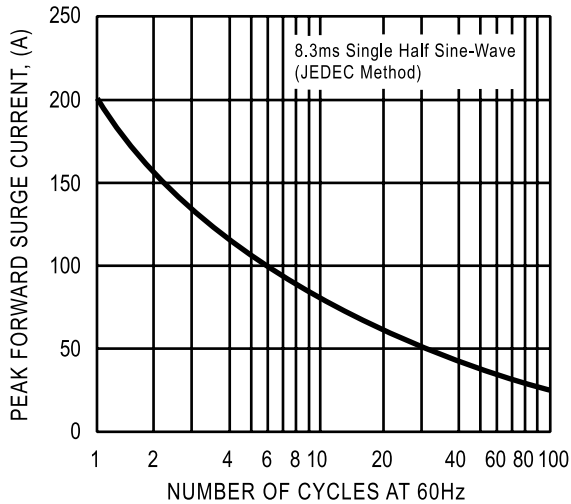


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

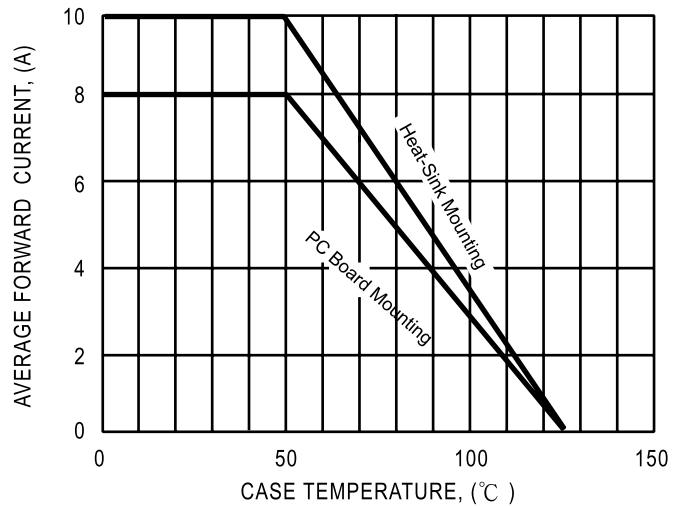


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

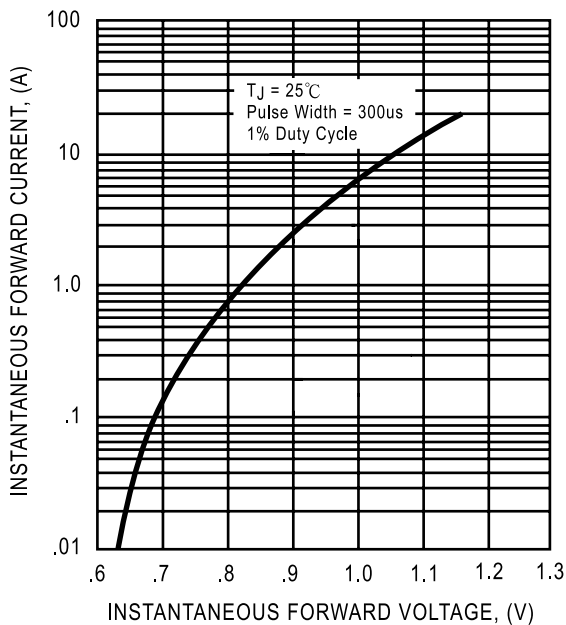


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

