

# KBPC1000P/W – KBPC1010P/W

## 10A HIGH CURRENT BRIDGE RECTIFIER

### Features

- Diffused Junction
- Low Reverse Leakage Current
- Low Power Loss, High Efficiency
- Electrically Isolated Epoxy Case for Maximum Heat Dissipation
- Case to Terminal Isolation Voltage 2500V
- UL Recognized File # E157705

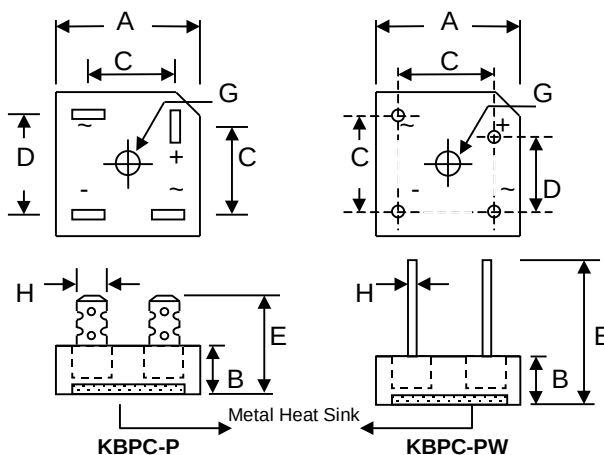
### Mechanical Data

- Case: Epoxy Case with Heat Sink Internally Mounted in the Bridge Encapsulation
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Symbols Marked on Case
- Mounting: Through Hole for #10 Screw
- Weight: KBPC-P 24 grams (approx.)  
KBPC-PW 21 grams (approx.)
- Marking: Type Number

"W" Suffix Designates Wire Leads

No Suffix Designates Faston Terminals

\*All Models are Available on B(Height)=7.9mm Max. Epoxy Case



|                     | KBPC-P                            |       | KBPC-PW |       |
|---------------------|-----------------------------------|-------|---------|-------|
| Dim                 | Min                               | Max   | Min     | Max   |
| A                   | 28.40                             | 28.70 | 28.40   | 28.70 |
| B                   | 10.97                             | 11.23 | 10.97   | 11.23 |
| C                   | 15.70                             | 16.70 | 17.10   | 19.10 |
| D                   | 17.50                             | 18.50 | 10.90   | 11.90 |
| E                   | 22.86                             | 25.40 | 30.50   | —     |
| G                   | Hole for #10 screw, 5.08Ø Nominal |       |         |       |
| H                   | 6.35 Typical                      |       | 0.97Ø   | 1.07Ø |
| All Dimension in mm |                                   |       |         |       |

### Maximum Ratings and Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified

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

For capacitive load, derate current by 20%.

| Characteristic                                                                                                        | Symbol                                                 | KBPC<br>1000P/W | KBPC<br>1001P/W | KBPC<br>1002P/W | KBPC<br>1004P/W | KBPC<br>1006P/W | KBPC<br>1008P/W | KBPC<br>1010P/W | Unit     |
|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                                | V <sub>RRM</sub><br>V <sub>RWM</sub><br>V <sub>R</sub> | 50              | 100             | 200             | 400             | 600             | 800             | 1000            | V        |
| RMS Reverse Voltage                                                                                                   | V <sub>R(RMS)</sub>                                    | 35              | 70              | 140             | 280             | 420             | 560             | 700             | V        |
| Average Rectified Output Current @T <sub>A</sub> = 50°C                                                               | I <sub>O</sub>                                         | 10              |                 |                 |                 |                 |                 |                 | A        |
| Non-Repetitive Peak Forward Surge Current<br>8.3ms Single half sine-wave superimposed<br>on rated load (JEDEC Method) | I <sub>FSM</sub>                                       | 200             |                 |                 |                 |                 |                 |                 | A        |
| Forward Voltage (per element) @I <sub>F</sub> = 5.0A                                                                  | V <sub>FM</sub>                                        | 1.1             |                 |                 |                 |                 |                 |                 | V        |
| Peak Reverse Current @T <sub>C</sub> = 25°C<br>At Rated DC Blocking Voltage @T <sub>C</sub> = 125°C                   | I <sub>RM</sub>                                        | 10<br>0.5       |                 |                 |                 |                 |                 |                 | µA<br>mA |
| Typical Junction Capacitance (Note 1)                                                                                 | C <sub>j</sub>                                         | 200             |                 |                 |                 |                 |                 |                 | pF       |
| Typical Thermal Resistance (Note 2)                                                                                   | R <sub>θJC</sub>                                       | 6.3             |                 |                 |                 |                 |                 |                 | K/W      |
| RMS Isolation Voltage from Case to Lead                                                                               | V <sub>ISO</sub>                                       | 2500            |                 |                 |                 |                 |                 |                 | V        |
| Operating and Storage Temperature Range                                                                               | T <sub>j</sub> , T <sub>STG</sub>                      | -65 to +125     |                 |                 |                 |                 |                 |                 | °C       |

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

2. Thermal resistance junction to case per element mounted on heatsink.

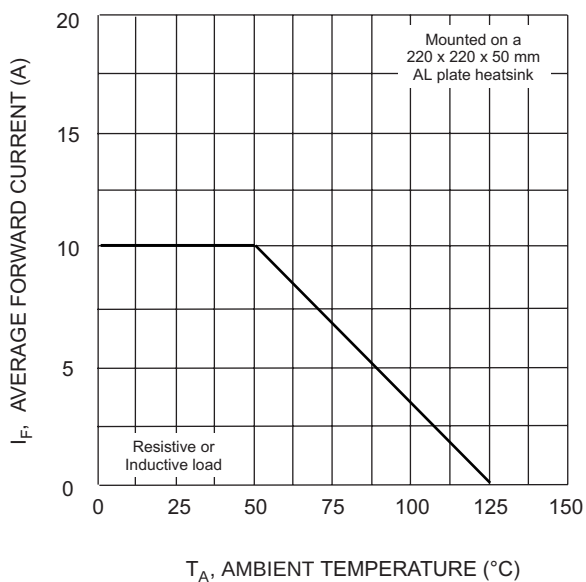


Fig. 1 Forward Current Derating Curve

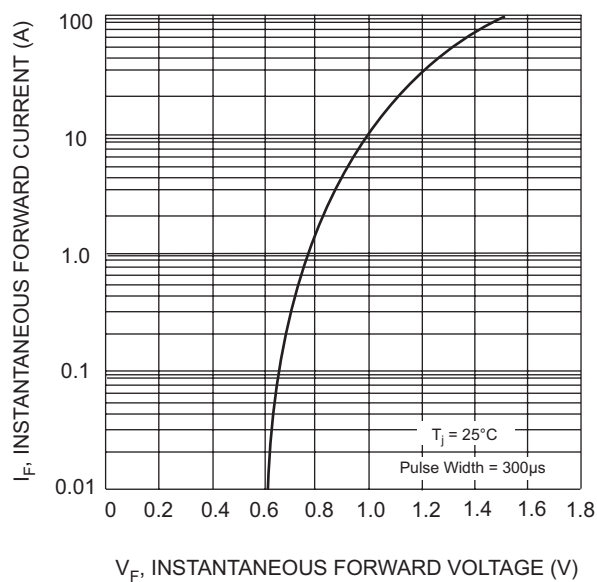


Fig. 2 Typical Forward Characteristics (per element)

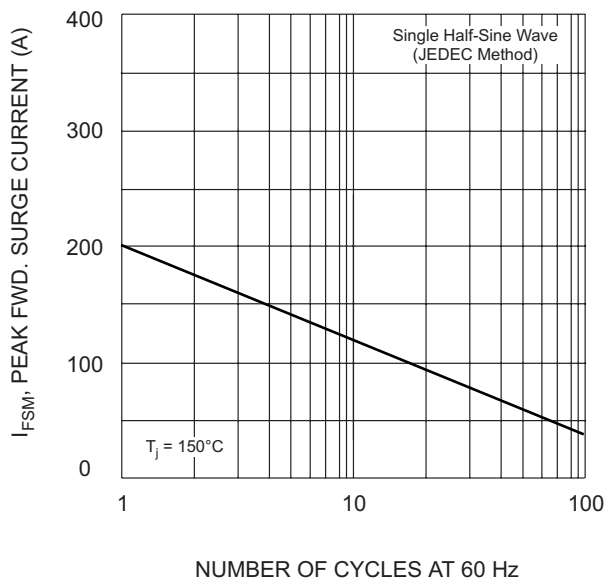


Fig. 3 Max Non-Repetitive Surge Current

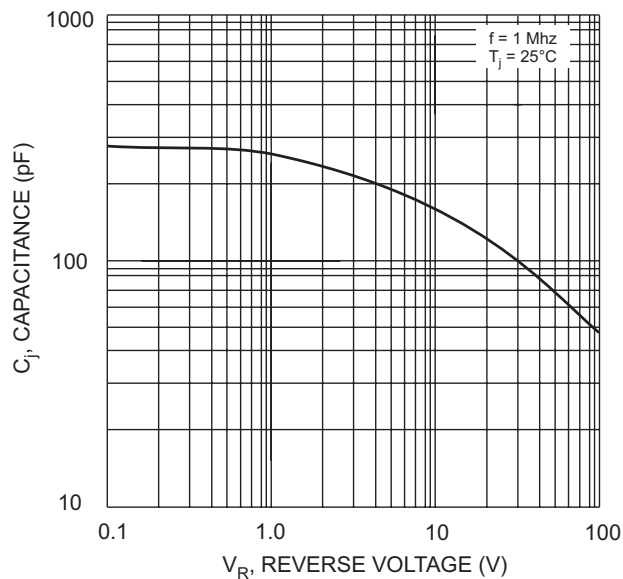


Fig. 4 Typical Junction Capacitance (per element)

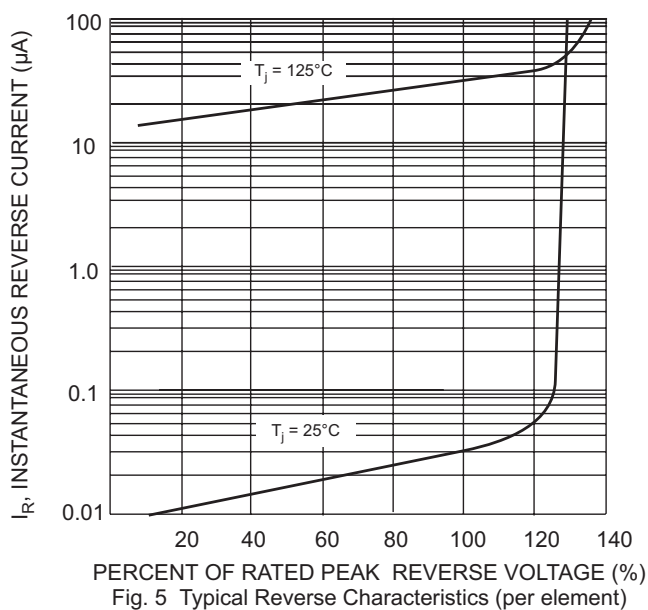


Fig. 5 Typical Reverse Characteristics (per element)

## ORDERING INFORMATION

| Product No. | Package Type  | Shipping Quantity |
|-------------|---------------|-------------------|
| KBPC1000P   | Square Bridge | 50 Units/Box      |
| KBPC1000PW  | Square Bridge | 50 Units/Box      |
| KBPC1001P   | Square Bridge | 50 Units/Box      |
| KBPC1001PW  | Square Bridge | 50 Units/Box      |
| KBPC1002P   | Square Bridge | 50 Units/Box      |
| KBPC1002PW  | Square Bridge | 50 Units/Box      |
| KBPC1004P   | Square Bridge | 50 Units/Box      |
| KBPC1004PW  | Square Bridge | 50 Units/Box      |
| KBPC1006P   | Square Bridge | 50 Units/Box      |
| KBPC1006PW  | Square Bridge | 50 Units/Box      |
| KBPC1008P   | Square Bridge | 50 Units/Box      |
| KBPC1008PW  | Square Bridge | 50 Units/Box      |
| KBPC1010P   | Square Bridge | 50 Units/Box      |
| KBPC1010PW  | Square Bridge | 50 Units/Box      |

Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.

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