

## 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
-  Recognized File # E157705

## Mechanical Data

- Case: Molded Plastic with Heatsink, Available in Both Low Profile and Standard Case
- Terminals: Plated Faston Lugs or Wire Leads, Add "W" Suffix to Indicate Wire Leads
- Polarity: As Marked on Case
- Mounting: Through Hole with #10 Screw
- Mounting Torque: 23 cm·kg (20 in·lbs) Max.
- Weight: 21 grams (KBPC-P); 18 grams (KBPC-PW)
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**



| Dim | KBPC-P<br>Low Profile / Standard  |               | KBPC-PW<br>Low Profile / Standard |              |
|-----|-----------------------------------|---------------|-----------------------------------|--------------|
|     | Min                               | Max           | Min                               | Max          |
| A   | 28.40                             | 28.70         | 28.40                             | 28.70        |
| B   | 7.50 / 10.97                      | 8.50 / 11.23  | 7.50 / 10.97                      | 8.50 / 11.23 |
| C   | 15.70                             | 16.70         | 17.10                             | 19.10        |
| D   | 17.50                             | 18.50         | 10.90                             | 11.90        |
| E   | 22.50 / 22.86                     | 23.50 / 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   | KBPC10      |     |     |     |     |     |      |      |      |      | Unit             |
|---|--|-------------|-----|-----|-----|-----|-----|------|------|------|------|------------------|
|   |  | 00P         | 01P | 02P | 04P | 06P | 08P | 10P  | 12P  | 14P  | 16P  |                  |
| 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 | 1200 | 1400 | 1600 | V                |
| RMS Reverse Voltage   | V <sub>R(RMS)</sub>                                    | 35          | 70  | 140 | 280 | 420 | 560 | 700  | 840  | 980  | 1120 | 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 leg @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>500   |     |     |     |     |     |      |      |      |      | μA               |
| I <sup>2</sup> t Rating for Fusing (t < 8.3ms)  | I <sup>2</sup> t                                       | 166         |     |     |     |     |     |      |      |      |      | A <sup>2</sup> s |
| Typical Junction Capacitance (Note 1)   | C <sub>j</sub>   | 200         |     |     |     |     |     |      |      |      |      | pF               |
| Typical Thermal Resistance per leg (Note 2)   | R <sub>θJC</sub>                                       | 3.0         |     |     |     |     |     |      |      |      |      | °C/W             |
| RMS Isolation Voltage from Case to Leads  | V <sub>ISO</sub>                                       | 2500        |     |     |     |     |     |      |      |      |      | V                |
| Operating and Storage Temperature Range   | T <sub>J</sub> , T <sub>STG</sub>                      | -65 to +150 |     |     |     |     |     |      |      |      |      | °C               |

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.  
2. Thermal resistance junction to case, mounted on heatsink.

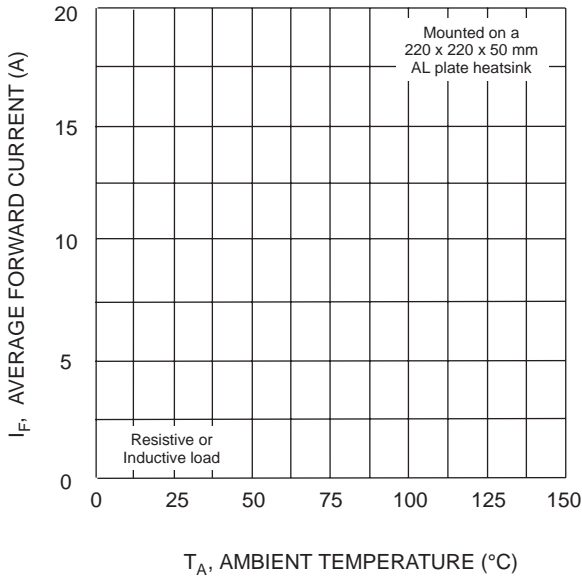


Fig. 1 Forward Current Derating Curve

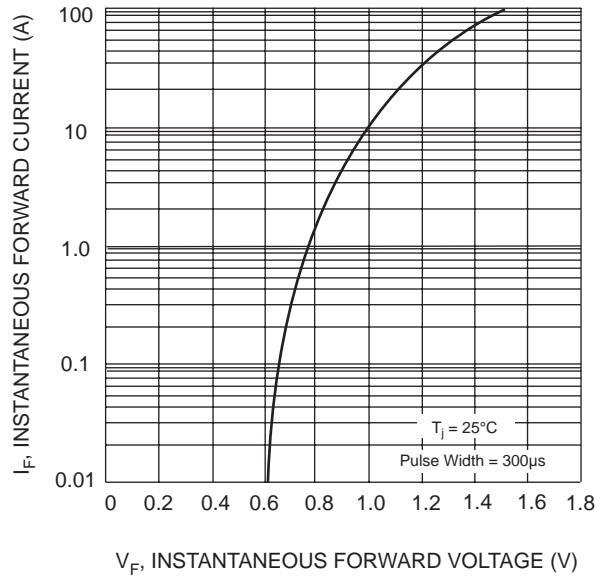


Fig. 2 Typical Forward Characteristics (per element)



Fig. 3 Max Non-Repetitive Surge Current

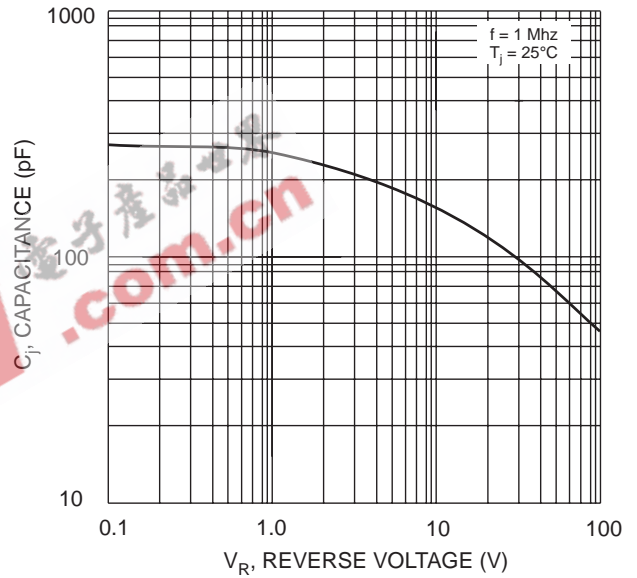
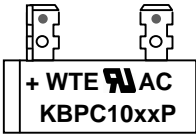
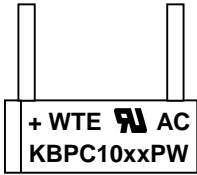


Fig. 4 Typical Junction Capacitance (per element)



Fig. 5 Typical Reverse Characteristics (per element)

## MARKING INFORMATION

|   |   |
|---|---|
| <p><b>KBPC-P</b></p>  <p>WTE = Manufacturer's Logo<br/>         KBPC10xxP = Device Number<br/>         xx = 00, 01, 02, 04, 06, 08, 10, 12, 14 or 16<br/>         Polarity = As Marked on Body</p> | <p><b>KBPC-PW</b></p>  <p>WTE = Manufacturer's Logo<br/>         KBPC10xxPW = Device Number<br/>         xx = 00, 01, 02, 04, 06, 08, 10, 12, 14 or 16<br/>         Polarity = As Marked on Body</p> |
|---|---|

## PACKAGING INFORMATION

**BULK**

| Case Style     | Inner Box Size<br>L x W x H (mm) | Quantity<br>(PCS) | Carton Size<br>L x W x H (mm) | Quantity<br>(PCS) | Approx. Gross Weight<br>(KG) |
|----------------|----------------------------------|-------------------|-------------------------------|-------------------|------------------------------|
| <b>KBPC-P</b>  | 195 x 195 x 40                   | 50                | 405 x 205 x 240               | 500               | 12.0                         |
| <b>KBPC-PW</b> | 195 x 195 x 40                   | 50                | 405 x 205 x 240               | 500               | 11.0                         |

**Note:** 1. Paper box, white or brown color.

## 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      |
| KBPC1012P   | Square Bridge | 50 Units/Box      |
| KBPC1012PW  | Square Bridge | 50 Units/Box      |
| KBPC1014P   | Square Bridge | 50 Units/Box      |
| KBPC1014PW  | Square Bridge | 50 Units/Box      |
| KBPC1016P   | Square Bridge | 50 Units/Box      |
| KBPC1016PW  | Square Bridge | 50 Units/Box      |

1. Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
2. To order Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, KBPC1000P-LF.

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**WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT.** WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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*We power your everyday.*