
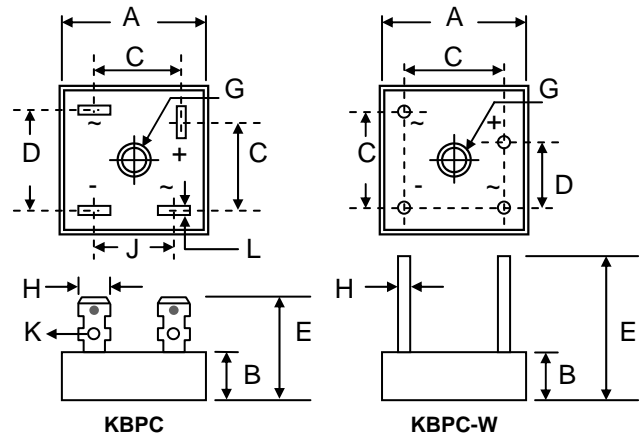


### Features

- Diffused Junction
- Low Reverse Leakage Current
- Low Power Loss, High Efficiency
- Electrically Isolated Metal Case for Maximum Heat Dissipation
- Low Thermal Resistance
- High Surge Current Capability
-  Recognized File # E157705

### Mechanical Data

- Case: KBPC (Metal Case with Faston Lugs) or KBPC-W (Metal Case with Wire Leads)
- 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: 2.0 N.m Max.
- Weight: 30 grams (KBPC); 28 grams (KBPC-W)
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**



| Dim                 | KBPC                              |       | KBPC-W |       |
|---------------------|-----------------------------------|-------|--------|-------|
|                     | Min                               | Max   | Min    | Max   |
| A                   | 27.94                             | 28.96 | 27.94  | 28.96 |
| B                   | 10.77                             | 11.23 | 10.77  | 11.23 |
| C                   | 15.30                             | 17.60 | 17.10  | 19.10 |
| D                   | 17.10                             | 19.10 | 10.40  | 12.40 |
| E                   | 21.50                             | —     | 30.50  | —     |
| G                   | Hole for #10 screw, 5.08Ø Nominal |       |        |       |
| H                   | 6.35 Typical                      |       | 0.97Ø  | 1.07Ø |
| J                   | 13.20                             | 15.20 |        |       |
| K                   | 2.5Ø Typical                      |       |        |       |
| L                   | 0.71                              | 0.91  |        |       |
| All Dimension in mm |                                   |       |        |       |

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

Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| Characteristic  | Symbol                            | KBPC15      |     |     |     |     |     |      |      | Unit             |
|---|-----------------------------------|-------------|-----|-----|-----|-----|-----|------|------|------------------|
|   |                                   | 00          | 01  | 02  | 04  | 06  | 08  | 10   | 12   |                  |
| Peak Repetitive Reverse Voltage   | V <sub>RRM</sub>                  |             |     |     |     |     |     |      |      |                  |
| Working Peak Reverse Voltage  | V <sub>RWM</sub>                  | 50          | 100 | 200 | 400 | 600 | 800 | 1000 | 1200 | V                |
| DC Blocking Voltage   | V <sub>R</sub>                    |             |     |     |     |     |     |      |      |                  |
| RMS Reverse Voltage   | V <sub>R(RMS)</sub>               | 35          | 70  | 140 | 280 | 420 | 560 | 700  | 840  | V                |
| Average Rectified Output Current @ <sub>T<sub>C</sub></sub> = 55°C  | I <sub>O</sub>                    | 15          |     |     |     |     |     |      |      | 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>                  | 300         |     |     |     |     |     |      |      | A                |
| Forward Voltage per leg @ <sub>I<sub>F</sub></sub> = 7.5A   | V <sub>FM</sub>                   | 1.1         |     |     |     |     |     |      |      | V                |
| Peak Reverse Current @ <sub>T<sub>C</sub></sub> = 25°C<br>At Rated DC Blocking Voltage @ <sub>T<sub>C</sub></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                  | 375         |     |     |     |     |     |      |      | A <sup>2</sup> s |
| Typical Junction Capacitance (Note 1)   | C <sub>J</sub>                    | 200         |     |     |     |     |     |      |      | pF               |
| Typical Thermal Resistance (Note 2)   | R <sub>JC</sub>                   | 1.7         |     |     |     |     |     |      |      | °C/W             |
| RMS Isolation Voltage, t = 1min   | V <sub>ISO</sub>                  | 2500        |     |     |     |     |     |      |      | V                |
| Operating and Storage Temperature Range   | T <sub>J</sub> , T <sub>STG</sub> | -55 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 127 x 102 x 76mm Al. heatsink.

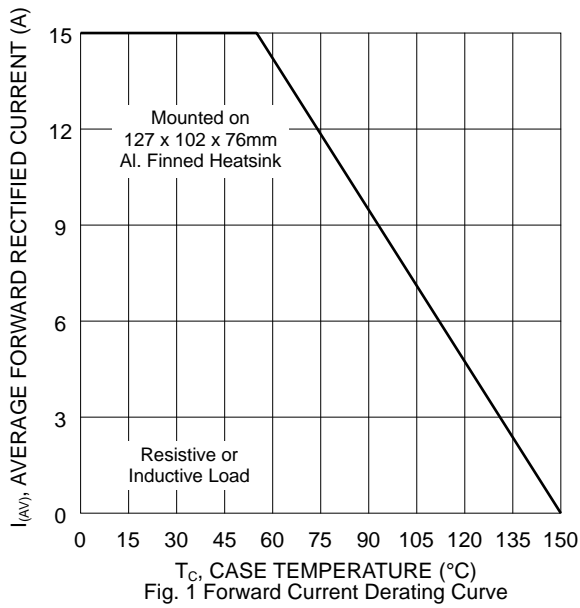


Fig. 1 Forward Current Derating Curve

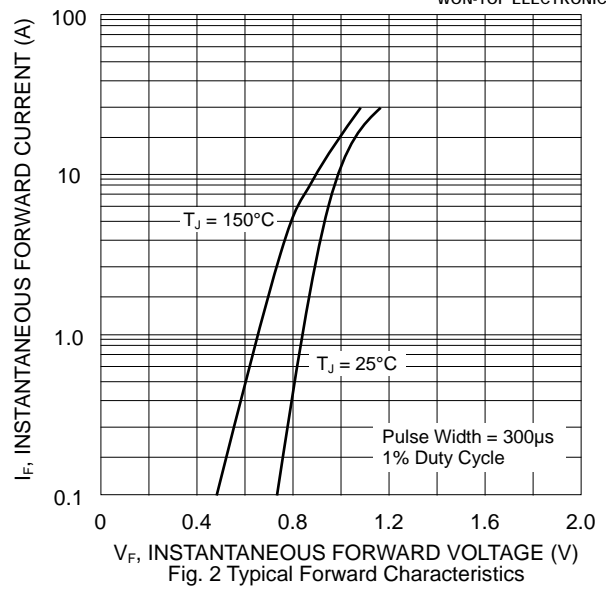


Fig. 2 Typical Forward Characteristics

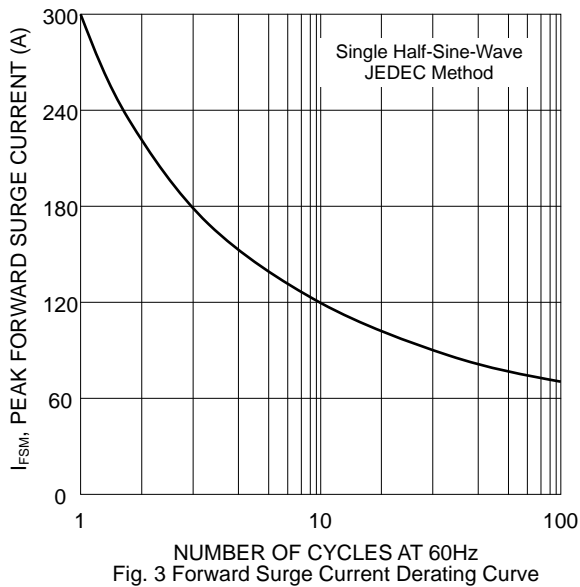


Fig. 3 Forward Surge Current Derating Curve

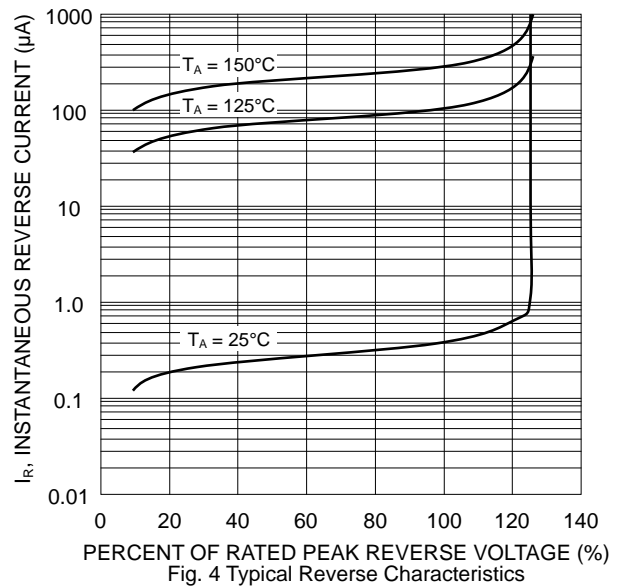


Fig. 4 Typical Reverse Characteristics

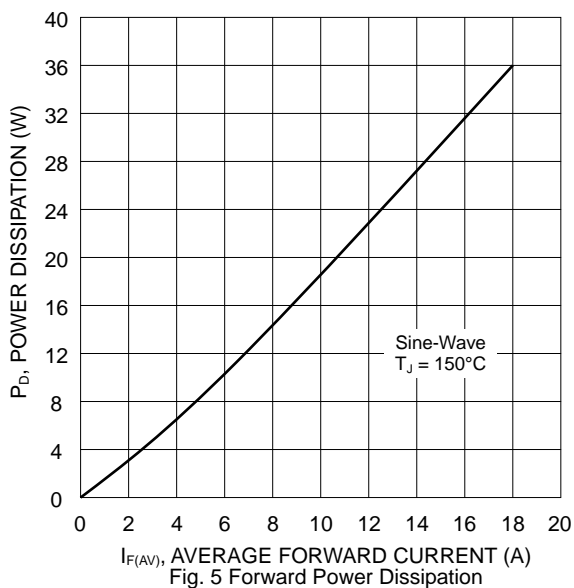


Fig. 5 Forward Power Dissipation

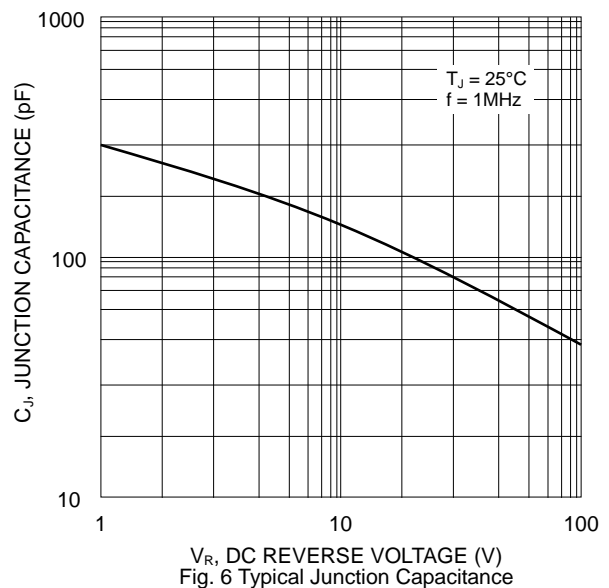
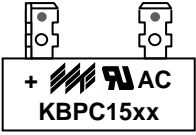
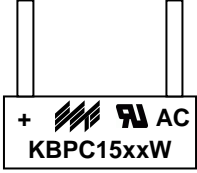


Fig. 6 Typical Junction Capacitance

## MARKING INFORMATION

| KBPC   | KBPC-W  |
|--|---|
|  <p>KBPC15xx = Device Number<br/>           xx = 00, 01, 02, 04, 06, 08, 10 or 12<br/>           Polarity = As Marked on Body</p> |  <p>KBPC15xxW = Device Number<br/>           xx = 00, 01, 02, 04, 06, 08, 10 or 12<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</b>   | 195 x 195 x 40                   | 50                | 405 x 205 x 240               | 500               | 17.0                         |
| <b>KBPC-W</b> | 195 x 195 x 40                   | 50                | 405 x 205 x 240               | 500               | 16.0                         |

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

## ORDERING INFORMATION

| Product No. | Package Type  | Shipping Quantity |
|-------------|---------------|-------------------|
| KBPC15xx    | Square Bridge | 50 Units/Box      |
| KBPC15xxW   | 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 RoHS / Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, KBPC1500-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.*