
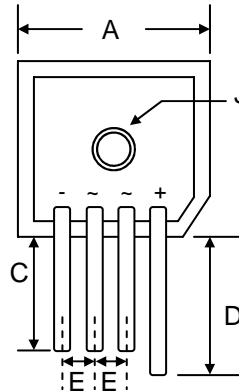


### Features

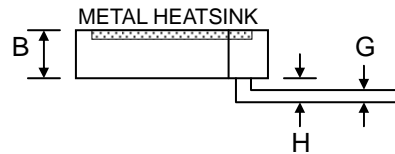
- Diffused Junction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- Designed for Saving Mounting Space
-  Recognized File # E157705

### Mechanical Data

- Case: KBPC-S, Molded Plastic with Heatsink Internally Mounted in the Bridge Encapsulation
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Body
- Mounting: Through Hole with #10 Screw
- Mounting Torque: 23 cm·kg (20 in·lbs) Max.
- Weight: 21 grams (approx.)
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 4**



| KBPC-S               |                |       |
|----------------------|----------------|-------|
| Dim                  | Min            | Max   |
| A                    | 28.40          | 28.70 |
| B                    | 10.97          | 11.23 |
| C                    | —              | 21.00 |
| D                    | —              | 25.00 |
| E                    | 5.10           | —     |
| G                    | 1.20 Ø Typical |       |
| H                    | 3.05           | 3.60  |
| J                    | 5.08 Ø Nominal |       |
| All Dimensions 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                            | KBPC40      |     |     |     |     |     |      |      |      |      | Unit             |   |
|---|-----------------------------------|-------------|-----|-----|-----|-----|-----|------|------|------|------|------------------|---|
|   |                                   | 00S         | 01S | 02S | 04S | 06S | 08S | 10S  | 12S  | 14S  | 16S  |                  |   |
| Peak Repetitive Reverse Voltage   | V <sub>RRM</sub>                  |             |     |     |     |     |     |      |      |      |      |                  | V |
| Working Peak Reverse Voltage  | V <sub>RWM</sub>                  | 50          | 100 | 200 | 400 | 600 | 800 | 1000 | 1200 | 1400 | 1600 |                  |   |
| DC Blocking Voltage   | V <sub>R</sub>                    |             |     |     |     |     |     |      |      |      |      |                  |   |
| 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> = 60°C   | I <sub>O</sub>                    | 40          |     |     |     |     |     |      |      |      |      | 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>                  | 400         |     |     |     |     |     |      |      |      |      | A                |   |
| Forward Voltage per leg @I <sub>F</sub> = 20A   | 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                  | 664         |     |     |     |     |     |      |      |      |      | A <sup>2</sup> s |   |
| Typical Junction Capacitance (Note 1)   | C <sub>j</sub>                    | 400         |     |     |     |     |     |      |      |      |      | pF               |   |
| Typical Thermal Resistance per leg (Note 2)   | R <sub>θJC</sub>                  | 2.1         |     |     |     |     |     |      |      |      |      | °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.

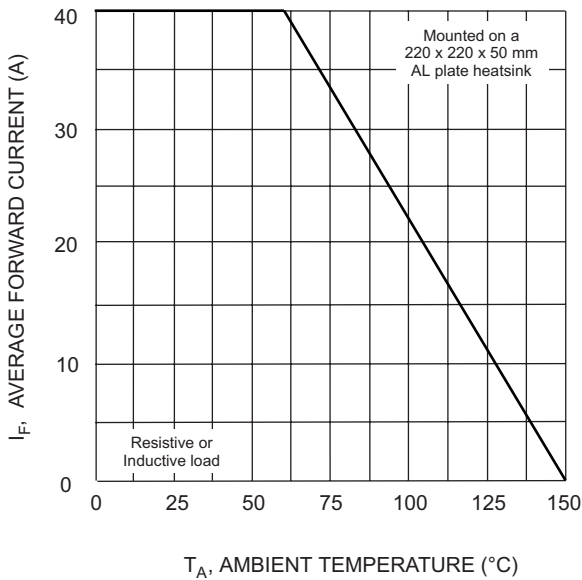


Fig. 1 Forward Current Derating Curve

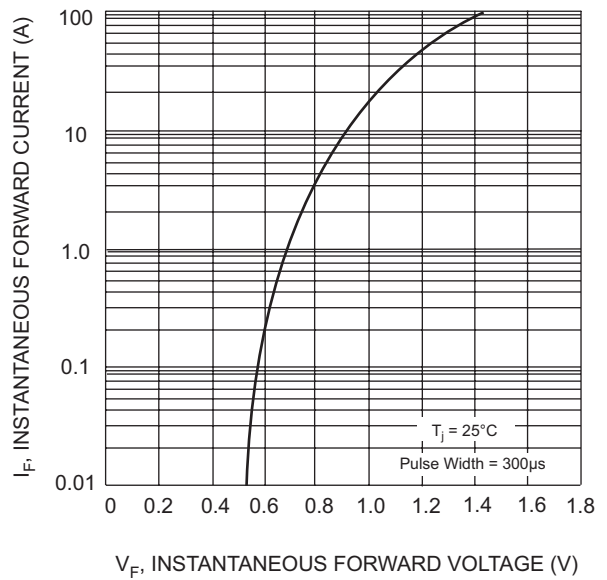


Fig. 2 Typical Forward Characteristics (per element)

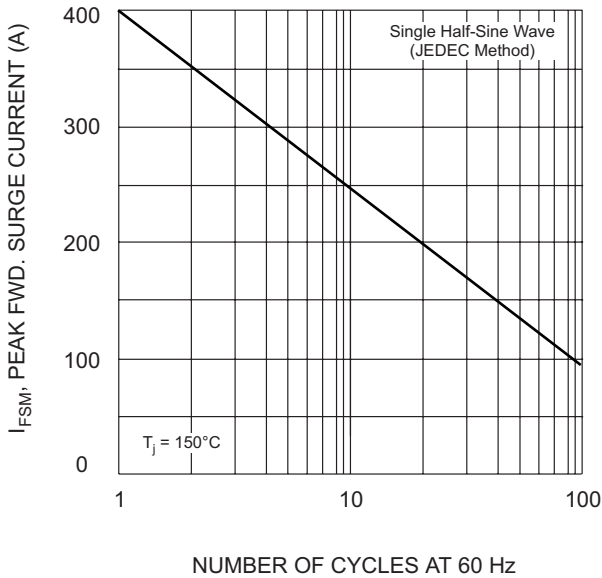


Fig. 3 Max Non-Repetitive Surge Current

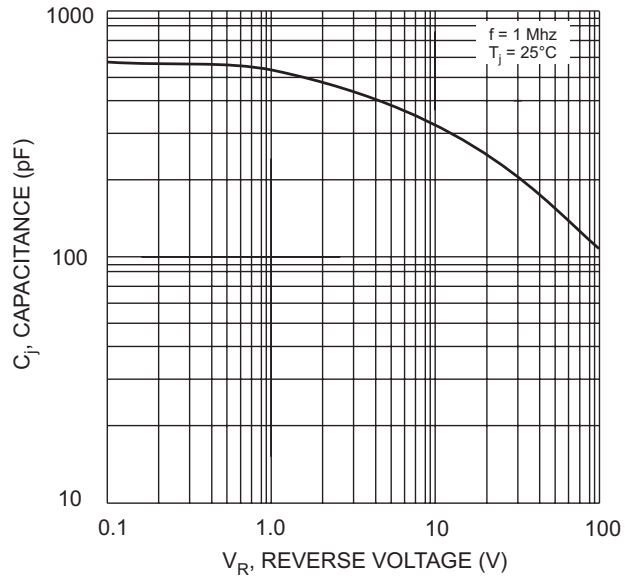


Fig. 4 Typical Junction Capacitance (per element)

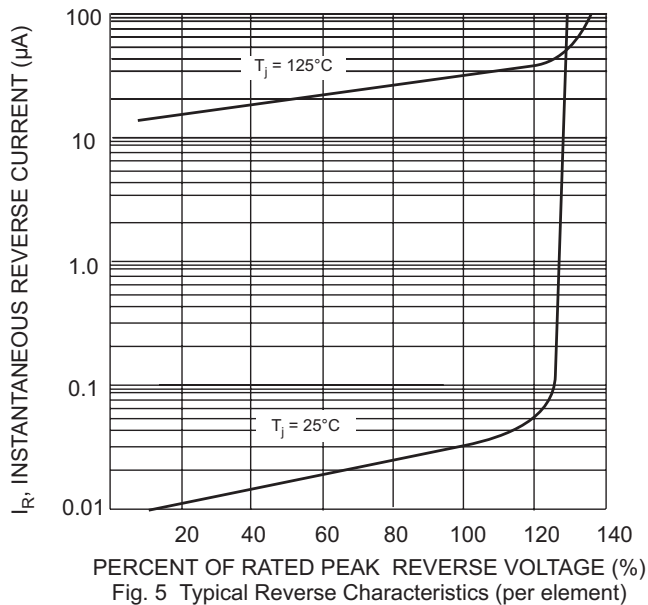


Fig. 5 Typical Reverse Characteristics (per element)

## MARKING INFORMATION



WTE = Manufacturer's Logo  
 KBPC40xxS = Device Number  
 xx = 00, 01, 02, 04, 06, 08, 10, 12, 14 or 16  
 Polarity = As Marked on Body

## PACKAGING INFORMATION

### BULK

| 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) |
|----------------------------------|-------------------|-------------------------------|-------------------|------------------------------|
| 195 x 195 x 40                   | 80                | 405 x 205 x 240               | 800               | 17.0                         |

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

## ORDERING INFORMATION

| Product No. | Package Type | Shipping Quantity |
|-------------|--------------|-------------------|
| KBPC4000S   | SIL Bridge   | 80 Units/Box      |
| KBPC4001S   | SIL Bridge   | 80 Units/Box      |
| KBPC4002S   | SIL Bridge   | 80 Units/Box      |
| KBPC4004S   | SIL Bridge   | 80 Units/Box      |
| KBPC4006S   | SIL Bridge   | 80 Units/Box      |
| KBPC4008S   | SIL Bridge   | 80 Units/Box      |
| KBPC4010S   | SIL Bridge   | 80 Units/Box      |
| KBPC4012S   | SIL Bridge   | 80 Units/Box      |
| KBPC4014S   | SIL Bridge   | 80 Units/Box      |
| KBPC4016S   | SIL Bridge   | 80 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, KBPC4000S-LF.**

Won-Top Electronics Co., Ltd (WTE) has checked all information carefully and believes it to be correct and accurate. However, WTE cannot assume any responsibility for inaccuracies. Furthermore, this information does not give the purchaser of semiconductor devices any license under patent rights to manufacturer. WTE reserves the right to change any or all information herein without further notice.

**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.

**Won-Top Electronics Co., Ltd.**

No. 44 Yu Kang North 3rd Road, Chine Chen Dist., Kaohsiung, Taiwan

**Phone:** 886-7-822-5408 or 886-7-822-5410

**Fax:** 886-7-822-5417

**Email:** sales@wontop.com

**Internet:** <http://www.wontop.com>

*We power your everyday.*