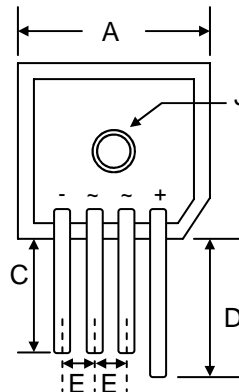


## Features

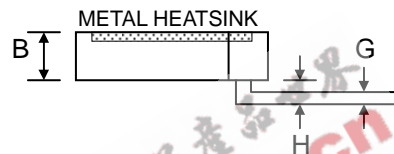
- Diffused Junction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- Designed for Saving Mounting Space
- Recognized File # E157705

## 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 @<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                            | KBPC35      |     |     |     |     |     |      |      |      |      | 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 | V                |
| DC Blocking Voltage   | V <sub>R</sub>                    |             |     |     |     |     |     |      |      |      |      | V                |
| RMS Reverse Voltage   | V <sub>R(RMS)</sub>               | 35          | 70  | 140 | 280 | 420 | 560 | 700  | 840  | 980  | 1120 | V                |
| Average Rectified Output Current @ <sub>T<sub>A</sub></sub> = 60°C  | I <sub>O</sub>                    | 35          |     |     |     |     |     |      |      |      |      | 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 @ <sub>I<sub>F</sub></sub> = 17.5A  | 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                  | 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.

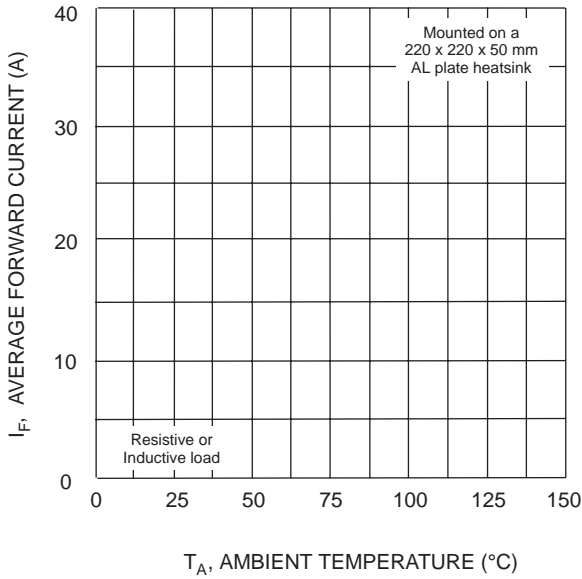


Fig. 1 Forward Current Derating Curve

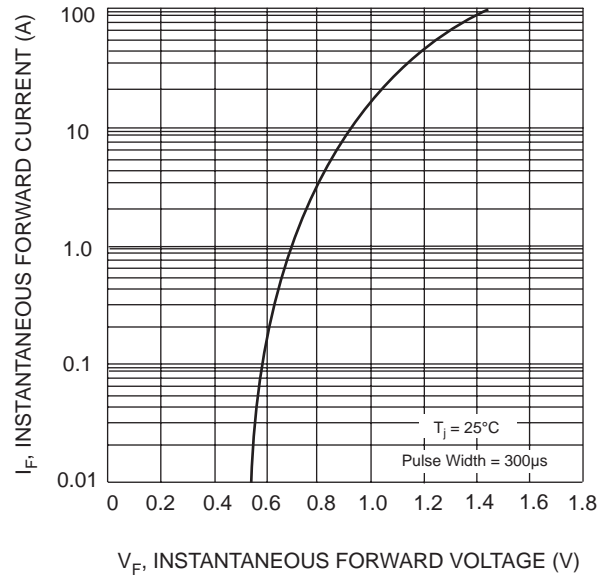


Fig. 2 Typical Forward Characteristics (per element)



Fig. 3 Max Non-Repetitive Surge Current

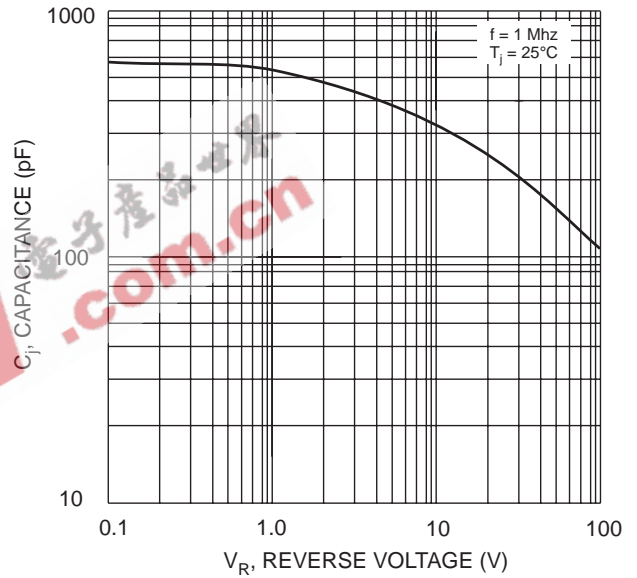


Fig. 4 Typical Junction Capacitance (per element)

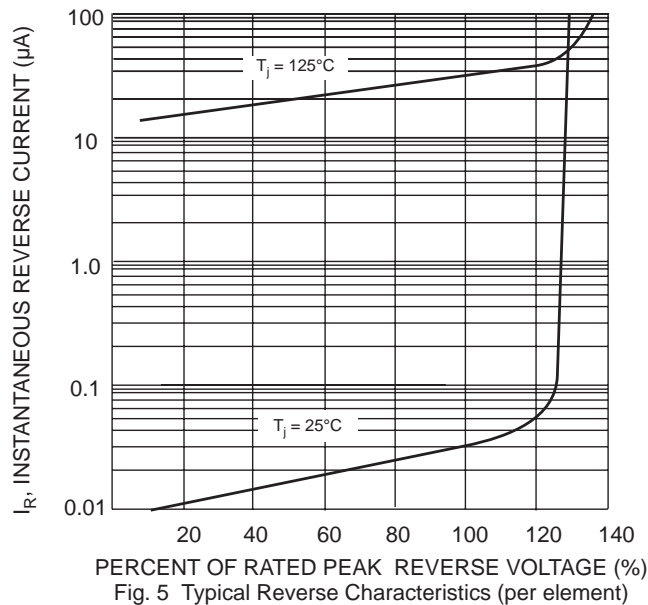


Fig. 5 Typical Reverse Characteristics (per element)

## MARKING INFORMATION



WTE = Manufacturer's Logo  
 KBPC35xxS = 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.

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## ORDERING INFORMATION

| Product No. | Package Type | Shipping Quantity |
|-------------|--------------|-------------------|
| KBPC3500S   | SIL Bridge   | 80 Units/Box      |
| KBPC3501S   | SIL Bridge   | 80 Units/Box      |
| KBPC3502S   | SIL Bridge   | 80 Units/Box      |
| KBPC3504S   | SIL Bridge   | 80 Units/Box      |
| KBPC3506S   | SIL Bridge   | 80 Units/Box      |
| KBPC3508S   | SIL Bridge   | 80 Units/Box      |
| KBPC3510S   | SIL Bridge   | 80 Units/Box      |
| KBPC3512S   | SIL Bridge   | 80 Units/Box      |
| KBPC3514S   | SIL Bridge   | 80 Units/Box      |
| KBPC3516S   | 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, KBPC3500S-LF.**

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### 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>

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