
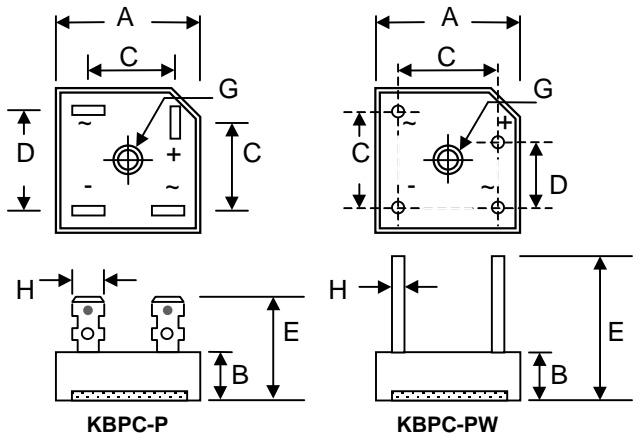


Features

- 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 Low Profile / Standard | | KBPC-PW 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_A=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 | |
|---|-----------------------------------|-------------|-----|-----|-----|-----|-----|------|------|------|------|------------------|---|
| | | 00P | 01P | 02P | 04P | 06P | 08P | 10P | 12P | 14P | 16P | | |
| Peak Repetitive Reverse Voltage | V _{RRM} | | | | | | | | | | | | V |
| Working Peak Reverse Voltage | V _{RWM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | 1200 | 1400 | 1600 | | |
| DC Blocking Voltage | V _R | | | | | | | | | | | | |
| RMS Reverse Voltage | V _{R(RMS)} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | 840 | 980 | 1120 | V | |
| Average Rectified Output Current @T _A = 60°C | I _O | 40 | | | | | | | | | | A | |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 400 | | | | | | | | | | A | |
| Forward Voltage per leg @I _F = 20A | V _{FM} | 1.1 | | | | | | | | | | V | |
| Peak Reverse Current @T _C = 25°C At Rated DC Blocking Voltage @T _C = 125°C | I _{RM} | 10 | | | | | | | | | | µA | |
| | | 500 | | | | | | | | | | | |
| I ² t Rating for Fusing (t < 8.3ms) | I ² t | 664 | | | | | | | | | | A ² s | |
| Typical Junction Capacitance (Note 1) | C _j | 400 | | | | | | | | | | pF | |
| Typical Thermal Resistance per leg (Note 2) | R _{θJC} | 2.1 | | | | | | | | | | °C/W | |
| RMS Isolation Voltage from Case to Leads | V _{ISO} | 2500 | | | | | | | | | | V | |
| Operating and Storage Temperature Range | T _j , T _{STG} | -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.

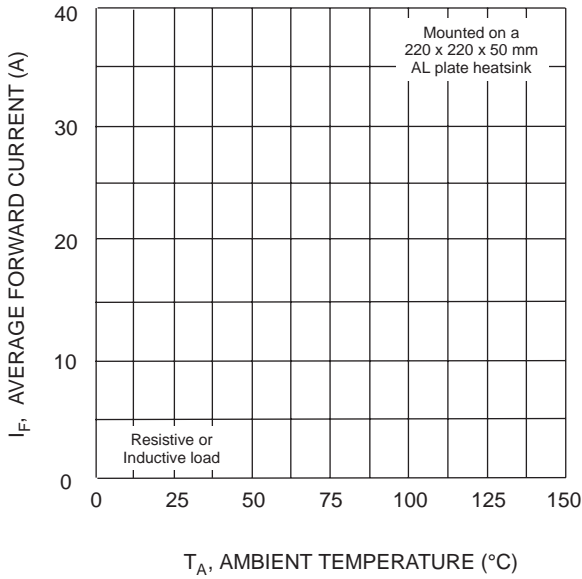


Fig. 1 Forward Current Derating Curve

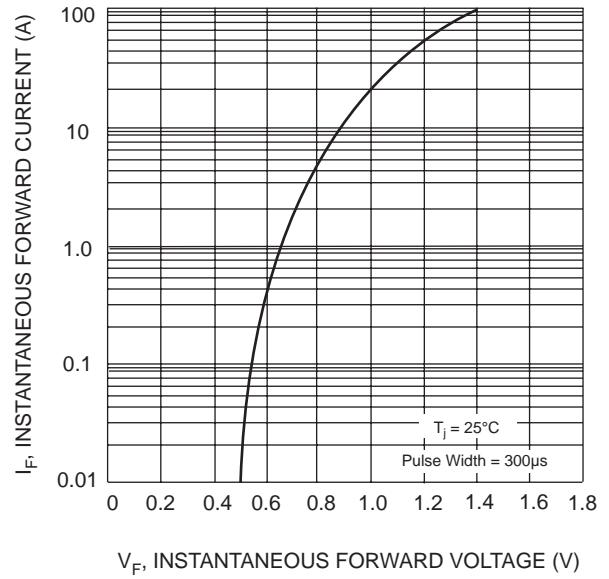


Fig. 2 Typical Forward Characteristics (per element)

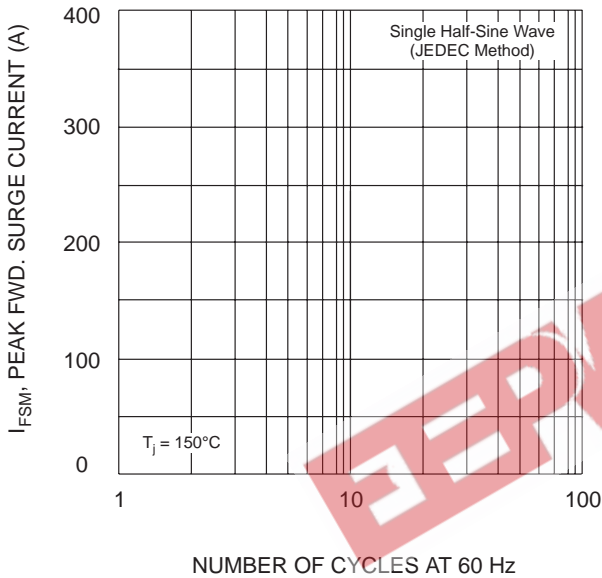


Fig. 3 Max Non-Repetitive Surge Current

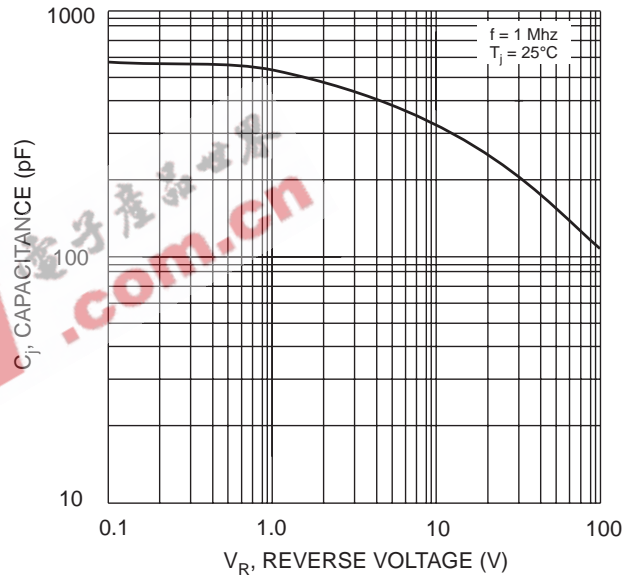


Fig. 4 Typical Junction Capacitance (per element)

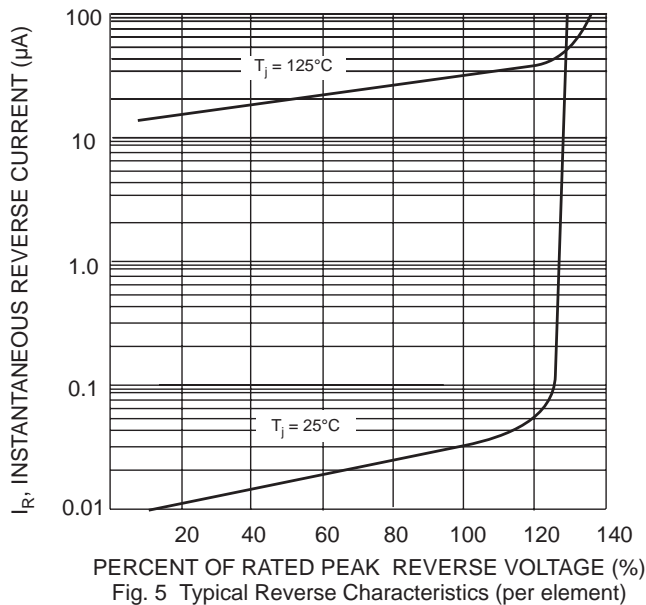
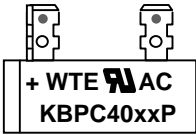
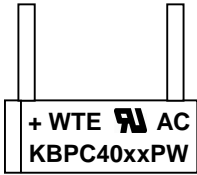


Fig. 5 Typical Reverse Characteristics (per element)

MARKING INFORMATION

| | |
|---|---|
| <p>KBPC-P</p>  <p>WTE = Manufacturer's Logo KBPC40xxP = Device Number xx = 00, 01, 02, 04, 06, 08, 10, 12, 14 or 16 Polarity = As Marked on Body</p> | <p>KBPC-PW</p>  <p>WTE = Manufacturer's Logo KBPC40xxPW = Device Number xx = 00, 01, 02, 04, 06, 08, 10, 12, 14 or 16 Polarity = As Marked on Body</p> |
|---|---|

PACKAGING INFORMATION

BULK

| Case Style | Inner Box Size L x W x H (mm) | Quantity (PCS) | Carton Size L x W x H (mm) | Quantity (PCS) | Approx. Gross Weight (KG) |
|----------------|----------------------------------|-------------------|-------------------------------|-------------------|------------------------------|
| KBPC-P | 195 x 195 x 40 | 50 | 405 x 205 x 240 | 500 | 12.0 |
| KBPC-PW | 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 |
|-------------|---------------|-------------------|
| KBPC4000P | Square Bridge | 50 Units/Box |
| KBPC4000PW | Square Bridge | 50 Units/Box |
| KBPC4001P | Square Bridge | 50 Units/Box |
| KBPC4001PW | Square Bridge | 50 Units/Box |
| KBPC4002P | Square Bridge | 50 Units/Box |
| KBPC4002PW | Square Bridge | 50 Units/Box |
| KBPC4004P | Square Bridge | 50 Units/Box |
| KBPC4004PW | Square Bridge | 50 Units/Box |
| KBPC4006P | Square Bridge | 50 Units/Box |
| KBPC4006PW | Square Bridge | 50 Units/Box |
| KBPC4008P | Square Bridge | 50 Units/Box |
| KBPC4008PW | Square Bridge | 50 Units/Box |
| KBPC4010P | Square Bridge | 50 Units/Box |
| KBPC4010PW | Square Bridge | 50 Units/Box |
| KBPC4012P | Square Bridge | 50 Units/Box |
| KBPC4012PW | Square Bridge | 50 Units/Box |
| KBPC4014P | Square Bridge | 50 Units/Box |
| KBPC4014PW | Square Bridge | 50 Units/Box |
| KBPC4016P | Square Bridge | 50 Units/Box |
| KBPC4016PW | 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, KBPC4000P-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.

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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