

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 | KBPC10 | | | | | | | | | | Unit |
|---|--|-------------|-----|-----|-----|-----|-----|------|------|------|------|------------------|
| | | 00P | 01P | 02P | 04P | 06P | 08P | 10P | 12P | 14P | 16P | |
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V _{RRM} V _{RWM} V _R | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | 1200 | 1400 | 1600 | V |
| RMS Reverse Voltage | V _{R(RMS)} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | 840 | 980 | 1120 | V |
| Average Rectified Output Current @T _A = 50°C | I _O | 10 | | | | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | I _{FSM} | 200 | | | | | | | | | | A |
| Forward Voltage per leg @I _F = 5.0A | V _{FM} | 1.1 | | | | | | | | | | V |
| Peak Reverse Current @T _C = 25°C At Rated DC Blocking Voltage @T _C = 125°C | I _{RM} | 10 500 | | | | | | | | | | μA |
| I ² t Rating for Fusing (t < 8.3ms) | I ² t | 166 | | | | | | | | | | A ² s |
| Typical Junction Capacitance (Note 1) | C _j | 200 | | | | | | | | | | pF |
| Typical Thermal Resistance per leg (Note 2) | R _{θJC} | 3.0 | | | | | | | | | | °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.

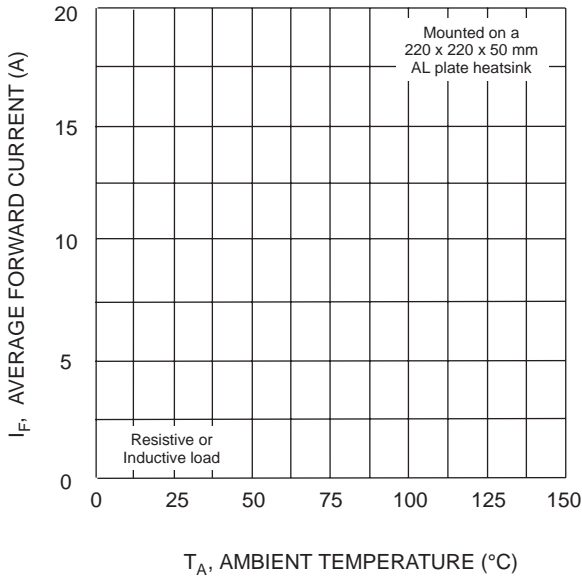


Fig. 1 Forward Current Derating Curve

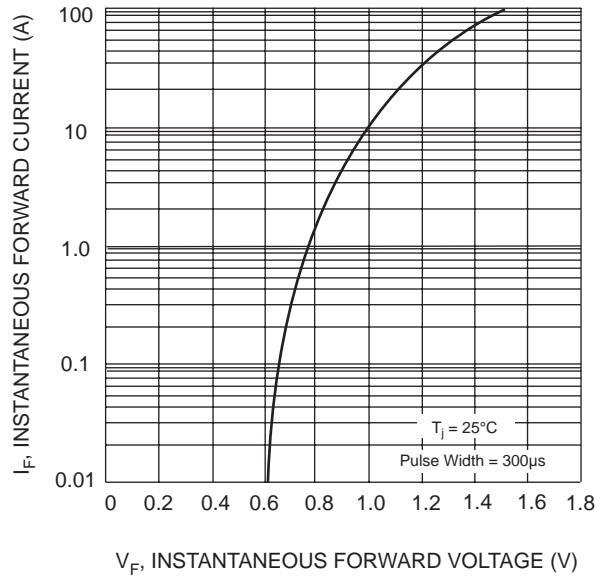


Fig. 2 Typical Forward Characteristics (per element)



Fig. 3 Max Non-Repetitive Surge Current

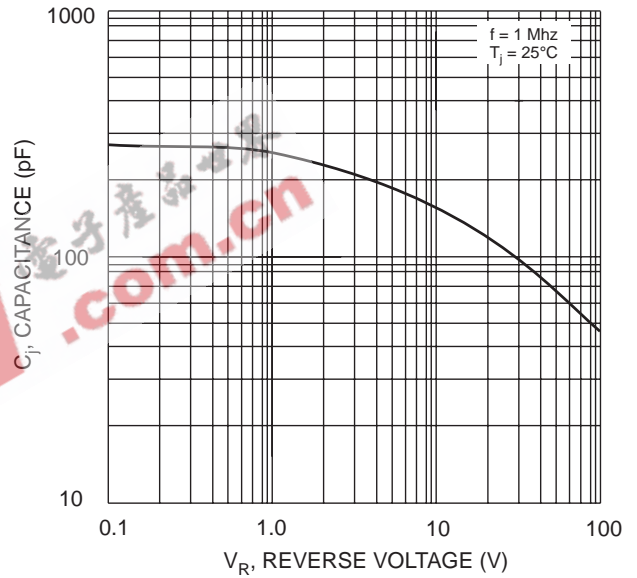
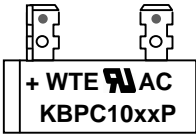
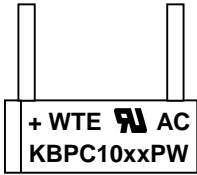


Fig. 4 Typical Junction Capacitance (per element)



Fig. 5 Typical Reverse Characteristics (per element)

MARKING INFORMATION

| | |
|---|---|
| <p>KBPC-P</p>  <p>WTE = Manufacturer's Logo KBPC10xxP = 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 KBPC10xxPW = 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 |
|-------------|---------------|-------------------|
| 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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