
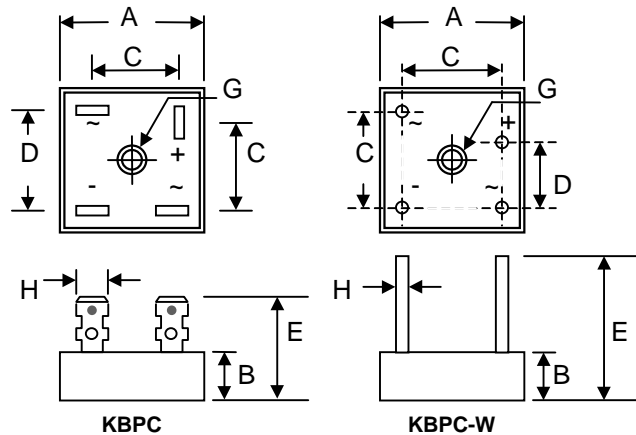


Features

- Diffused Junction
- Low Reverse Leakage Current
- Low Power Loss, High Efficiency
- Electrically Isolated Metal Case for Maximum Heat Dissipation
- Case to Terminal Isolation Voltage 2500V
-  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: 23 cm·kg (20 in·lbs) 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 | 10.97 | 11.23 | 10.97 | 11.23 |
| C | 15.50 | 17.60 | 17.10 | 19.10 |
| D | 17.50 | 18.50 | 10.90 | 11.90 |
| E | 22.86 | 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 @ $T_A=25^\circ\text{C}$ unless otherwise specified

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

| Characteristic | Symbol | KBPC25 | | | | | | | | | | Unit |
|---|---------------------------------|-------------|-----|-----|-----|-----|-----|------|------|------|------|----------------------|
| | | 00 | 01 | 02 | 04 | 06 | 08 | 10 | 12 | 14 | 16 | |
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V_{RRM} V_{RWV} 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 @ $T_A = 60^\circ\text{C}$ | I_O | 25 | | | | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 300 | | | | | | | | | | A |
| Forward Voltage per leg @ $I_F = 12.5\text{A}$ | V_{FM} | 1.2 | | | | | | | | | | V |
| Peak Reverse Current @ $T_C = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_C = 125^\circ\text{C}$ | I_{RM} | 10 1.0 | | | | | | | | | | μA mA |
| I^2t Rating for Fusing ($t < 8.3\text{ms}$) | I^2t | 373 | | | | | | | | | | A^2s |
| Typical Junction Capacitance (Note 1) | C_j | 300 | | | | | | | | | | pF |
| Typical Thermal Resistance per leg (Note 2) | $R_{\theta JC}$ | 2.6 | | | | | | | | | | $^\circ\text{C/W}$ |
| RMS Isolation Voltage from Case to Leads | V_{ISO} | 2500 | | | | | | | | | | V |
| Operating and Storage Temperature Range | T_j, T_{STG} | -65 to +150 | | | | | | | | | | $^\circ\text{C}$ |

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.

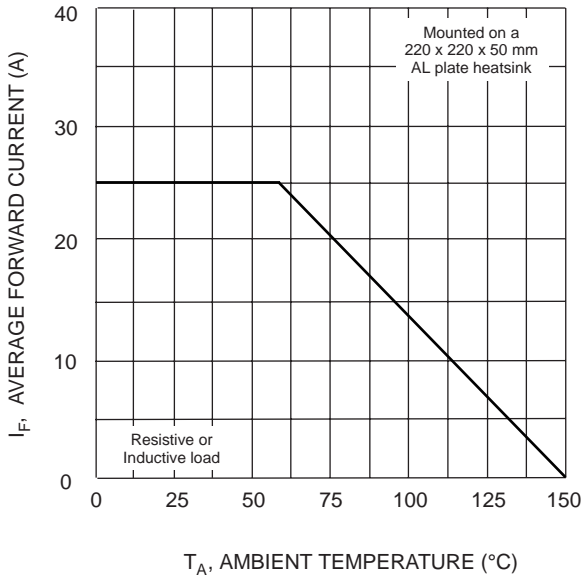


Fig. 1 Forward Current Derating Curve

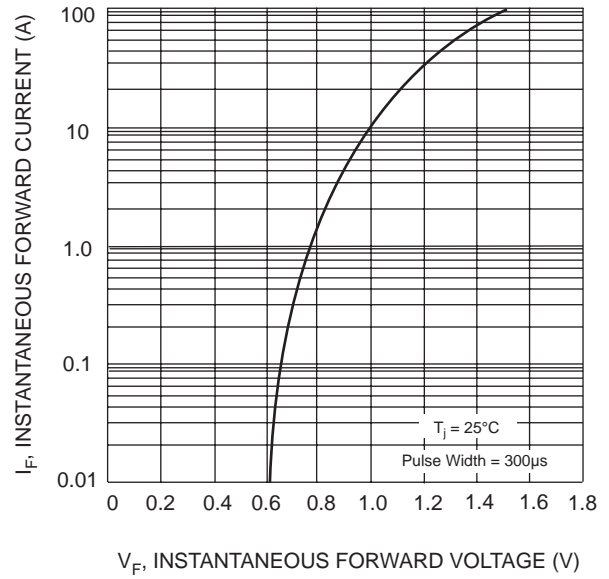


Fig. 2 Typical Forward Characteristics (per element)

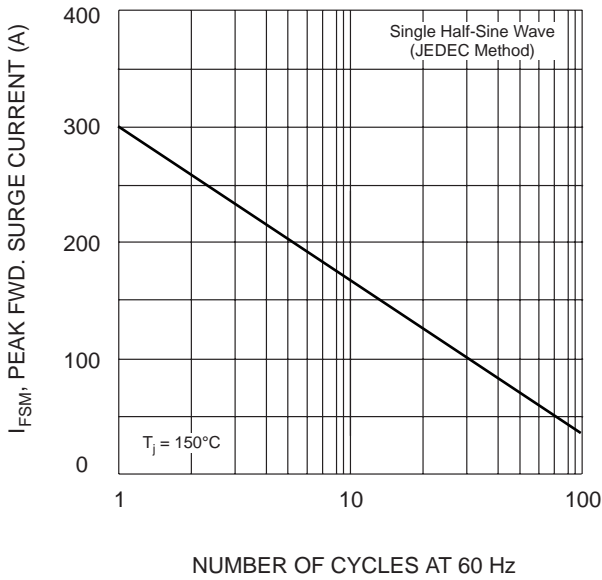


Fig. 3 Max Non-Repetitive Surge Current

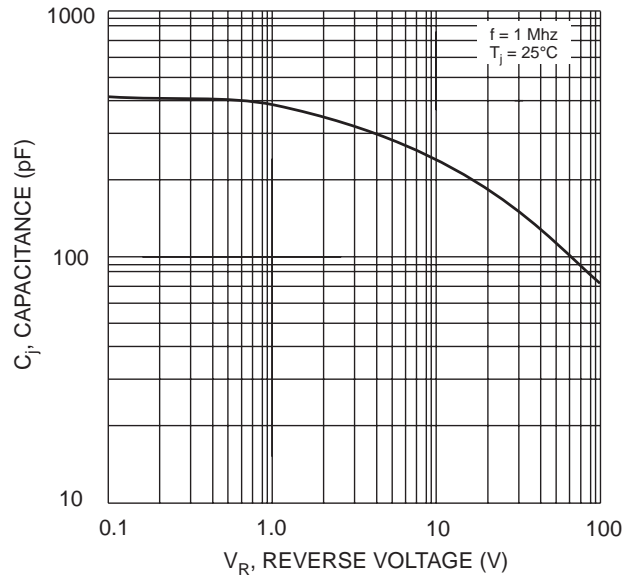


Fig. 4 Typical Junction Capacitance (per element)

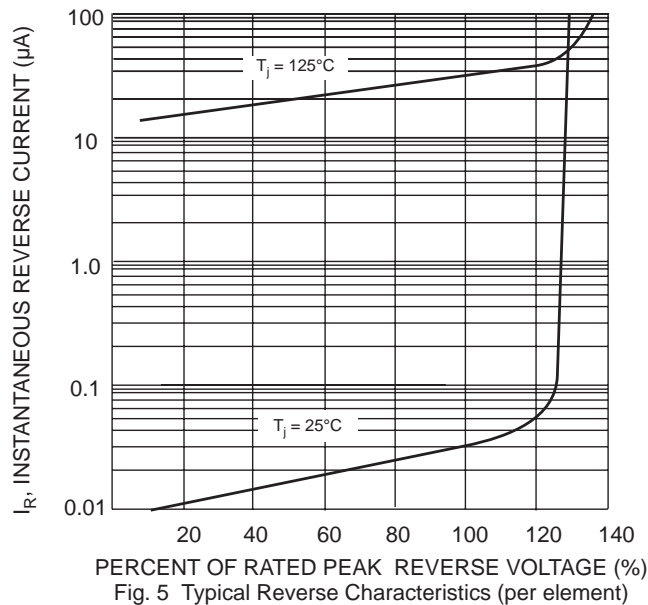
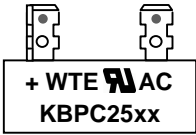
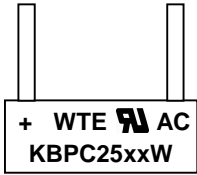


Fig. 5 Typical Reverse Characteristics (per element)

MARKING INFORMATION

| KBPC | KBPC-W |
|---|---|
|  <p data-bbox="221 468 738 580"> WTE = Manufacturer's Logo KBPC25xx = Device Number xx = 00, 01, 02, 04, 06, 08, 10, 12, 14 or 16 Polarity = As Marked on Body </p> |  <p data-bbox="880 468 1398 580"> WTE = Manufacturer's Logo KBPC25xxW = 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 | 195 x 195 x 40 | 50 | 405 x 205 x 240 | 500 | 17.0 |
| KBPC-W | 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 |
|-------------|---------------|-------------------|
| KBPC2500 | Square Bridge | 50 Units/Box |
| KBPC2500W | Square Bridge | 50 Units/Box |
| KBPC2501 | Square Bridge | 50 Units/Box |
| KBPC2501W | Square Bridge | 50 Units/Box |
| KBPC2502 | Square Bridge | 50 Units/Box |
| KBPC2502W | Square Bridge | 50 Units/Box |
| KBPC2504 | Square Bridge | 50 Units/Box |
| KBPC2504W | Square Bridge | 50 Units/Box |
| KBPC2506 | Square Bridge | 50 Units/Box |
| KBPC2506W | Square Bridge | 50 Units/Box |
| KBPC2508 | Square Bridge | 50 Units/Box |
| KBPC2508W | Square Bridge | 50 Units/Box |
| KBPC2510 | Square Bridge | 50 Units/Box |
| KBPC2510W | Square Bridge | 50 Units/Box |
| KBPC2512 | Square Bridge | 50 Units/Box |
| KBPC2512W | Square Bridge | 50 Units/Box |
| KBPC2514 | Square Bridge | 50 Units/Box |
| KBPC2514W | Square Bridge | 50 Units/Box |
| KBPC2516 | Square Bridge | 50 Units/Box |
| KBPC2516W | 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, KBPC2500-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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