

# KBPC1000/W – KBPC1010/W

## 10A HIGH CURRENT BRIDGE RECTIFIER

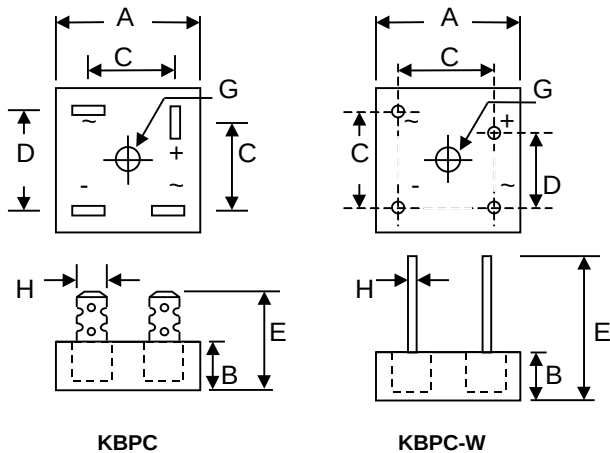
### Features

- 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
- UL Recognized File # E157705

### Mechanical Data

- Case: Metal Case with Electrically Isolated Epoxy
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: Symbols Marked on Case
- Mounting: Through Hole for #10 Screw
- Weight: KBPC 31.6 grams (approx.)  
KBPC-W 28.5 grams (approx.)
- Marking: Type Number

"W" Suffix Designates Wire Leads  
 No Suffix Designates Faston Terminals



|                     | KBPC                              |       | KBPC-W |       |
|---------------------|-----------------------------------|-------|--------|-------|
| Dim                 | Min                               | Max   | Min    | Max   |
| A                   | 28.40                             | 28.70 | 28.40  | 28.70 |
| B                   | 10.97                             | 11.23 | 10.97  | 11.23 |
| C                   | 15.70                             | 16.70 | 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<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                                                 | KBPC 1000/W | KBPC 1001/W | KBPC 1002/W | KBPC 1004/W | KBPC 1006/W | KBPC 1008/W | KBPC 1010/W | Unit     |
|-----------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                                | V <sub>RRM</sub><br>V <sub>RWM</sub><br>V <sub>R</sub> | 50          | 100         | 200         | 400         | 600         | 800         | 1000        | V        |
| RMS Reverse Voltage                                                                                                   | V <sub>R(RMS)</sub>                                    | 35          | 70          | 140         | 280         | 420         | 560         | 700         | V        |
| Average Rectified Output Current @T <sub>A</sub> = 50°C                                                               | I <sub>O</sub>                                         | 10          |             |             |             |             |             |             | 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>                                       | 200         |             |             |             |             |             |             | A        |
| Forward Voltage (per element) @I <sub>F</sub> = 5.0A                                                                  | V <sub>FM</sub>                                        | 1.2         |             |             |             |             |             |             | 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>1.0   |             |             |             |             |             |             | µA<br>mA |
| Typical Junction Capacitance (Note 1)                                                                                 | C <sub>J</sub>                                         | 300         |             |             |             |             |             |             | pF       |
| Typical Thermal Resistance (Note 2)                                                                                   | R <sub>θJC</sub>                                       | 6.3         |             |             |             |             |             |             | K/W      |
| RMS Isolation Voltage from Case to Lead                                                                               | V <sub>ISO</sub>                                       | 2500        |             |             |             |             |             |             | V        |
| Operating and Storage Temperature Range                                                                               | T <sub>J</sub> , T <sub>STG</sub>                      | -65 to +150 |             |             |             |             |             |             | °C       |

\* Glass passivated forms are available upon request.

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

2. Thermal resistance junction to case per element mounted on heatsink.

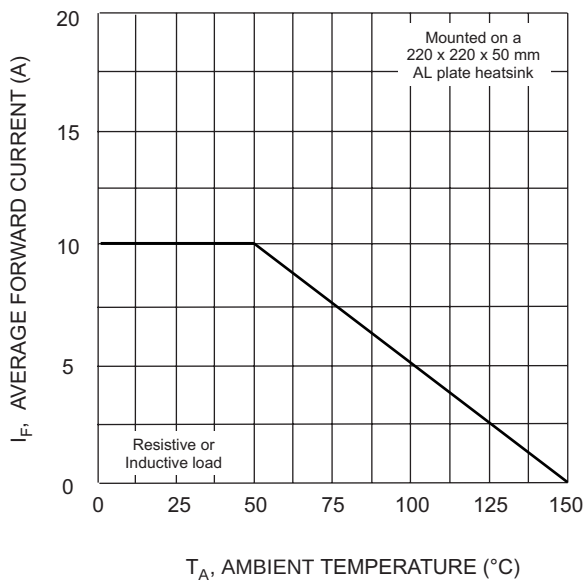


Fig. 1 Forward Current Derating Curve

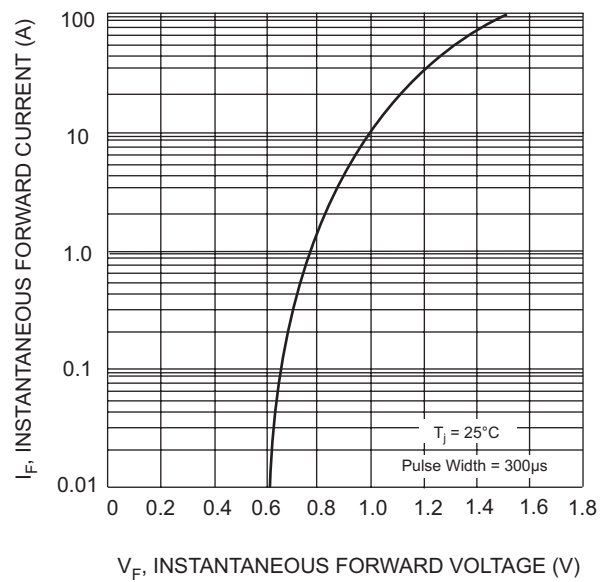


Fig. 2 Typical Forward Characteristics (per element)

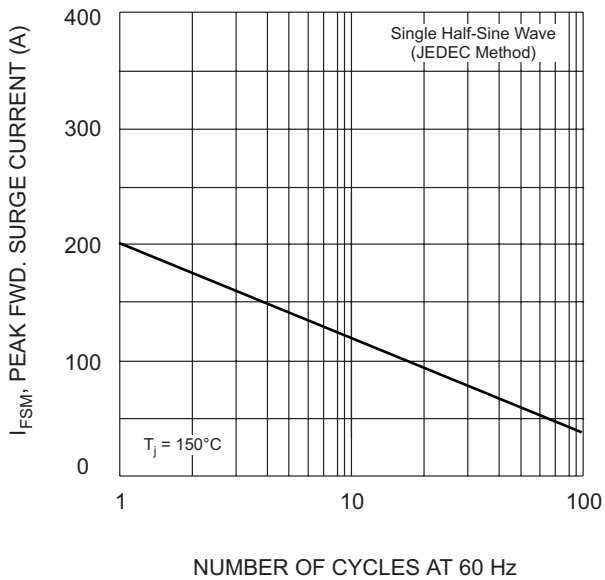


Fig. 3 Max Non-Repetitive Surge Current

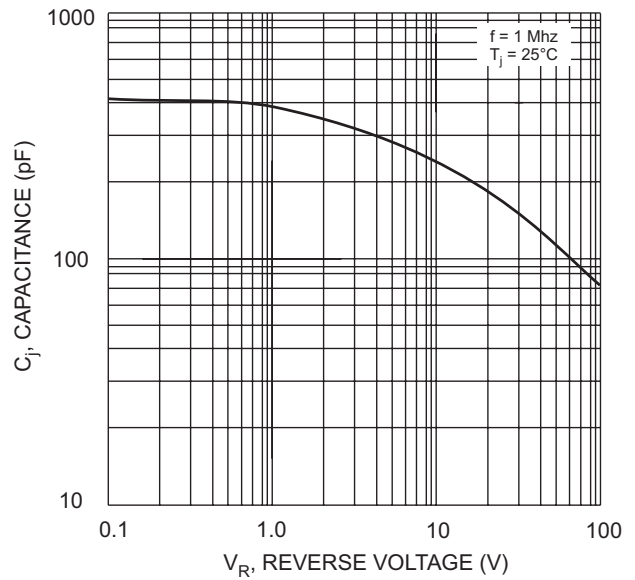


Fig. 4 Typical Junction Capacitance (per element)

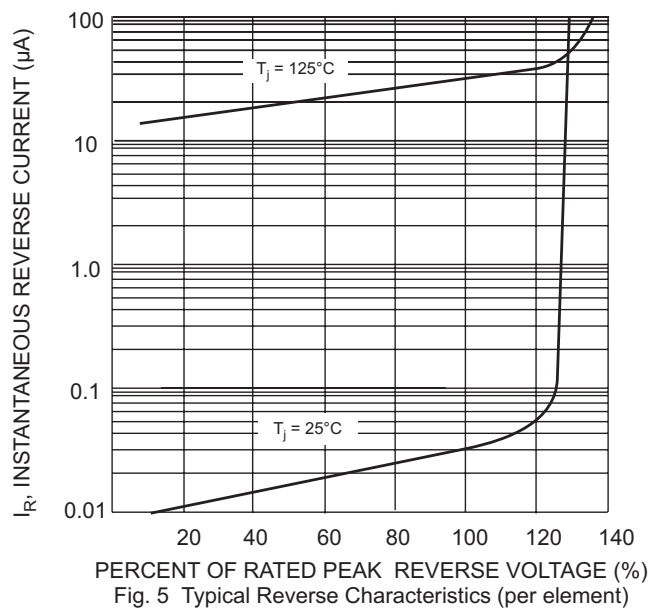


Fig. 5 Typical Reverse Characteristics (per element)

## ORDERING INFORMATION

| Product No. | Package Type  | Shipping Quantity |
|-------------|---------------|-------------------|
| KBPC1000    | Square Bridge | 50 Units/Box      |
| KBPC1000W   | Square Bridge | 50 Units/Box      |
| KBPC1001    | Square Bridge | 50 Units/Box      |
| KBPC1001W   | Square Bridge | 50 Units/Box      |
| KBPC1002    | Square Bridge | 50 Units/Box      |
| KBPC1002W   | Square Bridge | 50 Units/Box      |
| KBPC1004    | Square Bridge | 50 Units/Box      |
| KBPC1004W   | Square Bridge | 50 Units/Box      |
| KBPC1006    | Square Bridge | 50 Units/Box      |
| KBPC1006W   | Square Bridge | 50 Units/Box      |
| KBPC1008    | Square Bridge | 50 Units/Box      |
| KBPC1008W   | Square Bridge | 50 Units/Box      |
| KBPC1010    | Square Bridge | 50 Units/Box      |
| KBPC1010W   | Square Bridge | 50 Units/Box      |

Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.

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