

# KBPC1000GS – KBPC1010GS

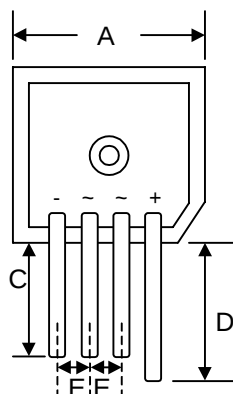
## 10A GLASS PASSIVATED IN-LINE BRIDGE RECTIFIER

### Features

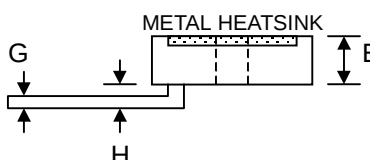
- Glass Passivated Die Construction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- Ideal for Printed Circuit Boards
- Designed for Saving Mounting Space

### Mechanical Data

- Case: Epoxy Case with Heat Sink Internally Mounted in the Bridge Encapsulation
- Terminals: Plated Leads Solderable per MIL-STD-202, Method 208
- Polarity: As Marked on Body
- Weight: 30 grams (approx.)
- Mounting Position: Any
- Marking: Type Number



| KBPC-S               |                |       |
|----------------------|----------------|-------|
| Dim                  | Min            | Max   |
| A                    | 28.40          | 28.70 |
| B                    | 10.97          | 11.23 |
| C                    | 13.90          | —     |
| D                    | 19.10          | —     |
| E                    | 5.10           | —     |
| G                    | 1.20 Ø Typical |       |
| H                    | 3.05           | 3.60  |
| All Dimensions 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 1000GS | KBPC 1001GS | KBPC 1002GS | KBPC 1004GS | KBPC 1006GS | KBPC 1008GS | KBPC 1010GS | 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 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>                                        | 1.1         |             |             |             |             |             |             | V                |
| Peak Reverse Current @T <sub>C</sub> = 25°C<br>At Rated DC Blocking Voltage @T <sub>C</sub> = 125°C                | I <sub>R</sub>                                         | 5.0<br>500  |             |             |             |             |             |             | μA               |
| Rating for Fusing (t < 8.3ms) (Note 1)                                                                             | I <sup>2</sup> t                                       | 374         |             |             |             |             |             |             | A <sup>2</sup> s |
| Typical Thermal Resistance (Note 2)                                                                                | R <sub>θJC</sub>                                       | 2.0         |             |             |             |             |             |             | 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               |

Note: 1. Non-repetitive for t > 1ms and < 8.3ms.

2. Thermal resistance junction to case per element mounted on 220 x 220 x 50mm thick AL plate.

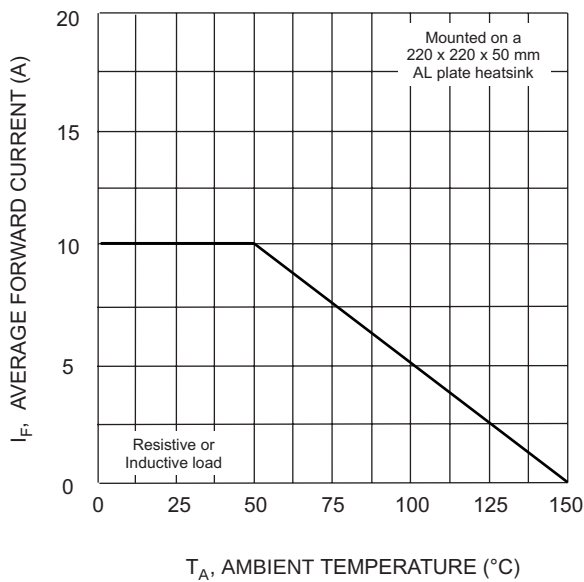


Fig. 1 Forward Current Derating Curve

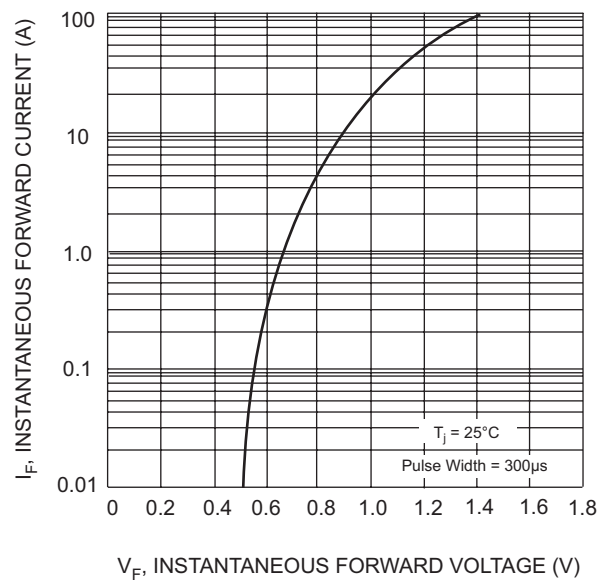


Fig. 2 Typical Forward Characteristics (per element)

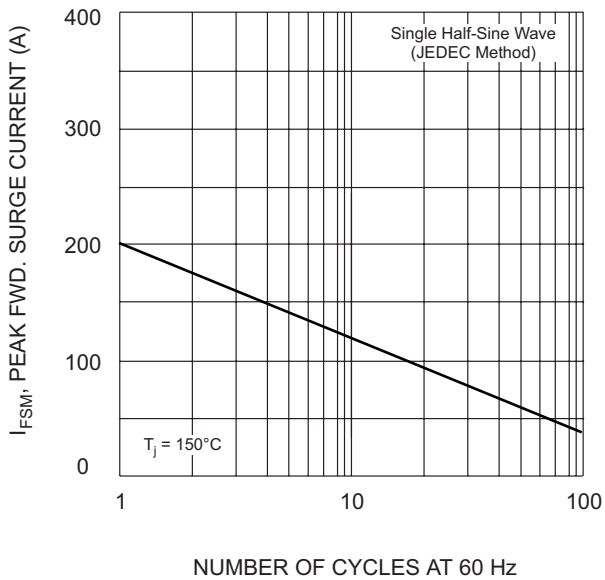


Fig. 3 Max Non-Repetitive Surge Current

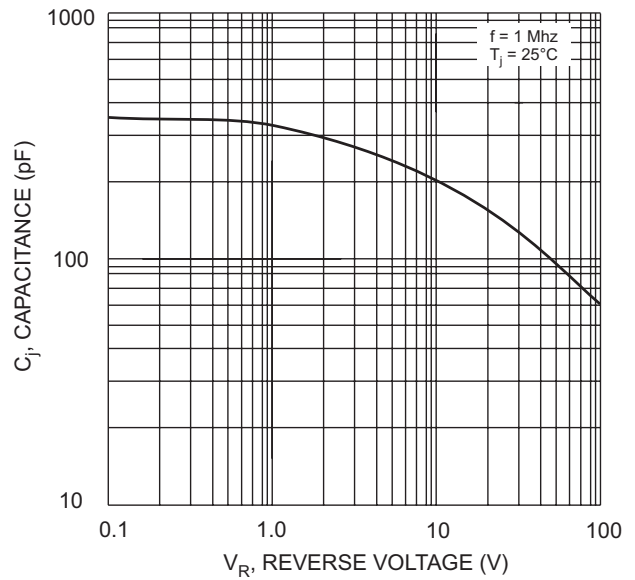


Fig. 4 Typical Junction Capacitance (per element)

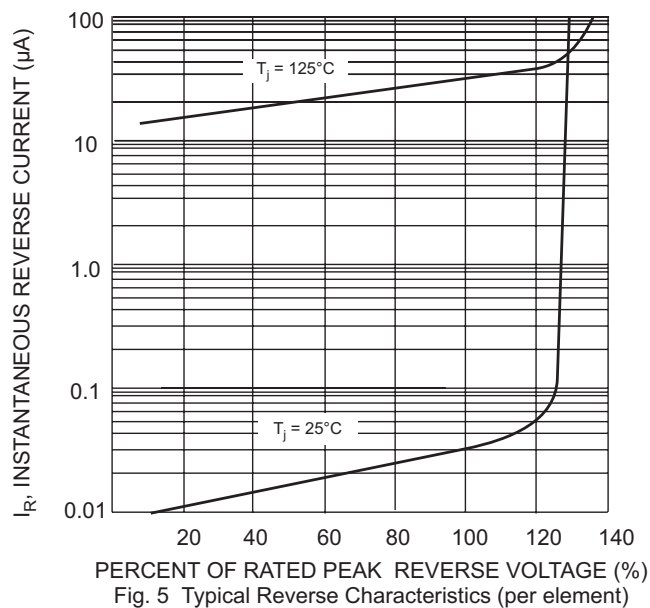


Fig. 5 Typical Reverse Characteristics (per element)

## ORDERING INFORMATION

| Product No. | Package Type | Shipping Quantity |
|-------------|--------------|-------------------|
| KBPC1000GS  | SIL Bridge   | 72 Units/Box      |
| KBPC1001GS  | SIL Bridge   | 72 Units/Box      |
| KBPC1002GS  | SIL Bridge   | 72 Units/Box      |
| KBPC1004GS  | SIL Bridge   | 72 Units/Box      |
| KBPC1006GS  | SIL Bridge   | 72 Units/Box      |
| KBPC1008GS  | SIL Bridge   | 72 Units/Box      |
| KBPC1010GS  | SIL Bridge   | 72 Units/Box      |

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

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