

# **KBPC1000S - KBPC1010S**

## **10A IN-LINE BRIDGE RECTIFIER**

#### **Features**

- Diffused Junction
- Low Forward Voltage Drop
- High Current Capability
- High Reliability
- High Surge Current Capability
- Ideal for Printed Circuit Boards
- Designed for Saving Mounting Space
- UL Recognized File # E157705

### **Mechanical Data**

 Case: Epoxy Case with Heat Sink Internally Mounted in the Bridge Encapsulation

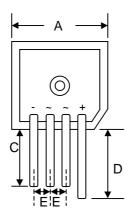
 Terminals: Plated Leads Solderable per MIL-STD-202, Method 208

Polarity: As Marked on Body

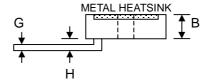
• Weight: 30 grams (approx.)

Mounting Position: Any

Marking: Type Number



| KBPC-S               |                |       |  |  |  |
|----------------------|----------------|-------|--|--|--|
| Dim                  | Min Max        |       |  |  |  |
| Α                    | 28.40          | 28.70 |  |  |  |
| В                    | 10.97          | 11.23 |  |  |  |
| С                    | 13.90          | _     |  |  |  |
| D                    | 19.10          | _     |  |  |  |
| E                    | 5.10           | _     |  |  |  |
| G                    | 1.20 Ø Typical |       |  |  |  |
| Н                    | 3.05 3.60      |       |  |  |  |
| All Dimensions in mm |                |       |  |  |  |



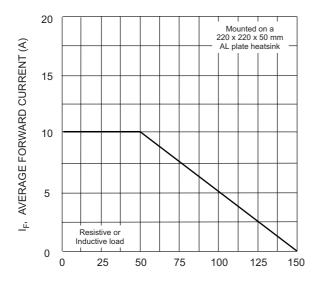
## Maximum Ratings and Electrical Characteristics @TA=25°C unless otherwise specified

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

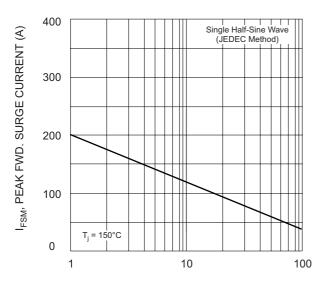
| Characteristic  | Symbol             | KBPC<br>1000S | KBPC<br>1001S | KBPC<br>1002S | KBPC<br>1004S | KBPC<br>1006S | KBPC<br>1008S | KBPC<br>1010S    | Unit |
|---|--------------------|---------------|---------------|---------------|---------------|---------------|---------------|------------------|------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                                | Vrrm<br>Vrwm<br>Vr | 50            | 100           | 200           | 400           | 600           | 800           | 1000             | ٧    |
| RMS Reverse Voltage   | VR(RMS)            | 35            | 70            | 140           | 280           | 420           | 560           | 700              | V    |
| Average Rectified Output Current @T <sub>A</sub> = 50°C   | lo                 | 10            |               |               |               |               |               | Α                |      |
| Non-Repetitive Peak Forward Surge Current<br>8.3ms Single half sine-wave superimposed on<br>rated load (JEDEC Method) | IFSM               | 200           |               |               |               |               | А             |                  |      |
| Forward Voltage (per element) @I <sub>F</sub> = 5.0A  | VFM                | 1.2           |               |               |               |               |               | V                |      |
| Peak Reverse Current $@T_A = 25^{\circ}C$<br>At Rated DC Blocking Voltage $@T_A = 100^{\circ}C$                       | lr                 | 10<br>1.0     |               |               |               |               | μA<br>mA      |                  |      |
| Rating for Fusing (t < 8.3ms) (Note 1)  | l <sup>2</sup> t   | 374           |               |               |               |               |               | A <sup>2</sup> s |      |
| Typical Thermal Resistance (Note 2)   | R <sub>θ</sub> JC  | 2.0           |               |               |               |               | K/W           |                  |      |
| RMS Isolation Voltage from Case to Lead   | Viso               | 2500          |               |               |               |               | V             |                  |      |
| Operating and Storage Temperature Range   | Tj, Tstg           | -55 to +150   |               |               |               |               | °C            |                  |      |

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

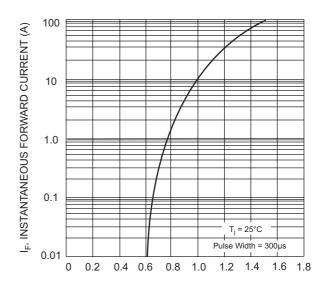
2. Thermal resistance junction to case per element mounted on 8" x 8" x 25" thick AL plate.



 ${\rm T_A}, {\rm AMBIENT\ TEMPERATURE\ (^\circ C)}$  Fig. 1 Forward. Current Derating Curve



NUMBER OF CYCLES AT 60 Hz Fig. 3 Max Non-Repetitive Surge Current



 $\rm V_F$ , INSTANTANEOUS FORWARD VOLTAGE (V) Fig. 2 Typical Forward Characteristics (per element)

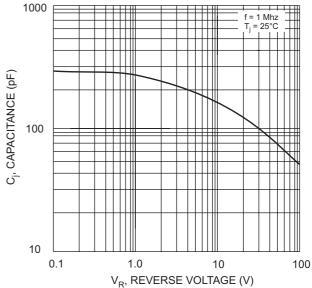
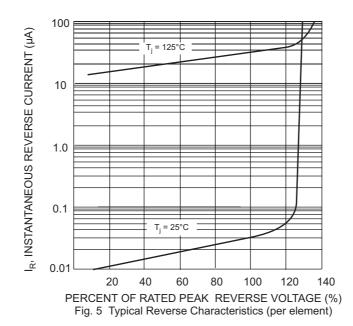


Fig. 4 Typical Junction Capacitance (per element)



#### **ORDERING INFORMATION**

| Product No. | Package Type | Shipping Quantity |  |  |
|-------------|--------------|-------------------|--|--|
| KBPC1000S   | SIL Bridge   | 72 Units/Box      |  |  |
| KBPC1001S   | SIL Bridge   | 72 Units/Box      |  |  |
| KBPC1002S   | SIL Bridge   | 72 Units/Box      |  |  |
| KBPC1004S   | SIL Bridge   | 72 Units/Box      |  |  |
| KBPC1006S   | SIL Bridge   | 72 Units/Box      |  |  |
| KBPC1008S   | SIL Bridge   | 72 Units/Box      |  |  |
| KBPC1010S   | 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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