

CURRENT 2.0 Ampere  
 VOLTAGE RANG 50 to 1000 Volts

**KBP2005 THRU KBP210**

## Features

- This series is SGS listed under the Recognized Component Index, file number SZXEC1902259902
- Ideal for printed circuit board mounting
- The plastic material used carries Underwriters Laboratory flammability recognition 94V-0
- Built-in printed circuit board stand-offs
- High case dielectric strength
- High temperature soldering guaranteed 265°C/10 seconds at 5 lbs (2.3kg) tension

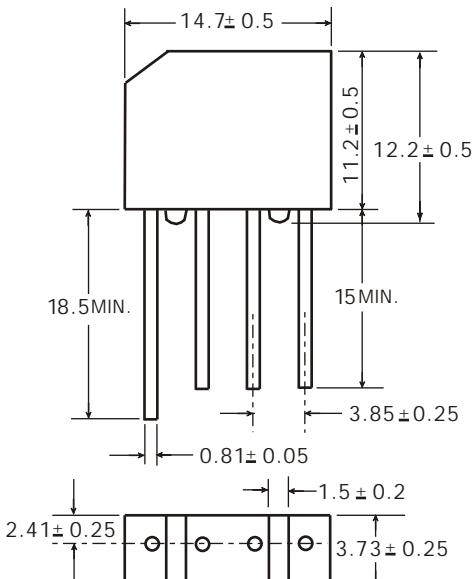
## Mechanical Data

Case: Reliable low cost construction utilizing molded plastic technique

Terminals: Plated leads solderable per MIL-STD-202, Method 208

Mounting Position: Any

Weight: 0.053 ounce, 1.5 grams (approx)



Dimensions in millimeters(1mm = 0.0394")

## Maximum Ratings & Thermal Characteristics

Rating at 25°C ambient temperature unless otherwise specified, Resistive or Inductive load, 60 Hz.  
 For Capacitive load derate current by 20%.

| Parameter   | Symbol                            | KBP 2005 | KBP 201 | KBP 202 | KBP 204      | KBP 206 | KBP 208 | KBP 210 | unit               |
|---|-----------------------------------|----------|---------|---------|--------------|---------|---------|---------|--------------------|
| Maximum repetitive peak reverse voltage   | VRRM                              | 50       | 100     | 200     | 400          | 600     | 800     | 1000    | V                  |
| Maximum RMS bridge input voltage  | VRMS                              | 35       | 70      | 140     | 280          | 420     | 560     | 700     | V                  |
| Maximum DC blocking voltage   | VDC                               | 50       | 100     | 200     | 400          | 600     | 800     | 1000    | V                  |
| Maximum average forward rectified output current at TA=50°C                           | IF(AV)                            |          |         |         |              | 2.0     |         |         | A                  |
| Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method) | IFSM                              |          |         |         | 60           |         |         |         | A                  |
| Rating for fusing ( t<8.3ms)  | I <sup>2</sup> t                  |          |         |         | 15.0         |         |         |         | A <sup>2</sup> sec |
| Typical thermal resistance per element(1)   | ReJA                              |          |         |         | 10.0         |         |         |         | °C / W             |
| Typical junction capacitance per element(2)   | C <sub>j</sub>                    |          |         |         | 25.0         |         |         |         | pF                 |
| Operating junction and storage temperature range                                      | T <sub>j</sub> , T <sub>STG</sub> |          |         |         | -55 to + 150 |         |         |         | °C                 |

## Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified. Resistive or Inductive load, 60Hz.  
 For Capacitive load derate by 20 %.

| Parameter   | Symbol | KBP 2005 | KBP 201 | KBP 202 | KBP 204   | KBP 206 | KBP 208 | KBP 210 | Unit |
|---|--------|----------|---------|---------|-----------|---------|---------|---------|------|
| Maximum instantaneous forward voltage drop per leg at 1.0A                                | VF     |          |         |         | 1.1       |         |         |         | V    |
| Maximum DC reverse current at rated TA =25°C<br>DC blocking voltage per element TA =125°C | IR     |          |         |         | 10<br>500 |         |         |         | μA   |

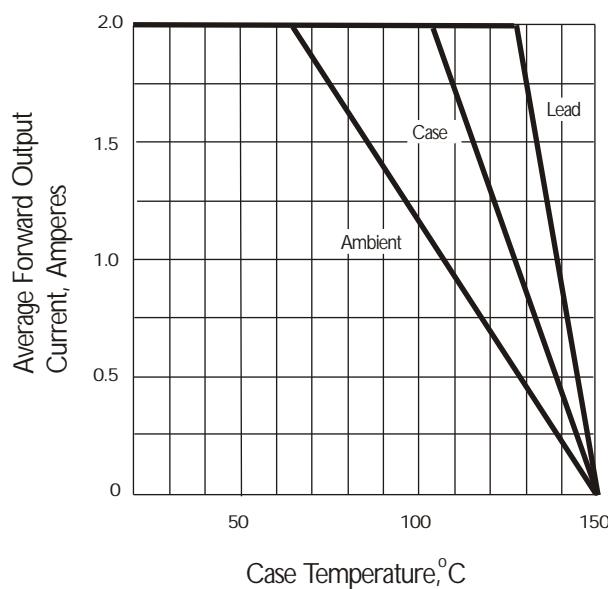
Notes: (1)Thermal resistance from Junction to Ambient on P.C.board mounting.  
 (2)Measured at 2.0MHz and applied reverse voltage of 4.0 volts.

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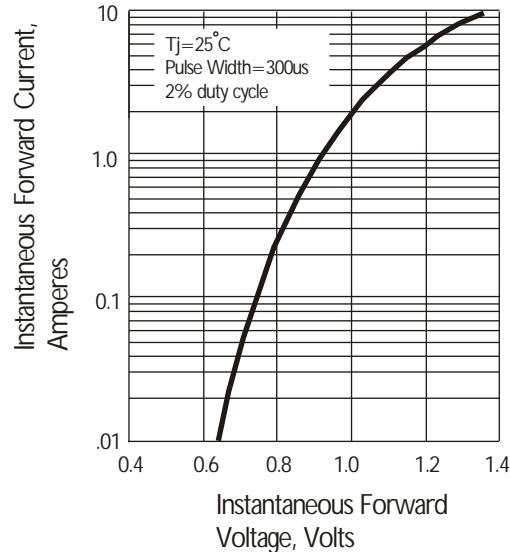
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**Rating and Characteristic Curves** ( TA=25°C Unless otherwise noted )

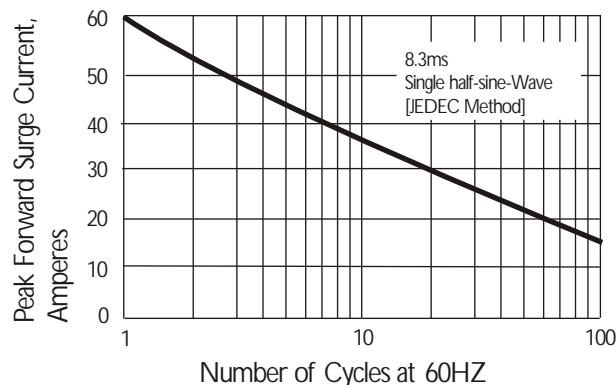
**Fig. 1 Derating Curve for Output Rectified Current**



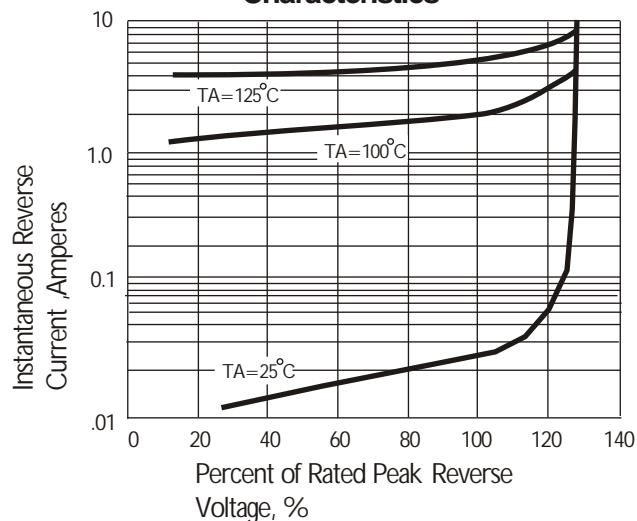
**Fig. 3 Typical Instantaneous Forward Characteristics**



**Fig. 2 Maximum Non-repetitive Peak Forward Surge Current**



**Fig. 4 Typical Reverse Characteristics**



**Fig. 5 Typical Junction Capacitance**

