



# KBP4005G THRU KBP410G

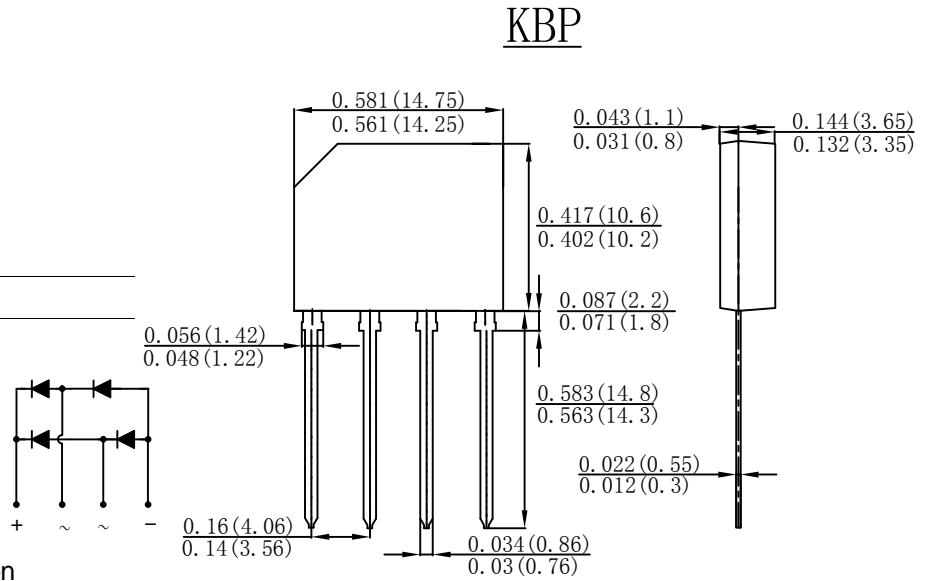
SINGLE PHASE 4.0AMP GLASS PASSIVATED BRIDGE RECTIFIER

## Features

- Glass passivated die construction
- Low forward voltage drop
- High current capability
- High surge current capability
- Plastic material-UL flammability 94V-0

## Mechanical Data

- Case: KBP, molded plastic
- Terminals: plated leads solderable per MIL-STD-202, Method 208
- Polarity: as marked on case
- Mounting position: Any
- Marking: type number
- Lead Free: For RoHS / Lead Free Version



## Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.  
 Single Phase, half wave, 60Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%.

| TYPE NUMBER   | SYMBOL                            | KBP 4005G | KBP 401G | KBP 402G | KBP 404G  | KBP 406G | KBP 408G | KBP 410G | UNITS            |
|---|-----------------------------------|-----------|----------|----------|-----------|----------|----------|----------|------------------|
| Peak Repetitive Reverse Voltage   | $V_{RRM}$                         |           |          |          |           |          |          |          |                  |
| Working Peak Reverse Voltage  | $V_{RWM}$                         | 50        | 100      | 200      | 400       | 600      | 800      | 1000     | V                |
| DC Blocking Voltage   | $V_{DC}$                          |           |          |          |           |          |          |          |                  |
| RMS Reverse Voltage   | $V_{RMS}$                         | 35        | 70       | 140      | 280       | 420      | 560      | 700      | V                |
| Average Rectified Output Current (With heatsink)<br>@T <sub>c</sub> =100°C (Note 1)                                   | $I_{F(AV)}$                       |           |          |          | 4.0       |          |          |          | A                |
|   |                                   |           |          |          | 2.0       |          |          |          |                  |
| Non-Repetitive Peak Forward Surge Current 8.3ms<br>Single half sine-wave superimposed on rated load<br>(JEDEC Method) | $I_{FSM}$                         |           |          |          | 120       |          |          |          | A                |
| I <sup>2</sup> t Rating for Fusing (t < 8.3ms)  | $I^2t$                            |           |          |          | 59.76     |          |          |          | A <sup>2</sup> s |
| Forward Voltage per element @IF=4.0A  | $V_{FM}$                          |           |          |          | 1.1       |          |          |          | V                |
| Peak Reverse Current @T <sub>J</sub> =25°C<br>At Rated DC Blocking Voltage @T <sub>J</sub> =125°C                     | $I_R$                             |           |          |          | 5.0       |          |          |          | uA               |
|   |                                   |           |          |          | 200       |          |          |          |                  |
| Typical Junction Capacitance (Note2)  | $C_j$                             |           |          |          | 30        |          |          |          | pF               |
| Typical Thermal Resistance  | $R_{\theta JA}$                   |           |          |          | 40        |          |          |          | °C/W             |
|   | $R_{\theta JL}$                   |           |          |          | 20        |          |          |          |                  |
| Operating and Storage Temperature Range   | T <sub>J</sub> , T <sub>STG</sub> |           |          |          | -55to+150 |          |          |          | °C               |

Note:1. Mounted on glass epoxy PC board with 1.3mm<sup>2</sup> solder pad.  
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C..



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Fig. 1 Forward Current Derating Curve

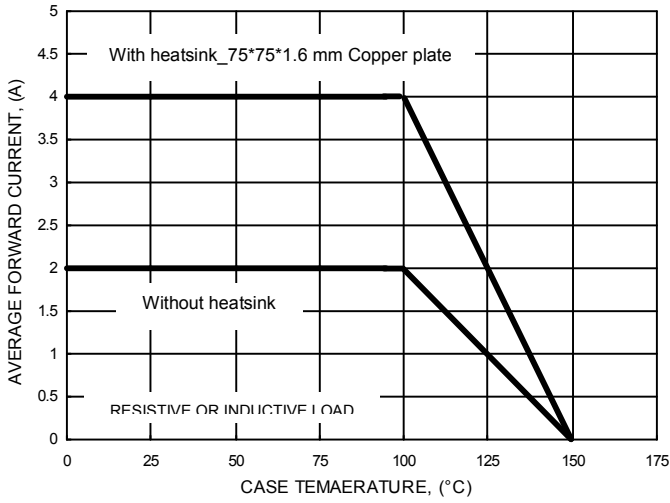


Fig. 2 Typical Fwd Characteristics

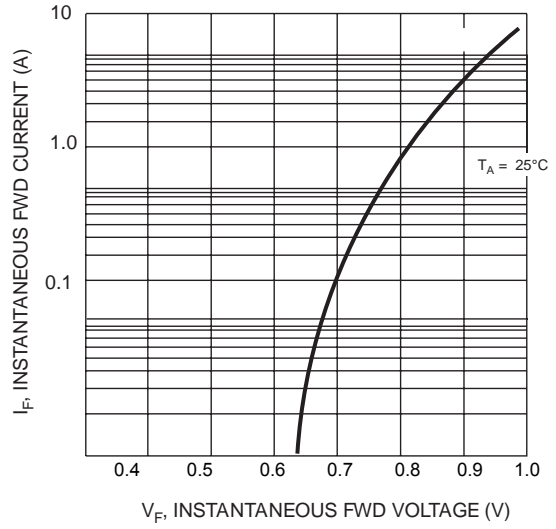


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

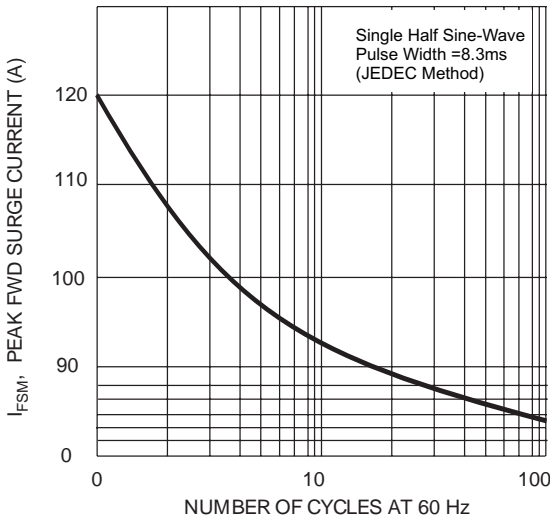


Fig. 4 Typical Junction Capacitance

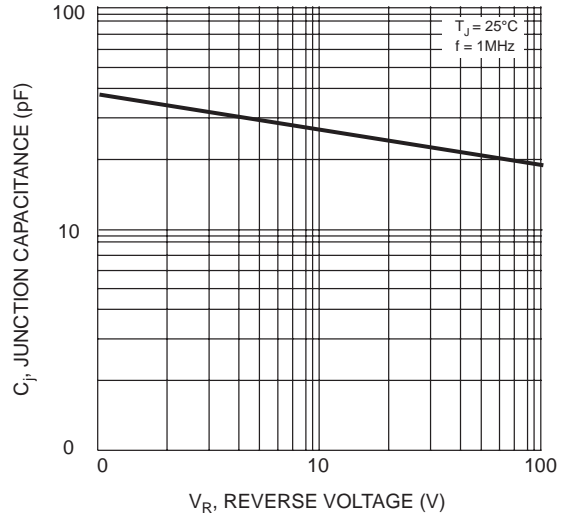
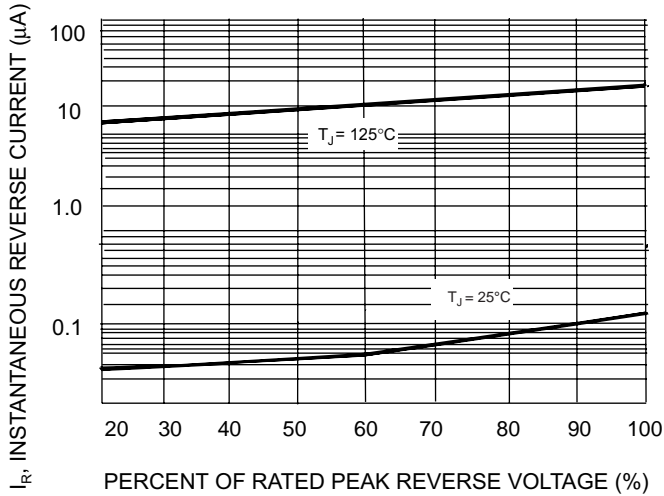


Fig. 5 Typical Reverse Characteristics (per element)





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