



# KBP306 THRU KBP310

## SINGLE PHASE 3.0 AMP BRIDGE RECTIFIERS

### FEATURES

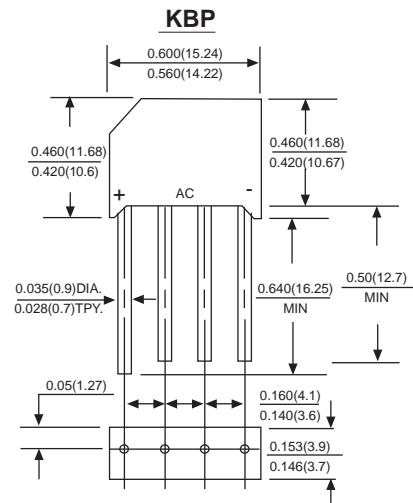
- \* Ideal for printed circuit board
- \* Low forward voltage
- \* Low leakage current
- \* Polarity: marked on body
- \* Mounting position: Any
- \* Weight: 4.8 grams

### VOLTAGE RANGE

600 to 1000 Volts

### CURRENT

3.0 Ampere



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 25°C ambient temperature unless otherwise specified.

Single phase half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

|  | Symbols                               | KBP306      | KBP308 | KBP310 | Units        |              |
|--|---------------------------------------|-------------|--------|--------|--------------|--------------|
| <b>Maximum Recurrent Peak Reverse Voltage</b>  | <b>V<sub>RRM</sub></b>                | 600         | 800    | 1000   | <b>Volts</b> |              |
| <b>Maximum RMS Voltage</b>   | <b>V<sub>RMS</sub></b>                | 420         | 560    | 700    | <b>Volts</b> |              |
| <b>Maximum DC Blocking Voltage</b>   | <b>V<sub>DC</sub></b>                 | 600         | 800    | 1000   | <b>Volts</b> |              |
| <b>Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at T<sub>A</sub>=50</b>                    | <b>I<sub>(AV)</sub></b>               | 3.0         |        |        |              | <b>Amp</b>   |
| <b>Peak Forward Surge Current,<br/>8.3ms single half-sine-wave<br/>superimposed on rated load (JEDEC method)</b> | <b>I<sub>FSM</sub></b>                | 70          |        |        |              | <b>Amp</b>   |
| <b>Maximum Forward Voltage<br/>at 3.0A DC and 25</b>   | <b>V<sub>F</sub></b>                  | 1.1         |        |        |              | <b>Volts</b> |
| <b>Maximum Reverse Current at T<sub>A</sub>=25<br/>at Rated DC Blocking Voltage T<sub>A</sub>=100</b>            | <b>I<sub>R</sub></b>                  | 10.0<br>500 |        |        |              | <b>uAmp</b>  |
| <b>Typical Junction Capacitance (Note 1)</b>   | <b>C<sub>J</sub></b>                  | 25          |        |        |              | <b>pF</b>    |
| <b>Typical Thermal Resistance (Note 2)</b>   | <b>R<sub>θJA</sub></b>                | 30          |        |        |              | <b>/W</b>    |
| <b>Typical Thermal Resistance (Note 2)</b>   | <b>R<sub>θJL</sub></b>                | 16          |        |        |              | <b>/W</b>    |
| <b>Operating and Storage Temperature Range</b>   | <b>T<sub>J</sub>, T<sub>stg</sub></b> | -55 to +150 |        |        |              |              |

### NOTES:

1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.

2- Thermal Resistance Junction to Ambient and form junction to lead at 0.375"(9.5mm) lead length P.C.B. Mounted.

## RATING AND CHARACTERISTIC CURVES (KBP306 THRU KBP310)

FIG.1- MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT PER BRIDGE ELEMENT

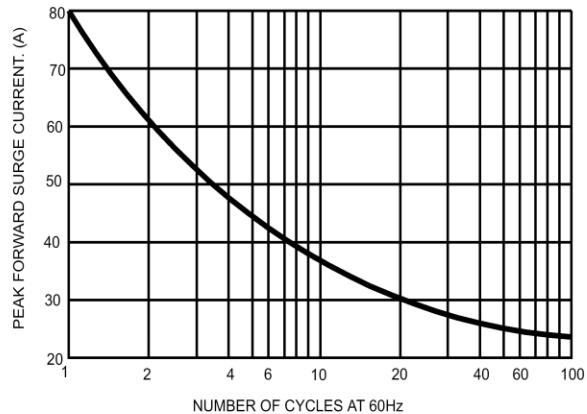


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

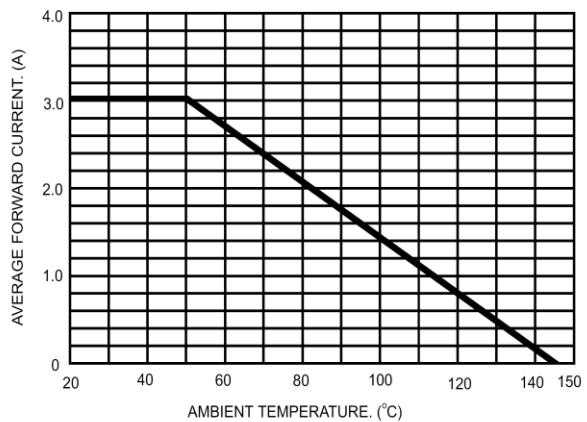


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

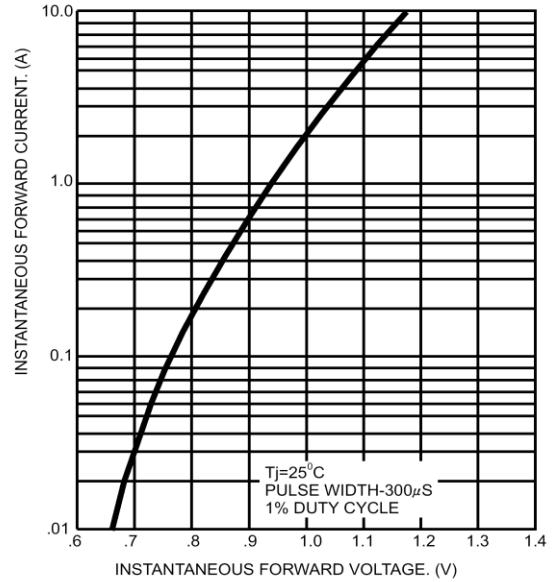
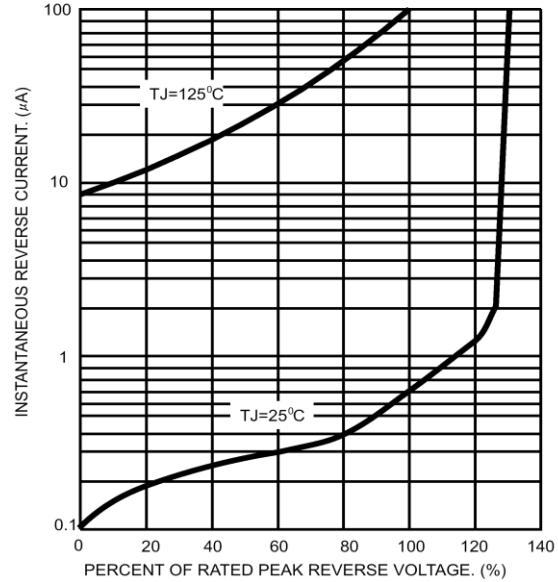


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT



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