



# KBP204~KBP2010

## Glass Passivated Bridge Rectifiers

**VOLTAGE** 400 to 1000 Volt **CURRENT** 2 Ampere

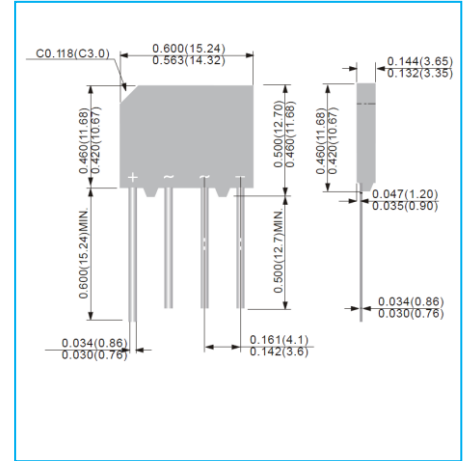
**KBPF** **Unit: Inch(mm)**

### FEATURES

- UL Recognized File #E228882
- Plastic material has Underwriters Laboratory Flammability Classification 94V-O
- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique.
- Lead free in compliance with EU RoHS2.0 (2011/65/EU & 2015/865/EU directive)
- Glass passivated chip junction

### MECHANICAL DATA

- Case: KBPF
- Terminals: Leads solderable per MIL-STD-750, Method 2026
- Polarity: As marked on body
- Weight: 1.6g



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

| PARAMETER   | SYMBOL                             | KBP 204      | KBP 206 | KBP 208 | KBP 2010 | UNIT             |
|---|------------------------------------|--------------|---------|---------|----------|------------------|
| Maximum repetitive peak reverse voltage   | $V_{RRM}$                          | 400          | 600     | 800     | 1000     | V                |
| Maximum RMS voltage   | $V_{RMS}$                          | 280          | 420     | 560     | 700      | V                |
| Maximum DC blocking voltage   | $V_{DC}$                           | 400          | 600     | 800     | 1000     | V                |
| Maximum average forward rectified current   | $I_{F(AV)}$                        | 2            |         |         |          | A                |
| Peak forward surge current, 8.3 ms single half sine-wave                              | $I_{FSM}$                          | 60           |         |         |          | A                |
| Rating of fusing ( $t < 8.3ms$ ) (Note1)  | $I^2t$                             | 15           |         |         |          | A <sup>2</sup> s |
| Maximum instantaneous forward voltage per diode<br>$I_F = 1 A$<br>$I_F = 2 A$         | $V_F$                              | 1<br>1.1     |         |         |          | V                |
| Maximum reverse current<br>@ rated $V_R$<br>$T_J = 25^\circ C$<br>$T_J = 125^\circ C$ | $I_R$                              | 5<br>500     |         |         |          | $\mu A$          |
| Typical junction capacitance (Note2)  | $C_J$                              | 23           |         |         |          | pF               |
| Typical thermal resistance (Note3)  | $R_{\theta JA}$<br>$R_{\theta JC}$ | 20<br>5      |         |         |          | $^\circ C/W$     |
| Operating junction temperature range  | $T_J$                              | - 55 to +150 |         |         |          | $^\circ C$       |
| Storage temperature range   | $T_{STG}$                          | - 55 to +150 |         |         |          | $^\circ C$       |

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

Note 2: Measured at 1MHz and applied Reverse bias of 4V DC

Note 3: Thermal resistance from junction to ambient and from junction to case mounted on PCB



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## TYPICAL CHARACTERISTIC CURVES

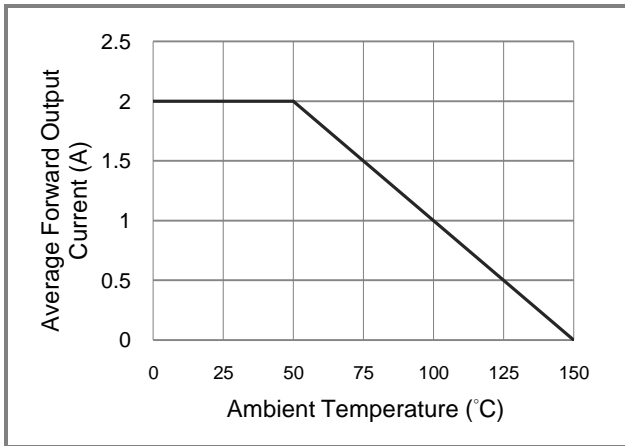


Fig.1 Forward Current Derating Curve

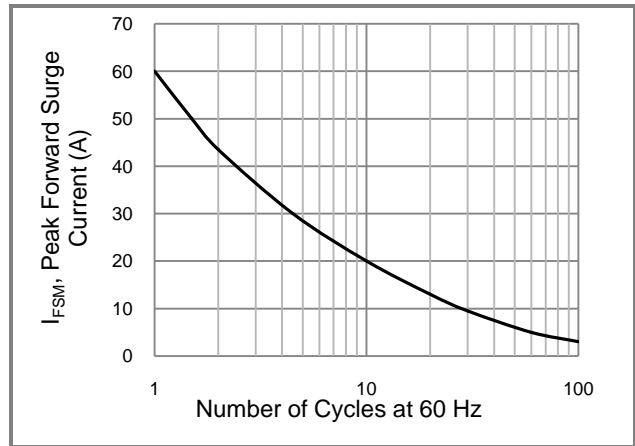


Fig.2 Maximum Forward Surge Current

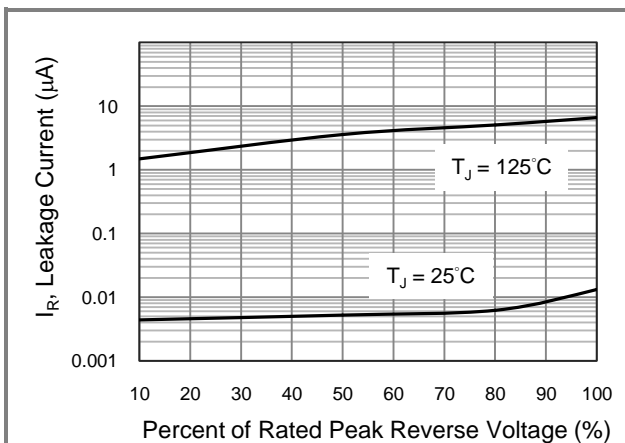


Fig.3 Typical Reverse Characteristics

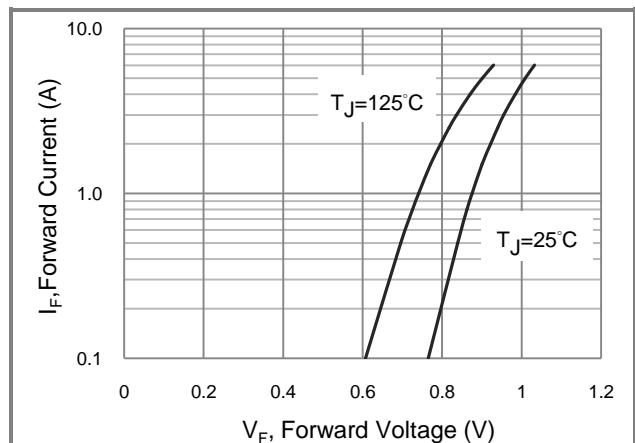


Fig.4 Typical Forward Characteristics

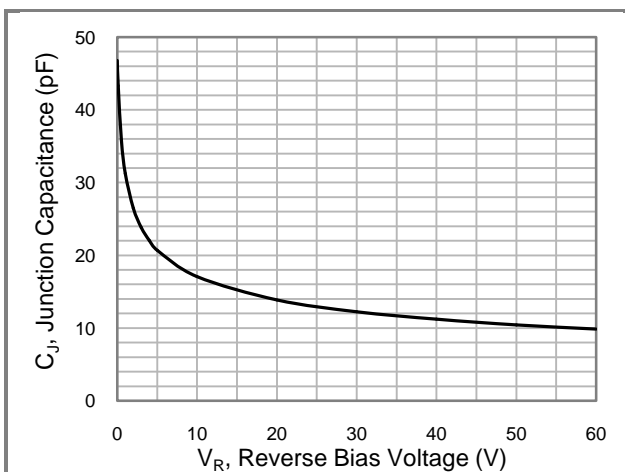


Fig.5 Typical Junction Capacitance



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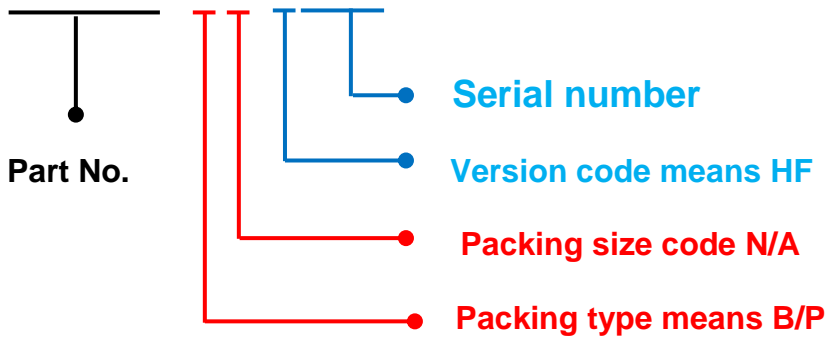
## Part No\_packing code\_Version

KBP204\_B0\_00001

KBP204\_B0\_10001

For example :

**KBP204\_B0\_00001**



| Packing Code <b>XX</b>               |                      |                                  |                      | Version Code <b>XXXXX</b> |                      |                                       |
|--------------------------------------|----------------------|----------------------------------|----------------------|---------------------------|----------------------|---------------------------------------|
| Packing type                         | 1 <sup>st</sup> Code | Packing size code                | 2 <sup>st</sup> Code | HF or RoHS                | 1 <sup>st</sup> Code | 2 <sup>st</sup> ~5 <sup>st</sup> Code |
| Tape and Ammunition Box (T/B)        | A                    | N/A                              | 0                    | HF                        | 0                    | serial number                         |
| Tape and Reel (T/R)                  | R                    | 7"                               | 1                    | RoHS                      | 1                    | serial number                         |
| Bulk Packing (B/P)                   | B                    | 13"                              | 2                    |                           |                      |                                       |
| Tube Packing (T/P)                   | T                    | 26mm                             | X                    |                           |                      |                                       |
| Tape and Reel (Right Oriented) (TRR) | S                    | 52mm                             | Y                    |                           |                      |                                       |
| Tape and Reel (Left Oriented) (TRL)  | L                    | PANASERT T/B CATHODE UP (PBCU)   | U                    |                           |                      |                                       |
| FORMING                              | F                    | PANASERT T/B CATHODE DOWN (PBCD) | D                    |                           |                      |                                       |



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