

# KBP2005-KBP210

Silicon Bridge Rectifiers



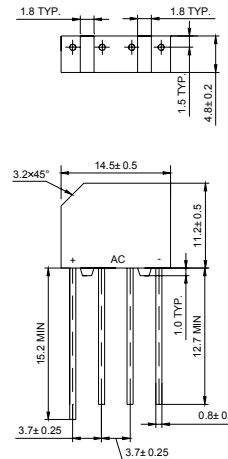
**VOLTAGE RANGE: 50 --- 1000 V**

**CURRENT: 2.0 A**

## KBP

### Features

- ◇ Rating to 1000V PRV
- ◇ Surge overload rating to 50 Amperes peak
- ◇ Ideal for printed circuit board
- ◇ Reliable low cost construction utilizing molded plastic technique results in inexpensive product
- ◇ Lead solderable per MIL-STD-202 method 208
- ◇ Plastic material has UL flammability classification 94V-0
- ◇ Weight: 0.050 ounces, 1.42 grams
- ◇ Glass passivated chip junctions



Dimensions in millimeters

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

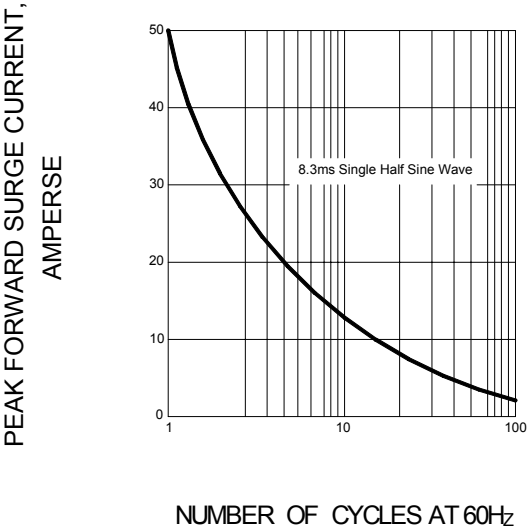
Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate by 20%.

|  |   | KBP<br>2005     | KBP<br>201 | KBP<br>202 | KBP<br>204 | KBP<br>206 | KBP<br>208 | KBP<br>210 | UNITS               |
|--|---|-----------------|------------|------------|------------|------------|------------|------------|---------------------|
| Maximum recurrent peak reverse voltage   | $V_{RRM}$   | 50              | 100        | 200        | 400        | 600        | 800        | 1000       | V                   |
| Maximum RMS voltage  | $V_{RMS}$   | 35              | 70         | 140        | 280        | 420        | 560        | 700        | V                   |
| Maximum DC blocking voltage  | $V_{DC}$  | 50              | 100        | 200        | 400        | 600        | 800        | 1000       | V                   |
| Maximum average forward<br>Output current @ $T_A=25^\circ\text{C}$   | $I_{F(AV)}$   | 2.0             |            |            |            |            |            |            | A                   |
| Peak forward surge current<br>8.3ms single half-sine-wave<br>superimposed on rated load                    | $I_{FSM}$   | 50.0            |            |            |            |            |            |            | A                   |
| $I^2t$ Rating for fusing @ $T_j=25^\circ\text{C}$  | $I^2t$  | 10.4            |            |            |            |            |            |            | A <sup>2</sup> S    |
| Maximum instantaneous forward voltage<br>@ 2.0 A   | $V_F$   | 1.1             |            |            |            |            |            |            | V                   |
| Maximum reverse current @ $T_A=25^\circ\text{C}$<br>at rated DC blocking voltage @ $T_A=100^\circ\text{C}$ | $I_R$   | 10.0<br>1.0     |            |            |            |            |            |            | $\mu\text{A}$<br>mA |
| Typical Thermal Resistance (Note)  | $R_{\theta JA}$<br>$R_{\theta JC}$<br>$R_{\theta JL}$ | 25<br>5<br>8    |            |            |            |            |            |            | $^\circ\text{C/W}$  |
| Operating junction temperature range   | $T_J$   | - 55 ---- + 150 |            |            |            |            |            |            | $^\circ\text{C}$    |
| Storage temperature range  | $T_{STG}$   | - 55 ---- + 150 |            |            |            |            |            |            | $^\circ\text{C}$    |

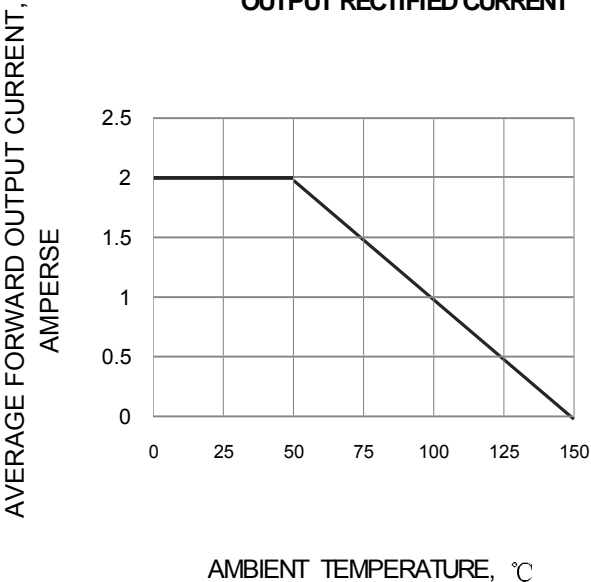


## Ratings AND Characteristic Curves

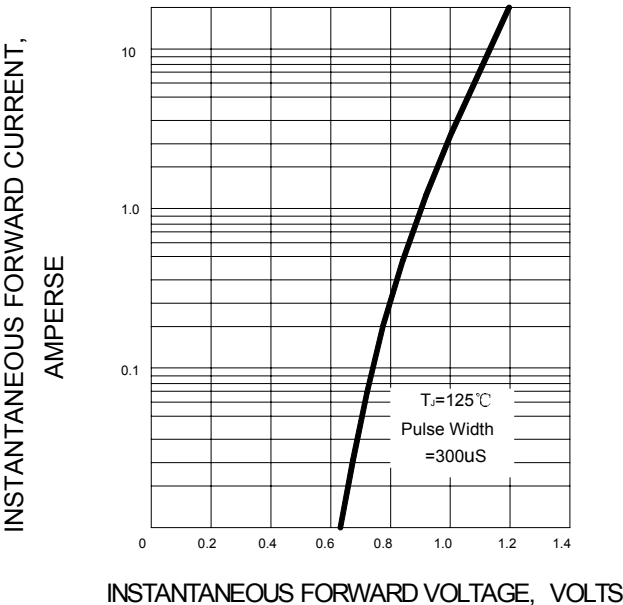
**FIG.1 – PEAK FORWARD SURGE CURRENT**



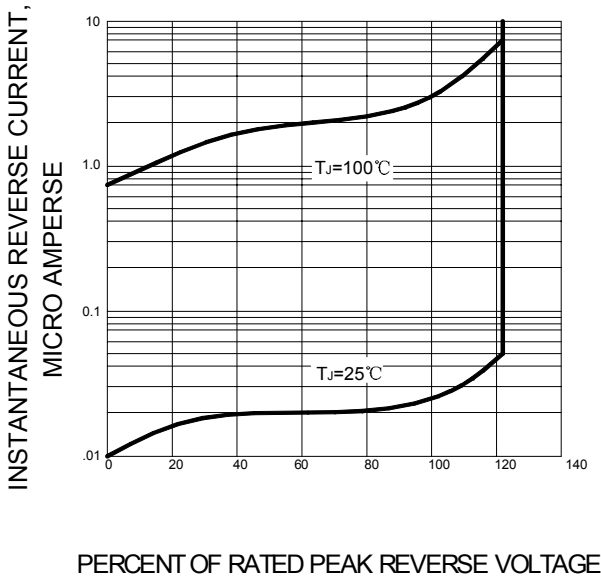
**FIG.2 – FORWARD DERATING CURVE  
OUTPUT RECTIFIED CURRENT**



**FIG.3 – TYPICAL FORWARD CHARACTERISTIC**



**FIG.4 – TYPICAL REVERSE CHARACTERISTIC**



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