

# KBP2005 THRU KBP210

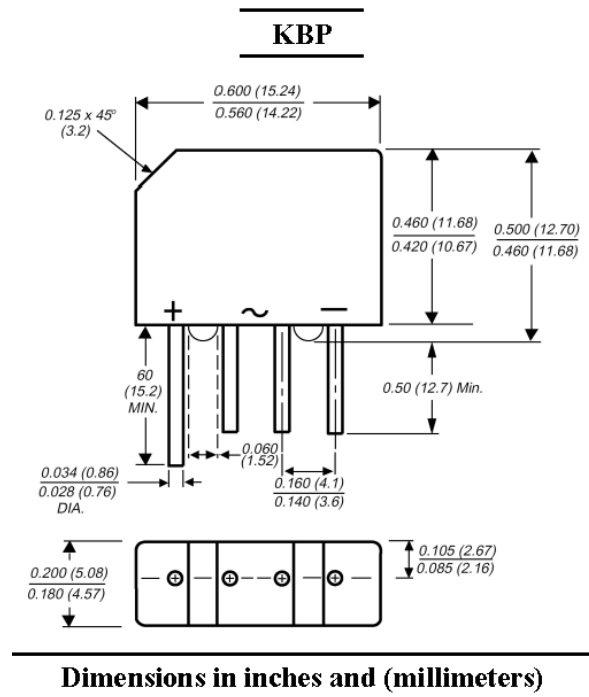
**SINGLE-PHASE SILICON BRIDGE RECTIFIER**  
**REVERSE VOLTAGE: 50 to 1000 V**  
**FORWARD CURRENT: 2 A**

## Features

- Reliable low cost construction utilizing molded plastic technique
- Ideal for printed circuit board
- Low forward voltage drop
- Low reverse leakage current
- High surge current capability

## Mechanical Data

- Case: Molded plastic, KBP
- Epoxy: UL 94V-0 rate flame retardant
- Terminals: Leads solderable per MIL-STD-202 method 208 guaranteed
- Mounting position: Any



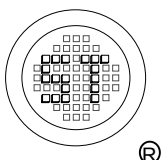
## Absolute Maximum Ratings and Characteristics

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

Parameter	Symbols	KBP 2005	KBP 201	KBP 202	KBP 204	KBP 206	KBP 208	KBP 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 Rectified Current .375" (9.5 mm) Lead Length at $T_A = 50\text{ }^\circ\text{C}$	$I_{(AV)}$	2							A
Peak Forward Surge Current, 8.3 ms Single Half-Sine -Wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	60							A
Maximum Forward Voltage at 2 A DC and 25 °C	$V_F$	1.1							V
Maximum Reverse Current at $T_A = 25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage $T_A = 100\text{ }^\circ\text{C}$	$I_R$	10 500							$\mu\text{A}$
Typical Junction Capacitance <sup>1)</sup>	$C_J$	25							pF
Typical Thermal Resistance <sup>2)</sup>	$R_{\theta JA}$	30							$^\circ\text{C/W}$
Typical Thermal Resistance <sup>2)</sup>	$R_{\theta JL}$	11							$^\circ\text{C/W}$
Operating and Storage Temperature Range	$T_J, T_S$	-55 to +125							$^\circ\text{C}$

<sup>1)</sup> Measured at 1 MHz and applied reverse voltage of 4 VDC.

<sup>2)</sup> Thermal resistance junction to ambient and from junction to lead at 0.375" (9.5 mm) lead length P.C.B mounted.



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

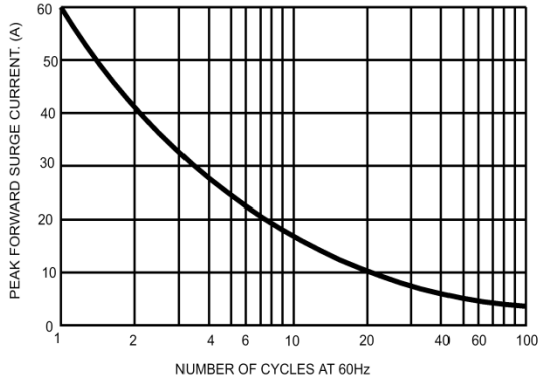


FIG.2- MAXIMUM FORWARD CURRENT DERATING CURVE

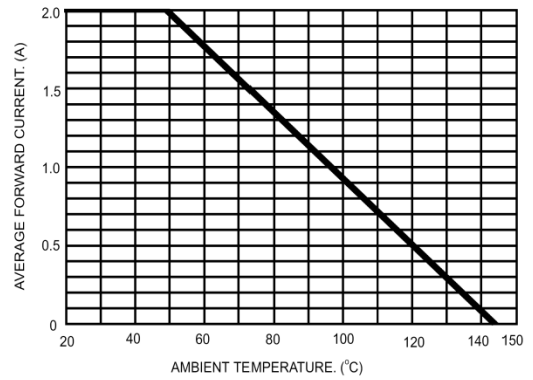


FIG.3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

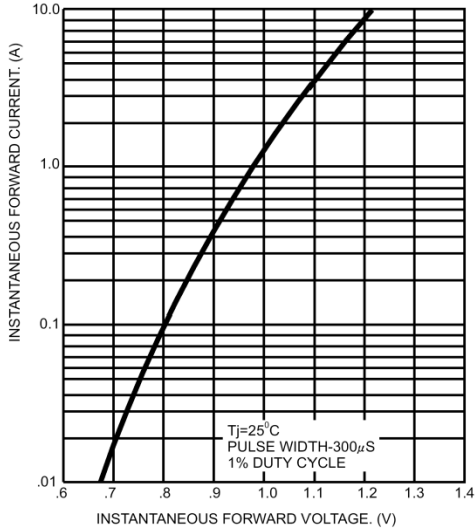
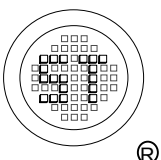
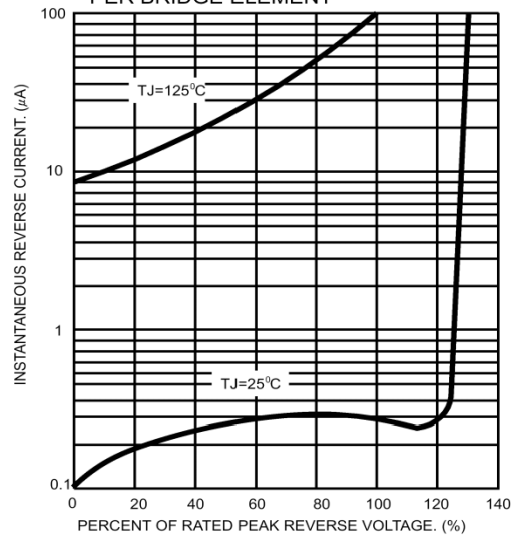


FIG.4- TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT



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