



# KBP2005 THRU KBP210

Reverse Voltage - 50 to 1000 Volts Forward Current - 2.0 Amperes

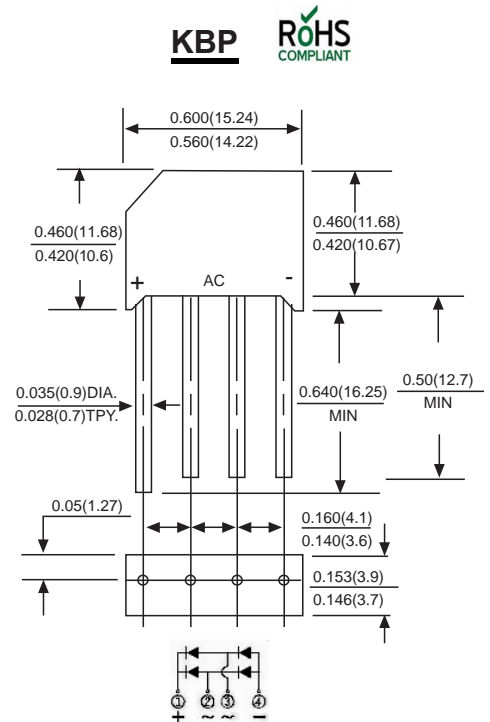
## SINGLE BRIDGE RECTIFIERS

### Features

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Ideal for printed circuit boards
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed:
- ◆ 260°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

### Mechanical Data

**Case** : JEDEC KBP Molded plastic body  
**Terminals** : Solder plated, solderable per MIL-STD-750, Method 2026  
**Polarity** : Polarity symbol marking on body  
**Mounting Position** : Any  
**Weight** : 0.0693 ounce, 1.95 grams



Dimensions in inches and (millimeters)

### Maximum Ratings And Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

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

Parameter	SYMBOLS	MDD	MDD	MDD	MDD	MDD	MDD	MDD	UNITS
		KBP2005	KBP201	KBP202	KBP204	KBP206	KBP208	KBP210	
Marking Code									
Maximum repetitive 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 output rectified current at $T_c=50$ C (Note 2)	$I_{(AV)}$	2.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	60.0							A
Maximum instantaneous forward voltage drop per bridge element at 2.0A	$V_F$	1.0							V
Maximum DC reverse current at rated DC blocking voltage	$I_R$	$T_A=25^\circ\text{C}$ 10							$\mu\text{A}$
		$T_A=100^\circ\text{C}$ 0.5							mA
Typical Junction Capacitance (Note 1)	$C_J$	20							pF
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	28							$^\circ\text{C/W}$
Operating junction temperature range	$T_J$	-55 to +125							$^\circ\text{C}$
storage temperature range	$T_{STG}$	-55 to +150							$^\circ\text{C}$

#### NOTES:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0 Volts.
2. Unit mounted on P.C. board with 0.47" x 0.47" (12x12mm) copper pads, 0.375" (9.5mm) lead length.



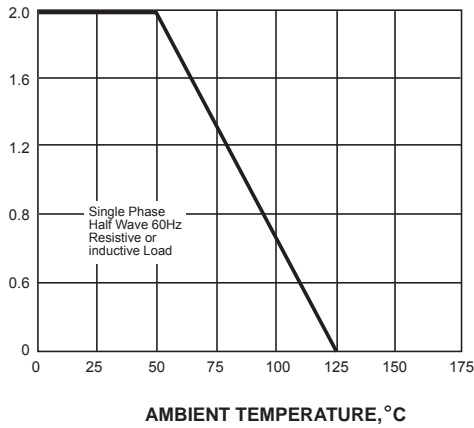
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## Ratings And Characteristic Curves

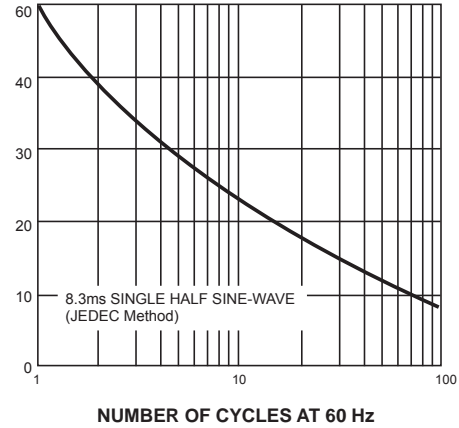
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



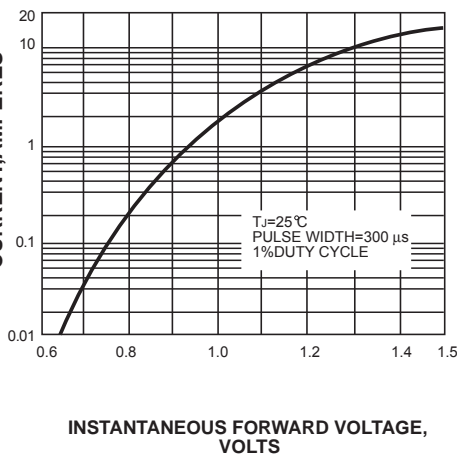
PEAK FORWARD SURGE CURRENT, AMPERES

FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



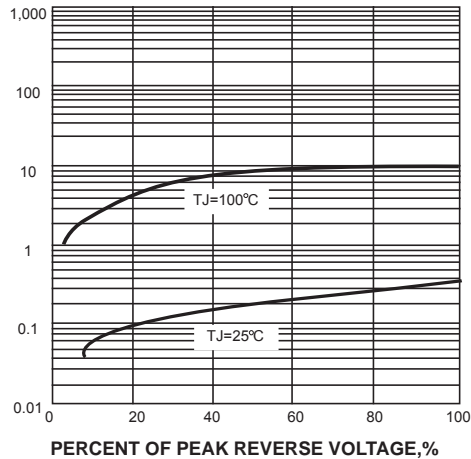
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



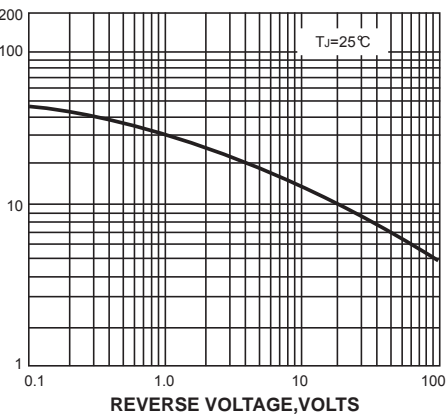
INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



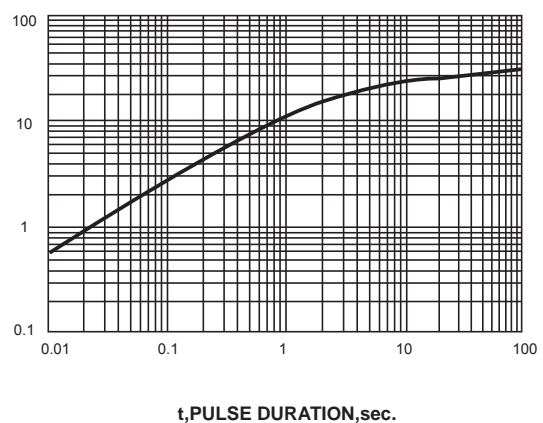
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.

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