



# KBPC10005 THRU KBPC1010

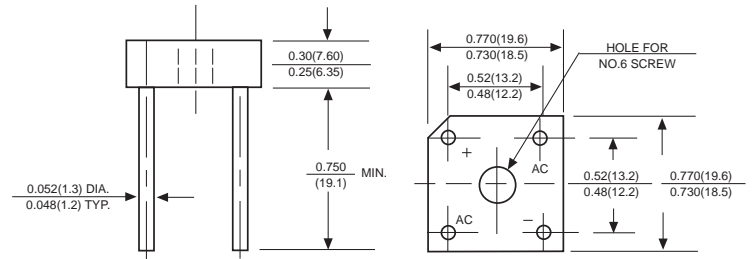
Reverse Voltage - 50 to 1000 Volts Forward Current -10.0 Amperes

## SILICON BRIDGE RECTIFIERS

### Features

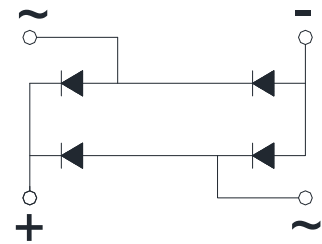
- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Ideal for printed circuit boards
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 260°C/10 seconds, 5 lbs. (2.3kg) tension

**BR-8** **ROHS COMPLIANT**



### Mechanical Data

**Case** : JEDEC BR-8 Molded plastic body  
**Terminals** : Solder plated, solderable per MIL-STD-750, Method 2026  
**Polarity** : Polarity symbol marking on body  
**Mounting Position** : Any  
**Weight** : 0.20 ounce, 5.62 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	
		KBPC10005	KBPC1001	KBPC1002	KBPC1004	KBPC1006	KBPC1008	KBPC1010		
Marking Code										
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V	
Maximum RMS voltage	$V_{RMS}$	30	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	$I_{AV}$	$T_C=50^\circ C$ (Note 1)							10.0	A
		$T_C=100^\circ C$ (Note 1)							8.0	
		$T_A=50^\circ C$ (Note 2)							8.0	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$								150	A
Rating for Fusing ( $t < 8.3ms$ )	$I^2t$								64	A <sup>2</sup> s
Maximum instantaneous forward voltage drop per bridge element at 5.0A	$V_F$								1.0	V
Maximum DC reverse current at rated DC blocking voltage	$I_R$	$T_A=25^\circ C$							10	$\mu A$
		$T_A=100^\circ C$							1.0	mA
Isolation voltage from case to leads	$V_{IOS}$								2500	V <sub>AC</sub>
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$								6.0	°C/W
Operating junction temperature range	$T_J$								-65 to +125	°C
storage temperature range	$T_{STG}$								-65 to +150	°C

**NOTES:**

1. Unit mounted on 8.7" x 8.7" x 0.24" thick (22x22x0.6cm) Al. plate.
2. Unit mounted on P.C. board with 0.47" x 0.47" (12x12mm) copper pads, 0.375" (9.5mm) lead length.



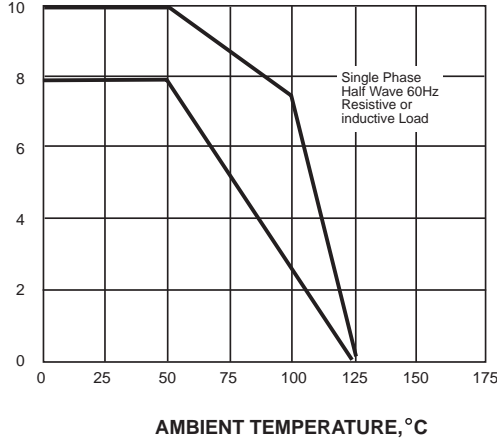
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Reverse Voltage - 50 to 1000 Volts Forward Current -10.0 Amperes

## Ratings And Characteristic Curves

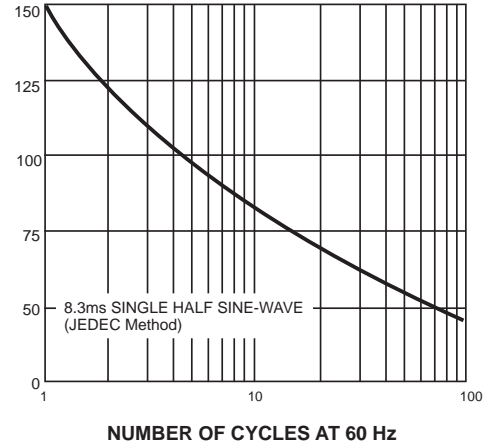
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



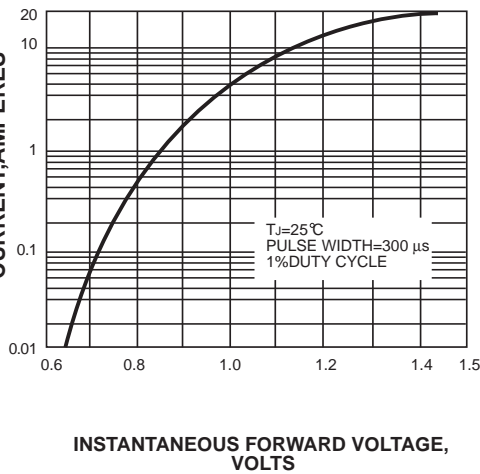
PEAK FORWARD SURGE CURRENT, AMPERES

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



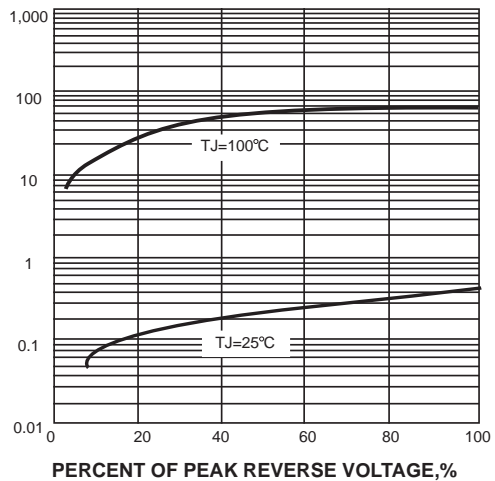
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



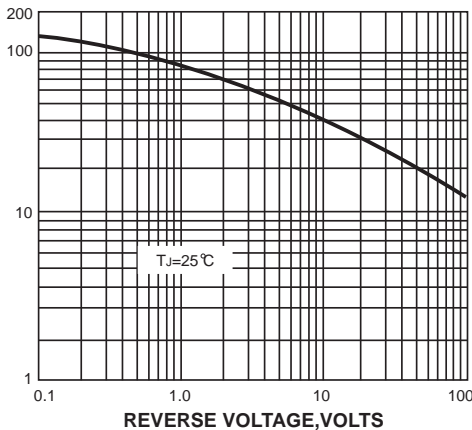
INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



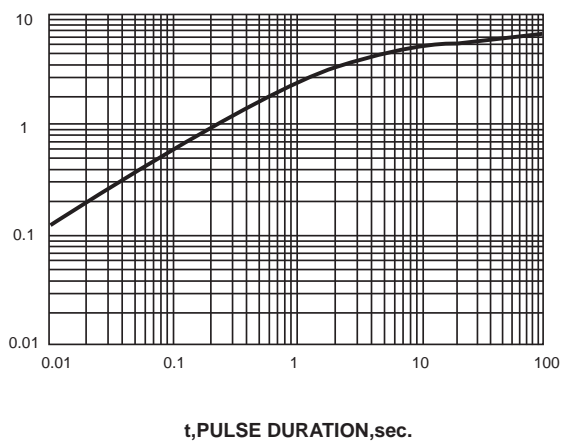
JUNCTION CAPACITANCE, pF

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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