



KBPC10005 THRU KBPC1010

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

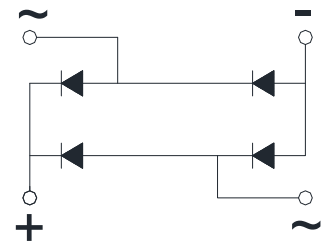
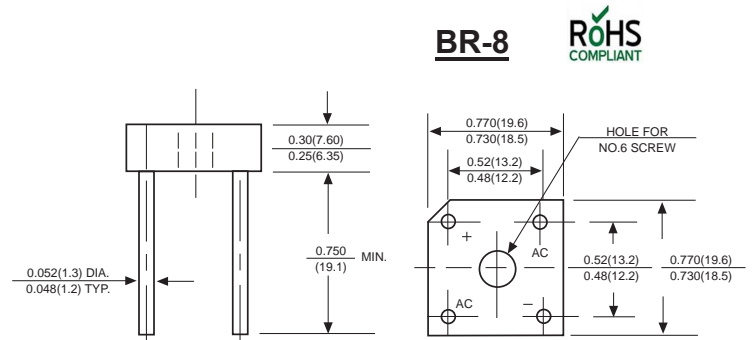
SILICON BRIDGE RECTIFIERS

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

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}	$T_C=50^\circ\text{C}$ (Note 1)		10.0					A
		$T_C=100^\circ\text{C}$ (Note 1)		8.0					
		$T_A=50^\circ\text{C}$ (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 ($t < 8.3\text{ms}$)	I^2t	64					A^2s		
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	$T_A=25^\circ\text{C}$		10					μA
		$T_A=100^\circ\text{C}$		1.0					mA
Isolation voltage from case to leads	V_{IOS}	2500					V_{AC}		
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	6.0					$^\circ\text{C}/\text{W}$		
Operating junction temperature range	T_J	-65 to +125					$^\circ\text{C}$		
storage temperature range	T_{STG}	-65 to +150					$^\circ\text{C}$		

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.



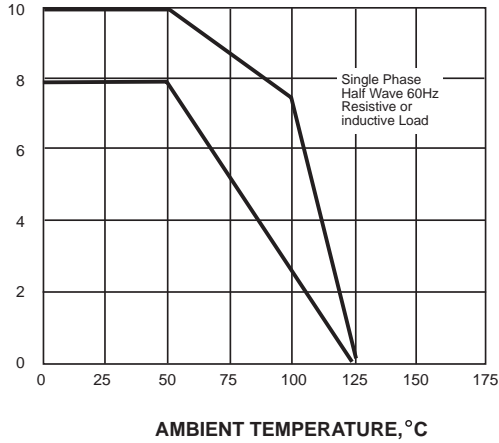
KBPC1005 THRU KBPC1010

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Ratings And Characteristic Curves

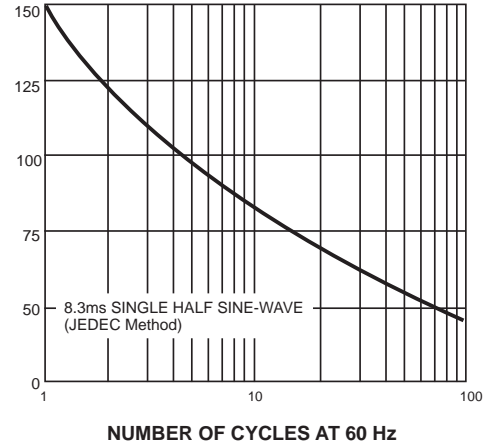
AVERAGE FORWARD RECTIFIED CURRENT, AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



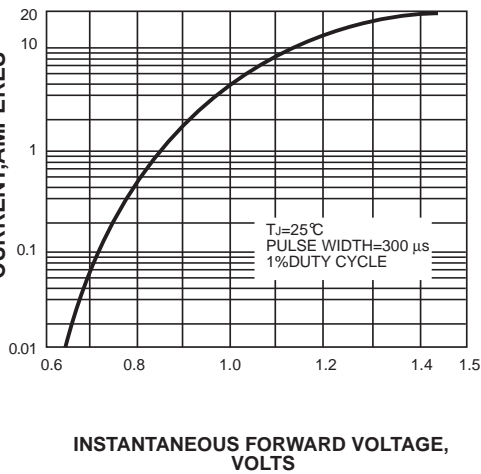
PEAK FORWARD SURGE CURRENT, AMPERES

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



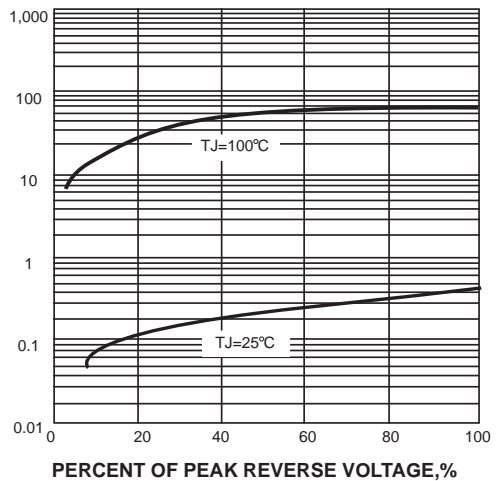
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



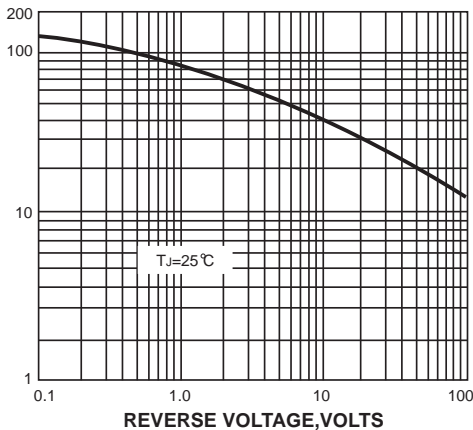
INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



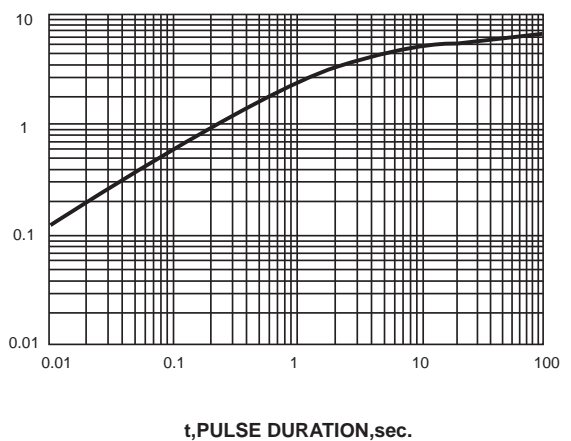
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.