



# KBPC50005 THRU KBPC5010

Reverse Voltage - 50 to 1000 Volts Forward Current - 50.0 Amperes

## SILICON BRIDGE RECTIFIERS

### Features

**KBPC-25** **RoHS**  
COMPLIANT

- ◆ 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, at 5 lbs. (2.3kg) tension

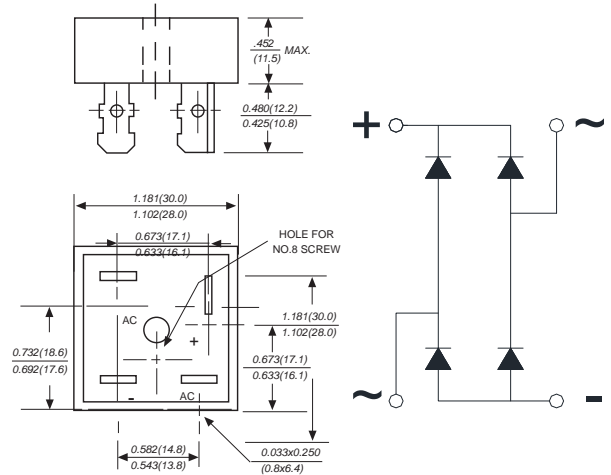
### Mechanical Data

**Case** : JEDEC KBPC Molded plastic body

**Terminals** : Solder plated, solderable per MIL-STD-750, Method 2026

**Polarity** : Polarity symbol marking on body

**Mounting Position** : Any



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
		KBPC50005	KBPC5001	KBPC5002	KBPC5004	KBPC5006	KBPC5008	KBPC5010	
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 $T_c=55^\circ\text{C}$	$I_{(AV)}$	50.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	500							A
Rating for Fusing ( $t < 8.3\text{ms}$ )	$I^2t$	1038							$\text{A}^2\text{s}$
Maximum instantaneous forward voltage drop per bridge element at 25.0A	$V_F$	1.1							V
Maximum DC reverse current at rated DC blocking voltage	$I_R$	$T_A=25^\circ\text{C}$							$\mu\text{A}$
		$T_A=100^\circ\text{C}$							mA
Typical Thermal Resistance	$R_{\theta JA}$	2.0							$^\circ\text{C}/\text{W}$
Operating junction temperature range	$T_J$	-55 to +150							$^\circ\text{C}$
storage temperature range	$T_{STG}$	-55 to +150							$^\circ\text{C}$



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## Ratings And Characteristic Curves

FIG. 1-MAXIMUM FORWARD SURGE CURRENT

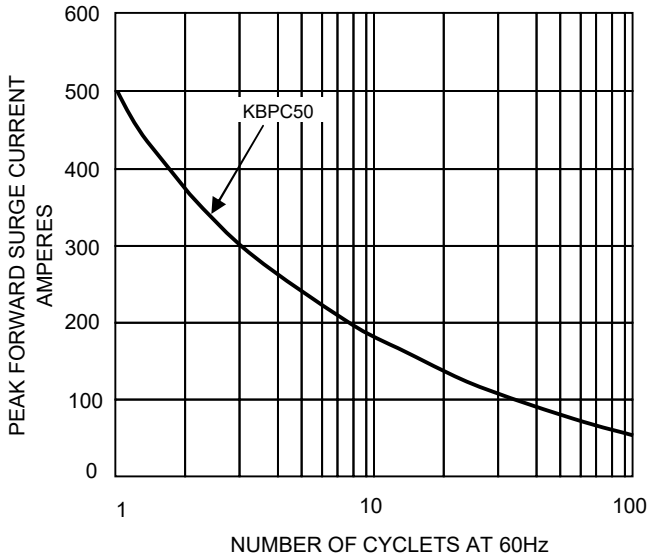


FIG. 2- DERATING CURVE  
OUTPUT RECTIFIED CURRENT

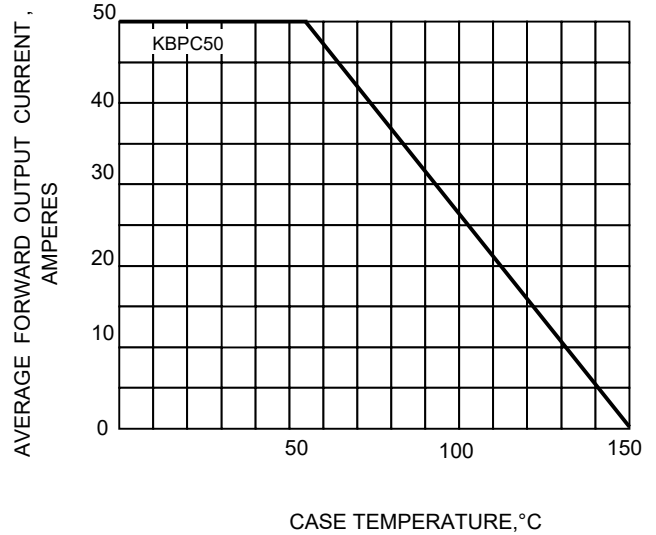


FIG. 3-TYPICAL FORWARD CHARACTERISTICS

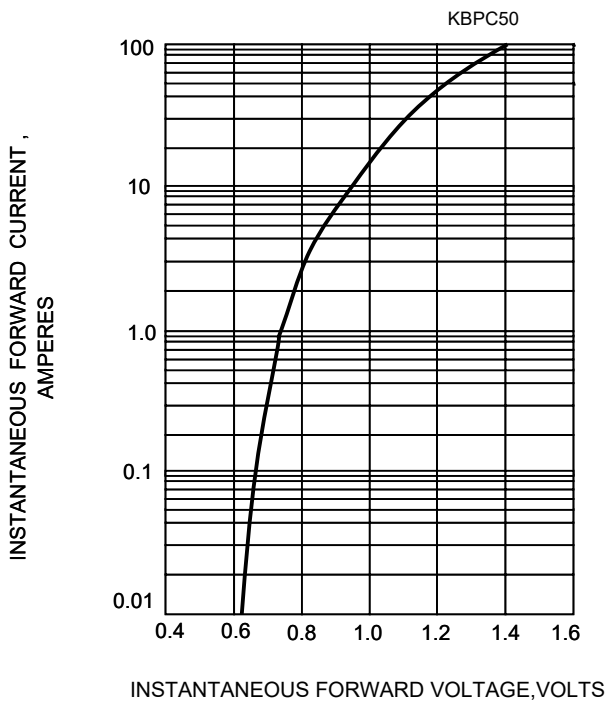
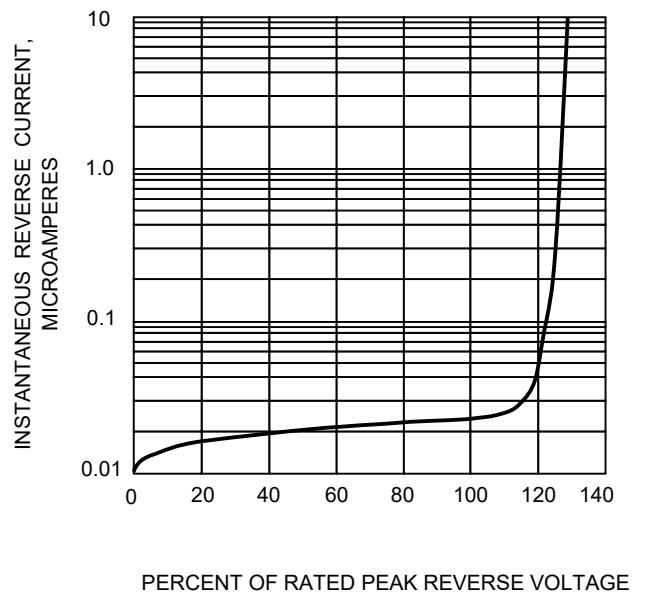


FIG. 4-TYPICAL REVERSE CHARACTERISTICS



The curve above is for reference only.