

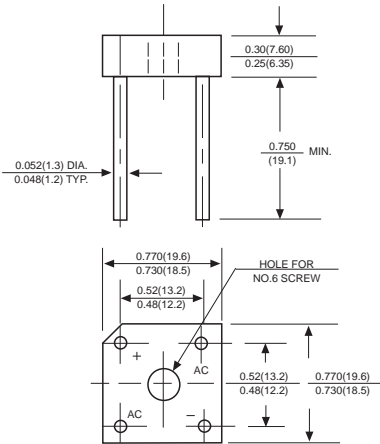


KBPC8005 THRU KBPC810

SILICON BRIDGE RECTIFIERS

Reverse Voltage - 50 to 1000 Volts Forward Current - 8.0 Amperes

KBPC8



Dimensions in inches and (millimeters)

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, at 5 lbs. (2.3kg) tension

MECHANICAL DATA

Case: Molded plastic body
Terminals: Plated leads solderable per MIL-STD-750, Method 2026
Polarity: Polarity symbols marked on case
Mounting: Thru hole for #6 screw, 5in.-lbs. torque max.
Weight: 0.200 ounce, 5.62 grams

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%.

MDD Catalog Number	SYMBOLS	KBPC 8005	KBPC 801	KBPC 802	KBPC 804	KBPC 806	KBPC 808	KBPC 810	UNITS	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	VOLTS	
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	VOLTS	
Maximum DC blocking voltage	V_{DC}	50	100	200	400	600	800	1000	VOLTS	
Maximum average forward output rectified current at	$I_{(AV)}$	$T_C=50^\circ C$ (Note 1)							8.0	Amps
		$T_C=100^\circ C$ (Note 1)							6.0	
		$T_A=50^\circ C$ (Note 2)							6.0	
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	125.0							Amps	
Rating for Fusing ($t < 8.3ms$)	$I^2 t$	64							A ² s	
Maximum instantaneous forward voltage drop per bridge element at 4.0A	V_F	1.1							Volts	
Maximum DC reverse current at rated DC blocking voltage	I_R	$T_A=25^\circ C$							10	μA
		$T_A=100^\circ C$							1.0	mA
Isolation voltage from case to leads	V_{ISO}	2500							V_{AC}	
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	6.0							$^\circ C/W$	
Operating junction temperature range	T_J	-55 to +125							$^\circ C$	
storage temperature range	T_{STG}	-55 to +150							$^\circ C$	

NOTES:

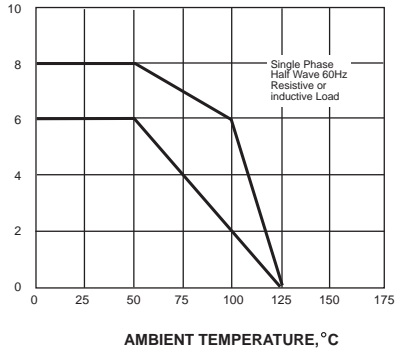
- Unit mounted on 8.7" x 8.7" x 0.24" thick (22x22x0.6cm) Al. plate.
- Unit mounted on P.C. board with 0.47" x 0.47" (12x12mm) copper pads, 0.375" (9.5mm) lead length.

MDD ELECTRONIC

RATINGS AND CHARACTERISTIC CURVES KBPC8005 THRU KBPC810

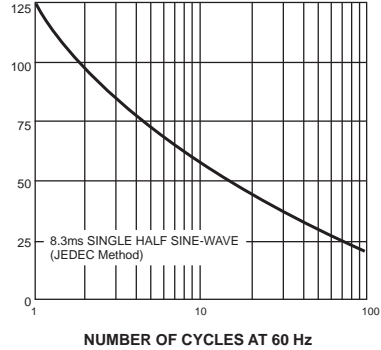
AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



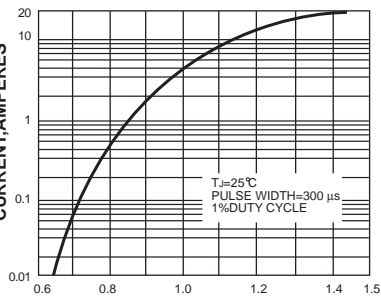
PEAK FORWARD SURGE CURRENT,
AMPERES

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



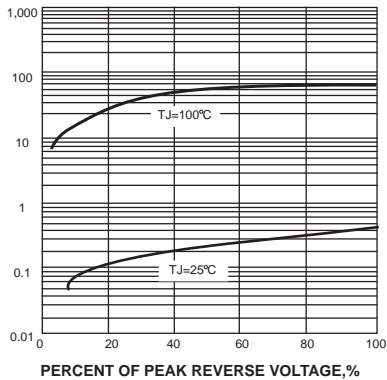
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



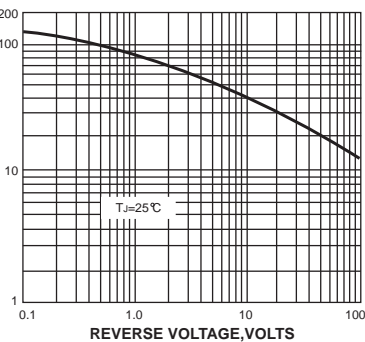
INSTANTANEOUS REVERSE CURRENT,
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



TRANSIENT THERMAL IMPEDANCE,
 $^\circ\text{C}/\text{W}$

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE

