



KBPC8005 THRU KBPC810

Reverse Voltage - 50 to 1000 Volts Forward Current - 8.0 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

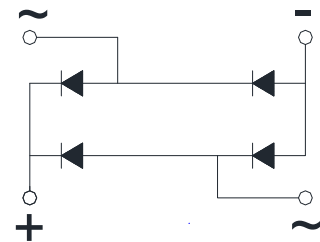
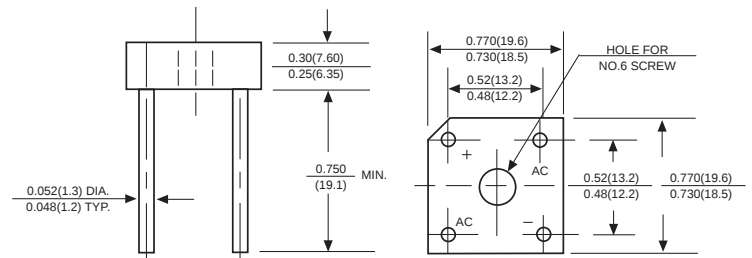
Terminals : Solder plated, solderable per MIL-STD-750, Method 2026

Polarity : Polarity symbol marking on body

Mounting Position : Any

Weight : 0.20 ounce, 5.62 grams

KBPC-8/BR-8



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 KBPC8005	MDD KBPC801	MDD KBPC802	MDD KBPC804	MDD KBPC806	MDD KBPC808	MDD KBPC810	UNITS
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 Tc=50°C (Note 1) Tc=100°C (Note 1) TA=50°C (Note 2)	$I_{(AV)}$	8.0 6.0 6.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	125							A
Rating for Fusing(t<8.3ms)	I^2t	64							A ² s
Maximum instantaneous forward voltage drop per bridge element at 4.0A	V_F	1.1							V
Maximum DC reverse current at rated DC blocking voltage TA=25°C TA=100°C	I_R	10 1.0							μA mA
Isolation voltage from case to leads	V_{IOS}	2500							V _{AC}
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	6.0							°C/W
Operating junction temperature range	T_J	-55 to +125							°C
storage temperature range	T_{STG}	-55 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.



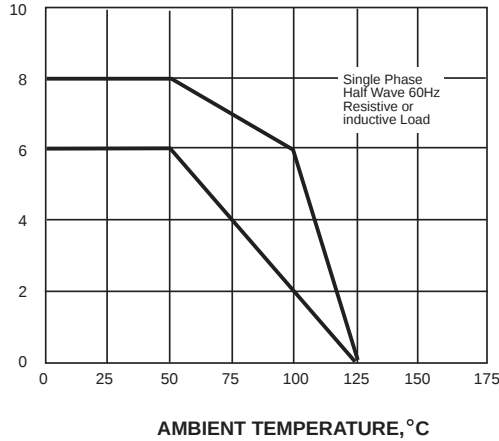
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Ratings And Characteristic Curves

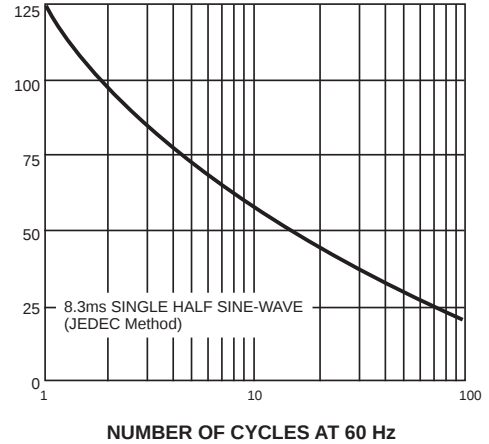
AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES

FIG. 1- FORWARD CURRENT DERATING CURVE



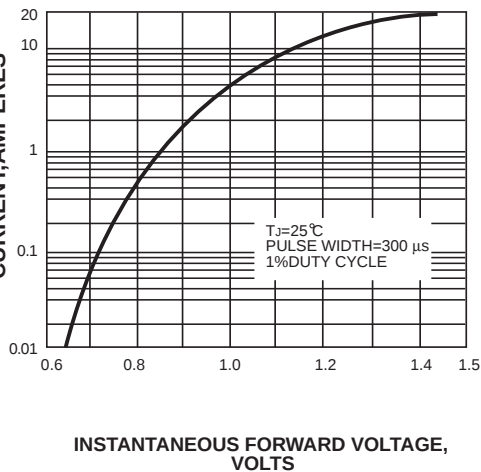
PEAK FORWARD SURGE CURRENT,
AMPERES

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



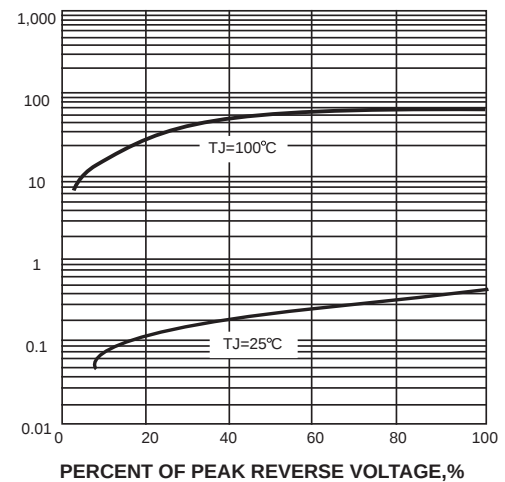
INSTANTANEOUS FORWARD
CURRENT,AMPERES

FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



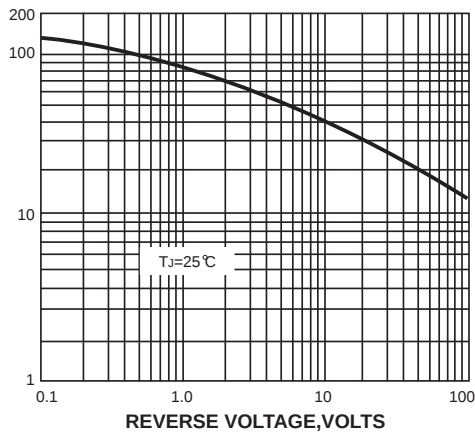
INSTANTANEOUS REVERSE CURRENT,
MICROAMPERES

FIG. 4-TYPICAL REVERSE CHARACTERISTICS



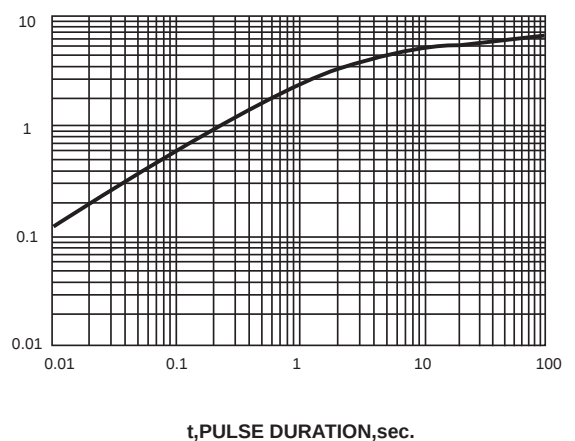
JUNCTION CAPACITANCE, pF

FIG. 5-TYPICAL JUNCTION CAPACITANCE



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

FIG. 6-TYPICAL TRANSIENT THERMAL IMPEDANCE



The curve above is for reference only.