

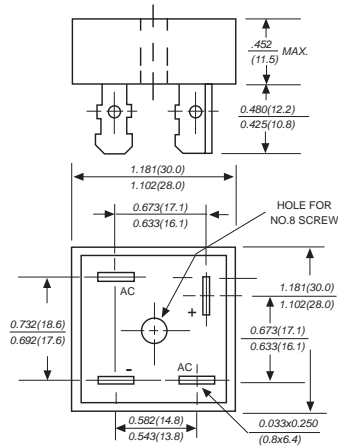


KBPC50005 THRU KBPC5010

SILICON BRIDGE RECTIFIERS

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

KBPC-35



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: Metal case

Terminals: Plated 0.25" (6.35mm) lug.

Polarity: Polarity symbols marked on case

Mounting: Thru hole for #8 screw, 20in.-lbs. torque max.

Weight: 1.02 ounce, 29 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 current capacitive load current derate by 20%.

TWGMC Catalog Number	SYMBOLS	KBPC 50005	KBPC 5001	KBPC 5002	KBPC 5004	KBPC 5006	KBPC 5008	KBPC 5010	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 $T_C=50^\circ\text{C}$ (Note 1,2)	$I_{(AV)}$	50							Amps
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	400.0							Amps
Rating for Fusing ($t < 8.3\text{ms}$)	I^2t	664							A^2s
Maximum instantaneous forward voltage drop per bridge element at 25A	V_F	1.1							Volts
Maximum DC reverse current at rated DC blocking voltage	I_R	$T_A=25^\circ\text{C}$							μA
		$T_A=100^\circ\text{C}$							mA
Isolation voltage from case to leads	V_{ISO}	2500							V_{AC}
Typical Thermal Resistance (Note 2)	$R_{\theta JA}$	2.0							$^\circ\text{C}/\text{W}$
Operating junction temperature range	T_J	-65 to +150							$^\circ\text{C}$
storage temperature range	T_{STG}	-65 to +150							$^\circ\text{C}$

NOTES:

1. Unit mounted on 9" x 3.5" x 4.6" thick (23cm x 9cm x 11.8cm) Al. plate.

2. Bolt down on heat-sink with silicone thermal compound between bridge and mounting surface for maximum heat transfer efficiency with #8 screw.

RATINGS AND CHARACTERISTIC CURVES KBPC50005 THRU KBPC5010

Fig. 1 Derating Curve for Output Rectified Current

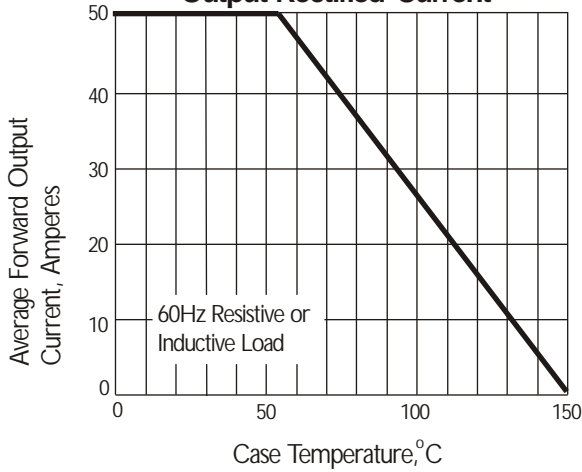


Fig. 2 Maximum Non-repetitive Peak Forward Surge Current

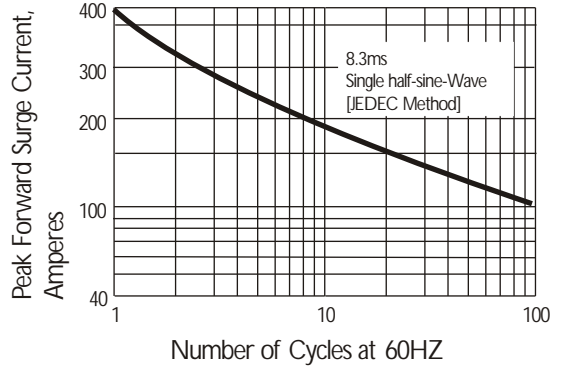


Fig. 3 Typical Instantaneous Forward Characteristics

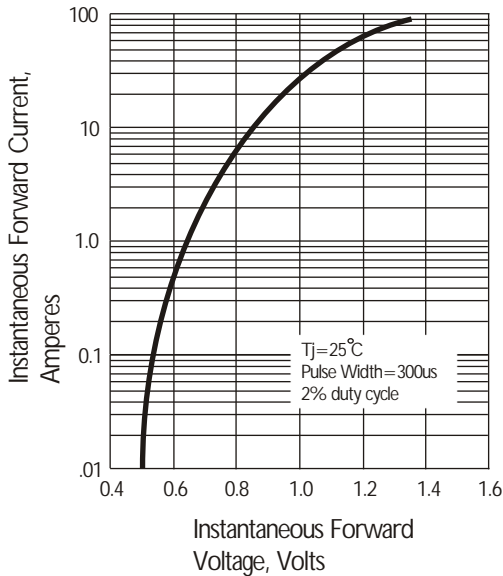


Fig. 4 Typical Reverse Characteristics at Tj=25°C

