

Kingtronics®

KBPC50005 THRU KBPC5010

SINGLE-PHASE GLASS PASSIVATED BRIDGE RECTIFIERS

REVERSE VOLTAGE 50 to 1000 Volts **FORWARD CURRENT** 50.0 Ampere

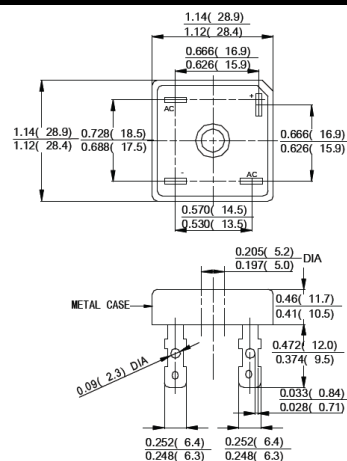
FEATURES

High forward surge current capability
 Integrally molded heatsink provide very low thermal resistance
 High isolation voltage from case to lugs
 High temperature soldering guaranteed: 260°C /10 second, at 5 lbs. (2.3kg) tension.

MECHANICAL DATA

Case: Metal case
 Terminal: Plated 0.25" (6.35mm) lug
 Polarity: Polarity symbols molded on case
 Mounting: Thru hole for #10 screw, 20 in,- lbs. Torque Max
 Weight: 1.02 ounce, 29 gram

KPBC



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 derate current by 20%

Dimensions in inches and (millimeters)

PARAMETER	SYMBOL	KBPC 50005	KBPC 5001	KBPC 5002	KBPC 5004	KBPC 5006	KBPC 5008	KBPC 5010	UNIT
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V_{RRM}	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 Rectified Output Current, at $T_C=50^\circ\text{C}$ (Note1,2)	$I_{(AV)}$	50							Amps
Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	400							Amps
Rating for Fusing($t<8.3\text{ms}$)	I^2t	664							A^2S
Maximum Instantaneous Forward Voltage at 25A	V_F	1.1							Volts
Maximum DC Reverse Current at rated DC blocking voltage	$T_A=25^\circ\text{C}$	5.0							μAmps
	$T_A=125^\circ\text{C}$	1.0							mAmps
Isolation Voltage from case to lugs	V_{ISO}	2500							V_{AC}
Typical Thermal Resistance (Note 1,2)	$R_{\theta JC}$	2.0							$^\circ\text{C/W}$
Operating Temperature Range	T_J	-65 to +150							$^\circ\text{C}$
Storage Temperature Range	T_{STG}	-65 to +150							$^\circ\text{C}$

- Unit mounted on 9"x3.5"x4.6"(23x9x11.8mm) Al. finned plate.
- Bolt down on heat-sink with silicone thermal compound between bridge and mounting surface for maximum heat transfer efficiency with #10 screw.

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RATINGS AND CHARACTERISTIC CURVES

FIG.1-DERATING CURVE FOR

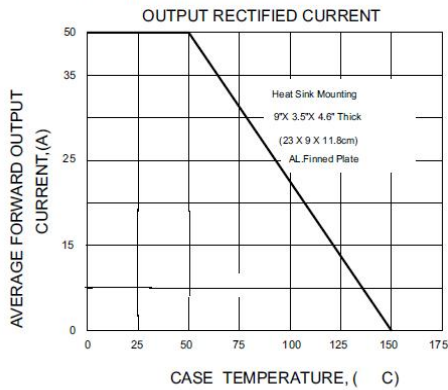


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER ELEMENT

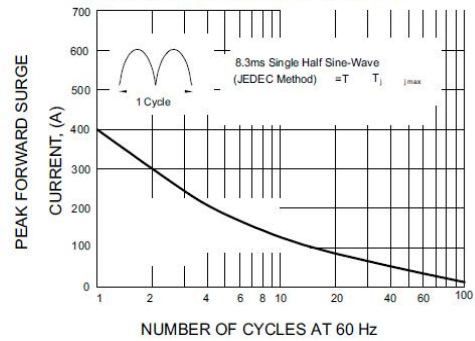


FIG.3-TYPICAL FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

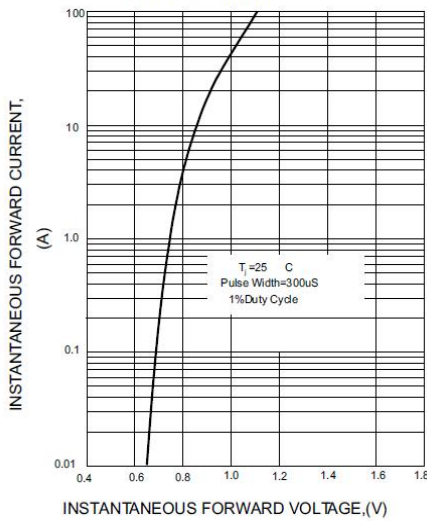


FIG.4-TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

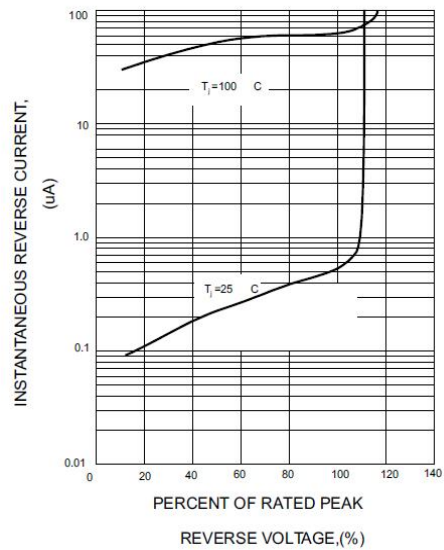
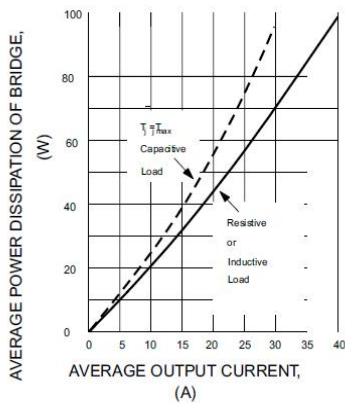


FIG.5-MAXIMUM POWER DISSIPATION



Note: Specifications are subject to change without notice.

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