

# Kingtronics®

# KBPC25005 THRU KBPC2510

## SINGLE-PHASE BRIDGE RECTIFIER

VOLTAGE RANGE 50 to 1000 Volts

CURRENT 25.0 Ampere

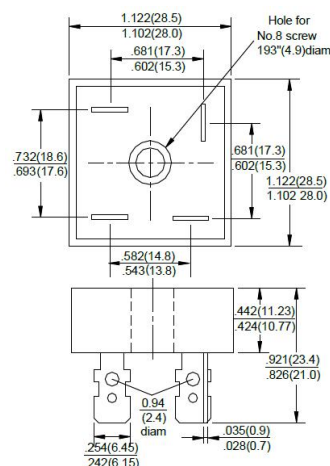
### FEATURES

- High forward surge current capability.
- 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: Matel case.
- Terminal: Plated 0.25" (6.35mm) lug.
- Polarity: Polarity symbols marked on case.
- Mounting: Thru hole for #10 screw, 20 in,- lbs. Torque Max.
- Weight:1.02 ounce, 29gram.

### KBPC



### 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)

	SYMBOLS	KBPC 25005	KBPC 2501	KBPC 2502	KBPC 2504	KBPC 2506	KBPC 2508	KBPC 2510	UNIT
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 Rectified Output Current at $T_C=50^\circ C$ (Note1,2)	$I_{(AV)}$	25							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	300							Amps
Rating for Fusing( $t<8.3ms$ )	$I^2T$	373							$A^2s$
Maximum Instantaneous Forward Voltage at 12.5A	$V_F$	1.1							Volts
Maximum Reverse Current at Rated DC Blocking Voltage	$T_A=25^\circ C$	5.0							$\mu A$ mps
	$T_A=125^\circ C$	0.5							mAmps
Isolation Voltage from case to lugs	$V_{ISO}$	2500							$V_{AC}$
Typical Thermal Resistance (Note 1,2)	$R_{\theta JC}$	2.0							$^\circ C/W$
Operating Temperature Range	$T_J$	-55 to +150							$^\circ C$
Storage Temperature Range	$T_{STG}$	-55 to +150							$^\circ C$

- Unit mounted on 9"x3.5"x4.6" thick (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.



## RATINGS AND CHARACTERISTIC CURVES

FIG.1-DERATING CURVE FOR  
OUTPUT RECTIFIED CURRENT

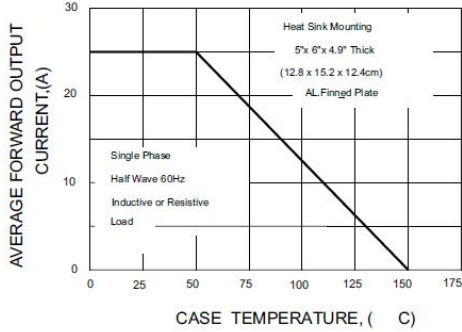


FIG.2-MAXIMUM NON-REPETITIVE PEAK  
FORWARD SURGE CURRENT PER ELEMENT

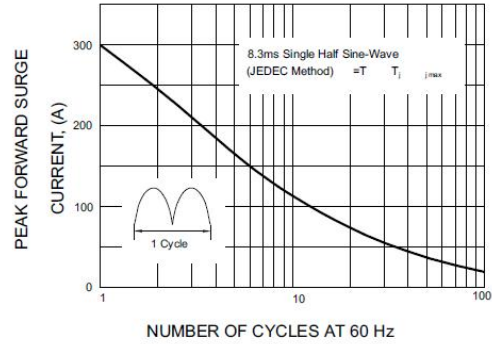


FIG.3-TYPICAL FORWARD CHARACTERISTICS  
PER BRIDGE ELEMENT

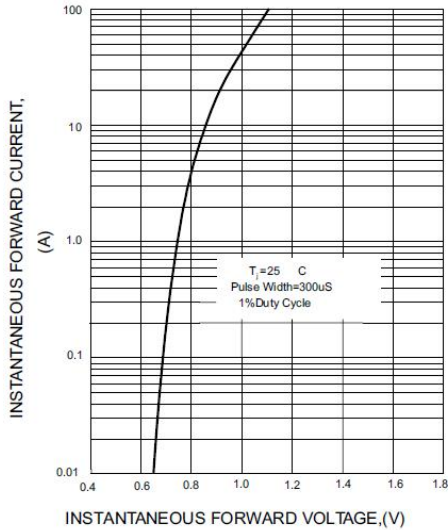


FIG.4-TYPICAL REVERSE CHARACTERISTICS  
PER BRIDGE ELEMENT

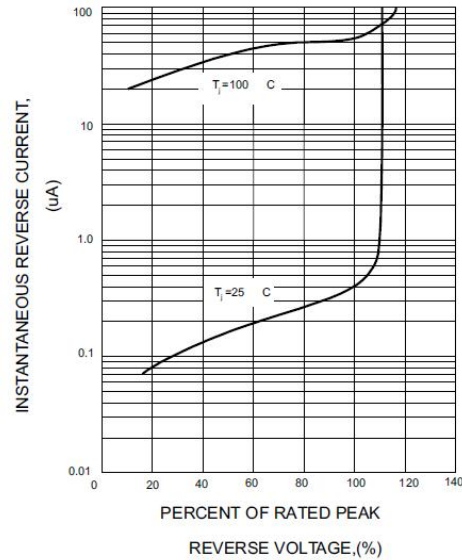


FIG.5-TYPICAL JUNCTION CAPACITANCE  
PER BRIDGE ELEMENT

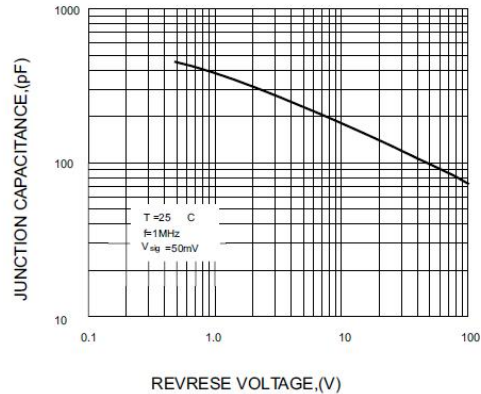
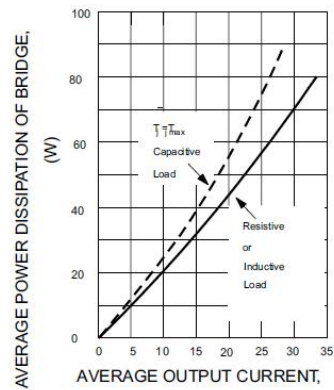


FIG.6-MAXIMUM POWER DISSIPATION



Note: Specifications are subject to change without notice.