

# KBPC25005 THRU KBPC2510

## SINGLE-PHASE BRIDGE RECTIFIER

VOLTAGE RANGE 50 to 1000 Volts    CURRENT 25.0 Ampere

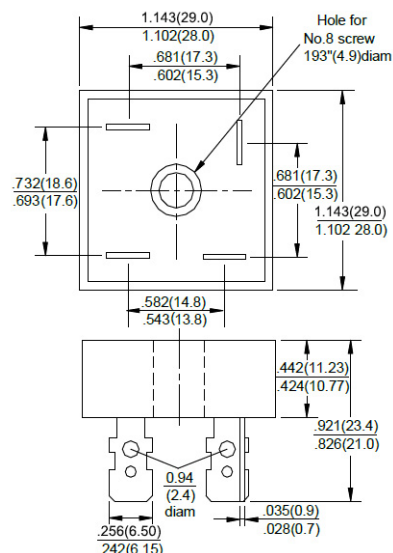
### FEATURES

- ◆ 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: Metal 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



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load derate current by 20%

		SYMBOL	KBPC 25005	KBPC 2501	KBPC 2502	KBPC 2504	KBPC 2506	KBPC 2508	KBPC 2510	UNIT
Maximum Repetitive Peak Reverse Voltage		V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage		V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage		V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Output Current at T <sub>C</sub> =50°C(Note1,2)		I <sub>(AV)</sub>	25							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)		I <sub>FSM</sub>	300							Amps
Rating for Fusing(t<8.3ms)		I <sub>2T</sub>	373							A <sup>2</sup> s
Maximum Instantaneous Forward Voltage at12.5A		V <sub>F</sub>	1.1							Volts
Maximum Reverse Current at Rated DC Blocking Voltage	T <sub>A</sub> =25°C	I <sub>R</sub>	5.0							μAmps
	T <sub>A</sub> =125°C		0.5							mAmps
Isolation Voltage from case to lugs		V <sub>ISO</sub>	2500							V <sub>AC</sub>
Typical Thermal Resistance (Note 1,2)		R <sub>θJC</sub>	2.0							°C/W
Operating Temperature Range		T <sub>J</sub>	-55 to +150							°C
Storage Temperature Range		T <sub>STG</sub>	-55 to +150							°C

Note: 1. Unit mounted on 9" × 3.5" × 4.6" thick (23×9×11.8mm) Al. Plate.

2. 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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### RATING AND CHARACTERISTIC CURVES KBPC25005 THRU KBPC2510

FIG.1-DERATING CURVE FOR  
OUTPUT RECTIFIED CURRENT

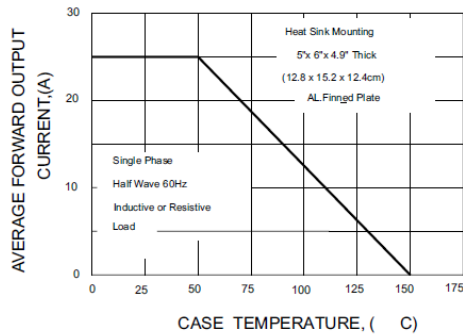


FIG.2-MAXIMUM NON-REPETITIVE PEAK  
FORWARD SURGE CURRENT PER ELEMENT

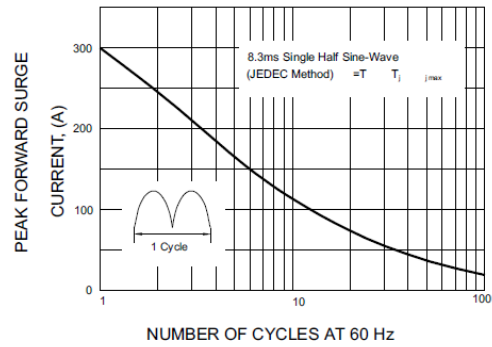


FIG.3-TYPICAL FORWARD CHARACTERISTICS  
PER BRIDGE ELEMENT

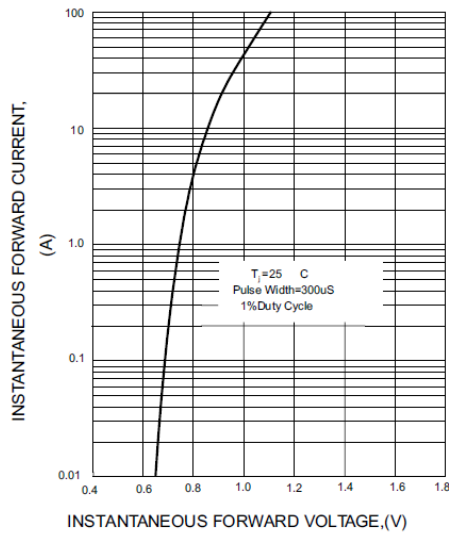


FIG.4-TYPICAL REVERSE CHARACTERISTICS  
PER BRIDGE ELEMENT

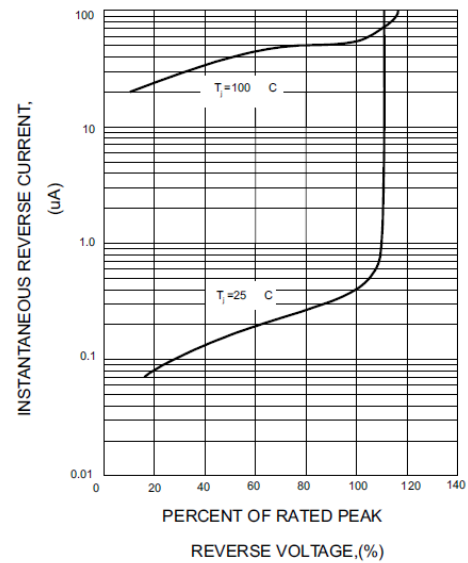


FIG.5-TYPICAL JUNCTION CAPACITANCE  
PER BRIDGE ELEMENT

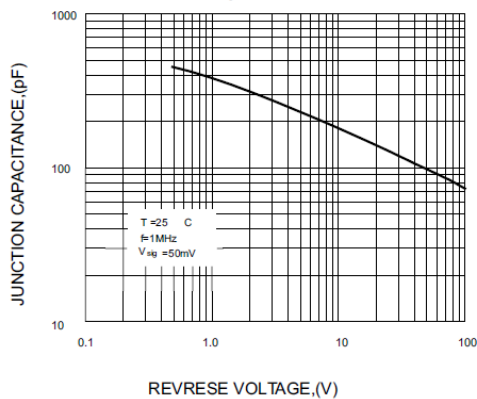
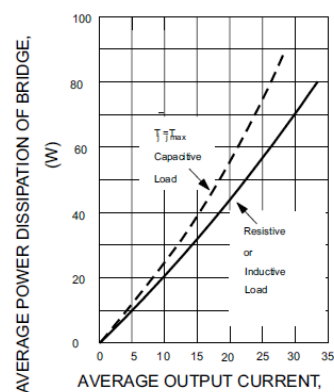


FIG.6-MAXIMUM POWER DISSIPATION



Note: Specifications are subject to change without notice. For more detail and update, please visit our website.