

# KBPC25005W THRU KBPC2510W

## SINGLE-PHASE BRIDGE RECTIFIER

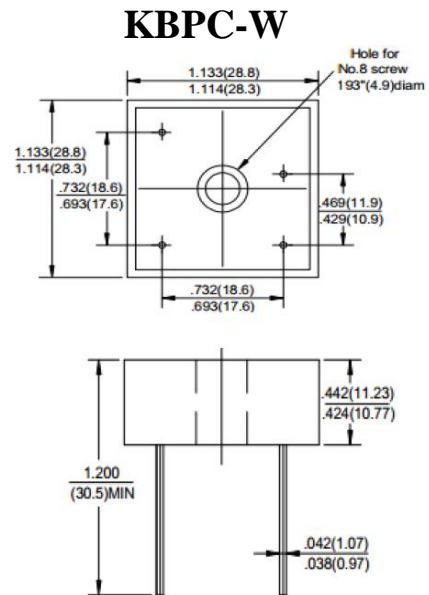
VOLTAGE RANGE 50 to 1000 Volts    CURRENT 25.0 Ampere

### 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.



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%

PARAMETER	SYMBOL	KBPC 25005W	KBPC 2501W	KBPC 2502W	KBPC 2504W	KBPC 2506W	KBPC 2508W	KBPC 2510W	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 $T_C=50^\circ\text{C}$ (Note 1, 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 ( $t < 8.3\text{ms}$ )	$I^2t$	373							$\text{A}^2\text{s}$
Maximum Instantaneous Forward Voltage at 12.5A	$V_F$	1.1							Volts
Maximum Reverse Current at Rated DC Blocking Voltage	$T_A=25^\circ\text{C}$	5.0							$\mu\text{Amps}$
	$T_A=125^\circ\text{C}$	0.5							mAmps
Isolation Voltage from case to lugs	$V_{ISO}$	2500							$V_{AC}$
Typical Thermal Resistance (Note 1,2)	$R_{\theta JL}$	2.0							$^\circ\text{C}/\text{W}$
Operating Temperature Range	$T_J$	-65 to +150							$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-65 to +150							$^\circ\text{C}$

Note: 1. Unit mounted on 9" x 3.5" x 4.6" thick (23 x 9 x 11.8mm) Al. finned 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 KBPC25005W THRU KBPC2510W

FIG.1-DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

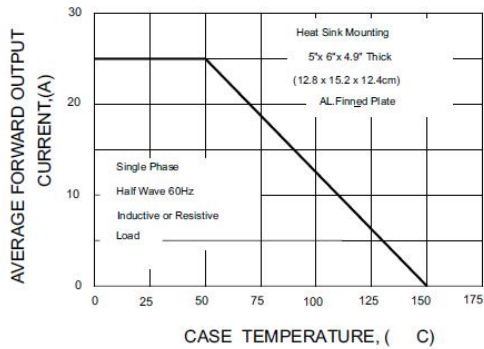


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER ELEMENT

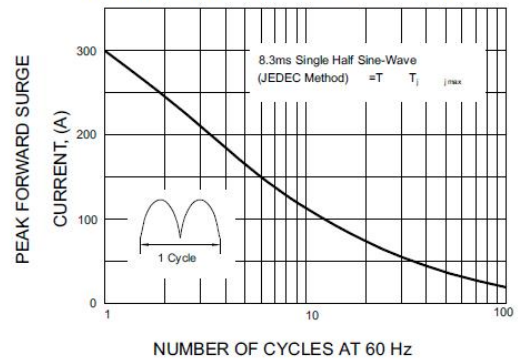


FIG.3-TYPICAL FORWARD CHARACTERISTICS PER BRIDGE ELEMENT

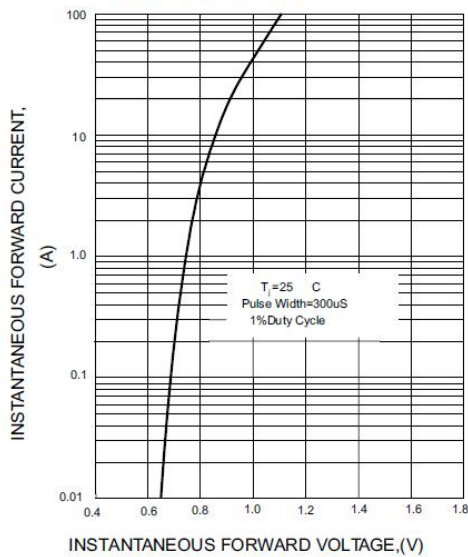


FIG.4-TYPICAL REVERSE CHARACTERISTICS PER BRIDGE ELEMENT

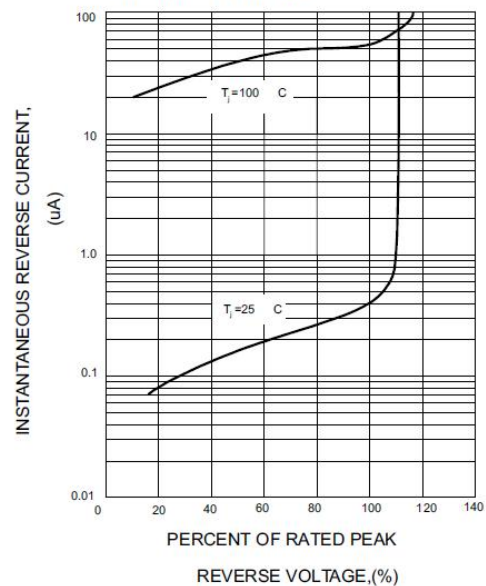


FIG.5-TYPICAL JUNCTION CAPACITANCE PER BRIDGE ELEMENT

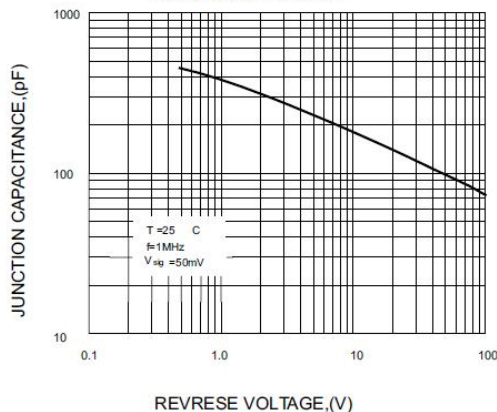
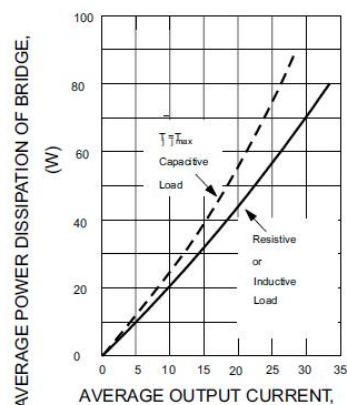


FIG.6-MAXIMUM POWER DISSIPATION



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