

KBPC25005 THRU KBPC2510

SINGLE-PHASE BRIDGE RECTIFIER

VOLTAGE RANGE 50 to 1000 Volts CURRENT 25.0 Ampere

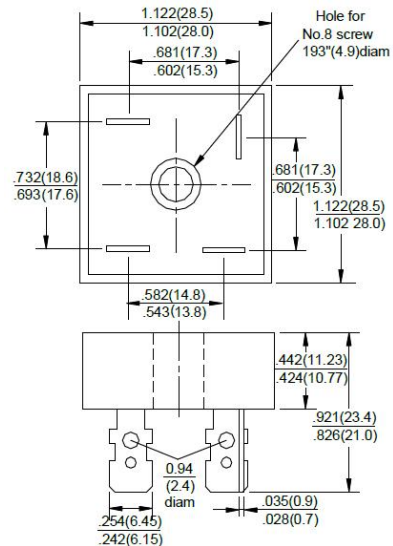
FEATURES

- ◆ 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_{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							A^2s	
Maximum Instantaneous Forward Voltage at 12.5A	V_F	1.1							Volts	
Maximum Reverse Current at Rated DC Blocking Voltage	$T_A=25^\circ\text{C}$	I_R	5.0							μAmps
	$T_A=125^\circ\text{C}$		0.5							mAmps
Isolation Voltage from case to lugs	V_{ISO}	2500							V_{AC}	
Typical Thermal Resistance (Note 1,2)	$R_{\theta JC}$	2.0							$^\circ\text{C}/\text{W}$	
Operating Temperature Range	T_J	-55 to +150							$^\circ\text{C}$	
Storage Temperature Range	T_{STG}	-55 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. 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

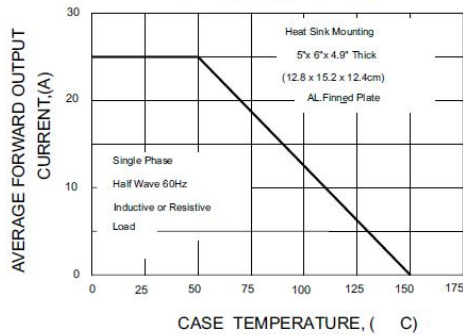


FIG.2-MAXIMUM NON-REPETITIVE PEAK
FORWARD SURGE CURRENT PER ELEMENT

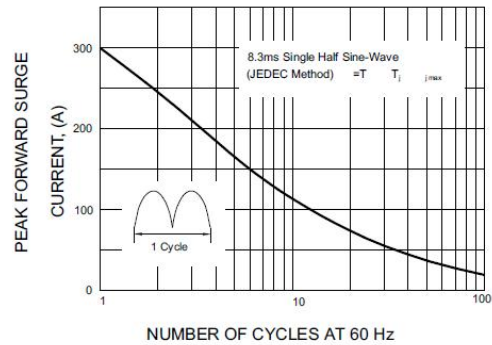


FIG.3-TYPICAL FORWARD CHARACTERISTICS
PER BRIDGE ELEMENT

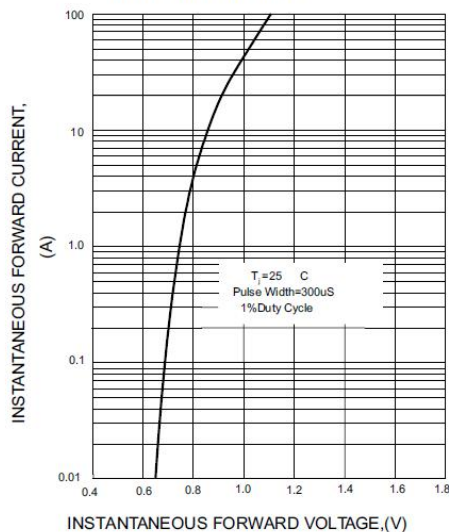


FIG.4-TYPICAL REVERSE CHARACTERISTICS
PER BRIDGE ELEMENT

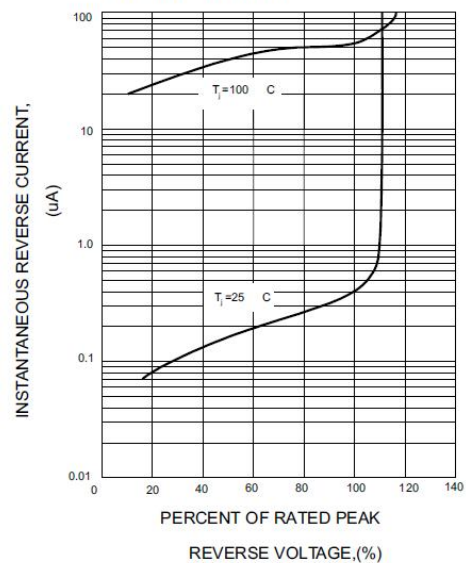


FIG.5-TYPICAL JUNCTION CAPACITANCE
PER BRIDGE ELEMENT

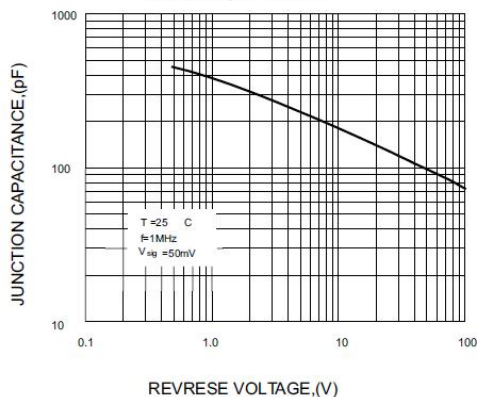
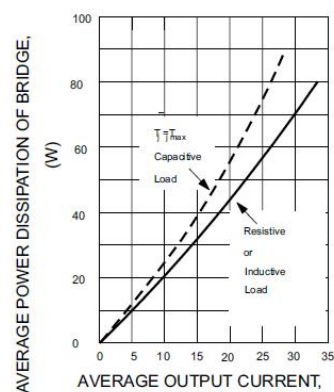


FIG.6-MAXIMUM POWER DISSIPATION



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