



# KBPC6005-KBPC610

# SINGLE-PHASE SILICON BRIDGE RECTIFIER

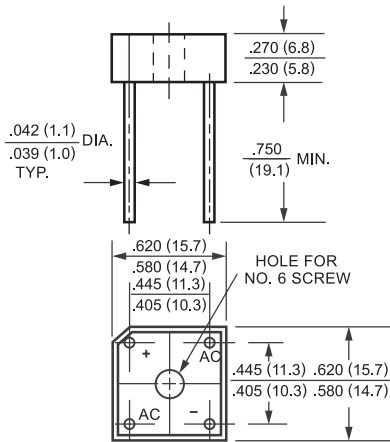
VOLTAGE RANGE - 50 to 1000 Volts CURRENT - 6.0 Amperes

## MECHANICAL DATA

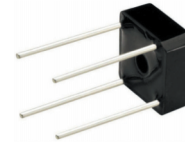
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: MIL-STD-202E, Method 208 guaranteed
- \* Polarity: Symbols molded or marked on body
- \* Mounting position: Any
- \* Weight: 6.1 grams

## FEATURES

- \* Surge overload rating: 125 Amperes peak
- \* Low forward voltage drop
- \* Small size: simple installation



BR-6



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

PARAMETER	SYMBOL	KBPC6005	KBPC601	KBPC602	KBPC604	KBPC606	KBPC608	KBPC610	UNITS	
		BR605	BR61	BR62	BR64	BR66	BR68	BR610		
Maximum Recurrent 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 Current at $T_C = 50^\circ C$	$I_O$	6.0							Amps	
Peak Forward Surge Current 8.3 ms single half sine-wave Superimposed on rated load (JEDEC Method)	$I_{FSM}$	125							Amps	
Maximum Forward Voltage Drop per element at 3.0A DC	$V_F$	1.0							Volts	
Maximum DC Reverse Current at Rated DC Blocking Voltage	$I_R$	@ $T_A = 25^\circ C$	10							uAmps
		@ $T_A = 100^\circ C$	500							
$I^2t$ Rating for Fusing ( $t < 8.3ms$ )	$I^2t$	127							$A^2Sec$	
Typical Junction Capacitance ( Note 1 )	$C_J$	186							pF	
Typical Thermal Resistance ( Note 2 )	$R_{\theta JA}$	22							$^\circ C/W$	
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +125 , -55 to +150							$^\circ C$	

Notes: 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts

2. Thermal Resistance from Junction to Ambient and from Junction to lead mounted on PCB with 0.5 x 0.5" (13x13mm) copper pads.

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## RATING AND CHARACTERISTIC CURVES

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

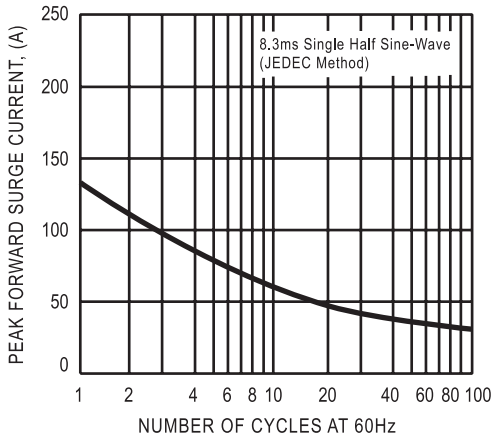


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

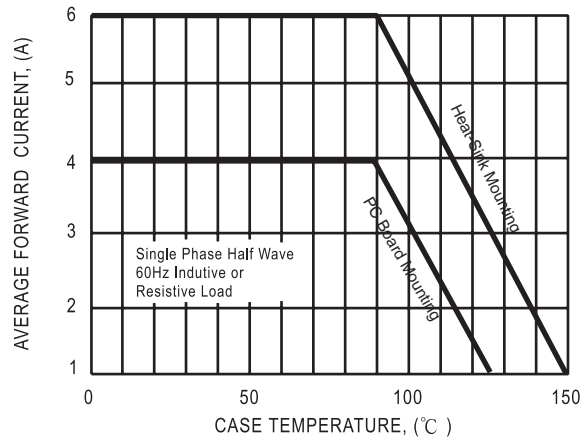


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

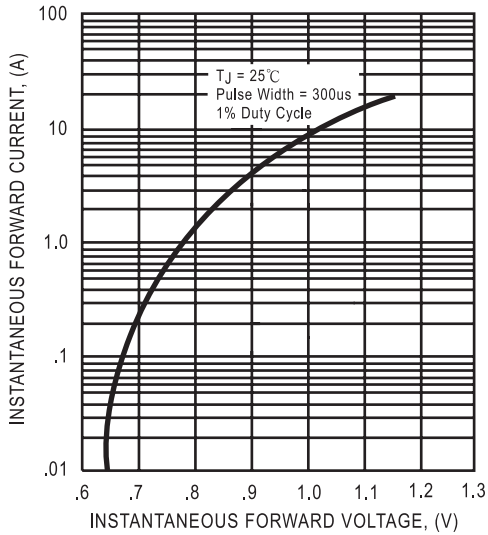


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

