



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

KBPC / BR605
6005

THRU

KBPC / BR610
610

TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 6.0 Amperes

FEATURES

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

MECHANICAL DATA

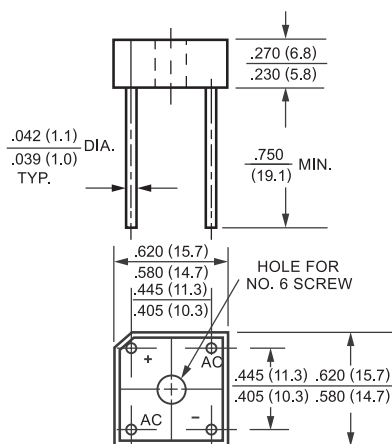
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Polarity: Symbols molded or marked on body
- * Mounting position: Any
- * Weight: 6.1 grams

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%.



BR-6



Dimensions in inches and (millimeters)

		KBPC 6005	KBPC 601	KBPC 602	KBPC 604	KBPC 606	KBPC 608	KBPC 610		
	SYMBOL	BR605	BR61	BR62	BR64	BR66	BR68	BR610	UNITS	
Maximum Recurrent Peak Reverse Voltage		V _{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Bridge Input 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°		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	@ T _A = 25°C	I _R	10							uAmps
DC Blocking Voltage per element	@ T _c = 100°C		500							
I ² t Rating for Fusing (t<8.3ms)		I ² t	127							A ² Sec
Typical Junction Capacitance (Note1)		C _J	186							pF
Typical Thermal Resistance (Note 2)		R _{θJA}	22							°C/W
Operating Temperature Range		T _J	-55 to + 125							°C
Storage Temperature Range		T _{STG}	-55 to + 150							°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 P.C.B. with 0.5 x 0.5" (13x13mm) copper pads.

RATING AND CHARACTERISTIC CURVES (KBPC6005 BR605) THRU BR610) KBPC610 BR610

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

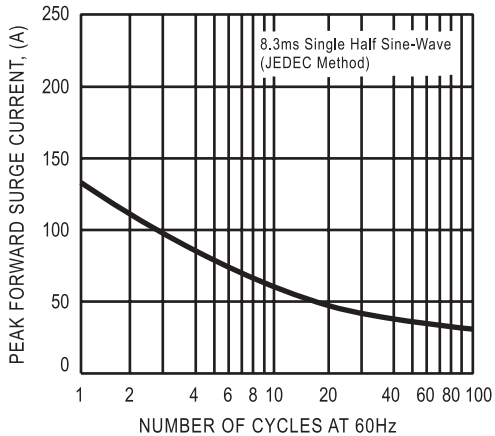


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

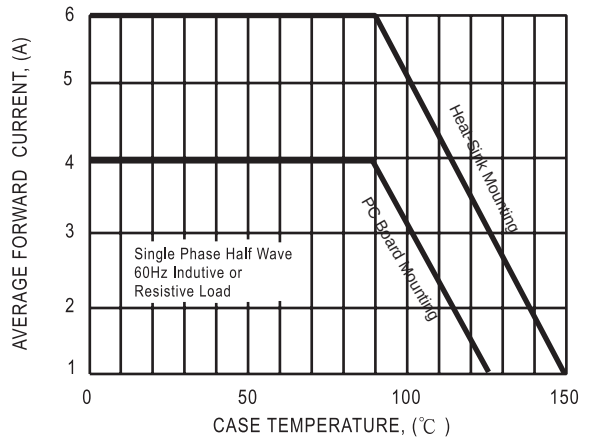


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

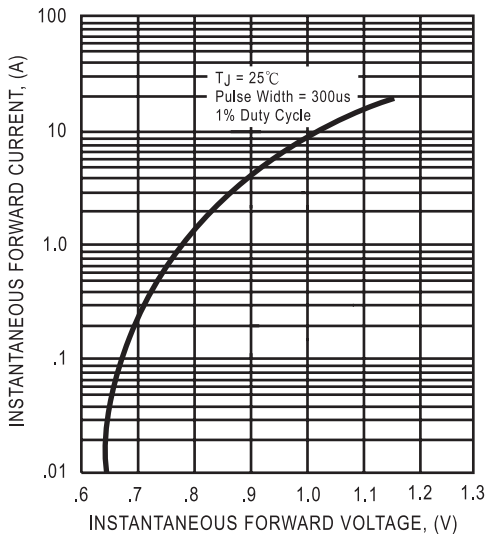
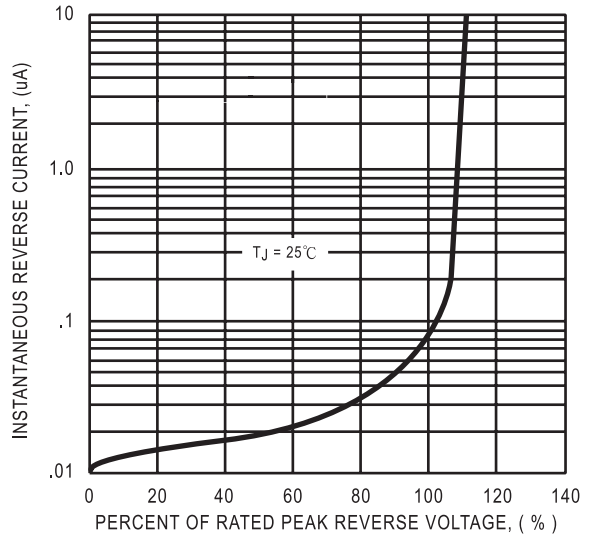


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



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