



**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**

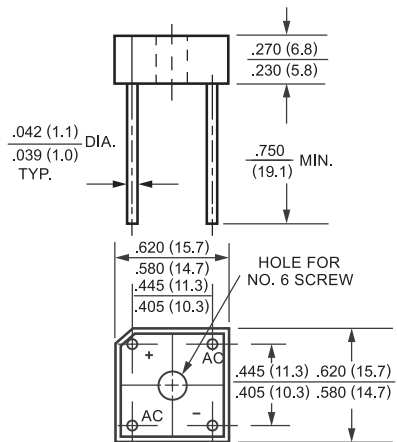
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: MIL-STD-202E, Method 208 guaranteed
- \* Polarity: Symbols molded or marked on body
- \* Mounting position: Any
- \* Weight: 6.1 grams

**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)

	SYMBOL	KBPC 6005	KBPC 601	KBPC 602	KBPC 604	KBPC 606	KBPC 608	KBPC 610	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS Bridge Input 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 °	I <sub>O</sub>	6.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	125							Amps
Maximum Forward Voltage Drop per element at 3.0A DC	V <sub>F</sub>	1.0							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage per element	@ T <sub>A</sub> = 25 °C	10							uAmps
	@ T <sub>c</sub> = 100 °C	500							
I <sup>2</sup> t Rating for Fusing (t<8.3ms)	I <sup>2</sup> t	127							A <sup>2</sup> Sec
Typical Junction Capacitance ( Note1)	C <sub>J</sub>	186							pF
Typical Thermal Resistance (Note 2)	R <sub>θJA</sub>	22							°C/W
Operating Temperature Range	T <sub>J</sub>	-55 to + 125							°C
Storage Temperature Range	T <sub>STG</sub>	-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      KBPC610  
 BR605      THRU      BR610 )

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

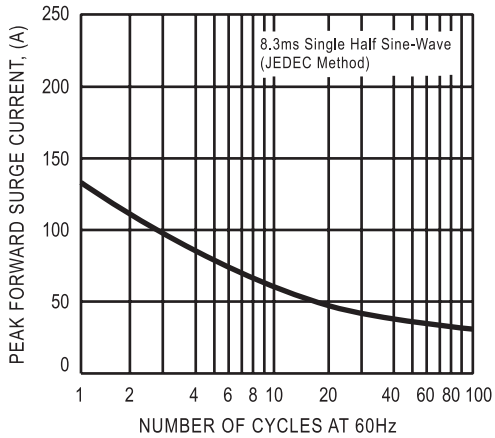


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

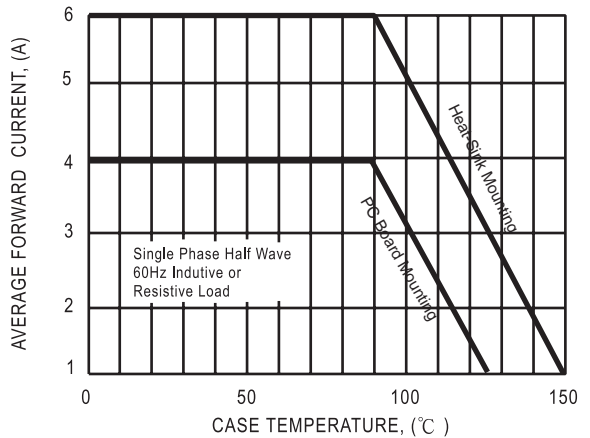


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

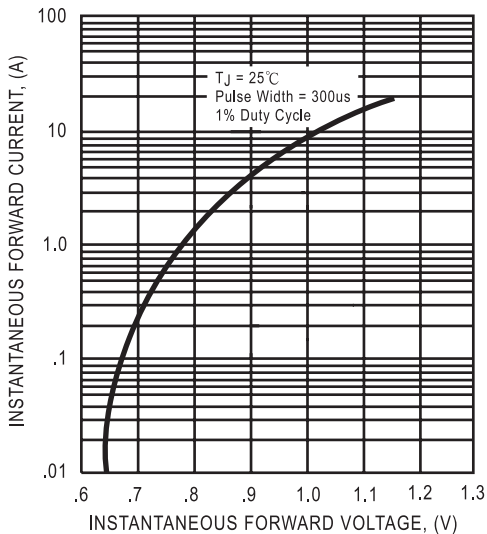
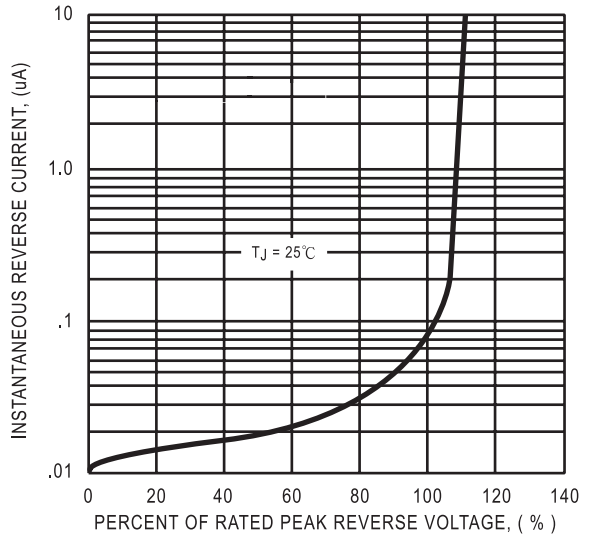


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



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