

DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

KBPC / BR605 6005 / THRU KBPC / BR610 610 / BR610

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

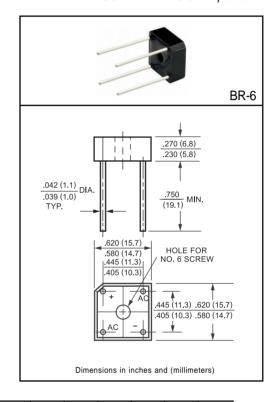
* Mounting position: Any

* 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%.



			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		VRRM	50	100	200	400	600	800	1000	Volts
Maximum RMS Bridge Input Voltage		VRMS	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage		VDC	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Output Current at Tc = 50 °		lo	6.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)		IFSM	125						Amps	
Maximum Forward Voltage Drop per element at 3.0A DC		VF	1.0							Volts
Maximum DC Reverse Current at Rated	@Ta = 25°C	l _R	10							uAmps
DC Blocking Voltage per element	@Tc = 100°C	- IK	500							
I ² t Rating for Fusing (t<8.3ms)		I ² t	127							A ² Sec
Typical Junction Capacitance (Note1)		Cı	186							pF
Typical Thermal Resistance (Note 2)		RθJA	22							°C/W
Operating Temperature Range		TJ	-55 to + 125							°C
Storage Temperature Range		Тѕтс	-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 (BR605 KBPC610 BR610 BR610

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT 250 PEAK FORWARD SURGE CURRENT, (A) 8.3ms Single Half Sine-Wave (JEDEC Method) 200 150 100 50 0 2 1 6 8 20 40 60 80 100 NUMBER OF CYCLES AT 60Hz

FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE 6 AVERAGE FORWARD CURRENT, (A) 5 4 3 Single Phase Half Wave 60Hz Indutive or Resistive Load 2 0 50 100 150 CASE TEMPERATURE, (°C)

FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS 100 INSTANTANEOUS FORWARD CURRENT, (A) = 25°C Pulse Width = 300us 1% Duty Cycle 10 1.0 .1 .01 .6 .7 .8 .9 1.0 1.1 1.2 1.3 INSTANTANEOUS FORWARD VOLTAGE, (V)

