



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

KBPC10005
THRU
KBPC1010

TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 10 Amperes

FEATURES

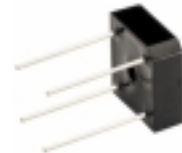
- * Surge overload rating: 200 Amperes peak
- * Low forward voltage drop

MECHANICAL DATA

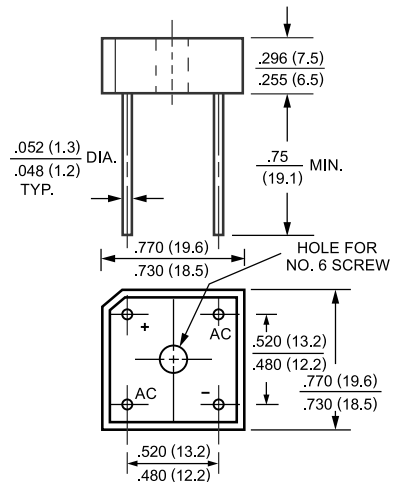
- * Case: Molded plastic
- * Epoxy: UL 94V-0 rate flame retardant
- * Lead: MIL-STD-202E, Method 208 guaranteed
- * Polarity: As marked
- * Mounting position: Any
- * Weight: 6.9 grams

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-8/10



Dimensions in inches and (millimeters)

	SYMBOL	KBPC 10005	KBPC 1001	KBPC 1002	KBPC 1004	KBPC 1006	KBPC 1008	KBPC 1010	UNITS	
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 Output Current at T _c = 50°C	I _O	10							Amps	
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	200							Amps	
Maximum Forward Voltage Drop per element at 5.0A DC	V _F	1.1							Volts	
Maximum DC Reverse Current at Rated	I _R	@T _A = 25°C							10	uAmps
DC Blocking Voltage per element		@T _C = 100°C							500	
I ² t Rating for Fusing (t<8.3ms)	I ² t	166							A ² Sec	
Typical Junction Capacitance (Note1)	C _J	200							pF	
Typical Thermal Resistance (Note 2)	RθJA	21							°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 (KBPC10005 THRU KBPC1010)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

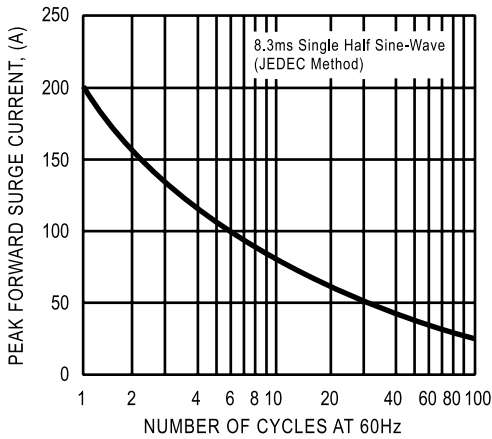


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

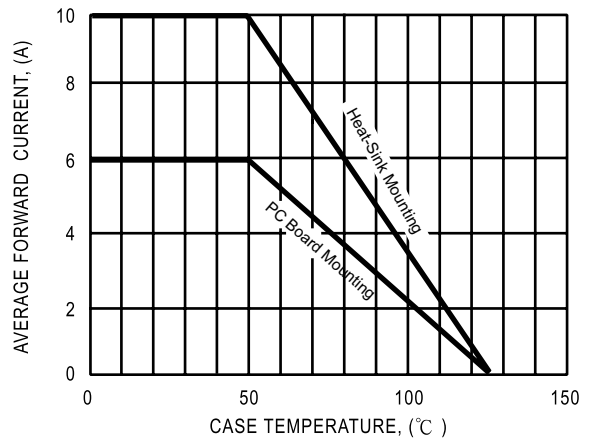


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

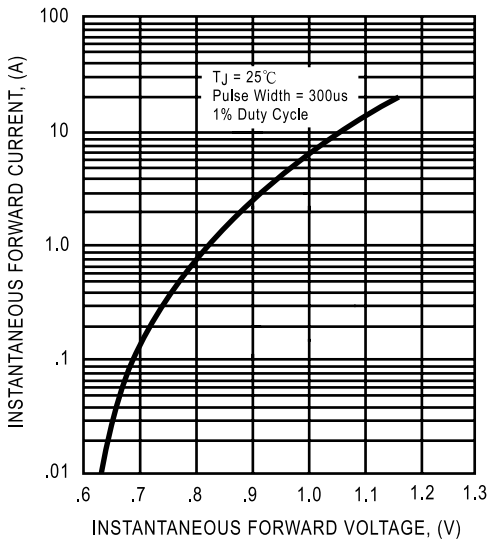
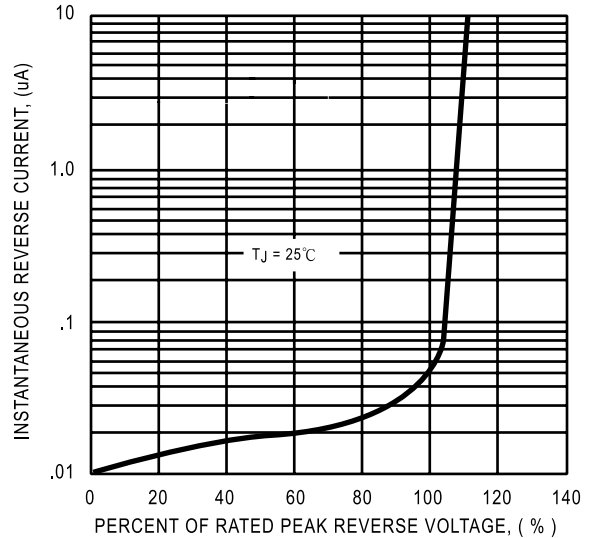


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



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