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DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

KBPC / MB 15005 / 1505 THRU KBPC / MB 1510 / 1510

TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 15 Amperes

FEATURES

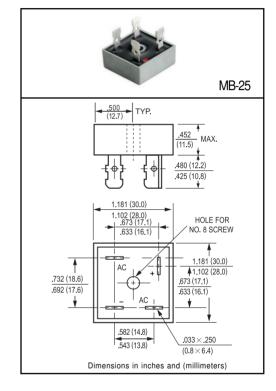
- * Metal case for Maximum Heat Dissipation
- * Surge overload ratings-300 Amperes
- * Low forward voltage drop

MECHANICAL DATA

- * Case: Metal case, electrically isolated * Epoxy: UL 94V-0 rate flame retardant
- * Terminals: Plated .25"(6.35mm) Faston lugs, Solderable per MIL-STD-202E. Method 208 guaranteed
- * Polarity: As marked * Mounting position: Any * Weight: 30 grams

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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



			KBPC 15005	KBPC 1501	KBPC 1502	KBPC 1504	KBPC 1506	KBPC 1508	KBPC 1510	
		SYMBOL	MB1505	MB151	MB152	MB154	MB156	MB158	MB1510	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 = 55°C		lo	15.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)		IFSM	300						Amps	
Maximum Forward Voltage Drop per element at 7.5A DC		VF	1.1						Volts	
Maximum DC Reverse Current at Rated	@TA = 25°C	- IB	10							uAmps
DC Blocking Voltage per element	@Tc = 100°C] 'n	500							
I ² t Rating for Fusing (t<8.3ms)		I ² t	374							A ² Sec
Typical Junction Capacitance (Note1)		Ci	40							pF
Typical Thermal Resistance (Note 2)		RθJA	19							°C/W
Operating and Storage Temperature Range		ТJ,Тsтg	-55 to + 175							°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 0.47 x 0.47" (12x12mm) copper pads.







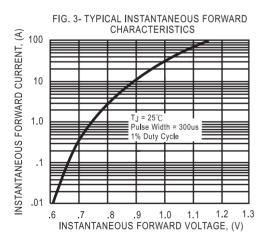


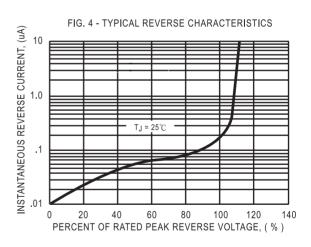


FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT 500 PEAK FORWARD SURGE CURRENT, (A) 8.3ms Single Half Sine-Wave (JEDEC Method) 400 300 200 100 0 1 2 4 6 8 10 20 40 60 80 100

NUMBER OF CYCLES AT 60Hz

FIG. 2 - TYPICAL FORWARD CURRENT **DERATING CURVE** 25 AVERAGE FORWARD CURRENT, (A) 20 15 10 Single Phase Half Wave 60Hz Indutive or 5 Resistive Load 0 0 50 100 150 175 CASE TEMPERATURE, (°C)







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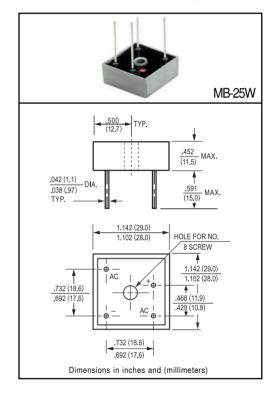
* Epoxy: UL 94V-0 rate flame retardant

* Lead: MIL-STD-202E, Method 208 guaranteed

* Polarity: As marked * Mounting position: Any * Weight: 30 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 15005W	KBPC 1501W	KBPC 1502W	KBPC 1504W	KBPC 1506W	KBPC 1508W	KBPC 1510W	
		SYMBOL	MB1505W	MB151W	MB152W	MB154W	MB156W	MB158W	MB1510W	UNITS
Maximum Recurrent Peak Reverse Voltage		VRRM	50	100	200	400	600	800	1000	Volts
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Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)		IFSM	300						Amps	
Maximum Forward Voltage Drop per element at 7.5A DC		VF	1.1						Volts	
Maximum DC Reverse Current at Rated	@TA = 25°C	l _B	10							uAmps
DC Blocking Voltage per element	@T _A = 100°C	IH IH	500							
I ² t Rating for Fusing (t<8.3ms)		I ² t	374							A ² Sec
Typical Junction Capacitance (Note1)		Ch	300							pF
Typical Thermal Resistance (Note 2)		RøJC	2.5						°C/W	
Operating and Storage Temperature Range		TJ,TSTG	-55 to + 150						٥C	

NOTES: 1.Measured at 1 MHz and applied reverse voltage of 4.0 volts 2. Thermal Resistance from Junction to Case per leg.





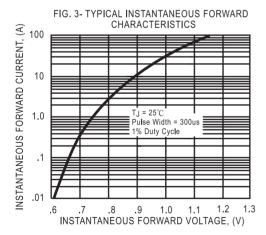


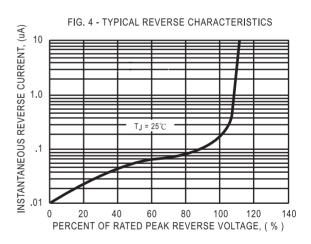




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