



## MASTER INSTRUMENT CORPORATION

**SINGLE-PHASE BRIDGE RECTIFIER**  
**MB2505W THRU MB2510W**  
**KBPC25005W THRU KBPC2510W**

**VOLTAGE RANGE** 50 to 1000 Volts  
**CURRENT** 25 Amperes

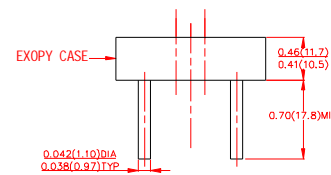
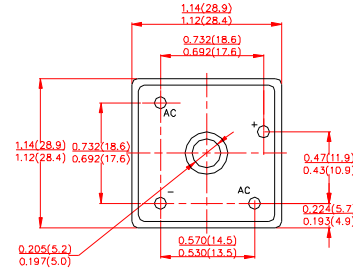
### FEATURES

- l Low cost
- l This series is UL recognized under component index, file number E127707
- l High forward surge current capability
- l Ideal for printed circuit board
- l High isolation voltage from case to leads
- l High temperature soldering guaranteed: 260 °C/10 second, at 5 lbs. (2.3kg) tension.

### MECHANICAL DATA

- l Case: Molded plastic body
- l Terminal: Plated 0.25" (6.35mm) lug.
- l Polarity: Polarity symbols marked on case
- l Mounting: Thru hole for #10 screw, 20 in.-lbs torque max.
- l Weight: 0.93 ounce, 26.4 grams

### MB-25W



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	SYMBOLS	MB2505W KBPC25005W	MB251W KBPC2501 W	MB252W KBPC2502 W	MB254W KBPC2504 W	MB256W KBPC2506 W	MB258W KBPC2508W	MB2510W KBPC2510W	UNITS
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS 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> =55°C (Note 1,2)	I <sub>(AV)</sub>	25							Amps
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	300							Amps
Rating for Fusing (t<8.3ms)	I <sup>2</sup> T	373							A <sup>2</sup> S
Maximum Instantaneous Forward Voltage at 5.0A	V <sub>F</sub>	1.1							Volts
Maximum DC Reverse Current at rated DC blocking voltage	T <sub>A</sub> =25°C	10							μAmps
	T <sub>A</sub> =100°C	1.0							mAmps
Isolation Voltage from case to lugs	V <sub>ISO</sub>	2500							V <sub>AC</sub>
Typical Thermal Resistance (Note 1,2)	R <sub>θJC</sub>	2.0							°C/W
Operating Temperature Range	T <sub>J</sub>	-55 to +150							°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150							°C

#### NOTES:

1. Unit mounted on 5"×6"×4.9"(12.8×15.2×12.4mm) Al. finned plate.
2. Bolt down on heat-sink with silicone thermal compound between bridge and mounting surface for maximum heat transfer efficiency with #10 screw.
3. Suffix "W" designates Wire Lead



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### RATINGS AND CHARACTERISTIC CURVES MB2505W THRU MB2510W

