



# DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

**KBPC  
50005(W)  
THRU  
KBPC  
5010(W)**

## TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

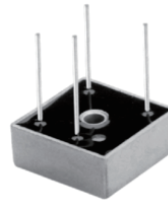
CURRENT - 50 Amperes

### FEATURES

- \* Metal case for maximum heat dissipation
- \* Low forward voltage drop
- \* High current capability

### MECHANICAL DATA

- \* Case: Molded plastic
- \* Epoxy: UL 94-V0 rated flame retardant
- \* Lead: MIL-STD-202E, Method 208 guaranteed
- \* Polarity: Symbols molded or marked on body
- \* Mounting position: Any
- \* Weight: 30 grams



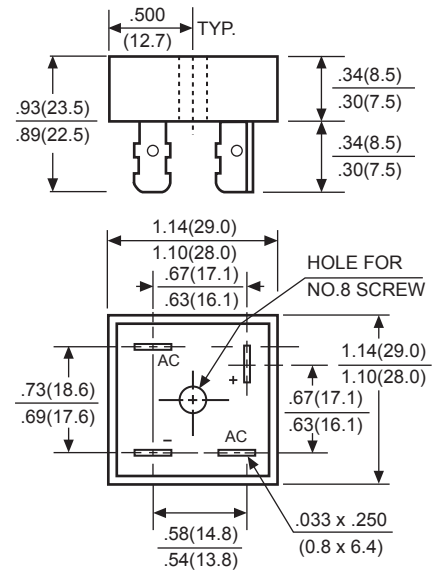
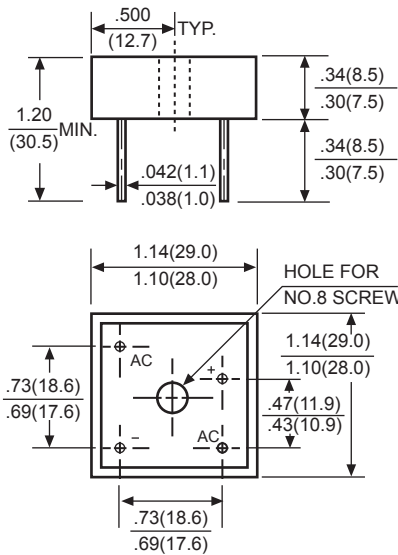
MB-25W



MB-25

### 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%.



Dimensions in inches and (millimeters)

	SYMBOL	KBPC 50005(W)	KBPC 5001(W)	KBPC 5002(W)	KBPC 5004(W)	KBPC 5006(W)	KBPC 5008(W)	KBPC 5010(W)	UNITS	
Maximum Recurrent 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 Current at T <sub>A</sub> = 55°C	I <sub>O</sub>	50							Amps	
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	500							Amps	
Maximum Instantaneous Forward Voltage at 25A DC	V <sub>F</sub>	1.1							Volts	
Maximum DC Reverse Current at Rated DC Blocking Voltage	I <sub>R</sub>	@T <sub>A</sub> = 25°C	10							μAmps
		@T <sub>A</sub> = 125°C	100							
I <sup>2</sup> t Rating for Fusing (t<8.3ms)	I <sup>2</sup> t	1037.5							A <sup>2</sup> s	
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150							°C	

Note: Suffix "W" for wire lead type (e.g.:KBPC50005W,KBPC5001W...etc)

# RATING AND CHARACTERISTIC CURVES (KBPC50005(W) THRU KBPC5010(W))

FIG. 1  
TYPICAL FORWARD CURRENT  
DERATING CURVE

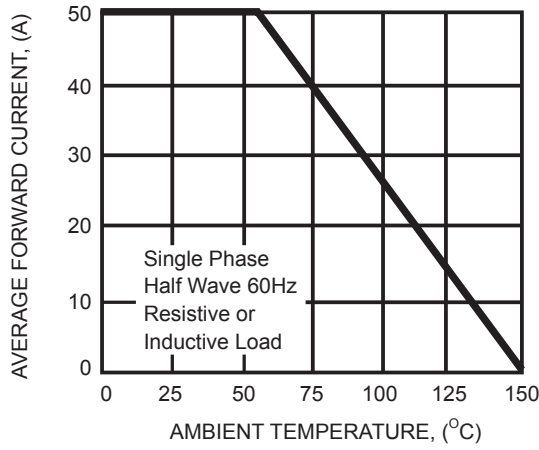


FIG. 2  
MAXIMUM NON-REPETITIVE FORWARD  
SURGE CURRENT

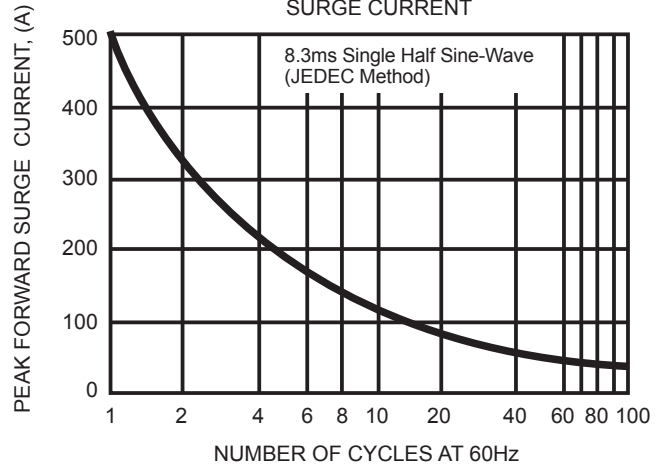


FIG. 3  
TYPICAL INSTANTANEOUS  
FORWARD CHARACTERISTICS

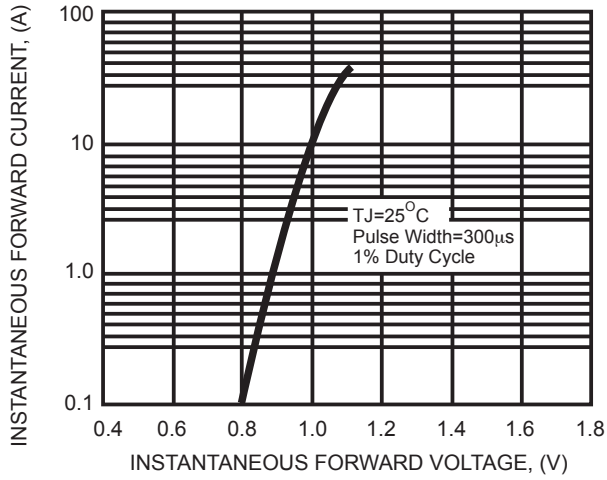
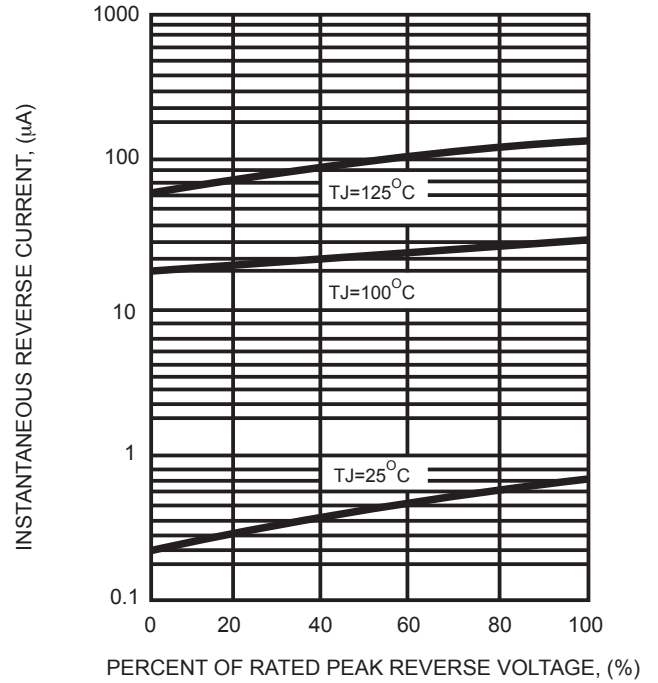


FIG. 4  
TYPICAL REVERSE CHARACTERISTICS



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