



# DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

KBPC / MB  
25005 / 2505  
THRU  
KBPC / MB  
2510 / 2510

## TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 25 Amperes

### FEATURES

- \* Metal case for Maximum Heat Dissipation
- \* Surge overload ratings-400 Amperes
- \* Low forward voltage drop

### MECHANICAL DATA

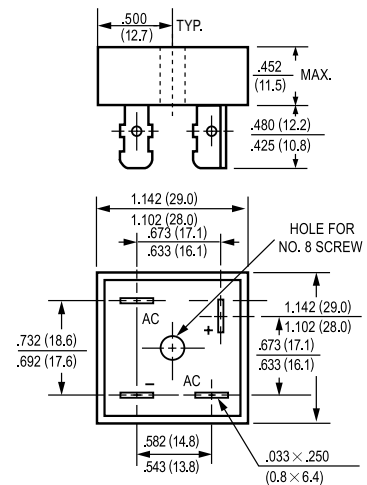
- \* Case: Metal, electrically isolated
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Plated .25"(6.35mm) Faston lugs, solderable per MIL-STD-202E, Method 208 guaranteed
- \* Polarity: As marked
- \* Mounting position: Any
- \* Weight: 30 grams

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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



MB-25



Dimensions in inches and (millimeters)

	SYMBOL	KBPC 25005	KBPC 2501	KBPC 2502	KBPC 2504	KBPC 2506	KBPC 2508	KBPC 2510	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts
Maximum RMS Bridge Input 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	I <sub>O</sub>				25				Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>				400				Amps
Maximum Forward Voltage Drop per element at 12.5A DC	V <sub>F</sub>				1.1				Volts
Maximum DC Reverse Current at Rated	I <sub>R</sub>				10				uAmps
DC Blocking Voltage per element					500				
I <sup>2</sup> t Rating for Fusing (t<8.3ms)	I <sup>2</sup> t				374				A <sup>2</sup> Sec
Typical Junction Capacitance ( Note1)	C <sub>J</sub>				300				pF
Typical Thermal Resistance (Note 2)	R <sub>θJC</sub>				2.5				°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>				-55 to + 150				°C

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

RATING AND CHARACTERISTIC CURVES ( KBPC25005 MB2505 THRU KBPC2510 MB2510 )

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

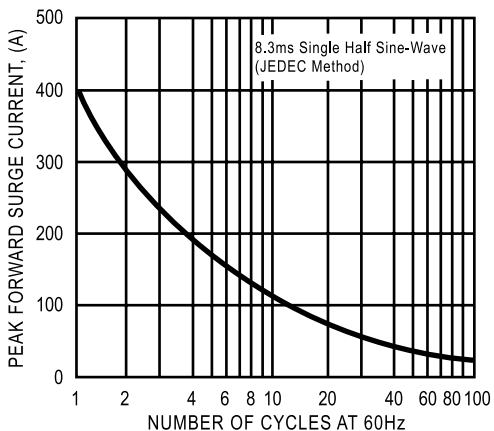


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

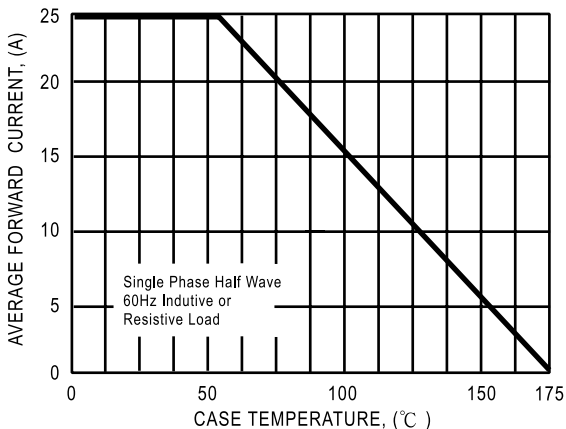


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

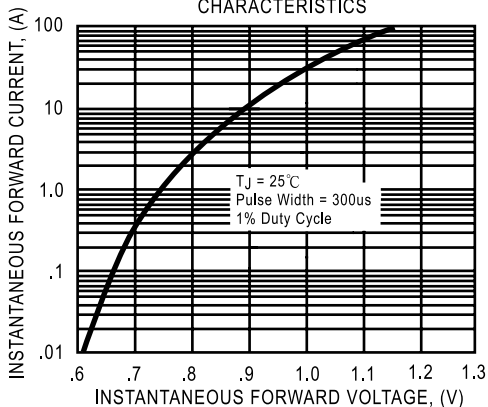
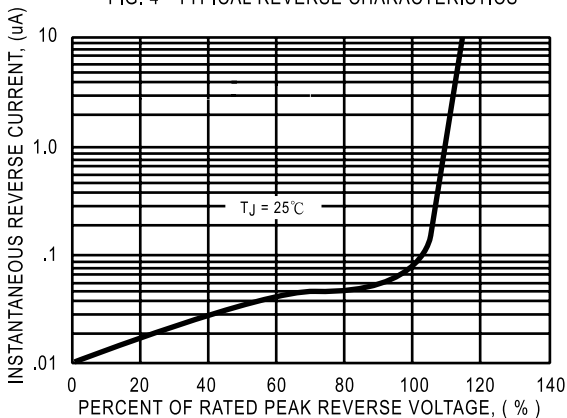


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



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