



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

KBPC / MB
50005W / 5005W
THRU
KBPC / MB
5010W / 5010W

TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 50 Amperes

FEATURES

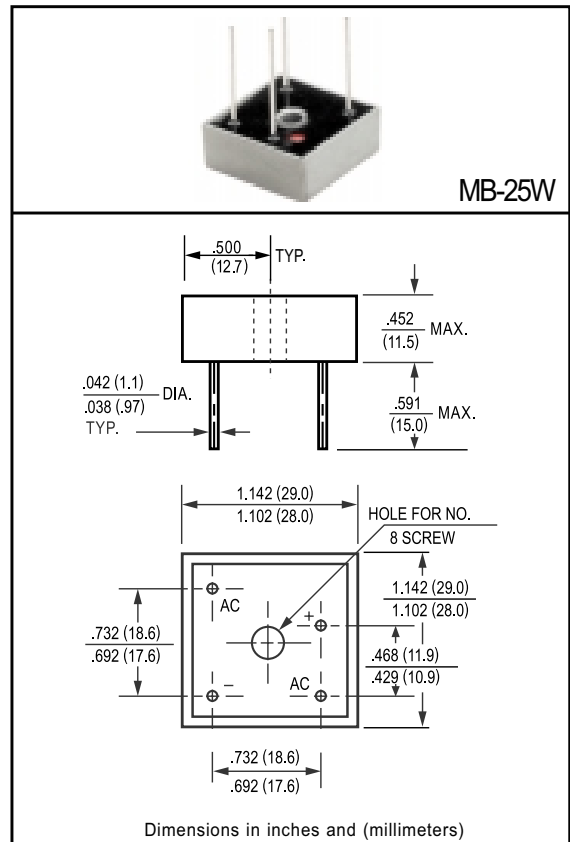
- * Metal case for Maximum Heat Dissipation
- * Surge overload ratings-400 Amperes
- * Low forward voltage drop

MECHANICAL DATA

- * Case: Metal, electrically isolated
- * Epoxy: UL 94V-0 rate flame retardant
- * 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%.



	SYMBOL	KBPC 50005W	KBPC 5001W	KBPC 5002W	KBPC 5004W	KBPC 5006W	KBPC 5008W	KBPC 5010W	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	400	600	800	1000	Volts
Maximum RMS Bridge Input 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 = 55°C	I _o	50							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	400							Amps
Maximum Forward Voltage Drop per element at 25A DC	V _F	1.1							Volts
Maximum DC Reverse Current at Rated	I _R	500							uAmps
DC Blocking Voltage per element									
I ² t Rating for Fusing (t<8.3ms)	I ² t	664							A ² Sec
Typical Junction Capacitance (Note1)	C _J	300							pF
Typical Thermal Resistance (Note 2)	R _{θJC}	2.0							°C/W
Operating and Storage Temperature Range	T _J , 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 Case per leg.

RATING AND CHARACTERISTIC CURVES

(KBPC50005W MB5005W THRU KBPC5010W MB5010W)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

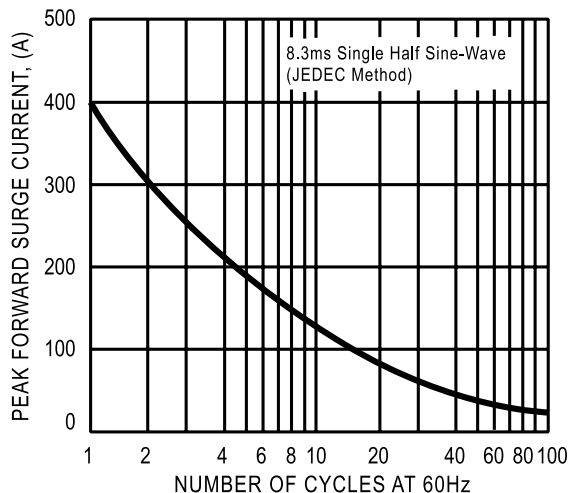


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

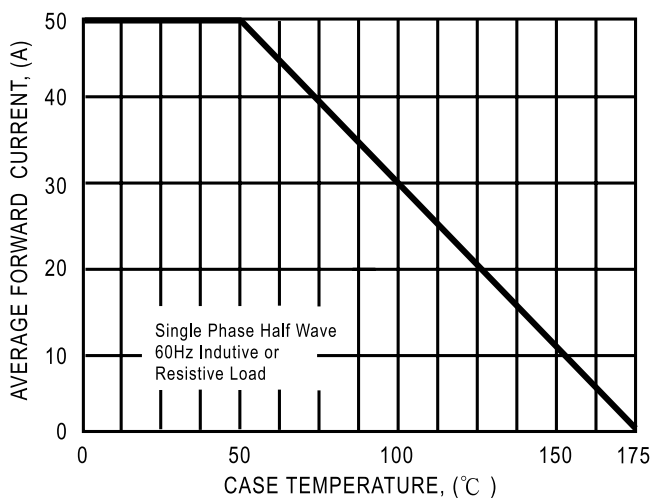


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

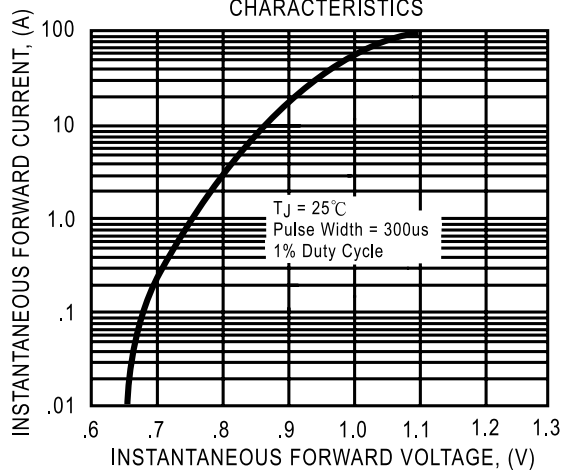
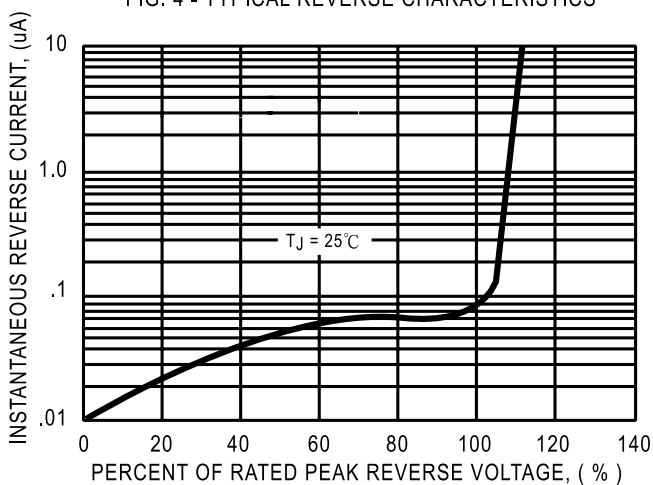


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



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