DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

KBPC 25005 / MB 2505
THRU
KBPC 2510 / MB 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

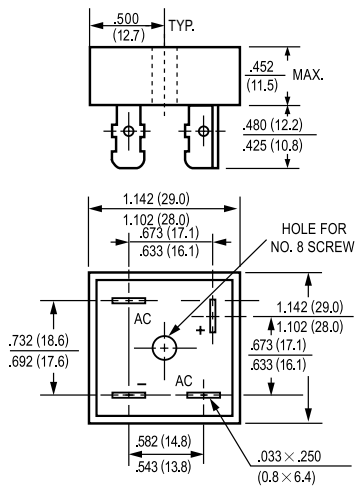
MECHANICAL DATA

* 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 MB2505	KBPC 2501 MB251	KBPC 2502 MB252	KBPC 2504 MB254	KBPC 2506 MB256	KBPC 2508 MB258	KBPC 2510 MB2510	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 Tc = 55°C		I_O	25							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 12.5A DC		V_F	1.1							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage per element	@T_A = 25°C	I_R	10							uAmps
	@T_A = 100°C		500							
I^2t Rating for Fusing (t<8.3ms)		I^2t	374							A^2Sec
Typical Junction Capacitance (Note1)		C_J	300							pF
Typical Thermal Resistance (Note 2)		$R\theta JC$	2.5							°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.

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RATING AND CHARACTERISTIC CURVES (KBPC25005 / MB2505 THRU KBPC2510 / MB2510)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

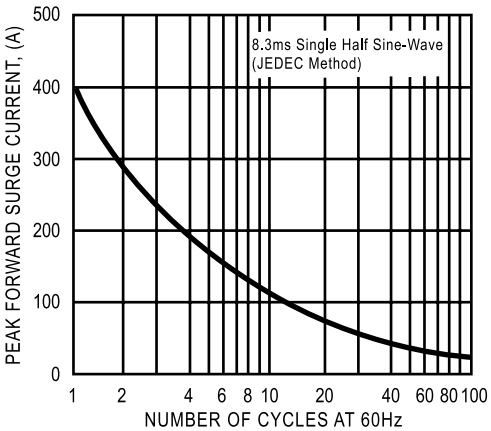


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

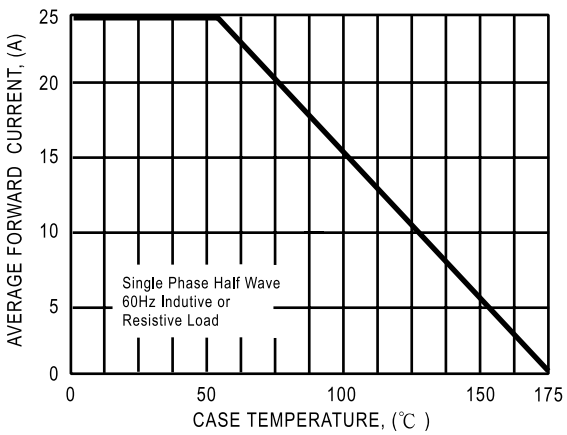


FIG. 3- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

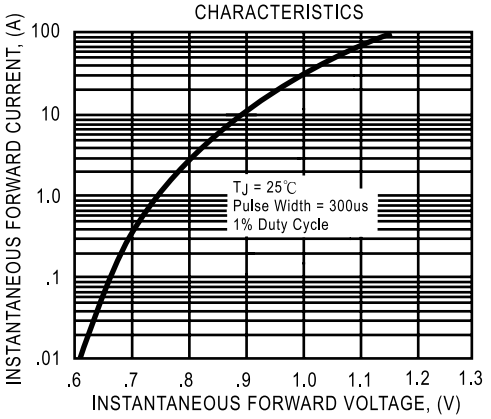
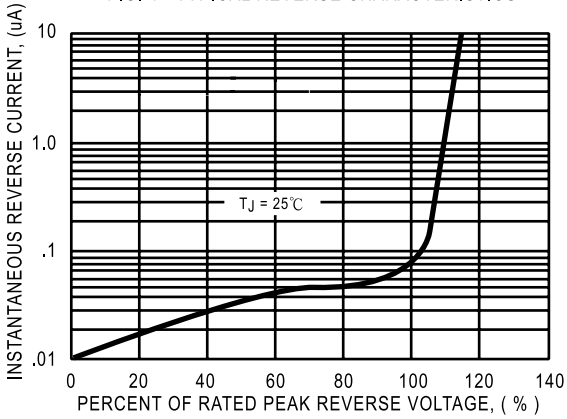


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



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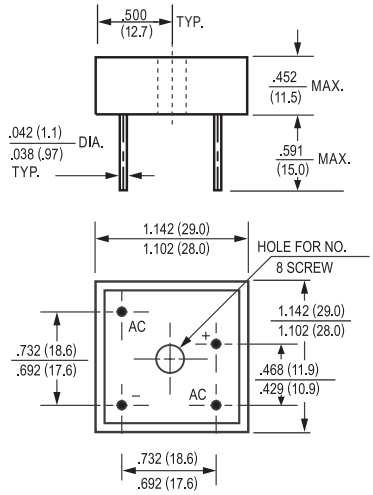
MB-25W



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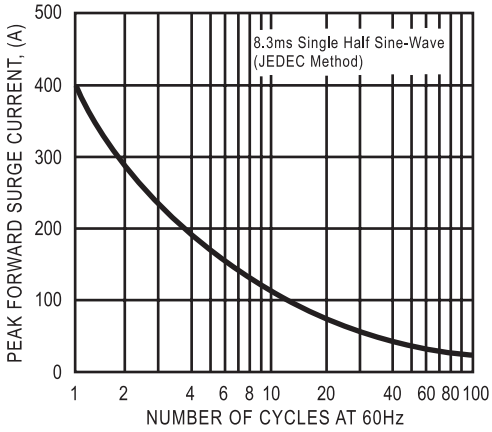

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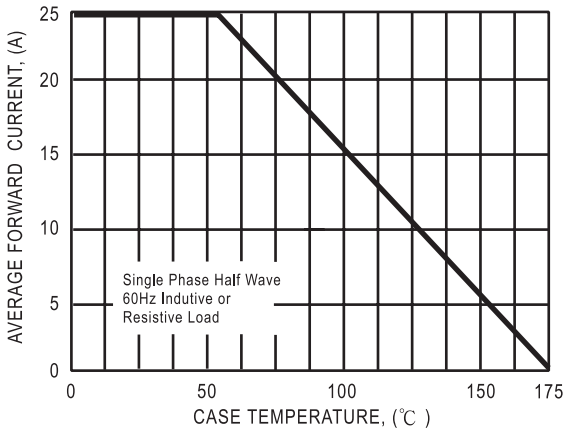

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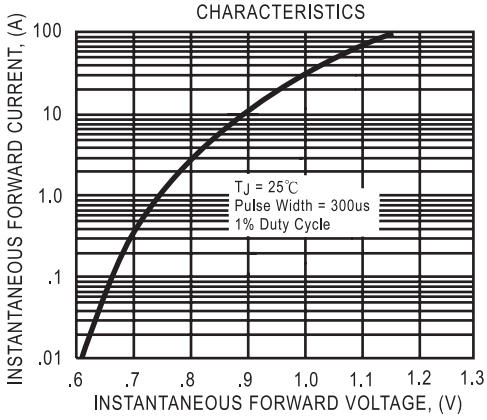
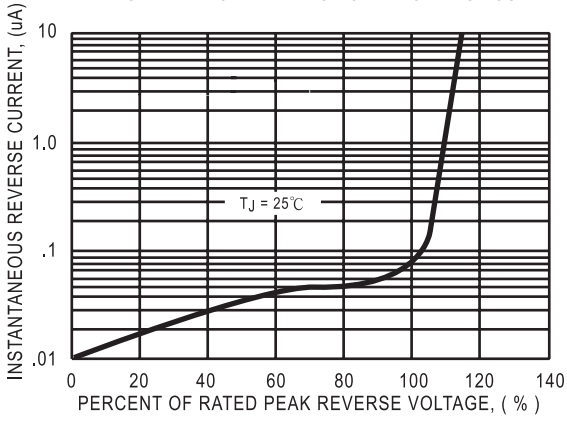
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