



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

**MB5005W
THRU
MB5010W**

TECHNICAL SPECIFICATIONS OF SINGLE-PHASE SILICON BRIDGE RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 50 Amperes

FEATURES

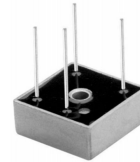
- * Metal case for Maximum Heat Dissipation
- * Surge overload ratings - 500 Amperes
- * Low forward voltage drop

MECHANICAL DATA

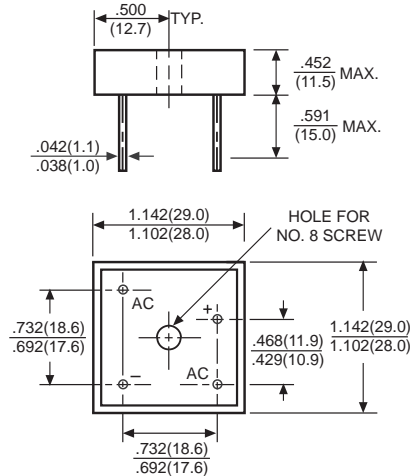
- * Case: Molded plastic with heatsink
- * Epoxy: UL 94V-0 rate flame retardant
- * Terminals: Plated .25"(6.35mm) Faston lugs, Solderable per MIL-STD-202E, Method 208 guaranteed
- * Polarity: As marked
- * Mounting position: Any
- * Weight: 30 grams approx.

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-25W



Dimensions in inches and (millimeters)

	SYMBOL	MB5005W	MB501W	MB502W	MB504W	MB506W	MB508W	MB5010W	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 = 50°C	I _o	50							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}					500			Amps
Maximum Forward Voltage Drop per element at 25 A DC	V _F					1.1			Volts
Maximum DC Reverse Current at Rated	I _R					10			μAmps
DC Blocking Voltage per element						500			
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 (MB5005W THRU MB5010W)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

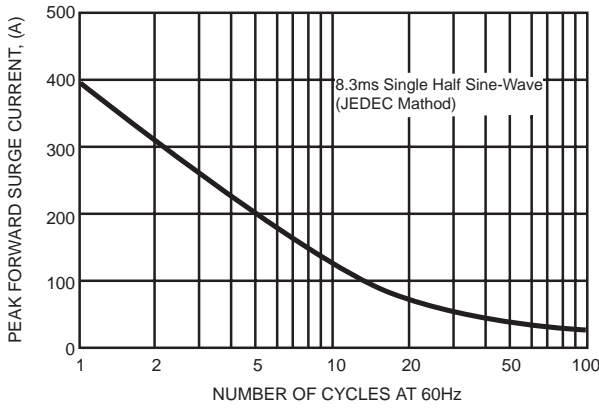


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

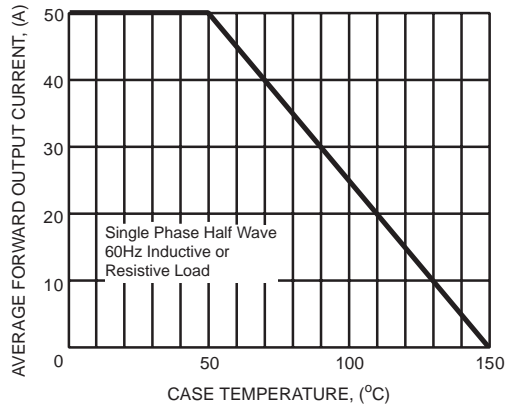


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

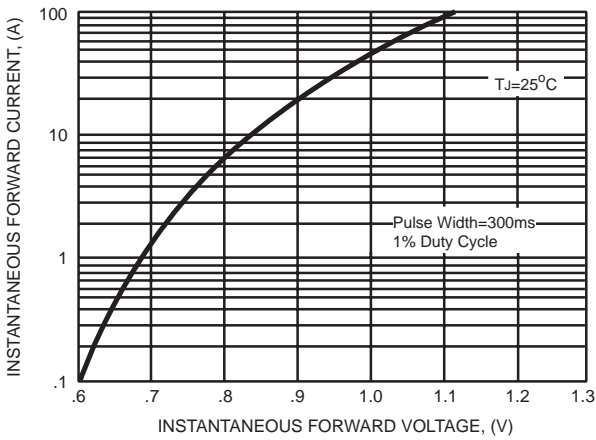
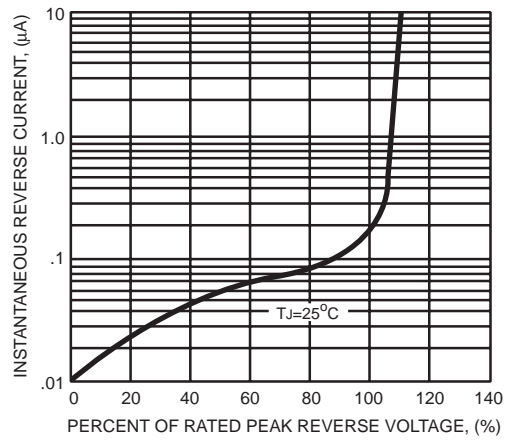


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



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