



**DC COMPONENTS CO., LTD.**

**RECTIFIER SPECIALISTS**

**MB5005  
THRU  
MB5010**

**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**

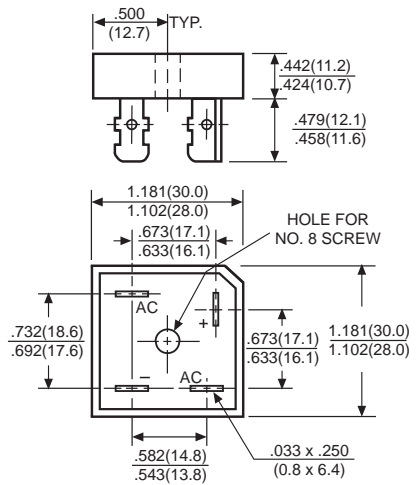
- \* Case: Molded plastic with heatsink
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: Plated .25"(6.35mm) Faston lugs, Solderable per MIL-STD-202E, Method 208 guaranteed
- \* Polarity: As marked
- \* Mounting position: Any
- \* Weight: 30 grams approx.

**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-25**



**Dimensions in inches and (millimeters)**

	SYMBOL	MB5005	MB501	MB502	MB504	MB506	MB508	MB5010	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> = 50°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 Forward Voltage Drop per element at 25 A DC	V <sub>F</sub>					1.1			Volts
Maximum DC Reverse Current at Rated	I <sub>R</sub>					10			μAmps
DC Blocking Voltage per element						500			
I <sup>2</sup> t Rating for Fusing (t<8.3ms)	I <sup>2</sup> t					664			A <sup>2</sup> Sec
Typical Junction Capacitance (Note1)	C <sub>J</sub>					300			pF
Typical Thermal Resistance (Note 2)	R <sub>θJC</sub>					2.0			°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 (MB5005 THRU MB5010)

FIG. 1 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

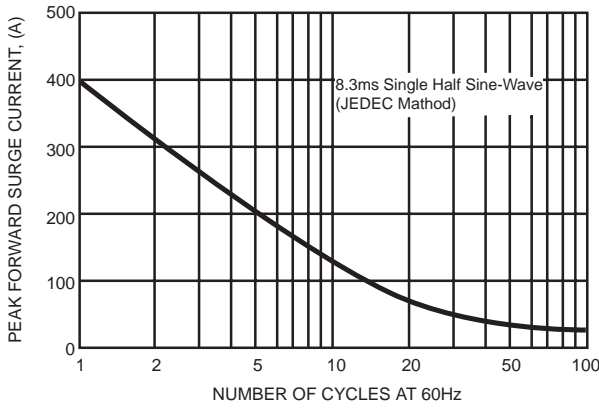


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

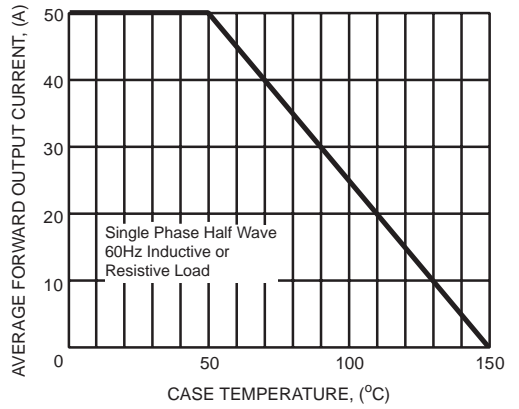


FIG. 3 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

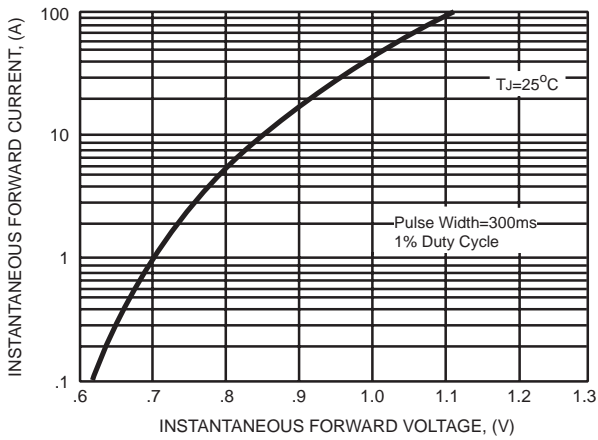
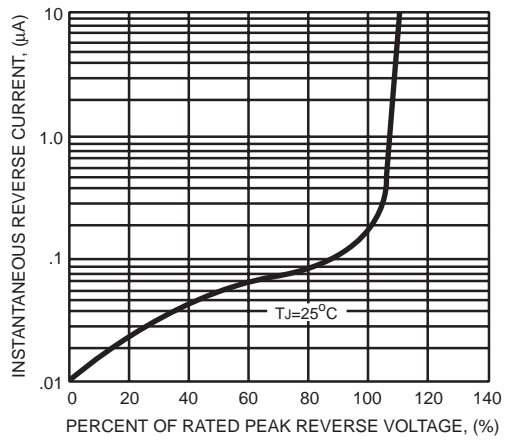


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS



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