



*DC COMPONENTS CO., LTD.*

RECTIFIER SPECIALISTS

**MB05F  
THRU  
MB10F**

*TECHNICAL SPECIFICATIONS OF SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER*

*VOLTAGE RANGE - 50 to 1000 Volts*

*CURRENT - 0.8 Ampere*

**FEATURES**

- \*High surge current capability
- \* Ideal for printed circuit board
- \* Glass passivated junction

**MECHANICAL DATA**

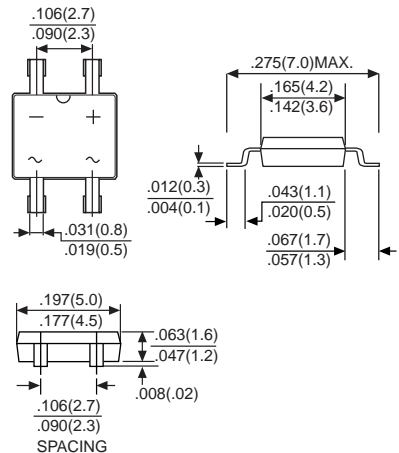
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Terminals: MIL-STD-202E, Method 208 guaranteed
- \* Polarity: Symbols molded or marked on body
- \* Mounting position: Any
- \* Weight: 0.08 gram

**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%.



MBF



Dimensions in inches and (millimeters)

|   | SYMBOL              | MB05F       | MB1F | MB2F | MB4F | MB6F | MB8F | MB10F | 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 Output Current at TA = 50 °C (Note 1)                                     | I <sub>O</sub>      | 0.8         |      |      |      |      |      |       | Amps  |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) | I <sub>FSM</sub>    | 25          |      |      |      |      |      |       | Amps  |
| Maximum DC Forward Voltage Drop per Bridge Element at 0.8A DC                                     | V <sub>F</sub>      | 1.1         |      |      |      |      |      |       | Volts |
| Maximum Reverse Current at rated DC Blocking Voltage per element                                  | @TA = 25°C          | 5.0         |      |      |      |      |      |       | μAmps |
|   | @TA = 125°C         | 100         |      |      |      |      |      |       |       |
| Typical Junction Capacitance ( Note 2)  | C <sub>J</sub>      | 13          |      |      |      |      |      |       | pF    |
| Typical Thermal Resistance (Note 3)   | R <sub>θJA</sub>    | 95          |      |      |      |      |      |       | °C/W  |
| Operating and Storage Temperature Range   | T <sub>J,TSTG</sub> | -50 to +150 |      |      |      |      |      |       | °C    |

NOTES: 1. Mounted on P.C. board with 4x(5x5mm<sup>2</sup>) copper pad.  
2. Measured at 1.0 MHZ and applied reverse voltage of 4.0V DC.  
3. Thermal resistance junction to ambient.

# RATING AND CHARACTERISTIC CURVES ( MB05F THRU MB10F )

FIG. 1 - MAXIMUM NON-REPETITIVE SURGE CURRENT

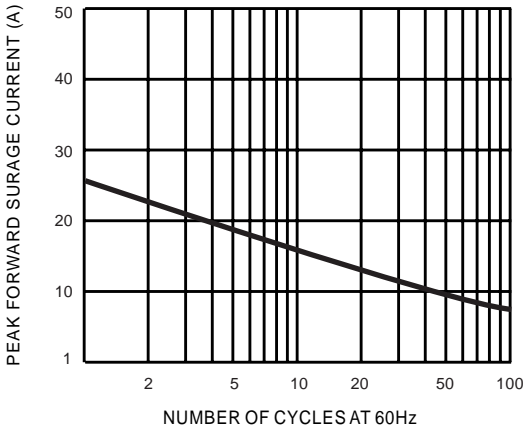


FIG. 2 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT

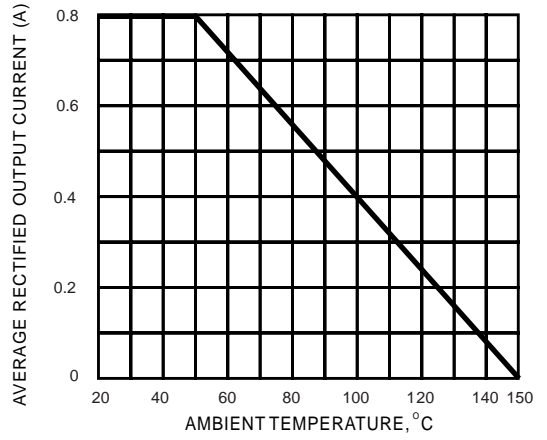


FIG. 3 - TYPICAL FORWARD CHARACTERISTICS

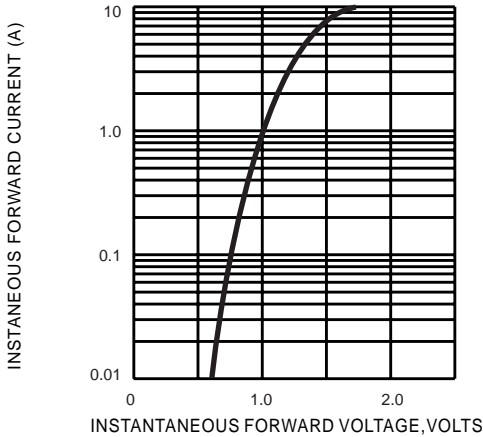


FIG. 4 - TYPICAL REVERSE CHARACTERISTICS

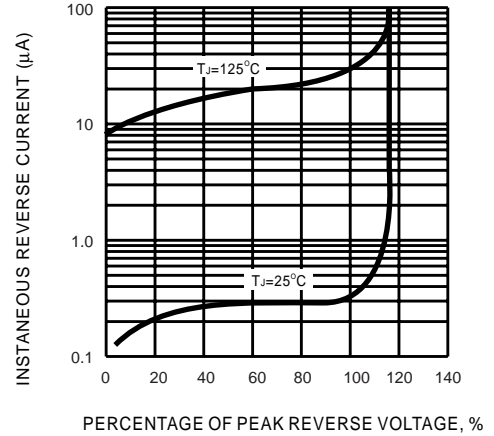
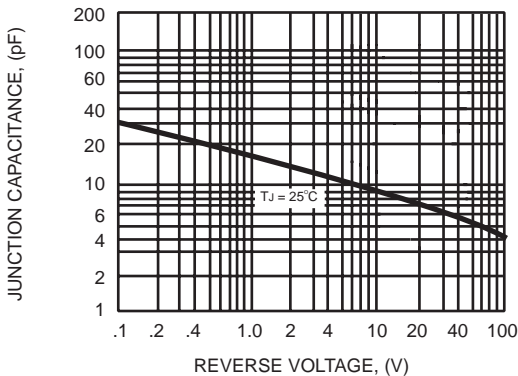


FIG. 5 - TYPICAL JUNCTION CAPACITANCE



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