



DC COMPONENTS CO., LTD.

RECTIFIER SPECIALISTS

MB05S  
THRU  
MB10S

TECHNICAL SPECIFICATIONS OF SINGLE-PHASE MINI SURFACE MOUNT BRIDGE RECTIFIER

VOLTAGE RANGE - 50 to 1000 Volts

CURRENT - 0.8 Ampere

FEATURES

- \* Surge overload rating - 30 Amperes peak
- \* Ideal for printed circuit board
- \* Reliable low cost construction
- \* 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: 0.13 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

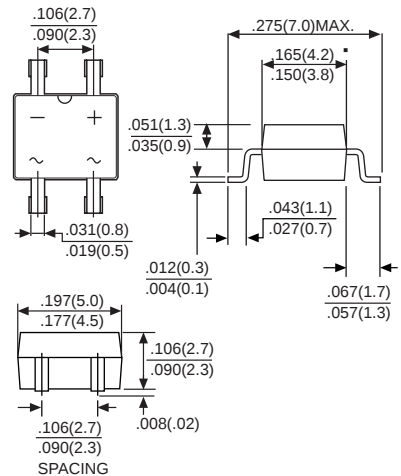
Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase, half wave, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%.



MBS



|                                                                                                   |             | SYMBOL  | MB05S        | MB1S | MB2S | MB4S | MB6S | MB8S | MB10S | UNITS |
|---------------------------------------------------------------------------------------------------|-------------|---------|--------------|------|------|------|------|------|-------|-------|
| Maximum Recurrent Peak Reverse Voltage                                                            |             | VRRM    | 50           | 100  | 200  | 400  | 600  | 800  | 1000  | Volts |
| Maximum RMS Bridge Input Voltage                                                                  |             | VRMS    | 35           | 70   | 140  | 280  | 420  | 560  | 700   | Volts |
| Maximum DC Blocking Voltage                                                                       |             | VDC     | 50           | 100  | 200  | 400  | 600  | 800  | 1000  | Volts |
| Maximum Average Forward Output Current at TA = 40 °C (Note 1)                                     |             | IO      | 0.8          |      |      |      |      |      |       | Amps  |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC Method) |             | IFSM    | 25           |      |      |      |      |      |       | Amps  |
| Maximum DC Forward Voltage Drop per Bridge Element at 0.8A DC                                     |             | VF      | 1.1          |      |      |      |      |      |       | Volts |
| Maximum Reverse Current at rated                                                                  | @TA = 25°C  | IR      | 5.0          |      |      |      |      |      |       | μAmps |
| DC Blocking Voltage per element                                                                   | @TA = 125°C |         | 500          |      |      |      |      |      |       |       |
| Typical Junction Capacitance ( Note 2)                                                            |             | CJ      | 15           |      |      |      |      |      |       | pF    |
| Typical Thermal Resistance (Note 3)                                                               |             | REJC    | 75           |      |      |      |      |      |       | °C/W  |
| Operating and Storage Temperature Range                                                           |             | TJ,TSTG | -50 to + 150 |      |      |      |      |      |       | °C    |

NOTES: 1. Mounted on P.C. board.

2. Measured at 1.0 MHZ and applied reverse voltage of 4.0V DC.

3. Thermal resistance junction to case.

# RATING AND CHARACTERISTIC CURVES ( MB05S THRU MB10S )

FIG.1  
FORWARD CURRENT DERATING CURVE

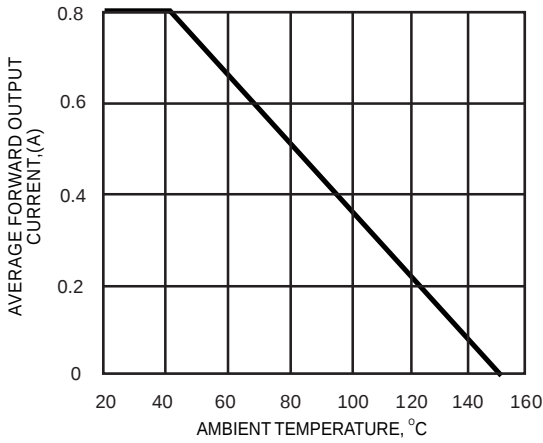


FIG.2  
MAXIMUM NON-REPETITIVE  
SURGE CURRENT

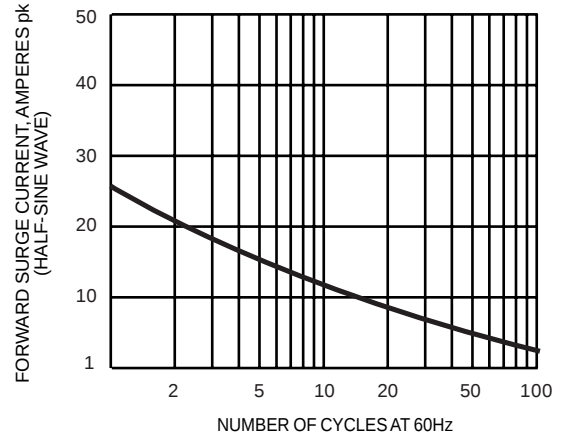


FIG.3  
TYPICAL FORWARD CHARACTERISTICS

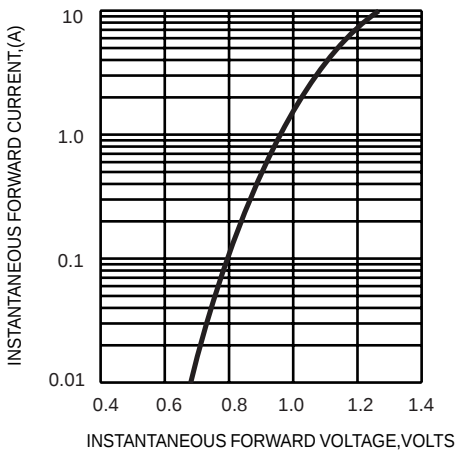


FIG.4  
TYPICAL REVERSE CHARACTERISTICS

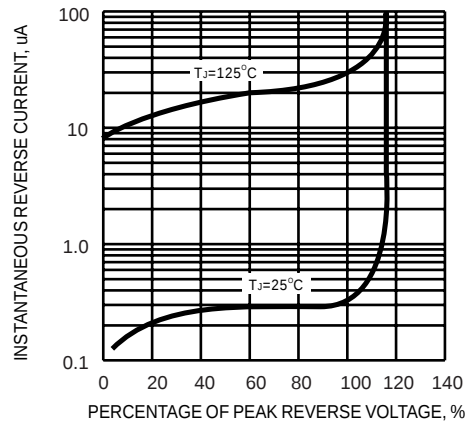
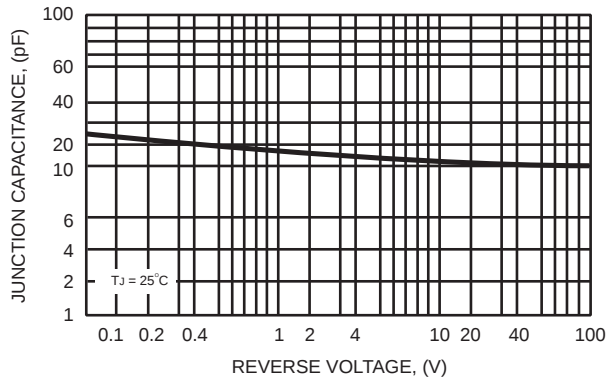


FIG. 5  
TYPICAL JUNCTION CAPACITANCE



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