



MBS Plastic-Encapsulate Bridge Rectifier

MB05S THRU MB10S General Purpose Bridge Rectifier

Features

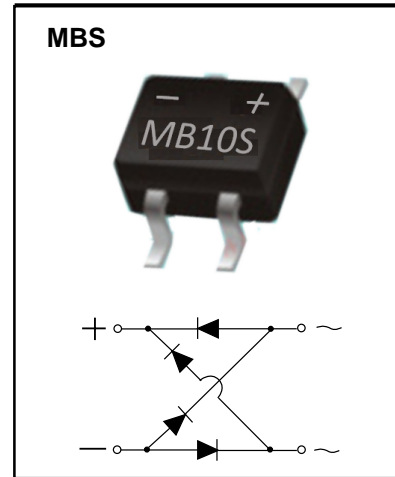
- $I_{F(AV)}$ 1A
- V_{RRM} 50V-1000V
- High surge current capability
- Glass passivated chip

Applications

- General purpose 1 phase Bridge rectifier applications

Marking

- MBXXS
- X : From 05 To 10



Limiting Values (Absolute Maximum Rating)

| Item | Symbol | Unit | Conditions | MB | | | | | | |
|--|----------------|-------------|--|-----------|-----|-----|-----|-----|-----|------|
| | | | | 05S | 1S | 2S | 4S | 6S | 8S | 10S |
| Repetitive Peak Reverse Voltage | V_{RRM} | V | | 50 | 100 | 200 | 400 | 600 | 800 | 1000 |
| Maximum RMS Voltage | V_{RMS} | V | | 35 | 70 | 140 | 280 | 420 | 560 | 700 |
| Average Rectified Output Current | I_o | A | 60Hz sine wave, R-load, $T_a=40^{\circ}C$ | 1.0 | | | | | | |
| Surge(Non-repetitive)Forward Current | I_{FSM} | A | 60Hz half sine wave, 1 cycle, $T_j=25^{\circ}C$ | 35 | | | | | | |
| Current Squared Time | I^2t | A^2S | $1ms \leq t < 8.3ms$ $T_j=25^{\circ}C$, Rating of per diode | 5.83 | | | | | | |
| Operation Junction and Storage Temperature Range | T_j, T_{stg} | $^{\circ}C$ | | -55 ~+150 | | | | | | |

Electrical Characteristics ($T_a=25^{\circ}C$ Unless otherwise specified)

| Item | Symbol | Unit | Test Condition | Max |
|----------------------|------------------|---------------|---|-----|
| Peak Forward Voltage | V_{FM} | V | $I_{FM}=1.0A$, Pulse measurement, Rating of per diode | 1.0 |
| Peak Reverse Current | I_{RRM} | μA | $V_{RM}=V_{RRM}$, Pulse measurement, Rating of per diode | 10 |
| Thermal Resistance | $R_{\theta J-A}$ | $^{\circ}C/W$ | Between junction and ambient, On alumina substrate | 76 |
| | | | Between junction and ambient, On glass-epoxi substrate | 134 |
| | $R_{\theta J-L}$ | | Between junction and lead | 20 |

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

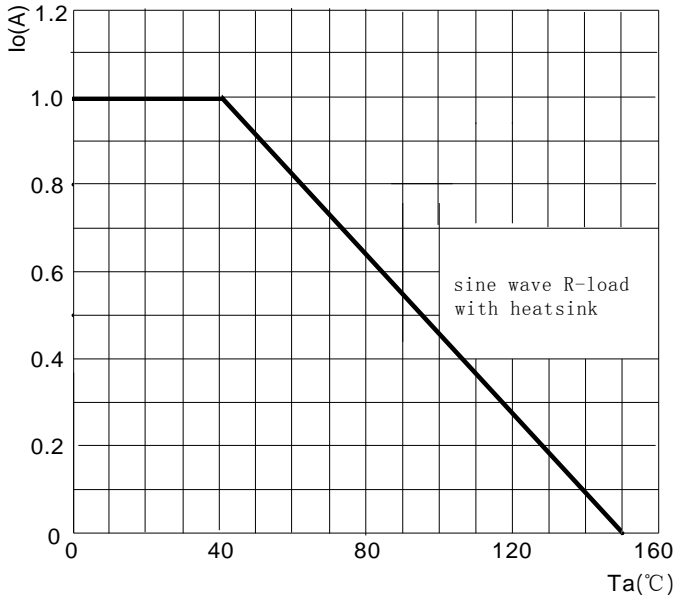


FIG.2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

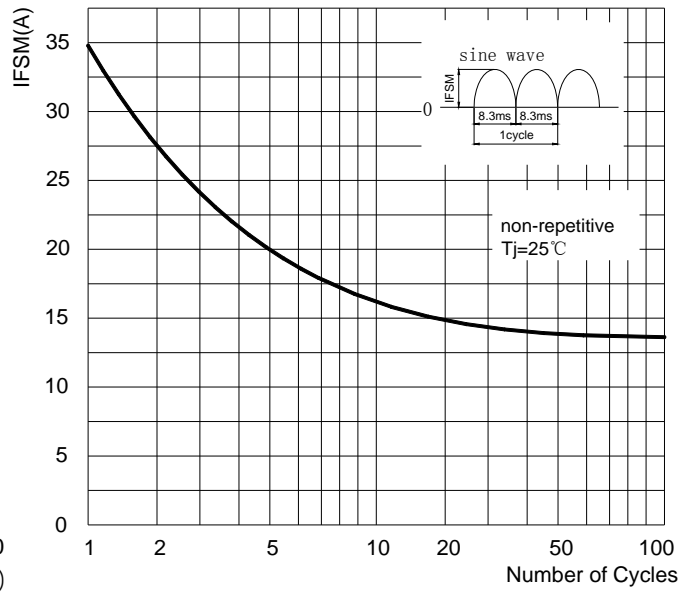


FIG.3: TYPICAL FORWARD CHARACTERISTICS

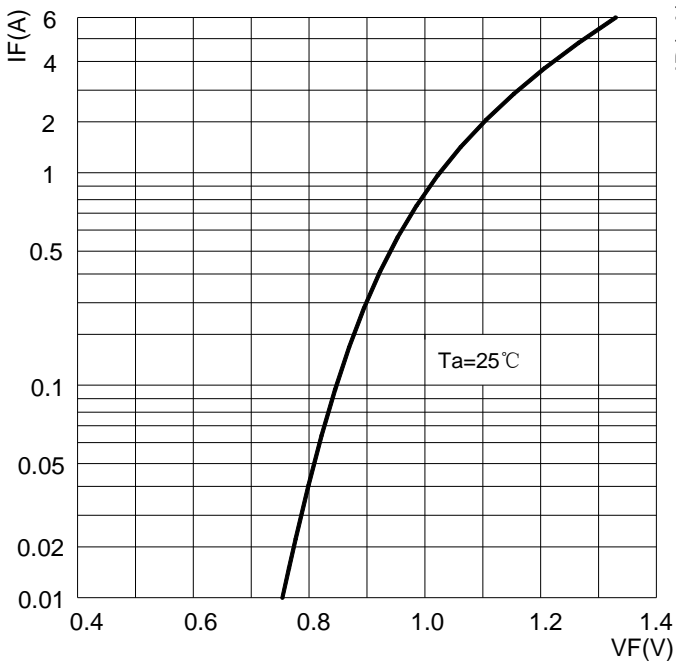
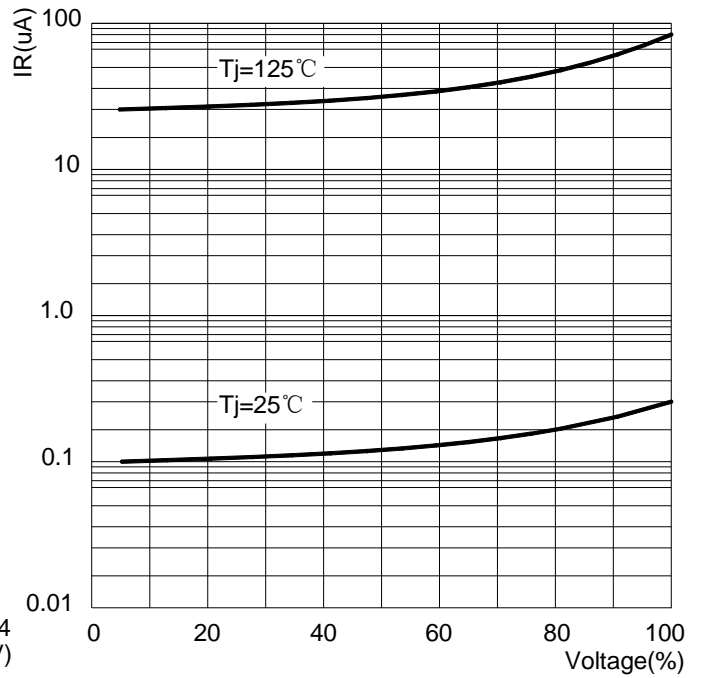
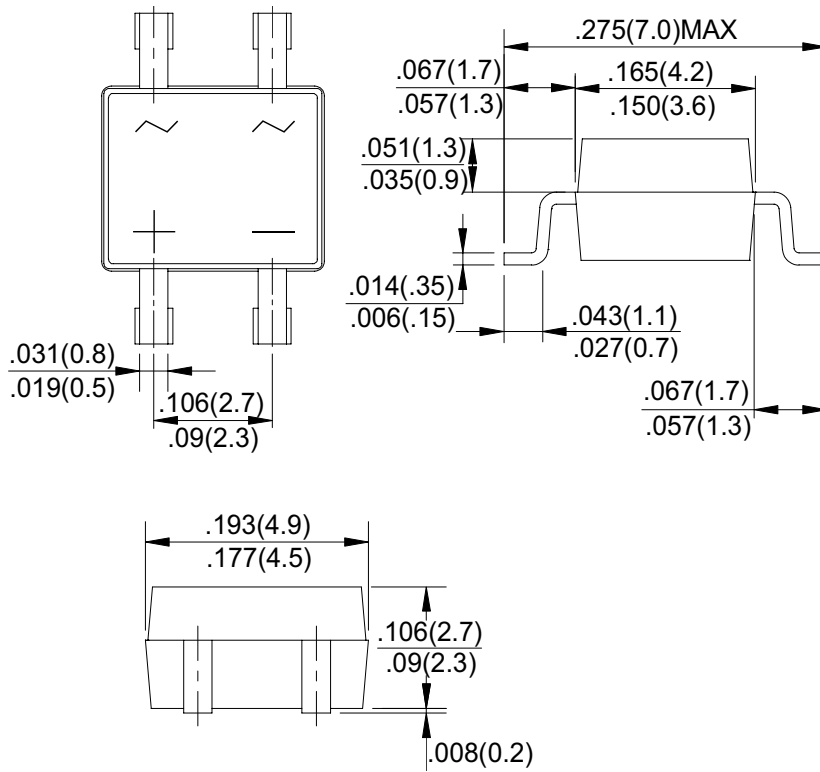


FIG.4: TYPICAL REVERSE CHARACTERISTICS

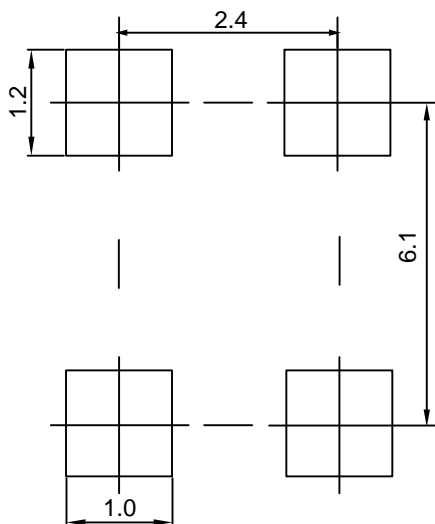


MBS Package Outline Dimensions



Dimensions in inches and (millimeters)

MBS Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

NOTICE

JSCJ reserves the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JSCJ does not assume any liability arising out of the application or use of any product described herein.

Reel Taping Specifications For Surface Mount Devices-MBS

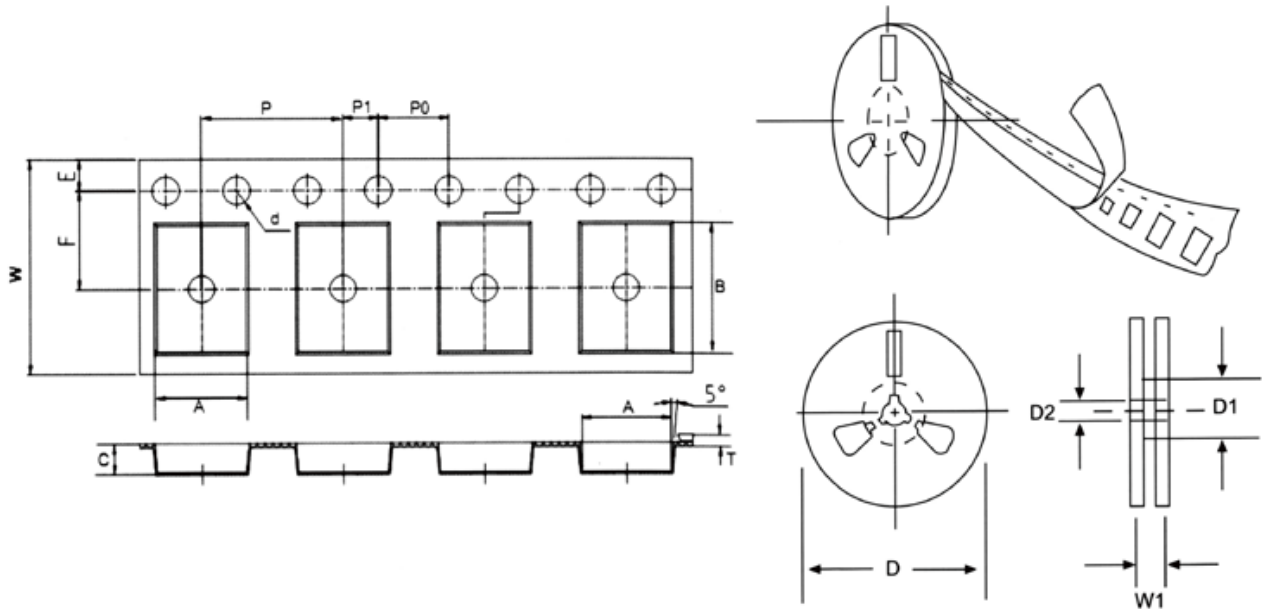


FIG: CONFIGURATION OF SURFACE MOUNTED DEVICES TAPING

| ITEM | SYMBOL | MBS mm(inch) |
|------------------------|--------|----------------------------|
| Carrier width | A | 5.05+0.1(0.198+0.004) |
| Carrier length | B | 7.22+0.1(0.284+0.004) |
| Carrier depth | C | 2.88+0.1(0.113+0.004) |
| Sprocket hole | d | 1.55±0.05(0.061±0.002) |
| Reel outside diameter | D | 330±2.0(13±0.079) |
| Reel inner diameter | D1 | 75 ±1.0 (2.95 ±0.039) |
| Feed hole diameter | D2 | 13+0.5(0.512+0.020) |
| Strocket hole position | E | 1.75+0.1(0.069+0.004) |
| Punch hole position | F | 5.50+0.05(0.217+0.002) |
| Punch hole pitch | P | 8.0+0.1(0.315+0.004) |
| Sprocket hole pitch | P0 | 4.0+0.1(0.157+0.004) |
| Embossment center | P1 | 2.0+0.1(0.079+0.004) |
| Total tape thickness | T | 0.20-0.70(0.080-0.028) |
| Tape width | W | 12.0+0.3/-0.1(0.472+0.004) |
| Reel width | W1 | 16.8+2.0(0.661+0.079) |

NOTE: Devices are packde in accordance with EIA standard RS-481-A and specification given above.