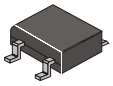
## DESCRIPTION and APPLICATIONS

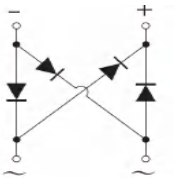
Suitable for AC to DC bridge full wave rectification for SMPS, LED lighting, adapter, battery charger, home appliances, office equipment, and telecommunication applications.

**VOLTAGE RANGE**
50 to 1000 Volts
**CURRENT**
0.8 Ampere

## FEATURES

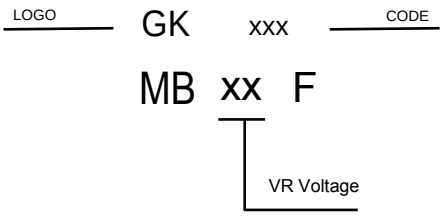
* Ideal for printed circuit board
* Reliable low cost construction utilizing molded plastic technique
* High surge current capability





Internal Schematic




## MECHANICAL DATA

* Polarity: Symbol molded on body
* Mounting position: Any

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

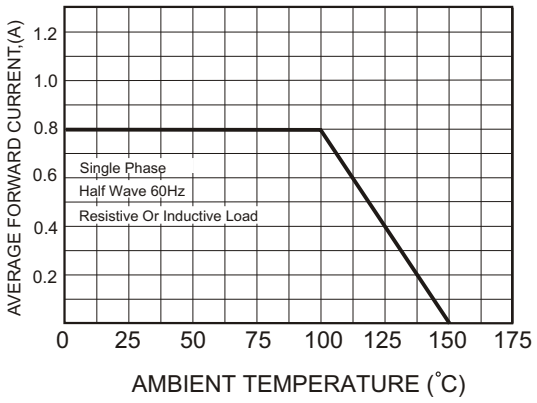
Rating 25˚C ambient temperature uniess otherwies specified.
Single phase half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

| TYPE NUMBER | MB05F | MB1F | MB2F | MB4F | MB6F | MB8F | MB10F | UNIT |
|---|---|---|---|---|---|---|---|---|
| Maximum Recurrent Peak Reverse Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current | 0.8 | | | | | | | A |
| Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | 3 0 | | | | | | | A |
| $I^2t$ Rating for Fusing (1ms < t < 8.3ms) | 3.7 | | | | | | | $A^2S$ |
| Maximum Forward Voltage Drop per Bridge Element at 0.4A D.C. | 1.0 | | | | | | | V |
| Maximum DC Reverse Current Ta=25˚C | 5.0 | | | | | | | μA |
| at Rated DC Blocking Voltage Ta=125˚C | 500 | | | | | | | μA |
| Typical Thermal Resistance R JA (Note 1) | 75 | | | | | | | ˚C/W |
| Operating Temperature Range, TJ | -55 — +150 | | | | | | | ˚C |
| Storage Temperature Range, TSTG | -55 — +150 | | | | | | | ˚C |

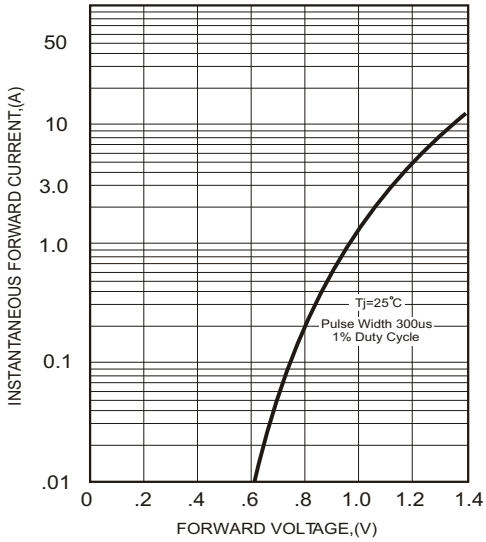
NOTE 1: Thermal Resistance Junction to Ambient.

## RATING AND CHARACTERISTIC CURVES

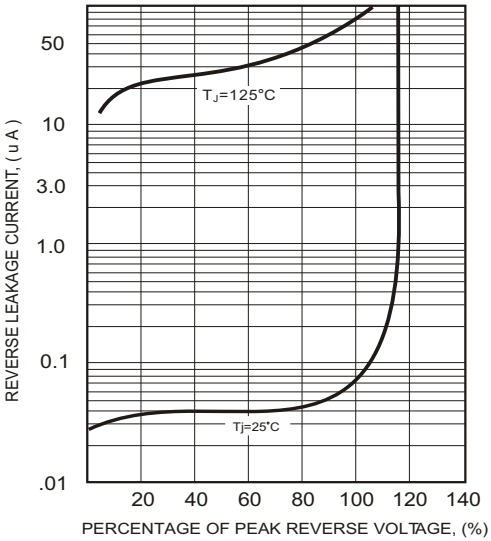
### FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE



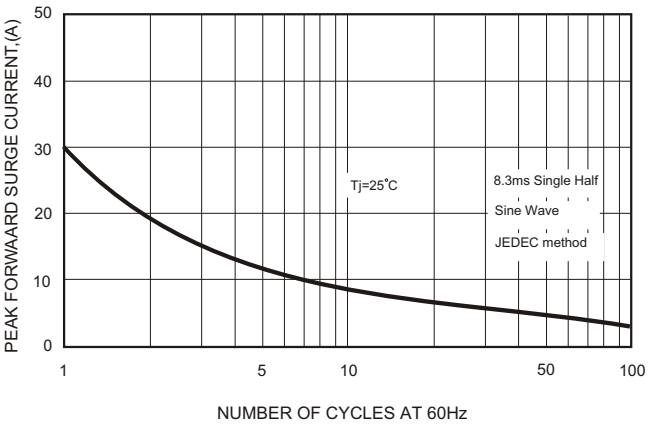

### FIG.2-TYPICAL FORWARD CHARACTERISTICS




### FIG.3 - TYPICAL REVERSE CHARACTERISTICS



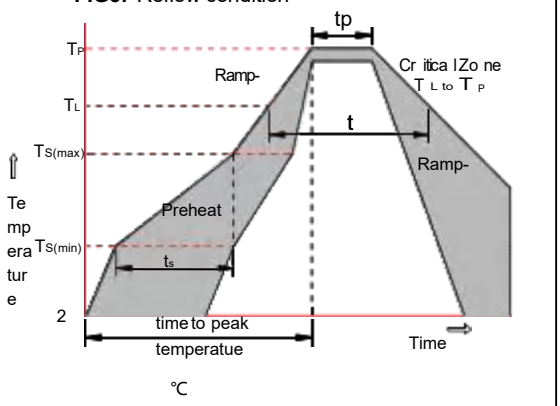

### FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



## Soldering parameters

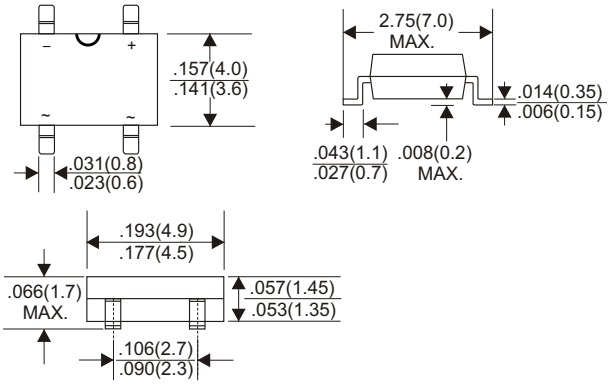
| Reflow Condition | | Pb-Free assembly (see as bellow) |
|---|---|---|
| Pre Heat | -Temperature Min ($T_{s(min)}$) | +150℃ |
| | -Temperature Max($T_{s(max)}$) | +200℃ |
| | -Time (Min to Max) (ts) | 60-180 secs. |
| Average ramp up rate (Liquid us Temp ($T_L$) to peak) | | 3℃/sec. Max |
| $T_{s(max)}$ to $T_L$ - Ramp-up Rate | | 3℃/sec. Max |
| Reflow | -Temperature($T_L$)(Liquid us) | +217℃ |
| | -Temperature($t_L$) | 60-150 secs. |
| Peak Temp ($T_p$) | | +260(+0/-5)℃ |
| Time within 5℃ of actual Peak Temp ($t_p$) | | 30 secs. Max |
| Ramp-down Rate | | 6℃/sec. Max |
| Time 25℃ to Peak Temp ($T_P$) | | 8 min. Max |
| Do not exceed | | +260℃ |

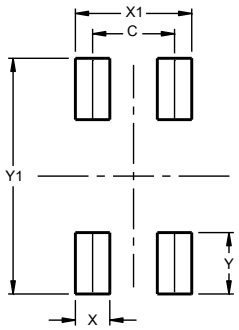
**FIG5:** Reflow condition




## Package Dimensions & Suggested Pad Layout

MBF

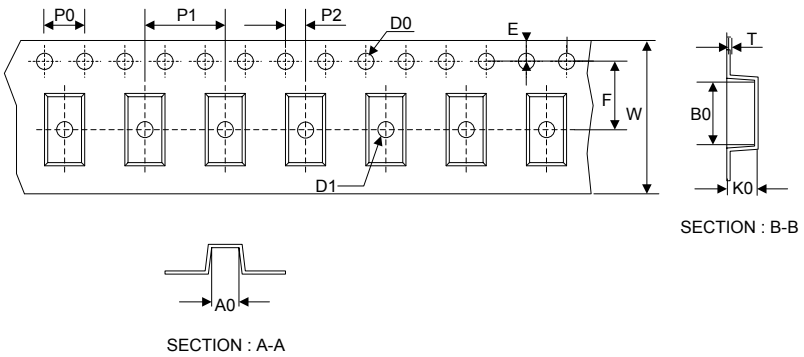



| Dimensions | Value (in mm) |
|---|---|
| C | 2.50 |
| X | 1.10 |
| X1 | 3.60 |
| Y | 2.10 |
| Y1 | 7.50 |

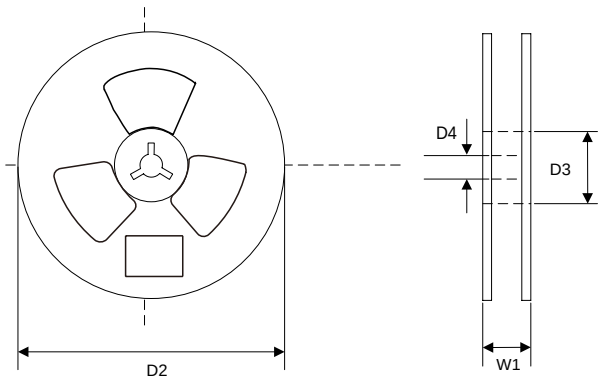
## Tape & rell specification

Tape




| Symbol | Dimension (mm) |
|---|---|
| P0 | 4.00±0.20 |
| P1 | 8.00±0.20 |
| P2 | 2.00±0.20 |
| D0 | 1.60±0.15 |
| D1 | 1.60±0.15 |
| E | 1.75±0.20 |
| F | 5.50±0.15 |
| W | 12.00±0.20 |
| A0 | 5.30±0.20 |
| B0 | 7.15±0.20 |
| K0 | 1.65±0.15 |
| T | 0.23±0.10 |

13” Reel




| | |
|---|---|
| D2 | 330.0±5.0 |
| D3 | 73Min. |
| D4 | 16.0±2.5 |
| W1 | 18.0±3.0 |
| Quantity: 5000PCS | |