

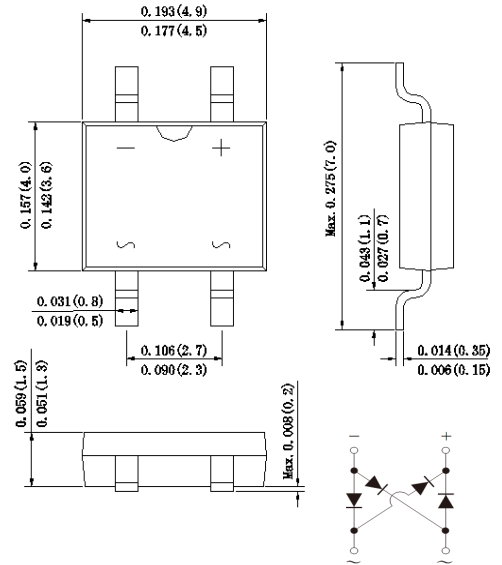
**Single Phase 0.8Amp Fast Recovery Bridge Rectifiers**

**MBF**



**Features**

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Idea for printed circuit board
- ◆ Glass passivated Junction chip
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed 250°C/10 seconds at terminals



Dimensions in inches and (millimeters)

**Mechanical Data**

- Case** : Molded plastic body
- Terminals** : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity** : Polarity symbol marking on body
- Mounting Position** : Any
- Weight** : 0.004 ounce, 0.118 grams

**Maximum Ratings And Electrical Characteristics**

Ratings at 25°C ambient temperature unless otherwise specified. Single phase half-wave 60Hz, resistive or inductive load, for capacitive load current derate by 20%.

| Parameter                                                                                      | SYMBOLS        | RMB05F      | RMB1F | RMB2F | RMB4F | RMB6F | RMB8F | RMB10F | UNITS        |
|------------------------------------------------------------------------------------------------|----------------|-------------|-------|-------|-------|-------|-------|--------|--------------|
| Maximum repetitive peak reverse voltage                                                        | $V_{RRM}$      | 50          | 100   | 200   | 400   | 600   | 800   | 1000   | V            |
| Maximum RMS voltage                                                                            | $V_{RMS}$      | 35          | 70    | 140   | 280   | 420   | 560   | 700    | V            |
| Maximum DC blocking voltage                                                                    | $V_{DC}$       | 50          | 100   | 200   | 400   | 600   | 800   | 1000   | V            |
| Maximum average forward rectified current at $T_L=100^\circ C$ On glass-epoxy P.C.B (Note 1)   | $I_{(AV)}$     | 0.8         |       |       |       |       |       |        | A            |
| Peak forward surge current, 8.3ms single half sine-wave superimposed on rated load             | $I_{FSM}$      | 30.0        |       |       |       |       |       |        | A            |
| Rating for fusing (t=8.3ms, $T_a=25^\circ C$ )                                                 | $I_t^2$        | 3.74        |       |       |       |       |       |        | $A^2s$       |
| Maximum instantaneous forward voltage at 0.8A                                                  | $V_F$          | 1.3         |       |       |       |       |       |        | V            |
| Maximum DC reverse current $T_A = 25^\circ C$ at rated DC blocking voltage $T_A = 125^\circ C$ | $I_R$          | 5.0<br>500  |       |       |       |       |       |        | $\mu A$      |
| Maximum reverse recovery time (Note 2)                                                         | $T_{rr}$       | 150         |       |       | 250   | 500   |       | ns     |              |
| Typical junction capacitance (Note 3)                                                          | $C_J$          | 20.0        |       |       |       |       |       |        | pF           |
| Typical thermal resistance                                                                     | $R_{qJA}$      | 85.0        |       |       |       |       |       |        | $^\circ C/W$ |
| Operating junction and storage temperature range                                               | $T_J, T_{STG}$ | -55 to +150 |       |       |       |       |       |        | $^\circ C$   |

- Note:** 1. Mounted on glass epoxy PC board with 1.3\*1.3mm solder pad  
 2. Reverse Recovery Test Conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{rr}=0.25A$   
 3. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

**Ratings And Characteristic Curves**

FIG. 1- DERATING CURVE OUTPUT RECTIFIED CURRENT

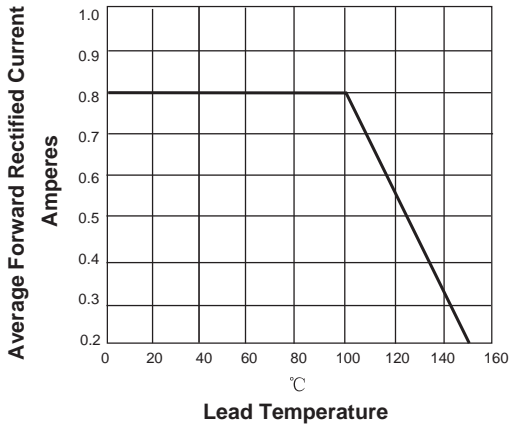


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

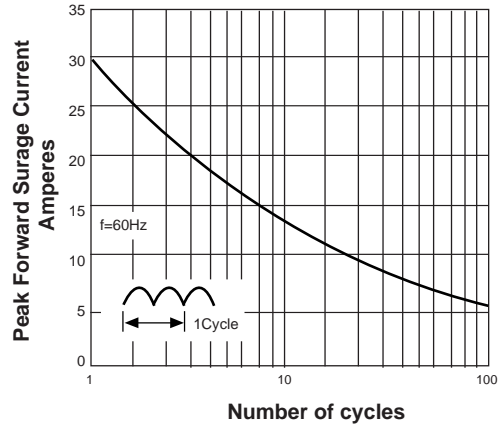


FIG. 3-TYPICAL FORWARD VOLTAGE CHARACTERISTICS

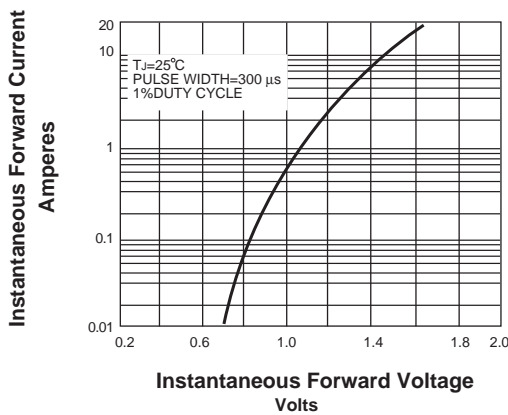
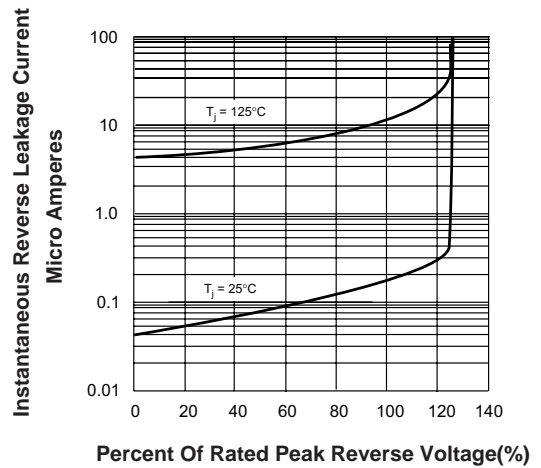
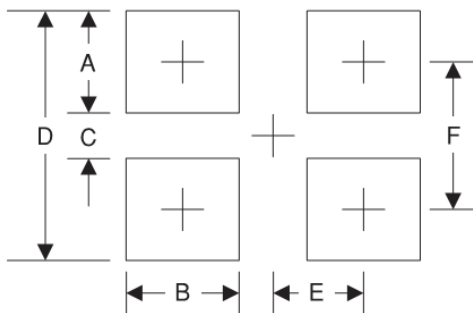


FIG. 4-TYPICAL REVERSE LEAKAGE CHARACTERISTICS



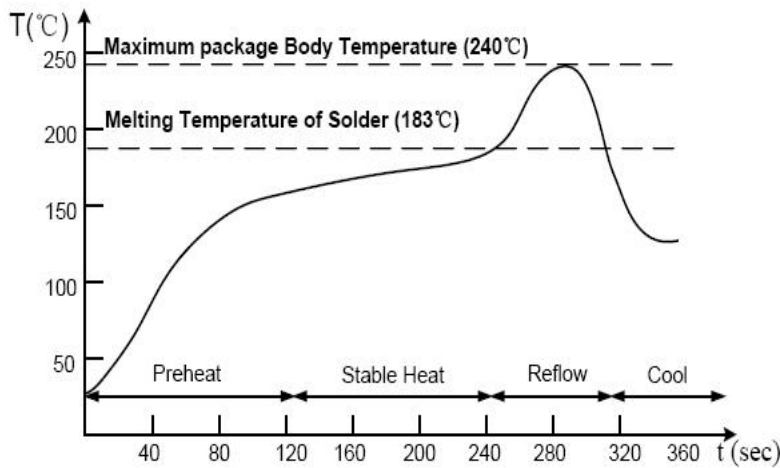
**Suggested Pad Layout**



| Symbol | Unit (mm) | Unit (inch) |
|--------|-----------|-------------|
| A      | 1.7       | 0.067       |
| B      | 1.0       | 0.039       |
| C      | 4.40      | 0.173       |
| D      | 8.10      | 0.319       |
| E      | 1.25      | 0.049       |
| F      | 6.30      | 0.248       |

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**Suggested Soldering Temperature Profile**

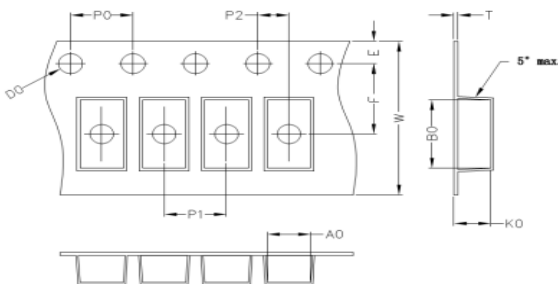


**Note**

- Recommended reflow methods: IR, vapor phase oven, hot air oven, wave solder.
- The device can be exposed to a maximum temperature of 265°C for 10 seconds.
- Devices can be cleaned using standard industry methods and solvents.
- If reflow temperatures exceed the recommended profile, devices may not meet the performance requirements.

**Package Information**

**Carrier Dimension(mm)**



| A0   | B0   | K0   | D0   | E    | F         |
|------|------|------|------|------|-----------|
| 5.10 | 7.20 | 2.88 | 1.55 | 1.75 | 5.50      |
| P0   | P1   | P2   | T    | W    | Tolerance |
| 4.0  | 8.0  | 2.0  | 0.25 | 12   | 0.1       |

**Package Specifications**

| Package | Reel Size | Reel DIA. (mm) | Q'TY/Reel (Kpcs) | Box Size (mm) | QTY/Box (Kpcs) | Carton Size (mm) | Q'TY/Carton (Kpcs) |
|---------|-----------|----------------|------------------|---------------|----------------|------------------|--------------------|
| MBS     | 13'       | 330            | 3                | 338           | 6              | 365*365*360      | 48                 |