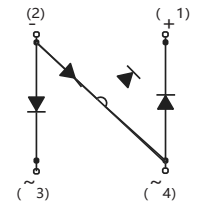
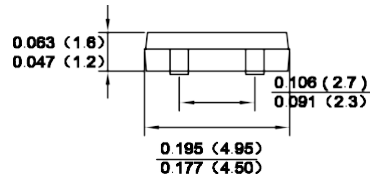
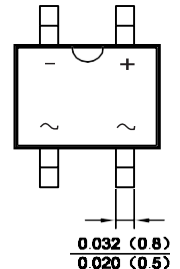


## GLASS PASSIVATED ULTRA FAST RECOVERY BRIDGE RECTIFIERS

### Features

- ◆ Ideal for printed circuit board
- ◆ Reliable low cost construction utilizing molded plastic technique
- ◆ High temperature soldering guaranteed: 260°/10 seconds at 5 lbs., (2.3kg) tension
- ◆ Small size, simple installation
- ◆ High surge current capability

### MBF



### Maximum Ratings And Electrical Characteristics

Dimensions in inches and (millimeters)

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                              | UMB2F       | UMB4F | UMB6F | UMB8F | UMB10F | UNITS |
|-----------------------------------------------------------------------------------------------------------------|--------------------------------------|-------------|-------|-------|-------|--------|-------|
| Marking Code                                                                                                    |                                      |             |       |       |       |        |       |
| Maximum repetitive peak reverse voltage                                                                         | V <sub>RRM</sub>                     | 200         | 400   | 600   | 800   | 1000   | V     |
| Maximum RMS voltage                                                                                             | V <sub>RMS</sub>                     | 140         | 280   | 420   | 560   | 700    | V     |
| Maximum DC blocking voltage                                                                                     | V <sub>DC</sub>                      | 200         | 400   | 600   | 800   | 1000   | V     |
| Maximum average forward rectified current<br>On glass-epoxy P.C.B.(Note1)<br>On aluminum substrate(Note2)       | I <sub>F(AV)</sub>                   | 1.0         |       |       |       |        | A     |
| Peak forward surge current,<br>8.3ms single half sine-wave superimposed on<br>rated load (JEDEC Method)         | I <sub>FSM</sub>                     | 35          |       |       |       |        | A     |
| Maximum instantaneous forward voltage drop<br>per leg at 1.0A                                                   | V <sub>F</sub>                       | 1.0         | 1.3   | 1.5   |       |        | V     |
| Maximum DC reverse current      T <sub>A</sub> =25°C<br>at rated DC blocking voltage      T <sub>A</sub> =125°C | I <sub>R</sub>                       | 5<br>100    |       |       |       |        | uA    |
| Maximum reverse recovery time    Note2                                                                          | t <sub>rr</sub>                      | 50          |       | 75    |       |        | nS    |
| Typical Junction Capacitance      Note1                                                                         | C <sub>j</sub>                       | 18          |       |       |       |        | pF    |
| Typical thermal resistance    Note3                                                                             | Rθ <sub>JL</sub><br>Rθ <sub>JA</sub> | 80<br>25    |       |       |       |        | °C/W  |
| Operating temperature range                                                                                     | T <sub>J</sub>                       | -55 to +150 |       |       |       |        | °C    |
| storage temperature range                                                                                       | T <sub>STG</sub>                     | -55 to +150 |       |       |       |        | °C    |

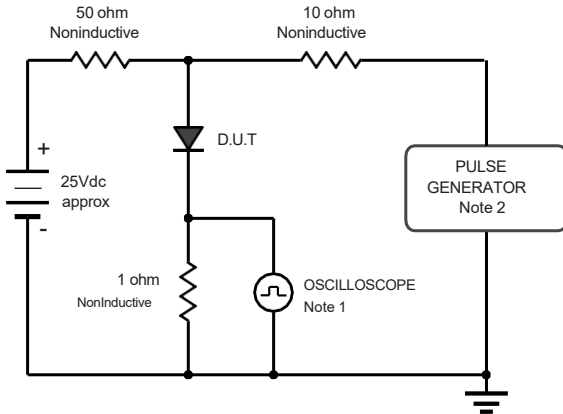
Note: 1. Measured at 1MHz and applied reverse voltage of 4 V D.C.

2. Measured with  $I_F = 0.5 A$ ,  $I_R = 1 A$ ,  $I_{rr} = 0.25 A$ .

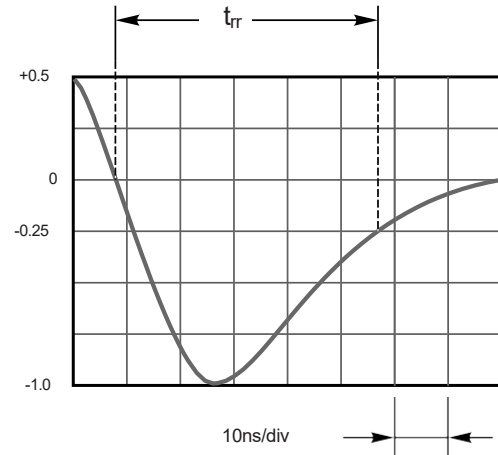
3. Mounted on glass epoxy PC board with 4×1.5"×1.5" (3.81×3.81 cm) copper pad.

## Ratings And Characteristic Curves

**Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram**

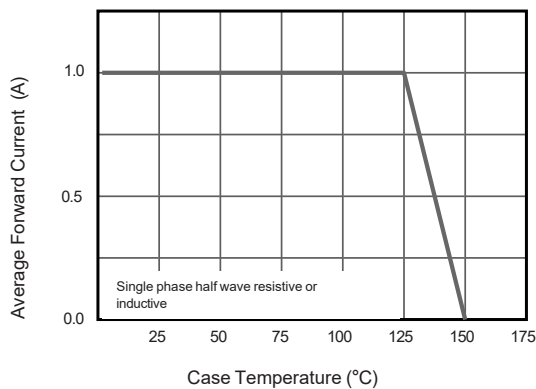


Note: 1. Rise Time = 7ns, max.  
Input Impedance = 1megohm, 22pF.  
2. Rise Time = 10ns, max.  
Source Impedance = 50 ohms.

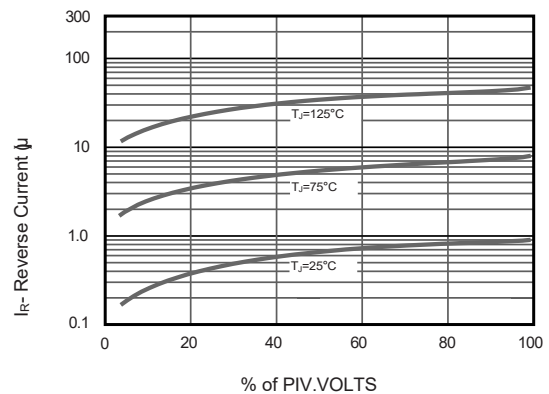


Set time Base for 10ns/div

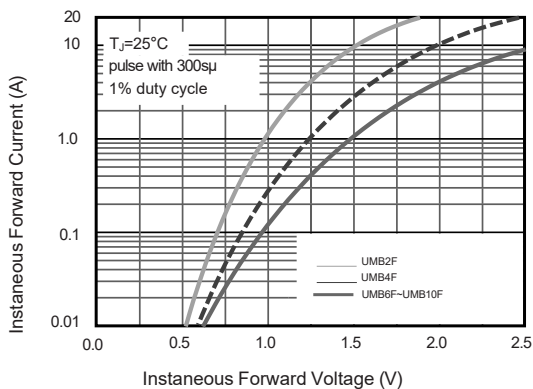
**Fig.2 Maximum Average Forward Current Rating**



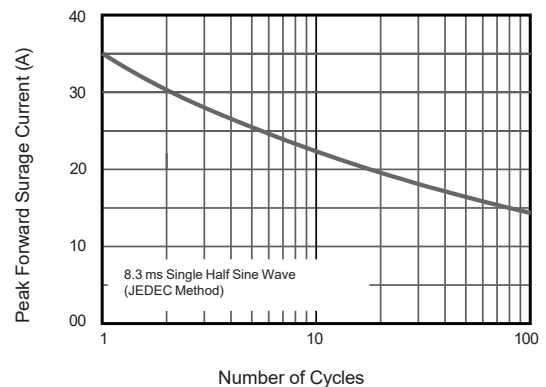
**Fig.3 Typical Reverse Characteristics**



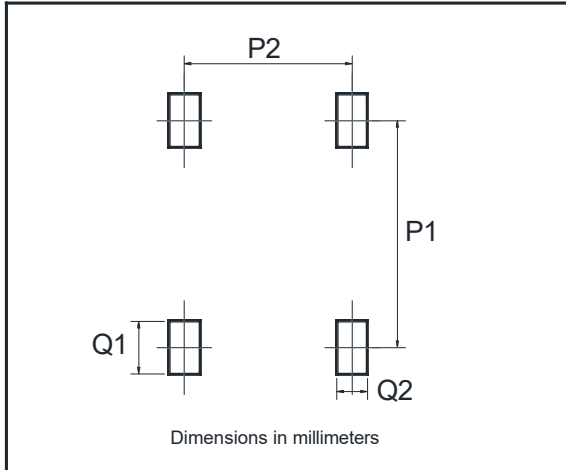
**Fig.3 Typical Instantaneous Forward Characteristics**



**Fig.4 Maximum Non-Repetitive Peak Forward Surge Current**



The curve above is for reference only.



| Dim | Min  |
|-----|------|
| P1  | 6.00 |
| P2  | 2.40 |
| Q1  | 1.84 |
| Q2  | 1.20 |