

# **EMB1F THRU EMB6F**

## SINGLE PHASE 0.8 AMP SUPER FAST GLASS PASSIVATED BRIDGE RECTIFIER

### **Features**

- · Glass passivated die construction
- · Low forward voltage drop
- High current capability
- High surge current capability
- Designed for surface mount application
- · Plastic material-UL flammability 94V-0

## **Mechanical Data**

- · Case: MB-F, molded plastic
- Terminals: plated leads solderable per MIL-STD-202, Method 208
- · Polarity: as marked on case
- Mounting position: Any
- Marking: type number
- · Lead Free: For RoHS / Lead Free Version,

# 0.063 (1.6) - + 0.063 (1.6) 0.047 (1.2) 0.195 (4.95) 0.177 (4.50) 0.032 (0.8) 0.020 (0.5) 0.014 (0.35) 0.006 (0.15) 0.043 (1.1) 0.043 (1.1) 0.028 (0.7) 0.162 (6.4) 0.108 (0.2) 0.008 (0.2) 0.162 (6.4)

dimensions in inches and (millimeters)

## **Maximum Ratings and Electrical Characteristics**

Rating at 25°C ambient temperature unless otherwise specified. Single Phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

| TYPE NUMBER   | SYMBOL          | EMB1F      | EMB2F     | EMB3F | EMB4F | EMB6F | UNITS            |
|---|-----------------|------------|-----------|-------|-------|-------|------------------|
| Peak Repetitive Reverse Voltage<br>Working Peak Reverse Voltage<br>DC Blocking Voltage                                | VRRM            | 100        | 200       | 300   | 400   | 600   | ٧                |
|   | Vrwм            |            |           |       |       |       |                  |
|   | V <sub>DC</sub> |            |           |       |       |       |                  |
| RMS Reverse Voltage   | VRMS            | 70         | 140       | 210   | 280   | 420   | V                |
| Average Rectified Output Current (Note 1)@Tc=100 ℃ (Note 2)@Tc=100 ℃  | IF(AV)          | 0.5<br>0.8 |           |       |       |       | Α                |
| Non-Repetitive Peak Forward Surge Current 8.3ms<br>Single half sine-wave superimposed on rated load<br>(JEDEC Method) | lғsм            | 30         |           |       |       |       | А                |
| I <sup>2</sup> t Rating for Fusing (t < 8.3ms)  | l²t             | 3.735      |           |       |       |       | A <sup>2</sup> s |
| Forward Voltage per element @IF=0.8A  | VFM             | 0          | 0.95 1.25 |       | 1.7   | V     |                  |
| Peak Reverse Current @T <sub>A</sub> =25 °C At Rated DC Blocking Voltage @T <sub>A</sub> =125 °C                      | lr              | 5.0<br>200 |           |       |       |       | uA               |
| Maximum reverse recovery time (Note 3)  | Trr             | 35         |           |       |       |       | nS               |
| Typical Junction Capacitance per leg (Note4)  | CJ              | 25         |           |       |       |       | pF               |
| Typical Thermal Resistance per leg  | Reja            | 60         |           |       |       |       | °C/W             |
|   | Røjl            | 16         |           |       |       |       |                  |
| Operating and Storage Temperature Range   | TJ,Tstg         | -55to+150  |           |       |       |       | $^{\circ}$       |

Note:1. Mounted on glass epoxy PC board with 1.3mm<sup>2</sup> solder pad.

- 2. Mounted on aluminum substrate PC board with 1.3mm<sup>2</sup> solder pad.
- 3. Reverse Recovery Test Conditions: IF=0.5A, IR=1.0A, IRR=0.25A
- 4. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

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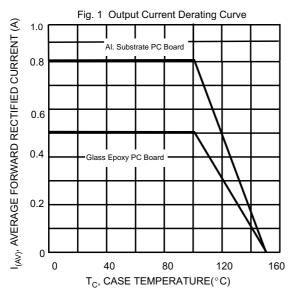


Fig. 3 Maximum Peak Forward Surge Current (per leg)

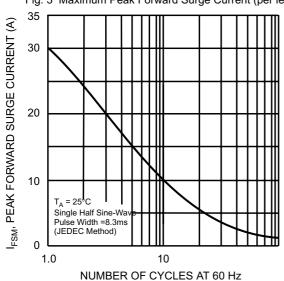
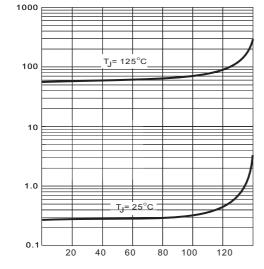


FIG.5 TYPICAL REVERSE CHRACTERISTICS



INVSTANTANEOUS REVERSE CURRENT (µA)

PERCENT OF RATED PEAK INVERSE VOLTGE (V)

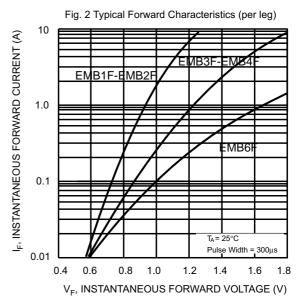


Fig. 4 Typical Junction Capacitance

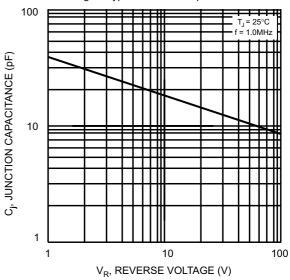
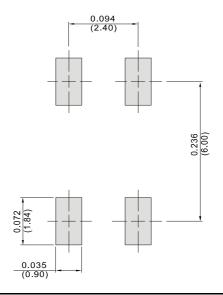


FIG.6 MOUNTING PAD LAYOUT





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