

### 描述 / Descriptions

4.0A 表面贴装玻璃钝化整流桥，薄型 UM5B 封装。  
4.0A Surface Mount Glass Passivated Bridge Rectifier, UM5B thin package.

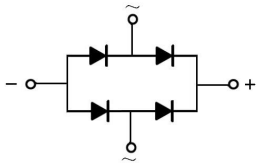
### 特征 / Features

玻璃钝化芯片，浪涌电流大，反向电压：100V~1000V，正向电流：4.0A，适用表面贴装。无卤产品。  
Glass Passivated Chip Junction, High Surge Current Capability, Reverse Voltage :100 to 1000V,  
Forward Current: 4.0A, Designed for Surface Mount Application. HF product.

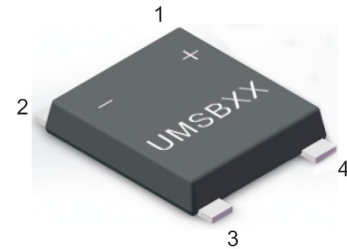
### 用途 / Applications

一般用途。  
General purpose.

### 内部等效电路 / Equivalent Circuit



### 引脚排列 / Pinning



| PIN | DESCRIPTION          |
|-----|----------------------|
| 1   | Output Anode ( + )   |
| 2   | Output Cathode ( - ) |
| 3   | Input Pin ( ~ )      |
| 4   | Input Pin ( ~ )      |

### 印章代码 / Marking

见印章说明。See Marking Instructions.

**极限参数 / Absolute Maximum Ratings(Ta=25°C)**

| 参数<br>Parameter   | 符号<br>Symbol    | 数值<br>Rating | 单位<br>Unit |
|---|-----------------|--------------|------------|
| Maximum Repetitive Peak Reverse Voltage   | $V_{RRM}$       | 1000         | V          |
| Maximum RMS voltage   | $V_{RMS}$       | 700          | V          |
| Maximum DC Blocking Voltage   | $V_{DC}$        | 1000         | V          |
| Average Rectified Output Current  | $I_o$           | 4.0          | A          |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) | $I_{FSM}$       | 150          | A          |
| Typical Junction Capacitance (Note1)  | $C_i$           | 50           | pF         |
| Typical Thermal Resistance (Note2)  | $R_{\theta JA}$ | 40           | °C/W       |
| Maximum Reverse Recovery Time (Note3)   | $t_{rr}$        | 200          | ns         |
| Operating and Storage Temperature Range   | $T_j, T_{stg}$  | -55~+150     | °C         |

Note:

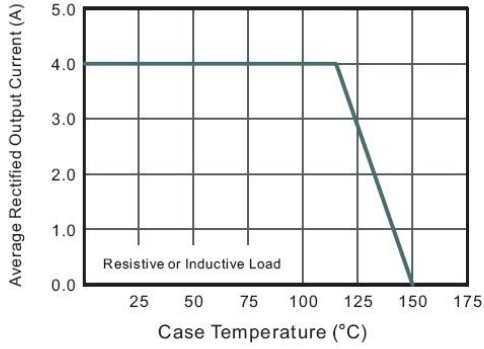
1. Measured at 1MHz and applied reverse voltage of 4 V D.C.
2. P.C.B. mounted with 4x1.5" x1.5" (3.81x3.81cm) copper pad areas.
3. Measured with  $I_F = 0.5 A$ ,  $I_R = 1 A$ ,  $I_{rr} = 0.25 A$ .

**电性能参数 / Electrical Characteristics(Ta=25°C)**

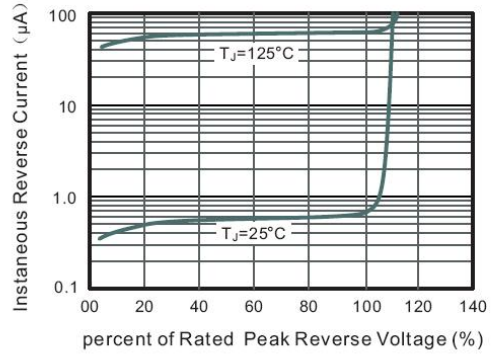
| 参数<br>Parameter   | 符号<br>Symbol | 测试条件<br>Test Conditions | 数值<br>Rating | 单位<br>Unit |
|---|--------------|-------------------------|--------------|------------|
| Forward Voltage per element                               | $V_F$        | $I_F = 4.0A$            | 1.3          | V          |
| Maximum DC Reverse Current at Maximum DC Blocking Voltage | $I_R$        | $T_a = 25^\circ C$      | 5.0          | $\mu A$    |
|   |              | $T_a = 125^\circ C$     | 200          |            |

**电参数曲线图 / Electrical Characteristic Curve**

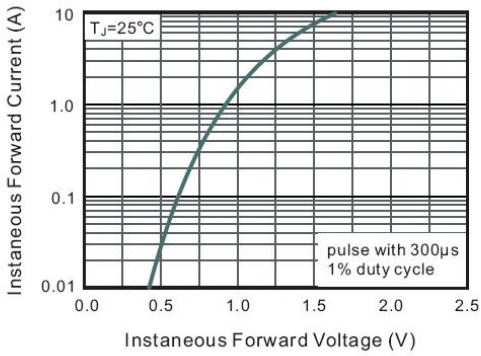
**Fig.1 Average Rectified Output Current Derating Curve**



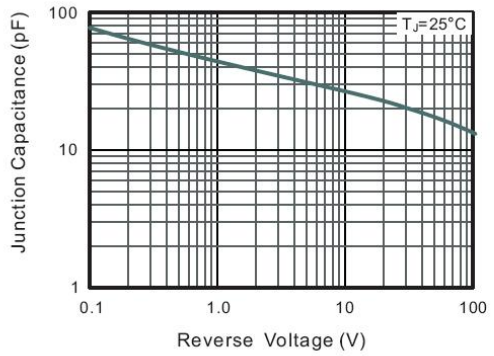
**Fig.2 Typical Reverse Characteristics**



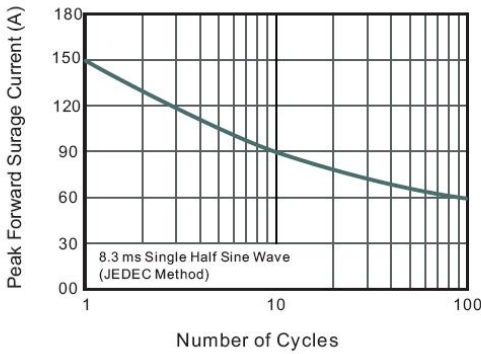
**Fig.3 Typical Instantaneous Forward Characteristics**



**Fig.4 Typical Junction Capacitance**

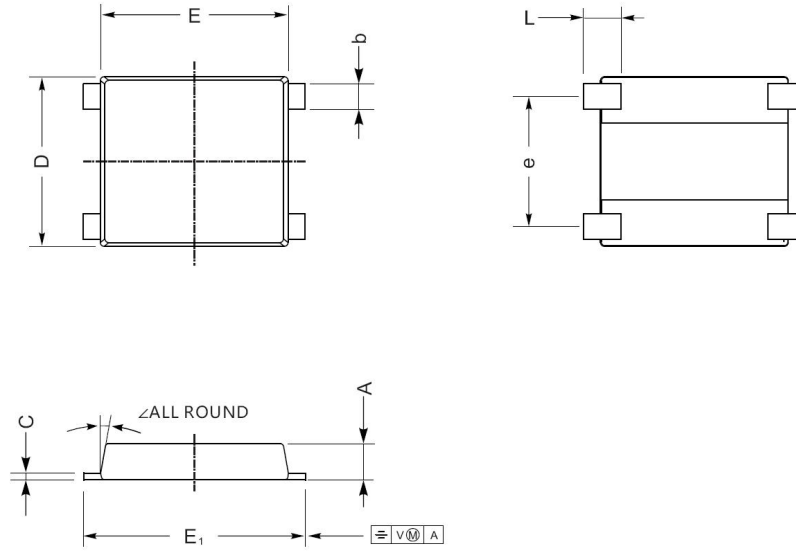


**Fig.5 Maximum Non-Repetitive Peak Forward Surge Current**



外形尺寸图 / Package Dimensions

UMSB



UMSB mechanical data

| UNIT |     | A   | C    | D   | E   | E <sub>1</sub> | L    | e   | b    | ∠   |
|------|-----|-----|------|-----|-----|----------------|------|-----|------|-----|
| mm   | max | 1.5 | 0.29 | 7.0 | 7.6 | 8.9            | 1.6  | 5.3 | 1.15 | 10° |
|      | min | 1.3 | 0.17 | 6.2 | 7.1 | 8.4            | 1.0  | 4.9 | 0.95 |     |
| mil  | max | 59  | 12   | 276 | 299 | 350            | 55   | 209 | 45   |     |
|      | min | 51  | 7    | 244 | 280 | 331            | 31.5 | 193 | 37   |     |

印章说明 / Marking Instructions



说明

FMB40M : 为型号代码

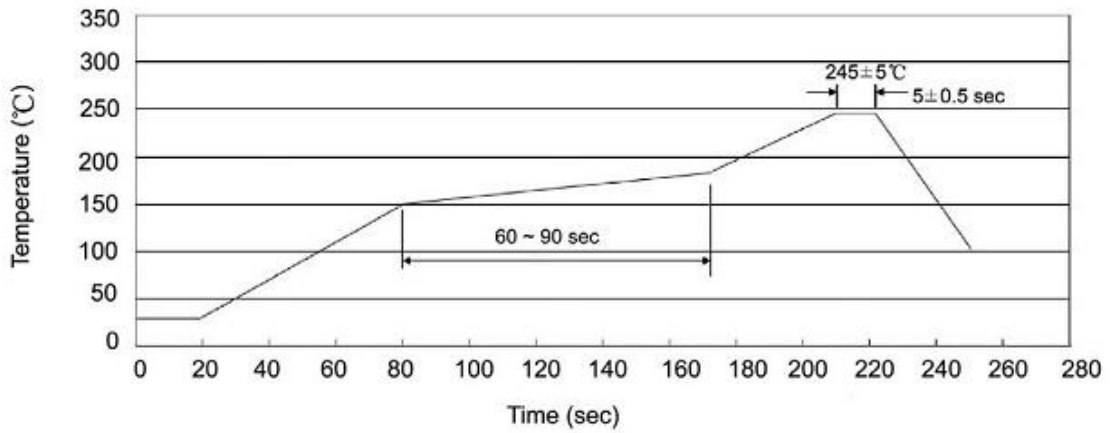
\*\*\*\* : 为生产批号追溯码，第 1 个\*为年月代码，后面 3 个\*为当月小批号代码

Note:

FMB40M : Product Type Code

\*\*\*\* : Lot No. Code , The 1st \* means:YM Code , The last 3 \* means:little Lot  
No Code

**回流焊温度曲线图(无铅) / Temperature Profile for IR Reflow Soldering(Pb-Free)**



说明：

- 1、预热温度 150 ~ 180°C，时间 60 ~ 90sec;
- 2、峰值温度 245±5°C，时间持续为 5±0.5sec;
- 3、焊接制程冷却速度为 2 ~ 10°C/sec.

Note:

- 1.Preheating:150~180°C, Time:60~90sec.
- 2.Peak Temp.:245±5°C, Duration:5±0.5sec.
3. Cooling Speed: 2~10°C/sec.

**耐焊接热试验条件 / Resistance to Soldering Heat Test Conditions**

温度：260±5°C

时间：10±1 sec.

Temp.:260±5°C

Time:10±1 sec

**包装规格 / Packaging SPEC.**

卷盘包装 / REEL

| Package Type<br>封装形式 | Units 包装数量         |                         |                        |                              |                        | Dimension 包装尺寸 (unit: mm <sup>3</sup> ) |                |                 |
|----------------------|--------------------|-------------------------|------------------------|------------------------------|------------------------|---|----------------|-----------------|
|                      | Units/Reel<br>只/卷盘 | Reels/Inner Box<br>卷盘/盒 | Units/Inner Box<br>只/盒 | Inner Boxes/Outer Box<br>盒/箱 | Units/Outer Box<br>只/箱 | Reel                                    | Inner Box 盒    | Outer Box 箱     |
| UMSB                 | 3000               | 2                       | 6000                   | 5                            | 30000                  | 13 "×16                                 | 337 × 337 × 49 | 345 × 345 × 280 |

**使用说明 / Notices**