

# FMSB30B~FMSB30M

Rev.A Mar.-2023

## 描述 / Descriptions

3.0A 表面贴装玻璃钝化整流桥，薄型 UMSB 封装。

3.0A Surface Mount Glass Passivated Bridge Rectifier,UMSB thin package.

## 特征 / Features

玻璃钝化芯片，快速反向恢复时间，反向电压：100V~1000V，正向电流：3.0A，适用表面贴装，无卤产品。

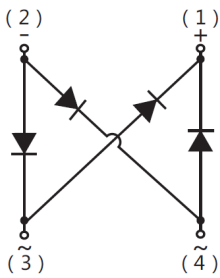
Glass Passivated Chip Junction, Fast reverse recovery time, Reverse Voltage :100 to 1000V, Forward Current: 3.0A, Designed for Surface Mount Application,HF product.

## 用途 / Applications

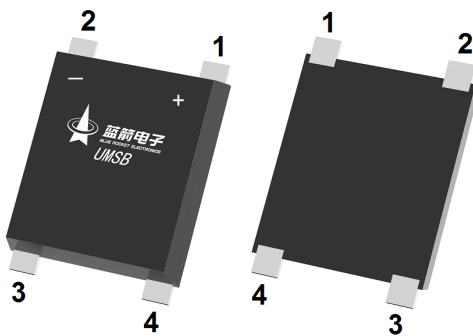
一般用途。

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 Parameter	符号 Symbol	数值 Rating						单位 Unit
		FMSB30B	FMSB30D	FMSB30G	FMSB30J	FMSB30K	FMSB30M	
Maximum Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	100	200	400	600	800	1000	V
Maximum RMS voltage	V <sub>RMS</sub>	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	100	200	400	600	800	1000	V
Average Rectified Output Current at T <sub>c</sub> = 115 °C	I <sub>o</sub>	3.0						A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I <sub>FSM</sub>	90						A
Typical Junction Capacitance (Note1)	C <sub>i</sub>	40						pF
Typical Thermal Resistance (Note2)	R <sub>θJA</sub>	65						°C/W
	R <sub>θJC</sub>	15						
	R <sub>θJL</sub>	30						
Maximum Reverse Recovery Time (Note3)	t <sub>rr</sub>	150			250	500		ns
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>stg</sub>	-55~+150						°C

Note:

1. Measured at 1MHz and applied reverse voltage of 4 V D.C.
2. Mounted on glass epoxy PC board with 4×1.5"×1.5" ( 3.81×3.81cm ) copper pad.
3. Measured with I<sub>F</sub>= 0.5 A, I<sub>R</sub> = 1 A, I<sub>rr</sub> = 0.25 A .

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

参数 Parameter	符号 Symbol	测试条件 Test Conditions	数值 Rating					单位 Unit
			FMSB30B	FMSB30D	FMSB30G	FMSB30J	FMSB30K	
Forward Voltage per element	V <sub>F</sub>	I <sub>F</sub> =3.0A	1.3					V
Maximum DC Reverse Current at Maximum DC Blocking Voltage	I <sub>R</sub>	T <sub>a</sub> =25°C	5.0					μA
		T <sub>a</sub> =125°C	200					

电参数曲线图 / Electrical Characteristic Curve

Fig.1 Average Rectified Output Current Derating Curve

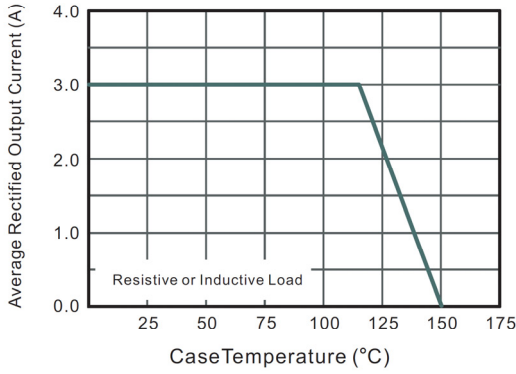


Fig.2 Typical Reverse Characteristics

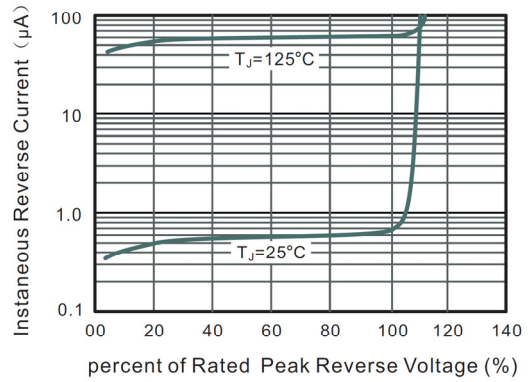


Fig.3 Typical Instantaneous Forward Characteristics

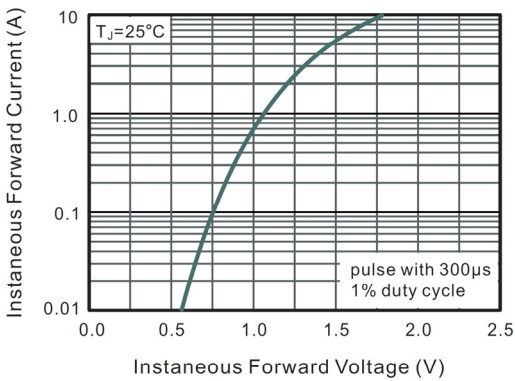


Fig.4 Typical Junction Capacitance

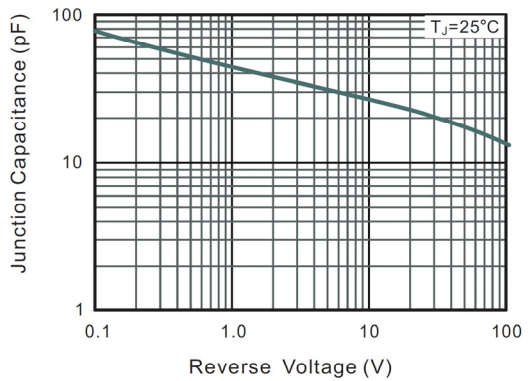


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

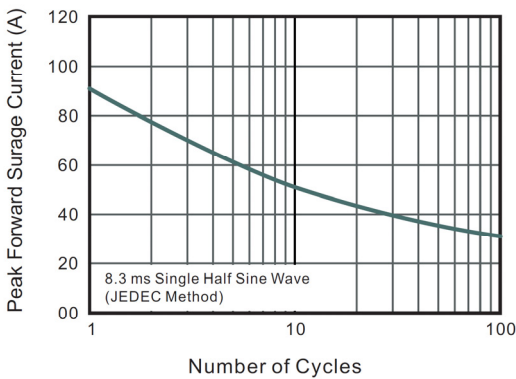
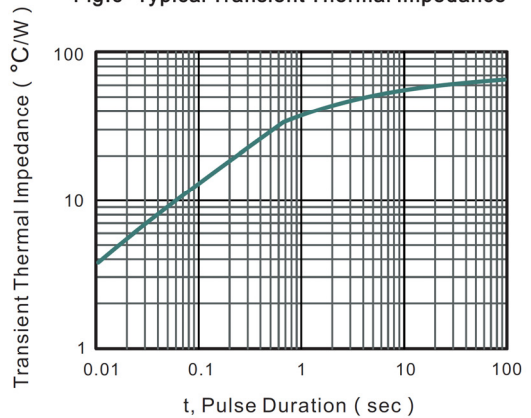
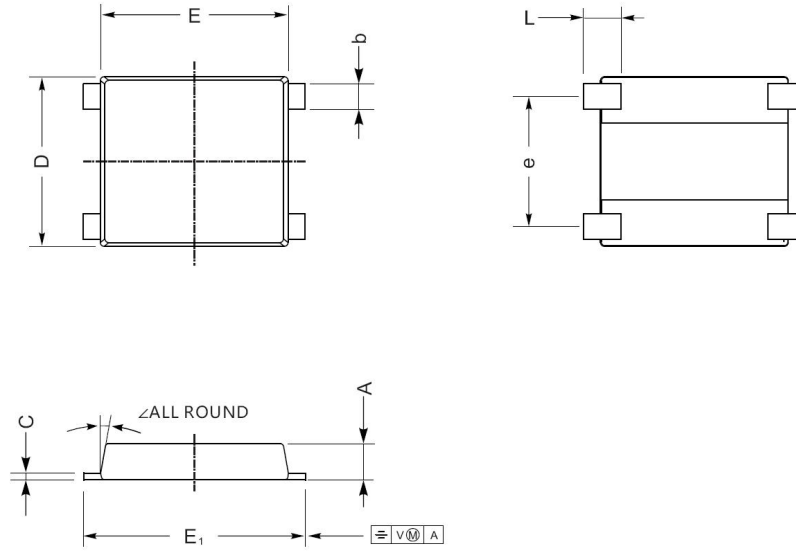


Fig.6- Typical Transient Thermal Impedance



外形尺寸图 / Package Dimensions

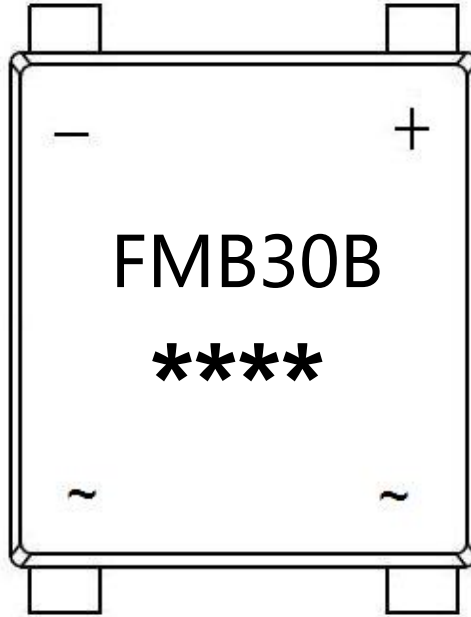
UMSB



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

FMB30B : 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:

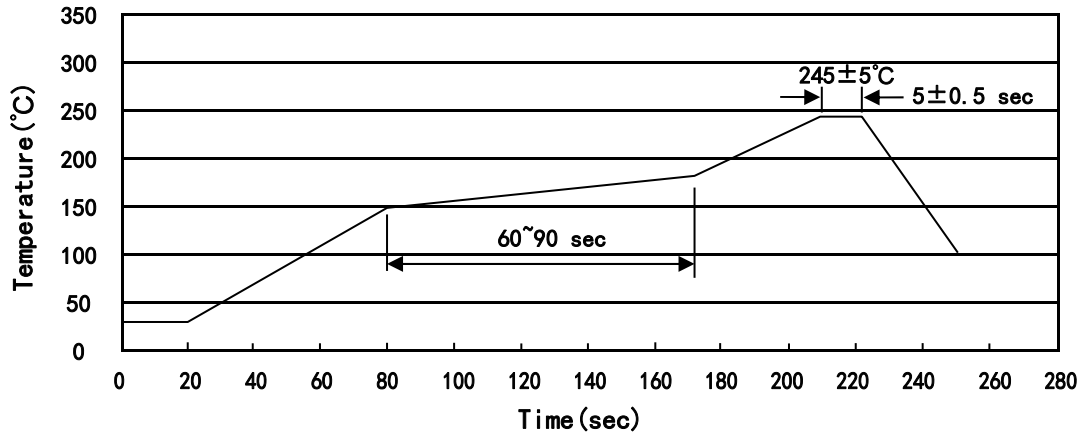
FMB30B : Product Type Code

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

### Marking

Type number	Marking code
FMSB30B	FMB30B
FMSB30D	FMB30D
FMSB30G	FMB30G
FMSB30J	FMB30J
FMSB30K	FMB30K
FMSB30M	FMB30M

**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 封装形式	Units 包装数量					Dimension 包装尺寸 (unit: mm <sup>3</sup> )		
	Units/Reel 只/卷盘	Reels/Inner Box 卷盘/盒	Units/Inner Box 只/盒	Inner Boxes/Outer Box 盒/箱	Units/Outer Box 只/箱	Reel	Inner Box 盒	Outer Box 箱
UMSB	3,000	2	6,000	6	36,000	13"×16	337×337×49	380×335×366

**使用说明 / Notices**