

MSB20B-MSB20M

Rev.A Oct.-2023

描述 / Descriptions

2.0A 表面贴装玻璃钝化整流桥，薄型 UMSB 封装。
 2.0A Surface Mount Glass Passivated Bridge Rectifier, UMSB thin package.

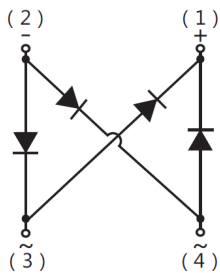
特征 / Features

玻璃钝化芯片，浪涌电流大，反向电压：100V~1000V，正向电流：2.0A，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: 2.0A, Designed for Surface Mount Application, HF product.

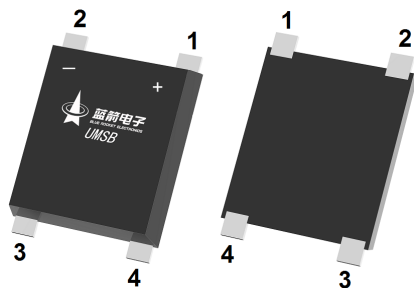
用途 / Applications

一般用途。
 General purpose.

内部等效电路 / Equivalent Circuit

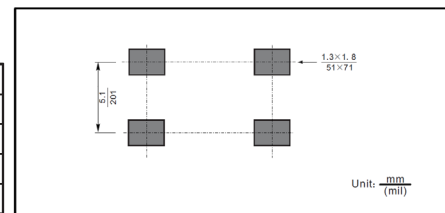


引脚排列 / Pinning



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

The recommended mounting pad size



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
		MSB20B	MSB20D	MSB20G	MSB20J	MSB20K	MSB20M	
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	100	200	400	600	800	1000	V
Average Rectified Output Current	I_o	2.0						A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	50						A
Typical Junction Capacitance (Note1)	C_i	30						pF
Typical Thermal Resistance (Note2)	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	60 10 25						°C/W
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. Mounted on glass epoxy PC board with 4×1.5"×1.5" (3.81×3.81 cm) copper pad.

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
Maximum Forward Voltage	V_F	$I_F=2.0A$	1.1	V
Maximum DC Reverse Current at Rated DC Blocking Voltage	I_R	$T_a=25^\circ C$	5	μA
		$T_a=125^\circ C$	100	

电参数曲线图 / Electrical Characteristic Curve

Fig.1 Average Rectified Output Current Derating Curve

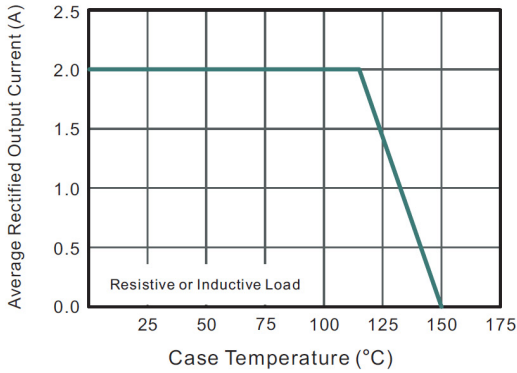


Fig.2 Typical Reverse Characteristics

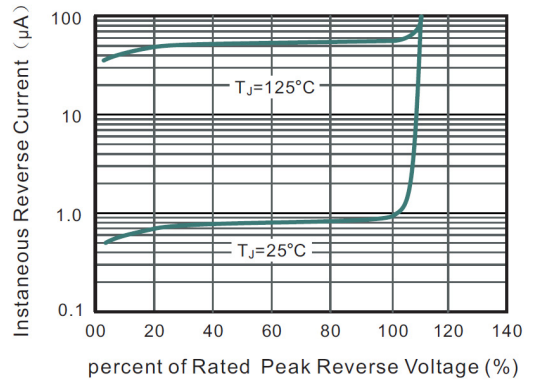


Fig.3 Typical Instaneous Forward Characteristics

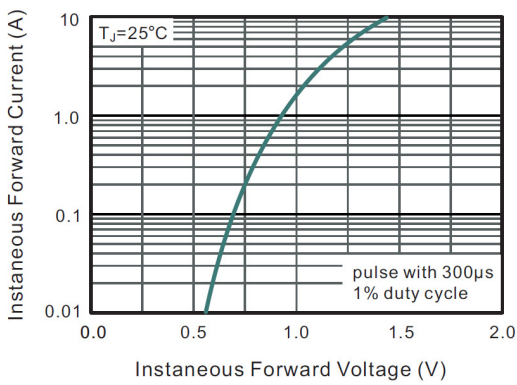


Fig.4 Typical Junction Capacitance

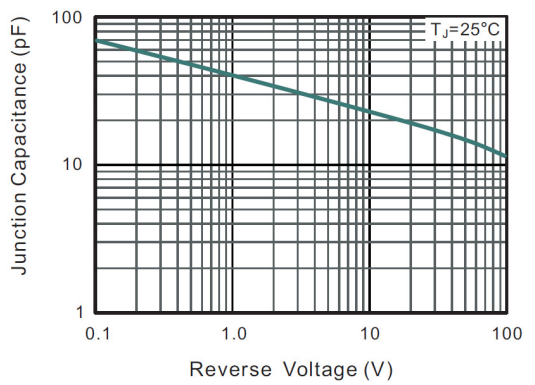


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

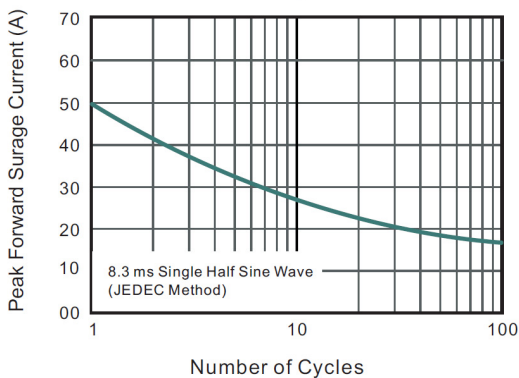
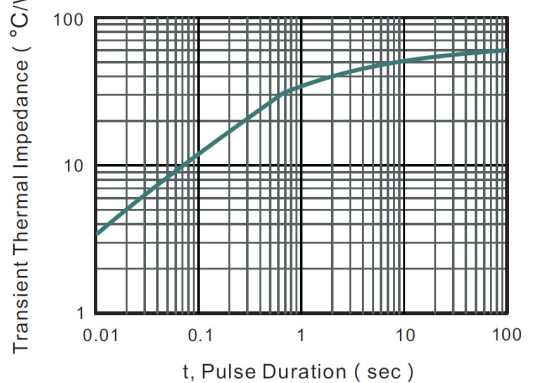
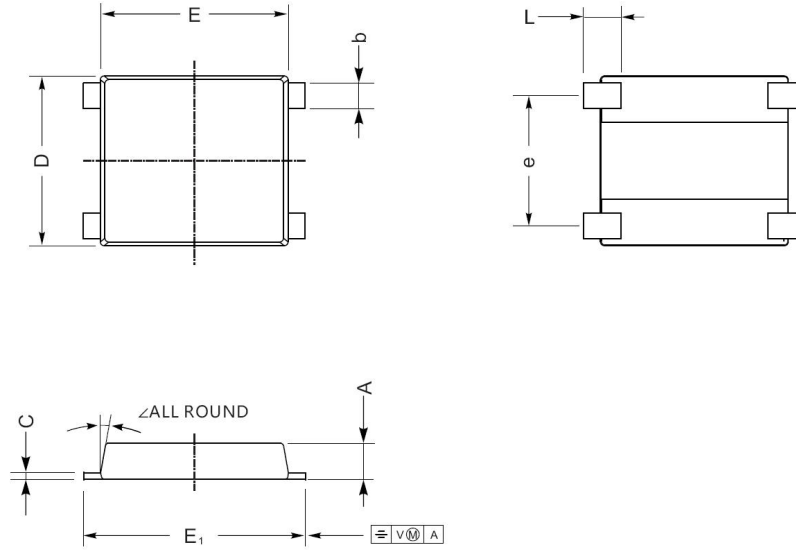


Fig.6- Typical Transient Thermal Impedance



外形尺寸图 / Package Dimensions

UMSB



UMSB mechanical data

UNIT		A	C	D	E	E ₁	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

MB20M : 为型号代码

**** : 为生产批号代码，随生产批号变化

Note:

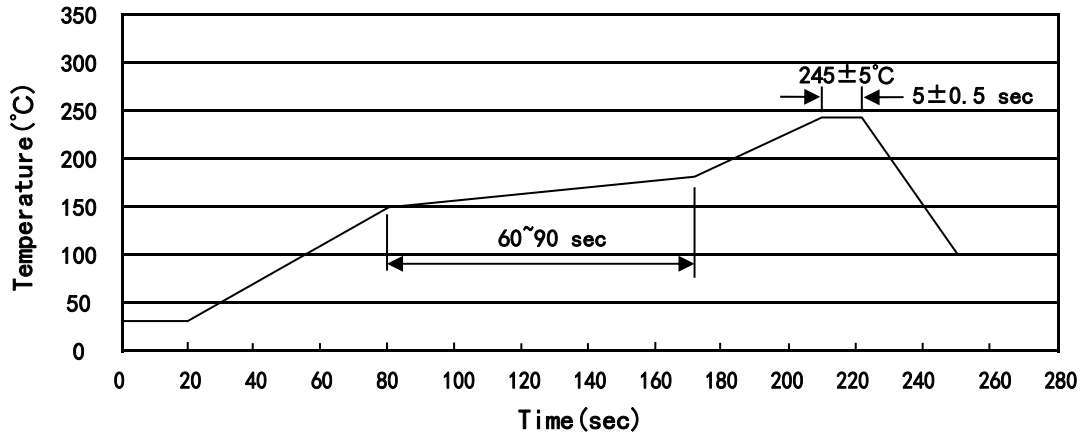
MB20M : Product Type Code

**** : Lot No. Code, code change with Lot No

Marking

Type number	Marking code
MSB20B	MB20B
MSB20D	MB20D
MSB20G	MB20G
MSB20J	MB20J
MSB20K	MB20K
MSB20M	MB20M

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 ³)		
	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