

# MSB20B-MSB20M

Rev.A Oct.-2023

## / Descriptions

2.0A

UMSB

2.0A Surface Mount Glass Passivated Bridge Rectifier,UMSB thin package.

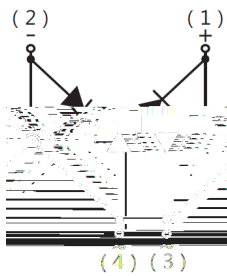
## / Features

Glass Passivated Chip Junction, High Surge Current Capability, Reverse Voltage :100 to 1000V,  
Forward Current: 2.0A, Designed for Surface Mount Application,HF product.

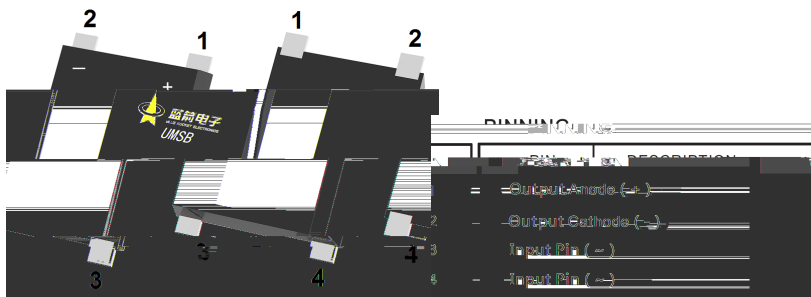
## / Applications

General purpose.

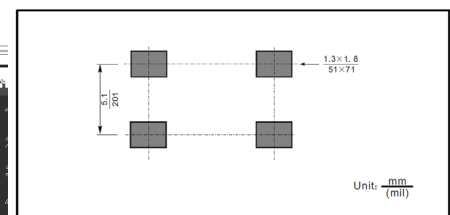
## / Equivalent Circuit



## / Pinning



The recommended mounting pad size



## / Marking

See Marking Instructions.

/ Absolute Maximum Ratings( $T_a=25^\circ\text{C}$ )

| Parameter                                                                                         | Symbol                                                   | Rating         |        |        |        |        |        | Unit |
|---------------------------------------------------------------------------------------------------|----------------------------------------------------------|----------------|--------|--------|--------|--------|--------|------|
|                                                                                                   |                                                          | MSB20B         | MSB20D | MSB20G | MSB20J | MSB20K | MSB20M |      |
| 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                                                                  | I <sub>o</sub>                                           | 2.0            |        |        |        |        |        | A    |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load (JEDEC Method) | I <sub>FSM</sub>                                         | 50             |        |        |        |        |        | A    |
| Typical Junction Capacitance <small>Note1</small>                                                 | C <sub>i</sub>                                           | 30             |        |        |        |        |        | pF   |
| Typical Thermal Resistance <small>Note2</small>                                                   | R <sub>θJA</sub><br>R <sub>θJC</sub><br>R <sub>θJL</sub> | 60<br>10<br>25 |        |        |        |        |        | /W   |
| Operating and Storage Temperature Range                                                           | T <sub>j</sub> , T <sub>stg</sub>                        | -55~+150       |        |        |        |        |        |      |

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.

/ Electrical Characteristics( $T_a=25^\circ\text{C}$ )

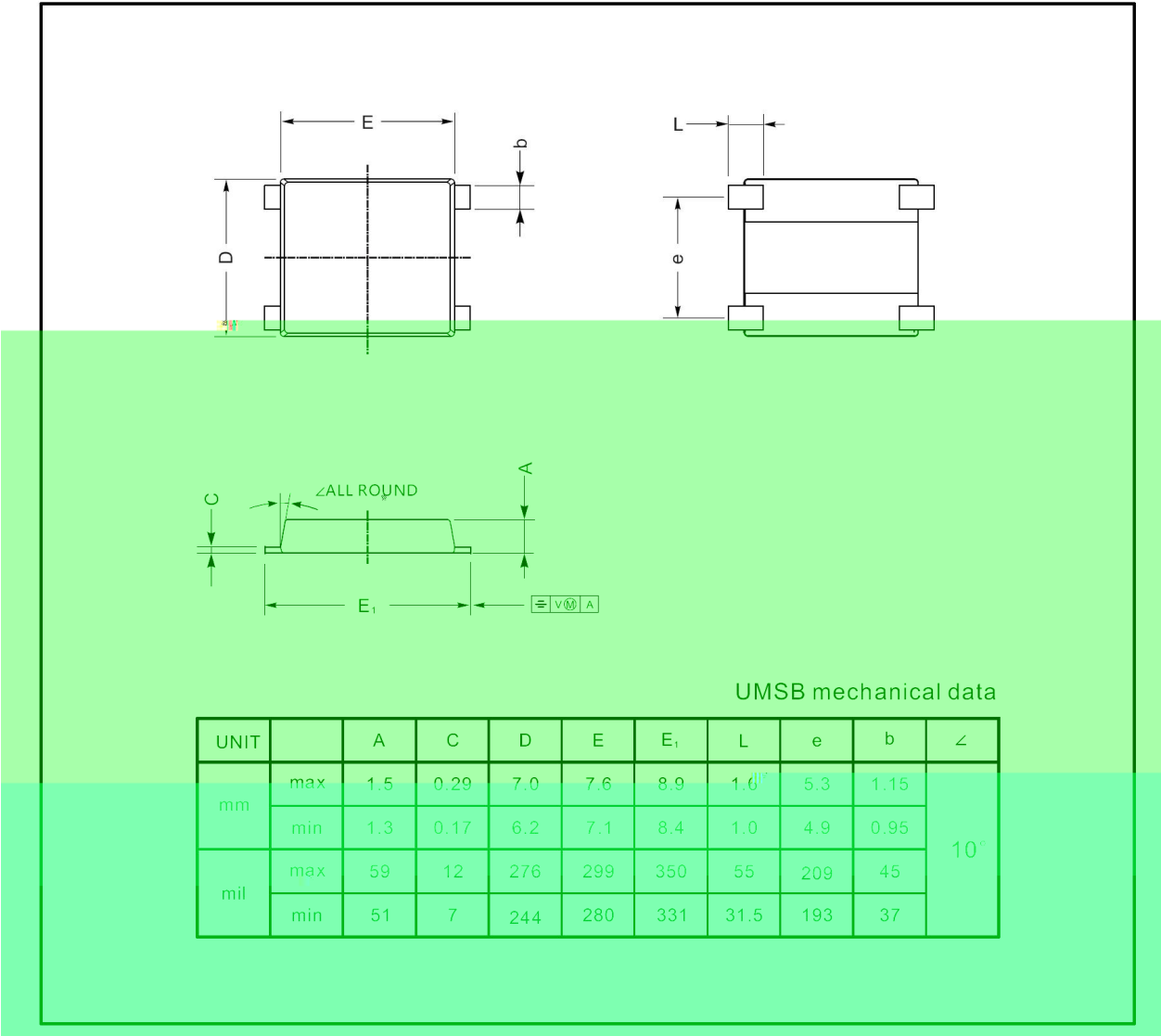
| Parameter                                               | Symbol | Test Conditions | Rating | Unit    |
|---------------------------------------------------------|--------|-----------------|--------|---------|
| Maximum Forward Voltage                                 | $V_F$  | $I_F=2.0A$      | 1.1    | V       |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | $I_R$  | $T_a=25$        | 5      | $\mu A$ |
|                                                         |        | $T_a=125$       | 100    |         |

/ Electrical Characteristic Curve

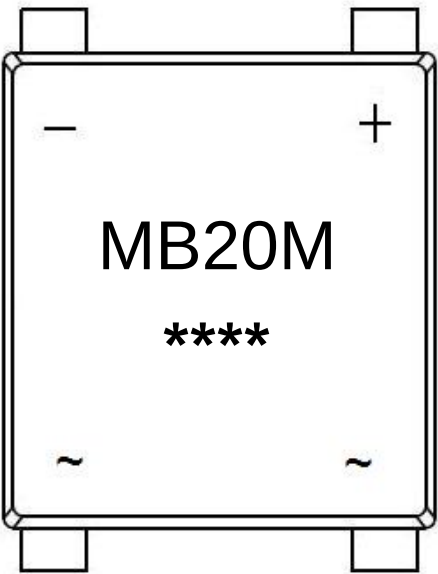


/ Package Dimensions

UMSB



/ Marking Instructions



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Note:

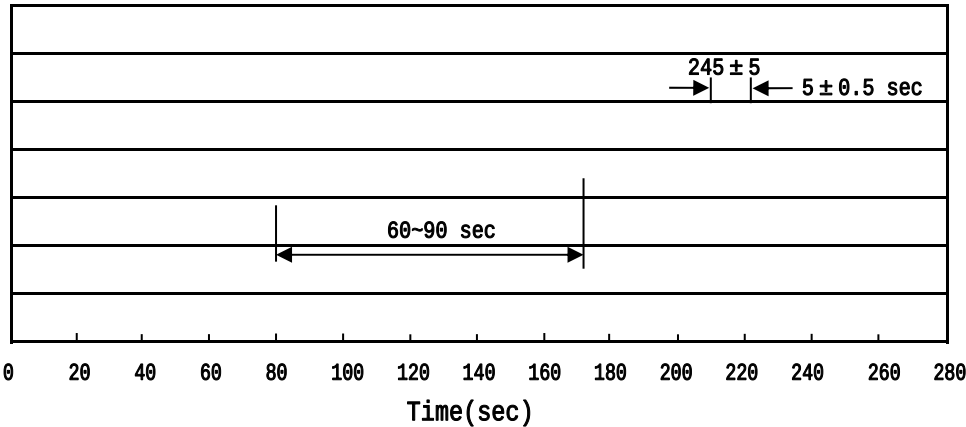
Product Type Code

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Marking

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

( ) /



Note:

- 1

150 180

60 90sec;

1.Preheating:150~180 , Time:60~90sec.
- 2

245 5

5 0.5sec;

2.Peak Temp.:245 5 , Duration:5 0.5sec.
- 3

2 10 /sec.

3. Cooling Speed: 2~10 /sec.

/ Resistance to Soldering Heat Test Conditions

260 5 10 1 sec. Temp.:260±5 Time:10±1 sec

/ Packaging SPEC.

/ REEL

| Package Type<br>7~ E | Units ;>û H |         |       |         |        | Dimension ;>û p . (unit /Æmm³) |            |             |
|----------------------|-------------|---------|-------|---------|--------|--------------------------------|------------|-------------|
|                      | Æ /--       | Æ -- /- | Æ /-  | Æ - /1ç | Æ /1ç  | Æ                              | Æ -        | Æ 1ç        |
| UMSB                 | 3,000       | 2       | 6,000 | 6       | 36,000 | 13"×16                         | 337×337×49 | 380×335×366 |

/ Notices