

## 产品规格书

### Specifcation of products

产品名称:快速单相桥

产品型号: MFQ180U3NZH5

浙江世菱半导体有限公司  
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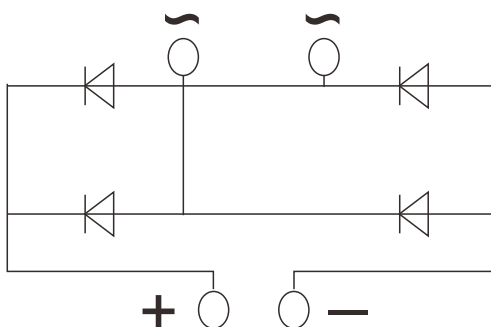
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|     |     |     |
|-----|-----|-----|
| 拟制  | 审核  | 核准  |
| 蓝少波 | 陈一凡 | 曹剑龙 |

| SYMBOL               | CHARACTERISTIC                           | TEST CONDITIONS                                                       | T <sub>j</sub> (°C) | VALUE |      |       | UNIT                             |
|----------------------|------------------------------------------|-----------------------------------------------------------------------|---------------------|-------|------|-------|----------------------------------|
|                      |                                          |                                                                       |                     | Min   | Type | Max   |                                  |
| I <sub>O</sub>       | DC output current                        | Single-phase full wave rectifying circuit, T <sub>C</sub> =100°C      | 125                 |       | 180  |       | A                                |
| V <sub>RRM</sub>     | Repetitive peak reverse voltage          | V <sub>RRM</sub> tp=10ms                                              | 125                 |       | 300  |       | V                                |
| I <sub>RRM</sub>     | Repetitive peak current                  | at V <sub>RRM</sub>                                                   | 125                 |       |      | 5     | mA                               |
| I <sub>FSM</sub>     | Surge forward current                    | 10ms half sine wave                                                   | 125                 |       | 1.8  |       | KA                               |
| I <sup>2</sup> t     | I <sup>2</sup> T for fusing coordination | V <sub>R</sub> =0.6V <sub>RRM</sub>                                   |                     |       | 10.9 |       | A <sup>2</sup> s*10 <sup>3</sup> |
| V <sub>FO</sub>      | Threshold voltage                        |                                                                       | 125                 |       |      | 0.75  | V                                |
| V <sub>FM</sub>      | Peak forward voltage                     | I <sub>FM</sub> =180A                                                 | 25                  |       |      | 1.20  | V                                |
| t <sub>rr</sub>      | Reverse Recove ry Tei m                  | I <sub>F</sub> =1A, V <sub>R</sub> =30V, di <sub>F</sub> /dt=-200A/μs |                     |       |      | 50    | ns                               |
| R <sub>th(j-c)</sub> | Thermal resistance Junction to heatsink  | Single side cooled                                                    |                     |       |      | 0.150 | °C /W                            |
| V <sub>iso</sub>     | Isolation voltage                        | 50Hz,R.M.S,t=1min,I <sub>iso</sub> :1mA(max)                          |                     | 2500  |      |       | V                                |
| F <sub>m</sub>       | Terminal connection torque(M6)           |                                                                       |                     |       | 5.0  |       | N.m                              |
|                      | Mounting torque(M6)                      |                                                                       |                     |       | 5.0  |       | N.m                              |
| T <sub>stg</sub>     | Stored temperature                       |                                                                       |                     | -40   |      | 125   | °C                               |
| W <sub>t</sub>       | Weight                                   |                                                                       |                     |       |      |       | g                                |
| Outline              |                                          |                                                                       |                     |       |      |       |                                  |

### OUTLINE DRAWING & CIRCUIT DIAGRAM



### Rating and Characteristic

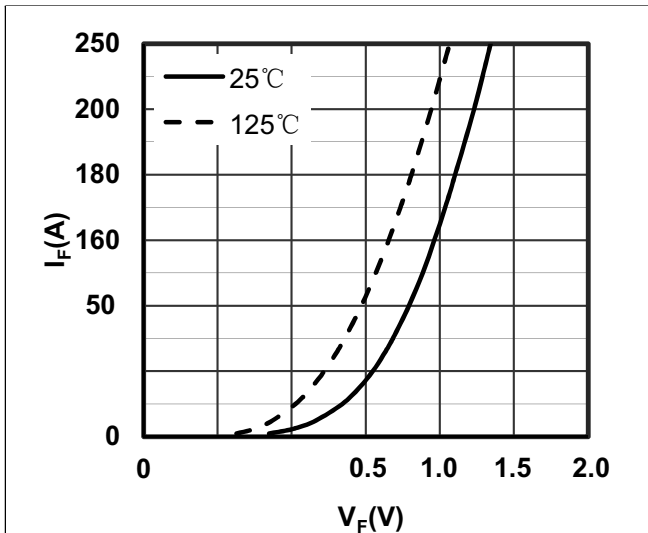


Fig1. Forward Characteristics

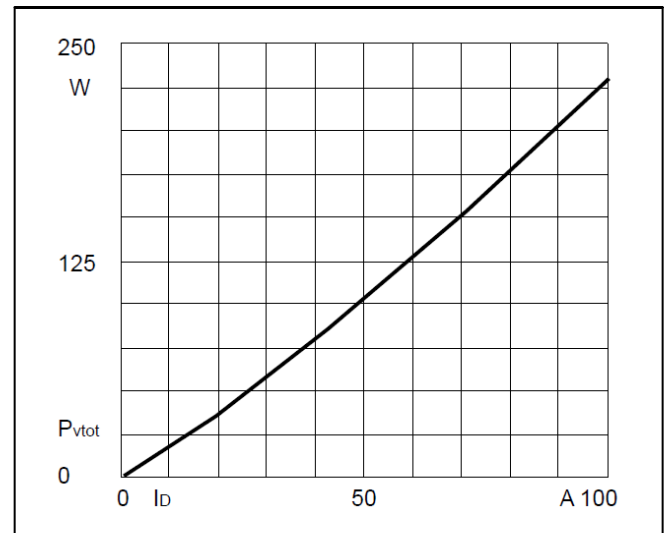


Fig2. Power dissipation

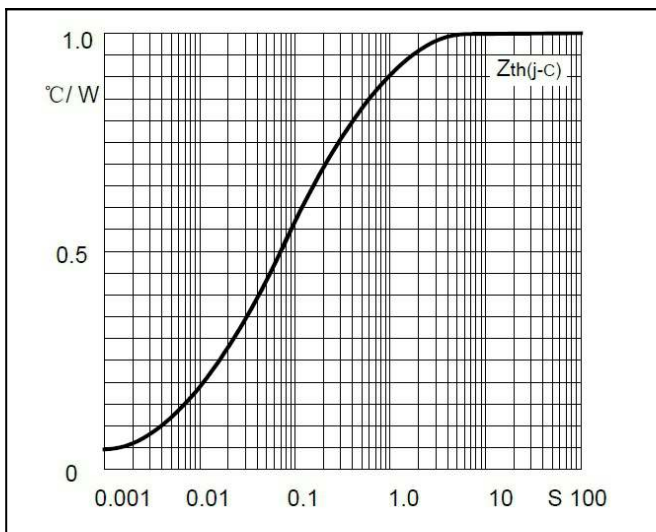


Fig3. Transient thermal impedance

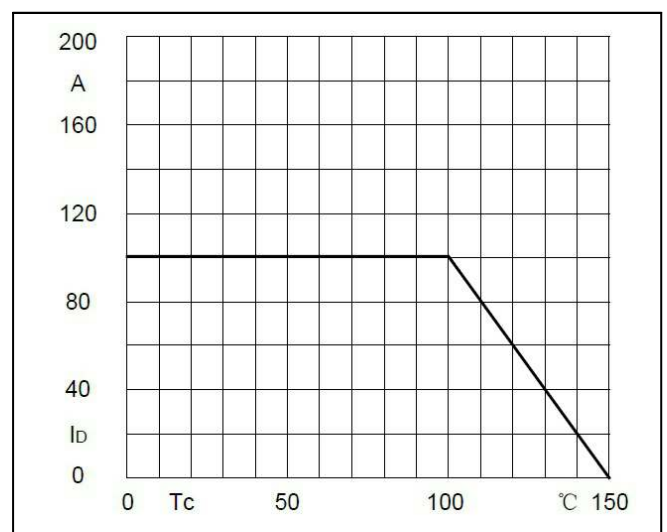
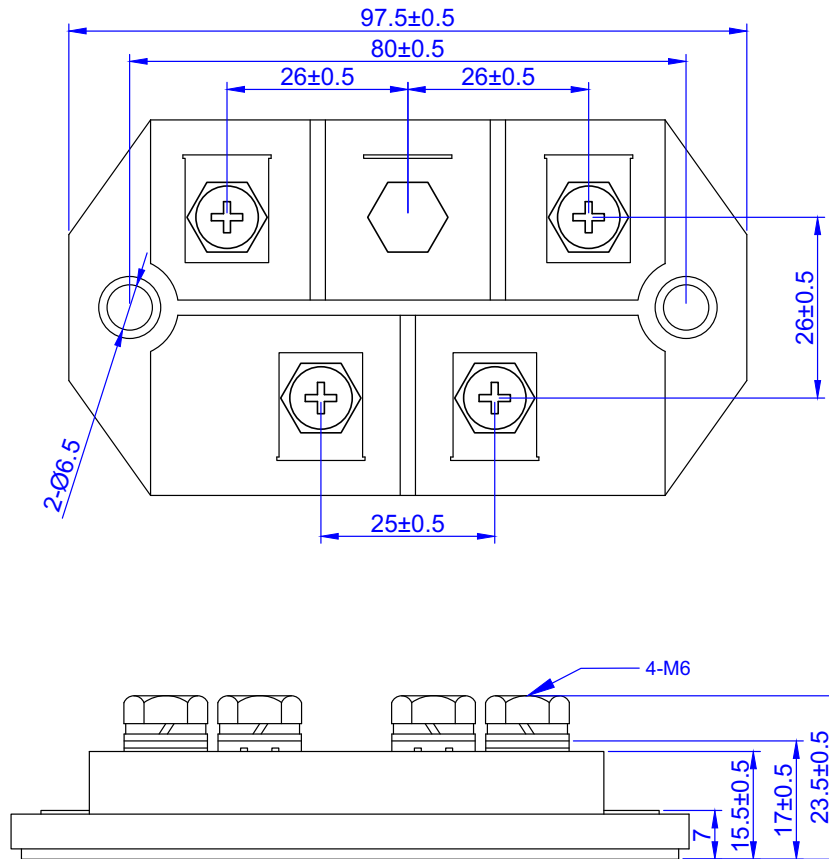


Fig4. Forward Current Derating Curve

## Package Outline Information



Unit:mm