

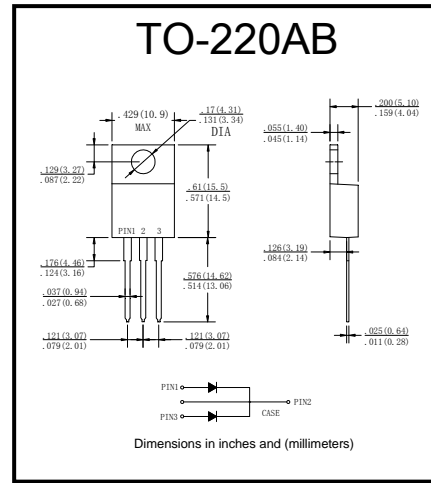


## 肖特基二极管 SCHOTTKY Diodes

### ■特征 Features

- 耐正向浪涌电流能力高  
High surge forward current capability
- 低功耗，大电流  
Low Power loss, High efficiency
- $I_o$  30.0A
- $V_{RRM}$  35-200V

### ■外形尺寸和印记 Outline Dimensions and Mark



### ■用途 Applications

- 快速整流用  
High speed switching

### ■极限值（绝对最大额定值）

#### Limiting Values (Absolute Maximum Rating)

| 参数名称<br>Item  | 符号<br>Symbol | 单位<br>Unit           | 测试条件<br>Test Conditions  | MBR30-CT   |    |    |    |    |    |    |     |     |     |     |
|---|--------------|----------------------|--|------------|----|----|----|----|----|----|-----|-----|-----|-----|
|   |              |                      |  | 35         | 40 | 45 | 50 | 60 | 80 | 90 | 100 | 150 | 200 |     |
| 反向重复峰值电压<br>Repetitive Peak Reverse Voltage         | $V_{RRM}$    | V                    |  | 35         | 40 | 45 | 50 | 60 | 80 | 90 | 100 | 150 | 200 | 200 |
| 平均整流输出电流<br>Average Rectified Output Current        | $I_o$        | A                    | 60Hz 正弦波，电阻负载， $T_a=25^\circ\text{C}$<br>60Hz sine wave, R- load, $T_a=25^\circ\text{C}$   | 30         |    |    |    |    |    |    |     |     |     |     |
| 正向（不重复）浪涌电流<br>Surge(Non-repetitive)Forward Current | $I_{FSM}$    | A                    | 60Hz正弦波，一个周期， $T_a=25^\circ\text{C}$<br>60Hz sine wave, 1 cycle, $T_a=25^\circ\text{C}$  | 200        |    |    |    |    |    |    |     |     |     |     |
| 正向浪涌电流的平方对电流浪涌持续时间的积分值<br>Current Squared Time      | $I^2t$       | $\text{A}^2\text{s}$ | $1\text{ms} \leq t < 8.3\text{ms}$ $T_j=25^\circ\text{C}$ , 单个二极管<br>$1\text{ms} \leq t < 8.3\text{ms}$ $T_j=25^\circ\text{C}$ , Rating of per diode | 167        |    |    |    |    |    |    |     |     |     |     |
| 贮存温度<br>Storage Temperature                         | $T_{stg}$    | $^\circ\text{C}$     |  | -55 ~ +150 |    |    |    |    |    |    |     |     |     |     |
| 结温<br>Junction Temperature                          | $T_j$        | $^\circ\text{C}$     | 在正向直流条件下，没有施加反向电压，通电 $\leq 1\text{h}$ （图示1）①<br>IN DC Forward Mode-Forward Operations, without reverse bias, $t \leq 1\text{h}$ (Fig. 1)①            | -55 ~ +150 |    |    |    |    |    |    |     |     |     |     |

### ■电特性（ $T_a=25^\circ\text{C}$ 除非另有规定）

#### Electrical Characteristics ( $T_a=25^\circ\text{C}$ Unless otherwise specified)

| 参数名称<br>Item                   | 符号<br>Symbol     | 单位<br>Unit                | 测试条件<br>Test Condition             | MBR30-CT               |    |     |    |      |    |      |      |     |     |  |
|--------------------------------|------------------|---------------------------|------------------------------------|------------------------|----|-----|----|------|----|------|------|-----|-----|--|
|                                |                  |                           |                                    | 35                     | 40 | 45  | 50 | 60   | 80 | 90   | 100  | 150 | 200 |  |
| 正向峰值电压<br>Peak Forward Voltage | $V_{FM}$         | V                         | $I_{FM}=15\text{A}$                | 0.7                    |    | 0.8 |    | 0.85 |    | 0.90 | 0.95 |     |     |  |
| 反向峰值电流<br>Peak Reverse Current | $I_{RRM1}$       | mA                        | $V_{RM}=V_{RRM}$                   | $T_a=25^\circ\text{C}$ |    |     |    |      |    |      |      |     |     |  |
|                                | $I_{RRM2}$       |                           |                                    | 20                     |    | 15  |    | 10   |    |      |      |     |     |  |
| 热阻<br>Thermal Resistance       | $R_{\theta J-C}$ | $^\circ\text{C}/\text{W}$ | 结和壳之间<br>Between junction and case | 2.0                    |    |     |    |      |    |      |      |     |     |  |

### 备注: Notes:

- 1) 热电阻从结到本体,每管脚到散热片的尺寸为 2"x3"x0.25 的铝板  
Thermal resistance from junction to case per leg with heat-sink size of 2"x3"x0.25" AL-plate



■ 特性曲线 (典型) Characteristics(Typical)

图1: 正向电流降额曲线

FIG1: IF (AV) --Tc Derating

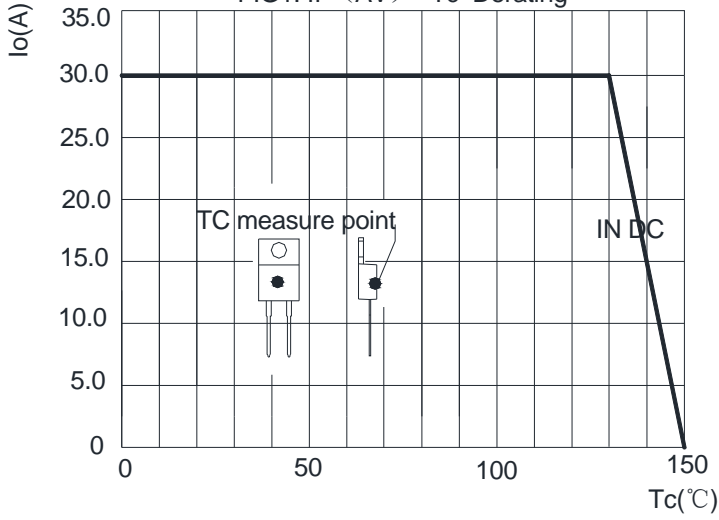


图2: 耐正向浪涌电流曲线

FIG2: Surge Forward Current Capability

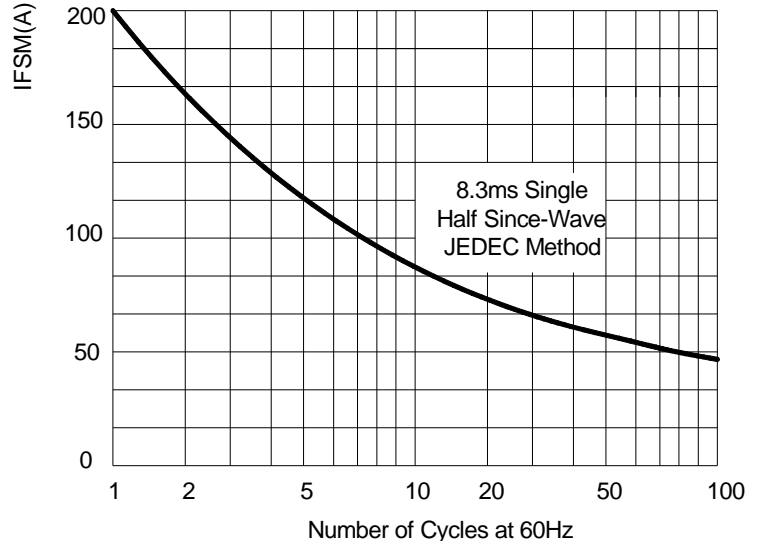


图3: 正向电压曲线

FIG3: Instantaneous Forward Voltage

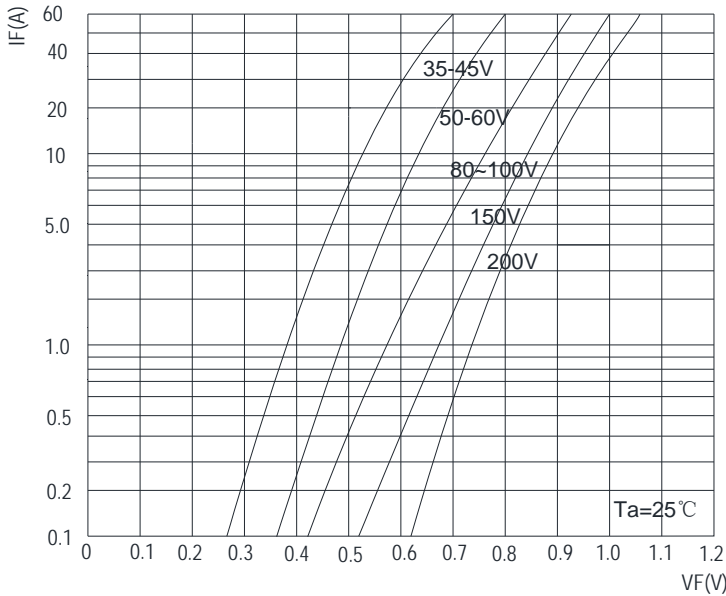


图4: 反向电流曲线

FIG4: Typical Reverse Characteristics

