

## 描述 / Descriptions

TO-220AC 塑封封装 超快恢复二极管。  
Ultrafast Recovery Diode in a TO-220AC Plastic Package.

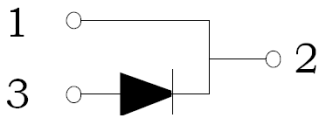
## 特征 / Features

超快恢复时间, 软恢复特性, 恢复损耗低, 低正向电压, 高浪涌电流能力, 低漏电流。  
Ultrafast Recovery Time, Soft Recovery Characteristics, Low Recovery Loss, Low Forward Voltage, High Surge Current Capability, Low Leakage Current.

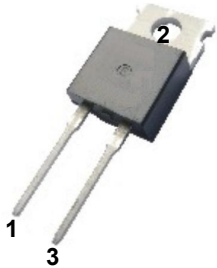
## 用途 / Applications

适用于续流, 缓冲, 钳位, 反转焊机, 电镀电源, 超声波清洗机和焊接机, 转换器, UPS。  
Freewheeling, Snubber, Clamp, Inversion Welder, Plating Power Supply, Ultrasonic Cleaner and Welder, Converter, UPS.

## 内部等效电路 / Equivalent Circuit



## 引脚排列 / Pinning



PIN1、2 : Cathode

PIN 3 : Anode

## 放大及印章代码 / $h_{FE}$ Classifications & Marking

见印章说明。 See Marking Instructions.

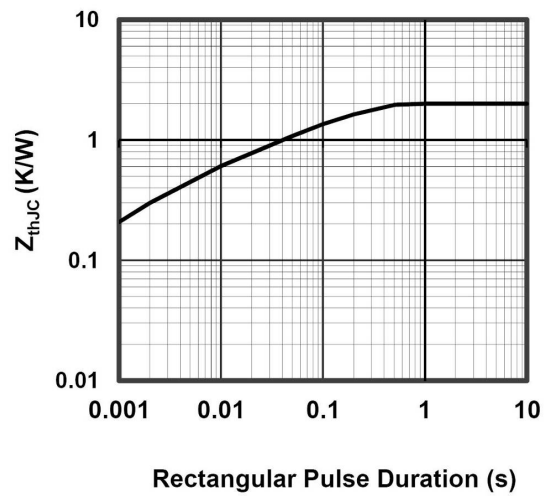
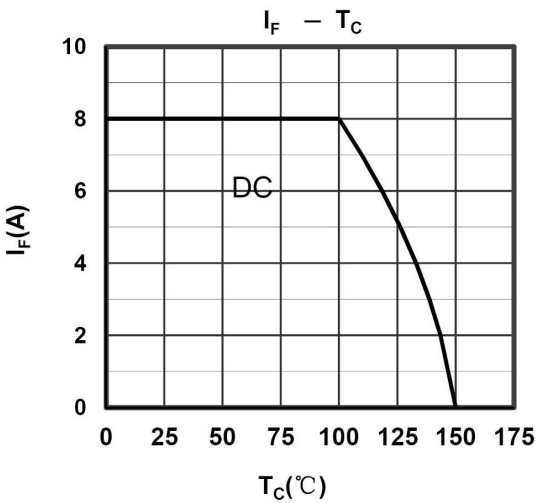
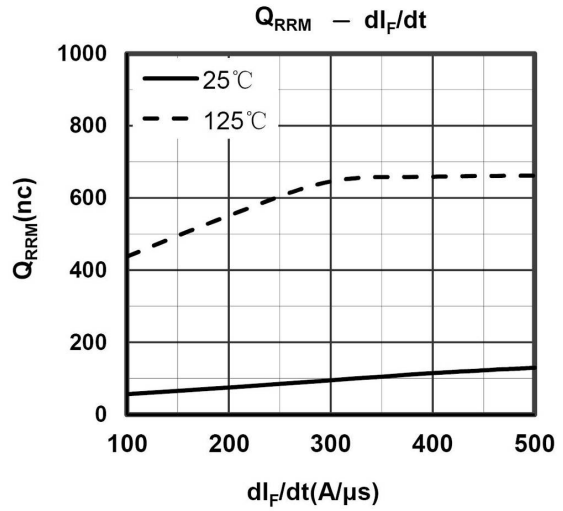
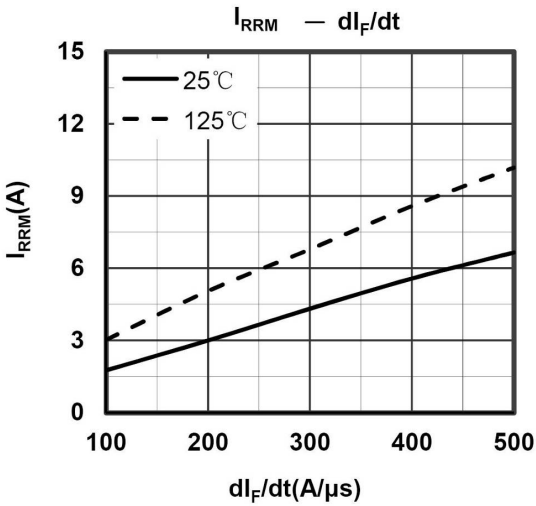
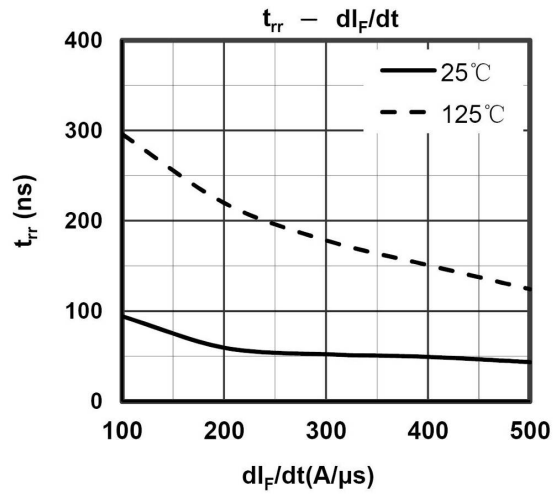
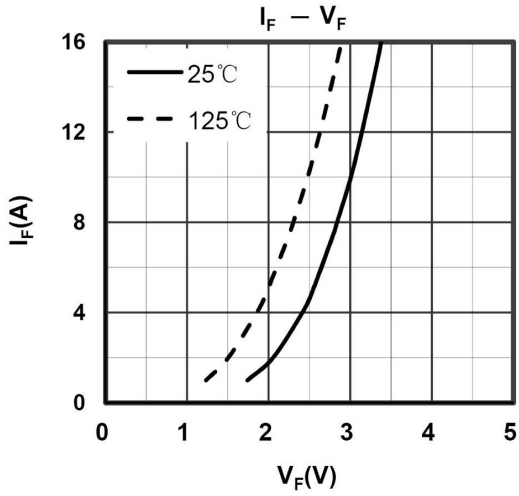
**极限参数 / Absolute Maximum Ratings(Ta=25°C)**

| 参数<br>Parameter   | 符号<br>Symbol                             | 数值<br>Rating | 单位<br>Unit         |
|---|--|--------------|--------------------|
| Peak Repetitive Reverse Voltage   | $V_{RRM}$                                | 1200         | V                  |
| Peak Reverse Voltage  | $V_R$                                    | 1200         | V                  |
| Average Rectified Forward Current   | $I_{F(AV)}$ ( $T_c=110^\circ\text{C}$ )  | 8            | A                  |
| Average Rectified Forward Current(RMS)  | $I_{F(RMS)}$ ( $T_c=110^\circ\text{C}$ ) | 12           | A                  |
| Non Repetitive Peak Surge Current( $T_J=45^\circ\text{C}$ , $t=10\text{ms}$ , 50Hz, Sine) | $I_{FSM}$                                | 60           | A                  |
| Power Dissipation   | $P_D$                                    | 62           | W                  |
| Thermal Resistance Junction to Case   | $R_{\theta JC}$                          | 2.0          | $^\circ\text{C/W}$ |
| Junction Temperature  | $T_J$                                    | -55~+150     | $^\circ\text{C}$   |
| Storage Temperature Range   | $T_{stg}$                                | -55~+125     | $^\circ\text{C}$   |

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

| 参数<br>Parameter                       | 符号<br>Symbol | 测试条件<br>Test Conditions  | 最小值<br>Min | 典型值<br>Typ | 最大值<br>Max | 单位<br>Unit    |
|---------------------------------------|--------------|--|------------|------------|------------|---------------|
| Forward Voltage                       | $V_F$        | $I_F=8\text{A}$  |            | 2.8        | 3.2        | V             |
|                                       |              | $I_F=8\text{A}$ $T_J=125^\circ\text{C}$                                    |            | 2.3        |            | V             |
| Maximum Instantaneous Reverse Current | $I_{RM}$     | $V_R=1200\text{V}$   |            |            | 10         | $\mu\text{A}$ |
|                                       |              | $V_R=1200\text{V}$ $T_J=125^\circ\text{C}$                                 |            |            | 1          | mA            |
| Reverse Recovery Time                 | $t_{rr}$     | $I_F=1\text{A}$ $V_R=30\text{V}$<br>$diF/dt=-200\text{A}/\mu\text{s}$      |            | 20         | 25         | ns            |
|                                       |              | $I_F=0.5\text{A}$ $I_R=1.0\text{A}$<br>$I_{RR}=0.25\text{A}$               |            | 35         | 40         | ns            |
|                                       |              | $V_R=600\text{V}$ $I_F=8\text{A}$<br>$diF/dt=-200\text{A}/\mu\text{s}$     |            | 60         |            | ns            |
| Peak Repetitive Reverse Current       | $I_{RRM}$    | $V_R=600\text{V}$ $I_F=8\text{A}$<br>$diF/dt=-200\text{A}/\mu\text{s}$     |            | 3.0        |            | A             |
| Reverse Recovery Time                 | $t_{rr}$     | $V_R=600\text{V}$ , $I_F=8\text{A}$<br>$diF/dt=-200\text{A}/\mu\text{s}$ , |            | 220        |            | ns            |
| Peak Repetitive Reverse Current       | $I_{RRM}$    | $T_J=125^\circ\text{C}$  |            | 5.0        |            | A             |

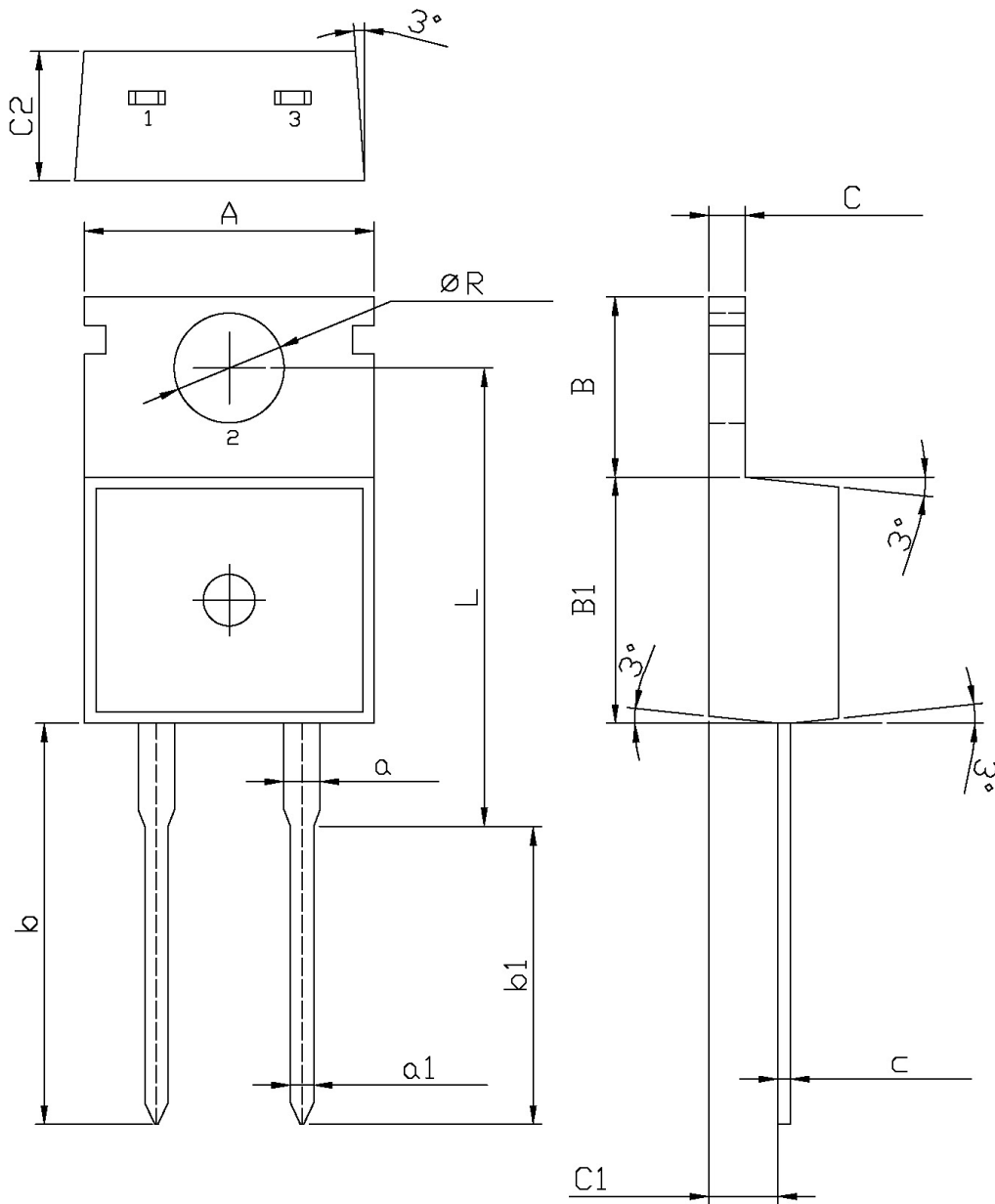
## 电参数曲线图 / Electrical Characteristic Curve



外形尺寸图 / Package Dimensions

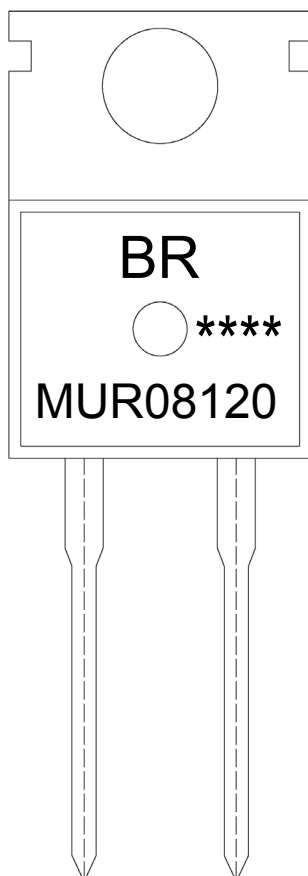
TO-220AC

Unit:mm



| Symbol | Dimensions In Millimeters |      | Symbol | Dimensions In Millimeters |     |
|--------|---------------------------|------|--------|---------------------------|-----|
|        | Min                       | Max  |        | Min                       | Max |
| A      | 9.8                       | 10.2 | B      | 6.3                       | 6.7 |
| R      | 3.56                      | 3.64 | B1     | 9.0                       | 9.4 |
| L      | 15.7                      | 16.1 | C1     | 2.2                       | 2.6 |
| b      | 12.6                      | 13.6 | C      | 1.2                       | 1.4 |
| b1     | 9.6                       | 10.6 | c      | 0.4                       | 0.6 |
| a      | 1.22                      | 1.32 | C2     | 4.3                       | 4.7 |
| a1     | 0.7                       | 0.9  |        |                           |     |

## 印章说明 / Marking Instructions



说明：

BR： 为公司代码

MUR08120： 为型号代码

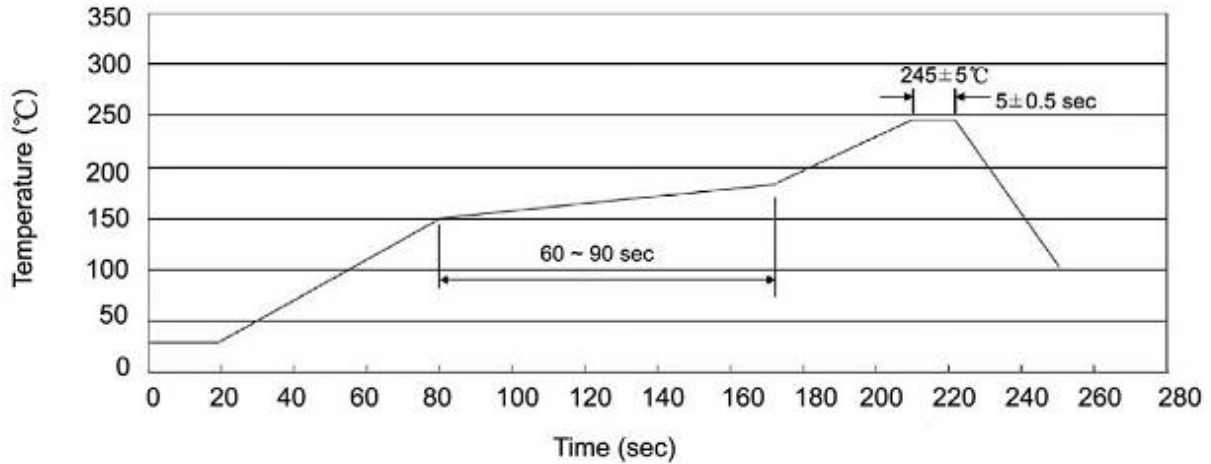
\*\*\*\*： 为生产批号代码，随生产批号变化。

Note:

BR: Company Code

MUR08120: Product Type Code.

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

**波峰焊温度曲线图(无铅) / Temperature Profile for Dip Soldering(Pb-Free)**


说明：

- 1、预热温度 150~180°C，时间 60~90sec；
- 2、峰值温度 255±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.:255±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：270±5°C

时间：10±1 sec.

Temp.:270±5°C

Time:10±1 sec

**包装规格 / Packaging SPEC.**

散件包装 / BULK

| Package Type<br>封装形式 | Units 包装数量       |                       |                        |                              |                        | Dimension 包装尺寸 (unit: mm <sup>3</sup> ) |             |             |
|----------------------|------------------|-----------------------|------------------------|------------------------------|------------------------|---|-------------|-------------|
|                      | Units/Bag<br>只/袋 | Bags/Inner Box<br>袋/盒 | Units/Inner Box<br>只/盒 | Inner Boxes/Outer Box<br>盒/箱 | Units/Outer Box<br>只/箱 | Bag 袋                                   | Inner Box 盒 | Outer Box 箱 |
| TO-220/F/AC          | 200              | 10                    | 2,000                  | 5                            | 10,000                 | 135×190                                 | 237×172×102 | 560×245×195 |

套管包装 / TUBE

| Package Type<br>封装形式 | Units 包装数量         |                         |                        |                              |                        | Dimension 包装尺寸 (unit: mm <sup>3</sup> ) |             |             |
|----------------------|--------------------|-------------------------|------------------------|------------------------------|------------------------|---|-------------|-------------|
|                      | Units/Tube<br>只/套管 | Tubes/Inner Box<br>套管/盒 | Units/Inner Box<br>只/盒 | Inner Boxes/Outer Box<br>盒/箱 | Units/Outer Box<br>只/箱 | Tube 套管                                 | Inner Box 盒 | Outer Box 箱 |
| TO-220/F/AC          | 50                 | 20                      | 1,000                  | 5                            | 5,000                  | 532×31.4×5.5                            | 555×164×50  | 575×290×180 |

**使用说明 / Notices**