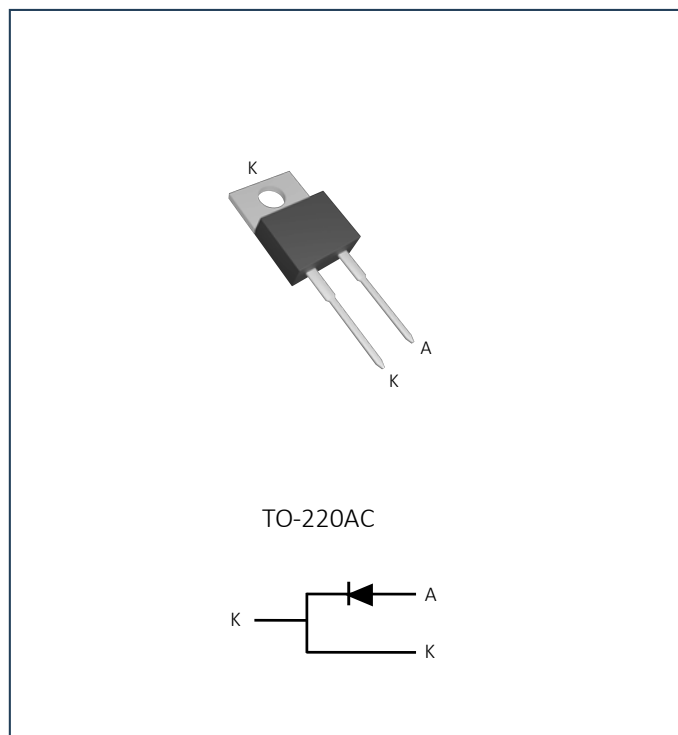


## 超快恢复二极管整流器

## Super Fast Recovery Rectifier

### 封装外形 Package



### 主要参数 Device summary

| Symbol       | Value           |
|--------------|-----------------|
| $I_F(AV)$    | 10A             |
| $V_{RRM}$    | 600V            |
| $V_F(typ)$   | 1.21V/10A@125°C |
| $I_R(typ)$   | 0.05mA@125°C    |
| $T_{j(max)}$ | 150°C           |

### 机械数据 Mechanical Data

- 模塑料符合 UL 94 V-0 易燃等级，符合 RoHS 标准  
Molding compound meets UL 94 V-0 flammability rating, RoHS-compliant
- 端子：镀锡引线，可焊接 J-STD-002 和 JESD22-B102 Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- 极性：本体标记  
Polarity: As marked on body

### 产品特点 Features

- 超快恢复时间 Ultra-fast recovery time
- 低正向压降 Low forward voltage
- 高结温 High Junction temperature
- 低漏电 Low leakage current
- 高可靠性 High reliability
- 环保产品 RoHS product

## 最大额定值 Maximum ratings

| 项目<br>Parameter                                           | 符合<br>Symbol       | 数值<br>Value | 单位<br>Unit |
|-----------------------------------------------------------|--------------------|-------------|------------|
| 反向重复峰值电压<br>Peak repetitive reverse voltage               | V <sub>RRM</sub>   | 600         | V          |
| 平均正向电流<br>Average forward current                         | I <sub>F(AV)</sub> | 10          | A          |
| 浪涌电流<br>Non-repetitive single pulse surge current t=8.3ms | I <sub>FSM</sub>   | 150         | A          |
| 结温<br>Junction temperature                                | T <sub>j</sub>     | -55~+150    | °C         |
| 存储温度<br>Storage temperature                               | T <sub>STG</sub>   | -55~+150    | °C         |

## 电特性 Electrical characteristics(T<sub>c</sub>=25°C)

| 项目<br>Parameter              | 测试条件<br>Tests conditions |                                                                                                  | 数值 Value |          |          | 单位<br>Unit |
|------------------------------|--------------------------|--------------------------------------------------------------------------------------------------|----------|----------|----------|------------|
|                              |                          |                                                                                                  | 最小值(min) | 典型值(typ) | 最大值(max) |            |
| 最大反向峰值电压<br>V <sub>RRM</sub> | I <sub>R</sub> =0.05mA   |                                                                                                  | 600      | -        | -        | V          |
| 反向漏电流<br>I <sub>R</sub>      | T <sub>j</sub> =25°C     | V <sub>R</sub> =V <sub>RRM</sub>                                                                 | -        | -        | 0.03     | mA         |
|                              | T <sub>j</sub> =125°C    |                                                                                                  | -        | -        | 0.3      |            |
| 正向电压<br>V <sub>F</sub>       | T <sub>j</sub> =25°C     | I <sub>F</sub> =10A                                                                              | -        | -        | 1.75     | V          |
|                              | T <sub>j</sub> =125°C    | I <sub>F</sub> =1A                                                                               | -        | 0.67     | -        |            |
|                              |                          | I <sub>F</sub> =5A                                                                               | -        | 0.99     | -        |            |
|                              |                          | I <sub>F</sub> =10A                                                                              | -        | 1.21     | -        |            |
| 反向恢复时间<br>T <sub>rr</sub>    | T <sub>j</sub> =25°C     | Reverse recovery condition<br>I <sub>F</sub> =0.5A, I <sub>R</sub> =1.0A, I <sub>rr</sub> =0.25A | -        | -        | 35       | nS         |

## 热特性 Thermal characteristics(T<sub>c</sub>=25°C)

| 项目<br>Parameter                                | 符合<br>Symbol         | 数值<br>Value | 单位<br>Unit |
|------------------------------------------------|----------------------|-------------|------------|
| 热阻<br>Thermal resistance from junction to case | R <sub>th(j-c)</sub> | 2.5         | °C/W       |

## 典型特征曲线图 Typical Characteristic Curve

图 1: 正向电流与外壳温度

FIG 1:  $I_F$ - $T_c$

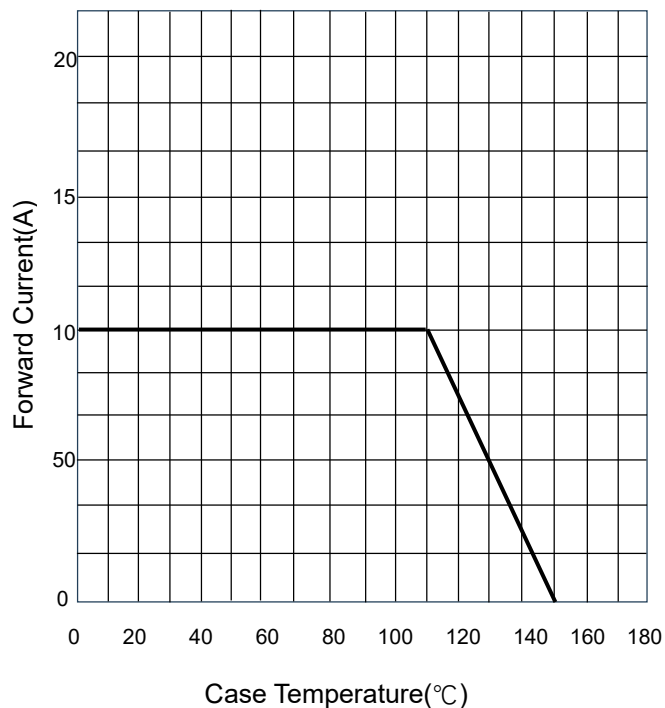


图 2: 正向浪涌循环次数

FIG 2: Surge Forward Current Capability

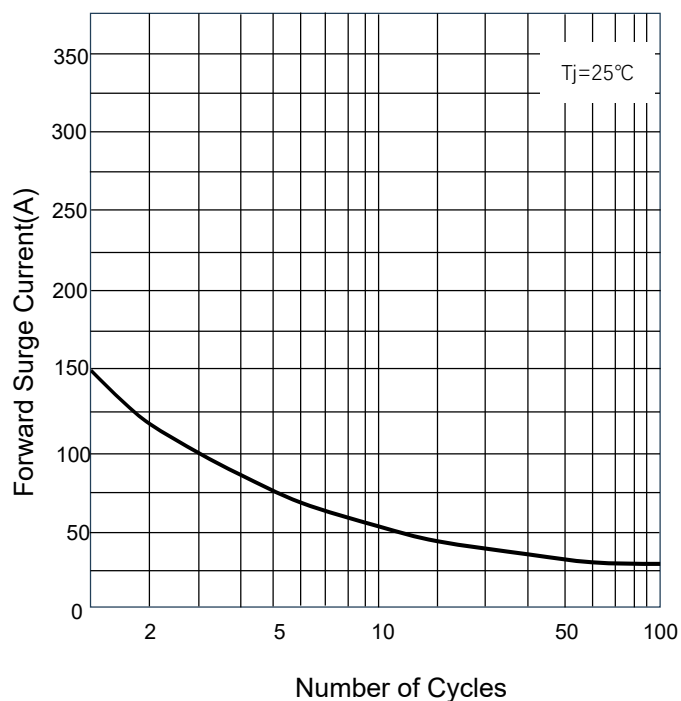


图 3: 反向电压与反向电流

FIG 3:  $V_R$ - $I_R$

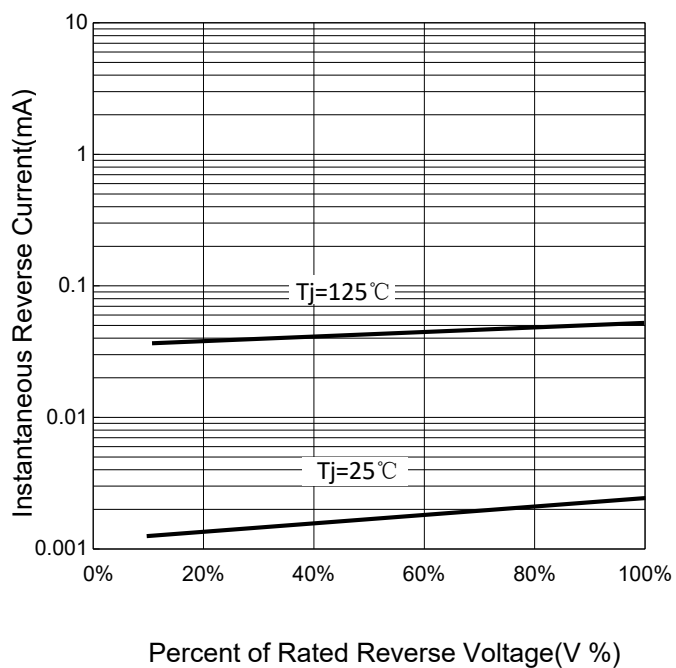
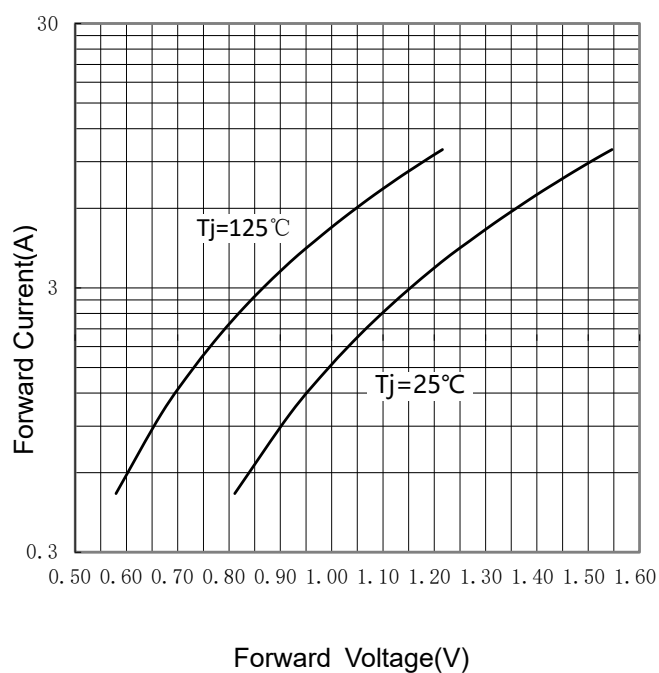
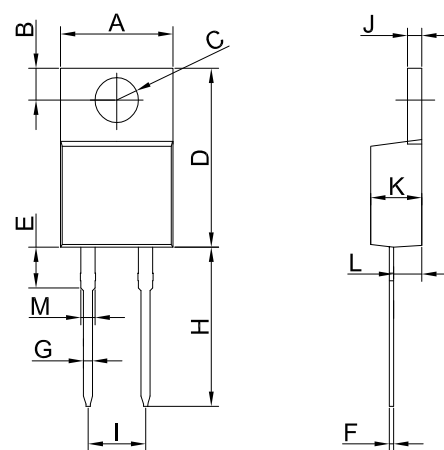


图 4: 正向电流与正向电压

FIG 4:  $I_F$ - $V_F$



外形尺寸图及焊盘布局参考 Outline Dimensions and Pad Layout Reference

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  |     |       |       |       |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|-----|-------|-------|-------|
| TO-220AC                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | Dim | Min   | Typ   | Max   |
|  <p>The diagram shows two views of a TO-220AC package. The left view is a top-down perspective showing dimensions A (width), B (height), C (width of the top flange), D (height of the top flange), E (height of the main body), G (width of the base), I (width of the base), and M (width of the base). The right view is a side profile showing dimensions J (height of the top flange), K (width of the top flange), L (width of the main body), and F (width of the base).</p> |  | A   | 9.80  | 10.00 | 10.20 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  | B   | 6.40  | 6.70  | 7.00  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  | C   | 10.00 | 10.20 | 10.40 |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  | D   | 1.00  | 1.20  | 1.40  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  | E   | 1.10  | 1.30  | 1.50  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  | F   | 0.28  | 0.38  | 0.48  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  | G   | 4.50  | 4.80  | 5.10  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  | H   | 4.40  | 4.60  | 4.80  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  | I   | 4.88  | 5.08  | 5.28  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  | J   | 1.17  | 1.27  | 1.37  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  | K   | 2.30  | 2.50  | 2.80  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  | L   | 0.00  | 0.15  | 0.30  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |  | M   | 0.70  | 0.80  | 0.90  |
| 尺寸单位: (mm)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |     |       |       |       |
| Dimensions in millimeters                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |     |       |       |       |

## 订购信息 Ordering Information

| 订单型号<br>Order code | 印记<br>Marking | 封装<br>Package | 重量<br>Weight<br>(g) | 包装形式<br>Packing | 基本包装<br>Base qty<br>(pcs) | 盒<br>Box<br>(pcs) | 箱<br>Carton<br>(pcs) |
|--------------------|---------------|---------------|---------------------|-----------------|---------------------------|-------------------|----------------------|
| CDSE1006000P       | DSE1006       | TO-220AC      | 1.8                 | 管装 Tube         | 50                        | 1000              | 5000                 |

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