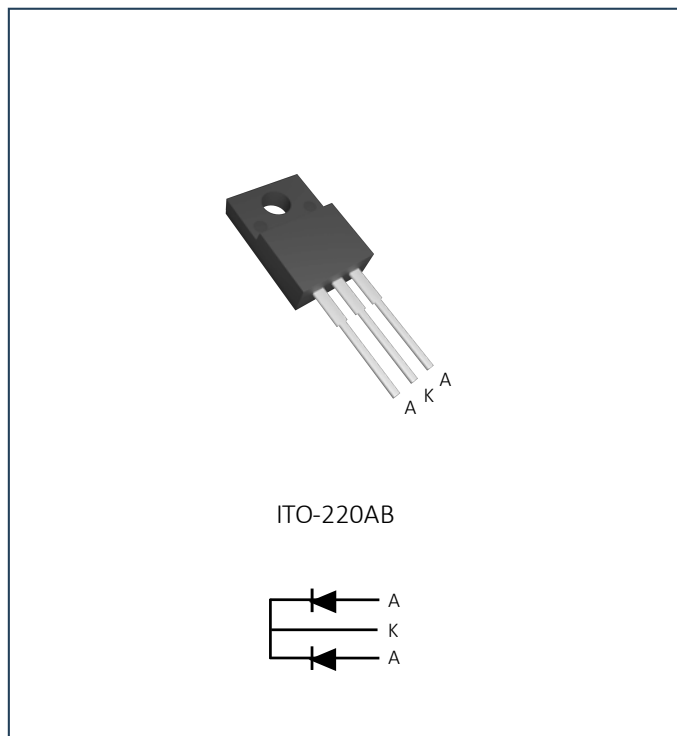


## MBR30L100FCT

低正向电压肖特基二极管

Low  $V_F$  Schottky Barrier Diode

### 封装外形 Package



### 主要参数 Device summary

| Symbol       | Value           |
|--------------|-----------------|
| $I_F(AV)$    | 30A             |
| $V_{RRM}$    | 100V            |
| $V_F(typ)$   | 0.65V@15A 125°C |
| $I_R(typ)$   | 5mA@100V 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

- 高频运行 High frequency operation
- 高结温 High Junction temperature
- 低漏电流 Low leakage current
- 高可靠性 High reliability
- 环保产品 RoHS product
- ITO-220AB 绝缘电压：≥3000VDC t=100mS

ITO-220AB Package Insulated voltage:  
≥ 3000VDC t=100mS

## 最大额定值 Maximum ratings

| 项目<br>Parameter                                             | 符合<br>Symbol | 数值<br>Value | 单位<br>Unit |
|-------------------------------------------------------------|--------------|-------------|------------|
| 反向电压<br>Peak repetitive reverse voltage                     | $V_{RRM}$    | 100         | V          |
| 平均正向电流<br>Average forward current                           | $I_F(AV)$    | 30<br>15    | A          |
| 浪涌电流<br>Non-repetitive single pulse surge current $t=8.3ms$ | $I_{FSM}$    | 175         | A          |
| 结温<br>Junction temperature                                  | $T_j$        | -55~+150    | °C         |
| 存储温度<br>Storage temperature                                 | $T_{STG}$    | -55~+150    | °C         |

## 电特性 Electrical characteristics( $T_c=25^{\circ}C$ )

| 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) |            |
| 反向电压<br>$V_{RRM}$ | $I_R=0.05mA$             |               | 100      | -        | -        | V          |
| 反向漏电流<br>$I_R$    | $T_j=25^{\circ}C$        | $V_R=V_{RRM}$ | -        | -        | 0.03     | mA         |
|                   | $T_j=125^{\circ}C$       |               | -        | -        | 30       |            |
| 正向电压<br>$V_F$     | $T_j=25^{\circ}C$        | $I_F=15A$     | -        | -        | 0.75     | V          |
|                   | $T_j=125^{\circ}C$       | $I_F=1A$      | -        | 0.26     | -        |            |
|                   |                          | $I_F=7.5A$    | -        | 0.52     | -        |            |
|                   |                          | $I_F=15A$     | -        | 0.65     | -        |            |

## 热特性 Thermal characteristics( $T_c=25^{\circ}C$ )

| 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 | $R_{th(j-c)}$ | 4.5         | °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:  $I_F$ - $T_c$

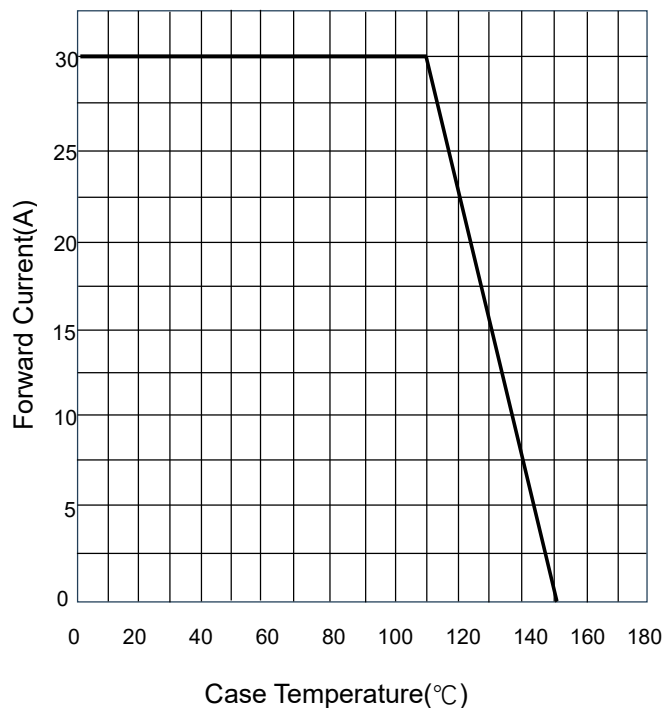


图 2: 正向浪涌循环次数

FIG 2: Surge Forward Current Capability

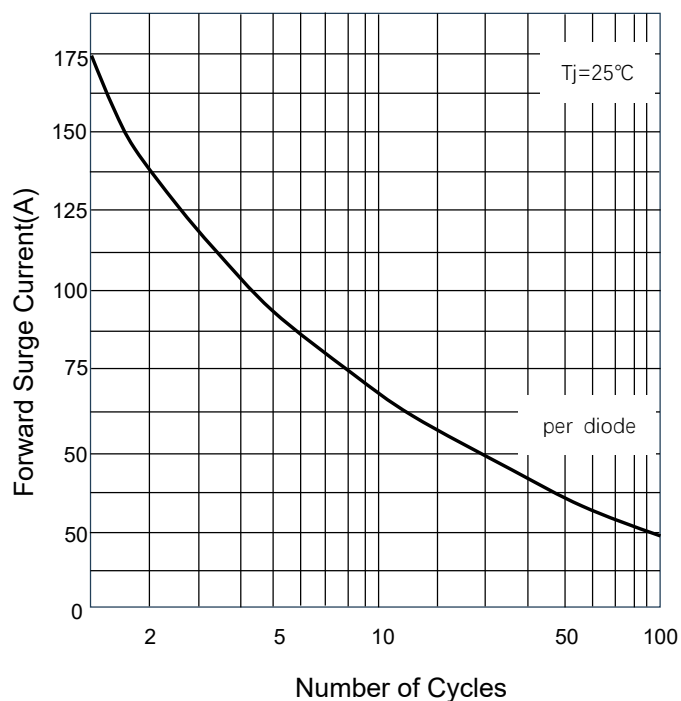


图 3: 反向电压与反向电流

FIG 3:  $V_R$ - $I_R$

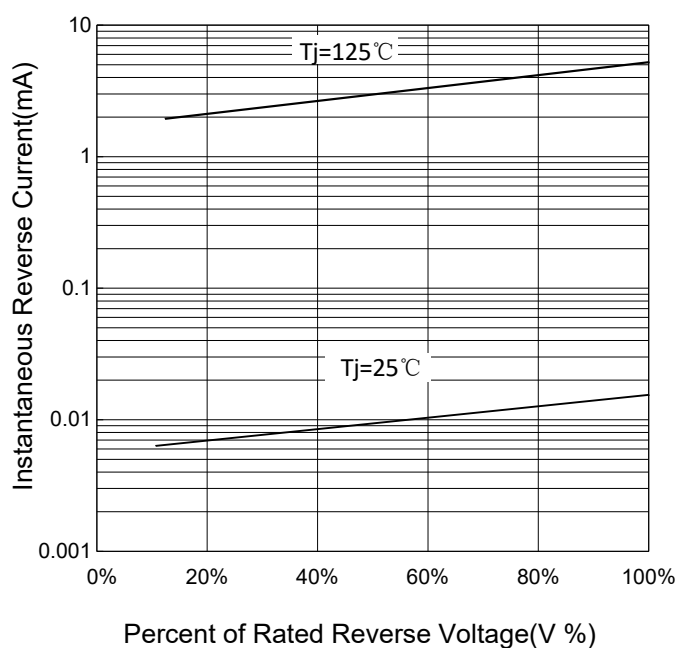
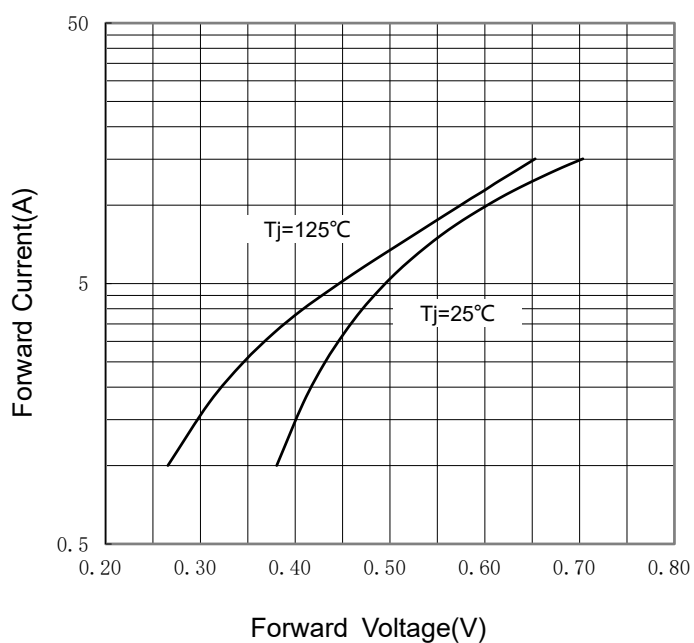
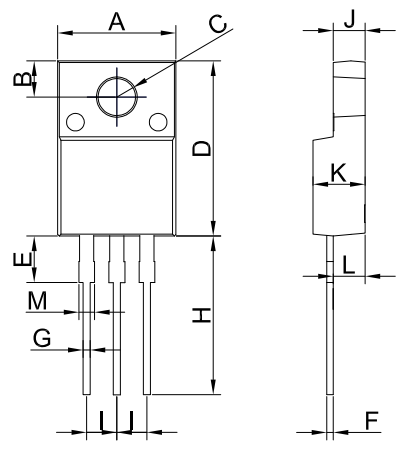


图 4: 正向电流与正向电压

FIG 4:  $I_F$ - $V_F$



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

|                                                                                   |  |                           |       |       |       |
|-----------------------------------------------------------------------------------|--|---------------------------|-------|-------|-------|
| ITO-220AB                                                                         |  | Dim                       | Min   | Typ   | Max   |
|  |  | A                         | 9.70  | 10.00 | 10.30 |
|                                                                                   |  | B                         | 3.00  | 3.20  | 3.40  |
|                                                                                   |  | C                         | 3.10  | 3.25  | 3.40  |
|                                                                                   |  | D                         | 15.10 | 15.40 | 15.70 |
|                                                                                   |  | E                         | 3.60  | 3.80  | 4.00  |
|                                                                                   |  | F                         | 0.45  | 0.55  | 0.65  |
|                                                                                   |  | G                         | 0.50  | 0.60  | 0.70  |
|                                                                                   |  | H                         | 12.80 | 13.20 | 13.60 |
|                                                                                   |  | I                         | 2.44  | 2.54  | 2.64  |
|                                                                                   |  | J                         | 2.50  | 2.70  | 2.90  |
|                                                                                   |  | K                         | 4.20  | 4.40  | 4.60  |
|                                                                                   |  | L                         | 2.60  | 2.70  | 2.80  |
|                                                                                   |  | M                         | 1.20  | 1.30  | 1.40  |
|                                                                                   |  | 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) |
|--------------------|---------------|---------------|---------------------|-----------------|---------------------------|-------------------|----------------------|
| WMBR30L100FCT000P  | MBR30L100FCT  | ITO-220AB     | 1.5                 | 管装 Tube         | 50                        | 1000              | 5000                 |

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