



HBR3100

主要参数 MAIN CHARACTERISTICS

| | |
|--------------|------------------------------|
| $I_{F(AV)}$ | 3A |
| V_{RRM} | 100 V |
| T_j | 175 °C |
| $V_{F(max)}$ | 0.7V (@ $T_j=125^{\circ}C$) |

用途

- 低压、高频整流
- 低压续流电路和保护电路

产品特性

- 轴向结构
- 低功耗，高效率
- 良好的高温特性
- 有过压保护环，高可靠性
- 环保 (RoHS) 产品

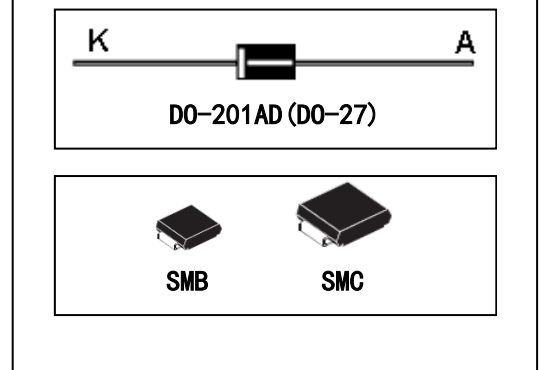
APPLICATIONS

- Low voltage, high frequency rectifier
- Free wheeling diodes, polarity protection applications

FEATURES

- Axial Lead Rectifier
- Low power loss, high efficiency
- High Operating Junction Temperature
- Guard ring for overvoltage protection, High reliability
- RoHS product

封装 Package



订货信息 ORDER MESSAGE

| 订货型号 Order codes | | | | 印 记 Marking | 封 装 Package |
|-----------------------|----------------------------|-----------------------|----------------------------|----------------|----------------|
| 有卤-条管 Halogen-Tube | 无卤-条管 Halogen Free-Tube | 有卤-编带 Halogen-Reel | 无卤-编带 Halogen Free-Reel | | |
| N/A | N/A | HBR3100-D-A | HBR3100-D-AR | HBR3100 | DO-201AD |
| N/A | N/A | HBR3100-XC-A | HBR3100-XC-AR | HBR3100 | SMB |
| N/A | N/A | HBR3100-XE-A | HBR3100-XE-AR | HBR3100 | SMC |
| 有卤-散装 Halogen-Bulk | 无卤-散装 Halogen Free-Bulk | | | 印 记 Marking | 封 装 Package |
| HBR3100-D2-F | HBR3100-D2-FR | | | HBR3100 | DO-201AD-B2 |



**绝对最大额定值 ABSOLUTE RATINGS** ($T_c=25^\circ\text{C}$)

| 项 目 Parameter | 符 号 Symbol | 数 值 Value | 单 位 Unit |
|---|---------------|--------------|------------------|
| 最大反向重复峰值电压 Repetitive peak reverse voltage | V_{RRM} | 100 | V |
| 最大直流阻断电压 Maximum DC blocking voltage | V_{DC} | 100 | V |
| 正向平均整流电流 $T_c=125^\circ\text{C}$ Average Rectified Forward Current | $I_{F(AV)}$ | 3 | A |
| 正向峰值浪涌电流 Surge non repetitive forward current (额定负载 8.3ms 半正弦波—按 JEDEC 方法) 8.3 ms single half-sine-wave (JEDEC Method) | I_{FSM} | 120 | A |
| 最高结温 Maximum junction temperature | T_j | 175 | $^\circ\text{C}$ |
| 储存温度 Storage temperature range | T_{STG} | -40~+150 | $^\circ\text{C}$ |

电特性 ELECTRICAL CHARACTERISTICS

| 项 目 Parameter | 测 试 条 件 Tests conditions | | 最 小 值 Value(min) | 典 型 值 Value(typ) | 最 大 值 Value(max) | 单 位 Unit |
|------------------|-----------------------------|-----------------|---------------------|---------------------|---------------------|---------------|
| I_R | $T_j=25^\circ\text{C}$ | $V_R=V_{RRM}$ | | | 10 | μA |
| | $T_j=125^\circ\text{C}$ | | | | 5 | mA |
| V_F | $T_j=25^\circ\text{C}$ | $I_F=3\text{A}$ | | 0.74 | 0.80 | V |
| | $T_j=125^\circ\text{C}$ | | | 0.65 | 0.7 | V |

热特性 THERMAL CHARACTERISTICS

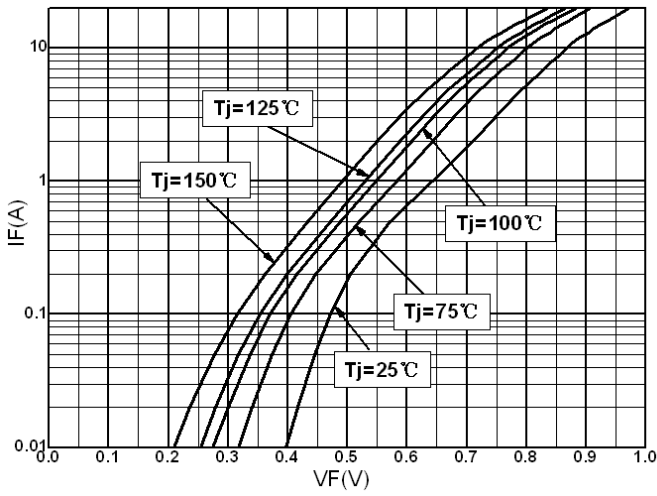
| 项 目 Parameter | 符 号 Symbol | 最 小 值 Value(min) | 最 大 值 Value(max) | 单 位 Unit |
|---|---------------|---------------------|---------------------|--------------------|
| 结到环境的热阻 Thermal resistance from junction to ambient | DO-201AD(-B2) | | 70 | $^\circ\text{C/W}$ |
| | SMB | | 140 | |
| | SMC | | 120 | |
| 结到管壳的热阻 Thermal resistance from junction to case | DO-201AD(-B2) | | 25 | $^\circ\text{C/W}$ |
| | SMB | | 40 | |
| | SMC | | 37 | |



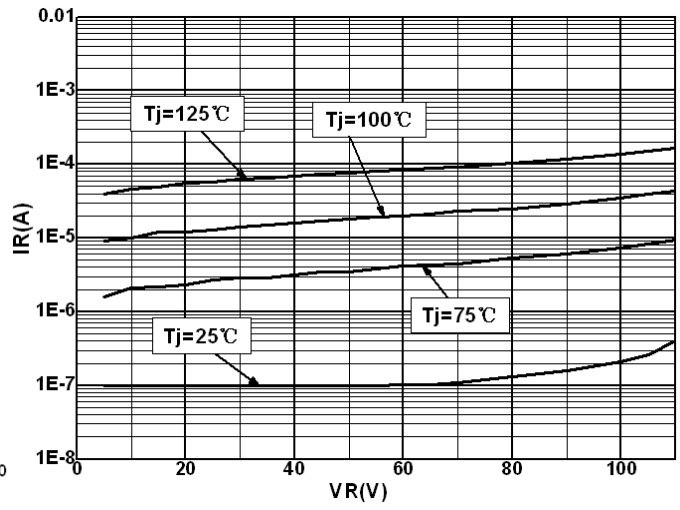


特征曲线 ELECTRICAL CHARACTERISTICS (curves)

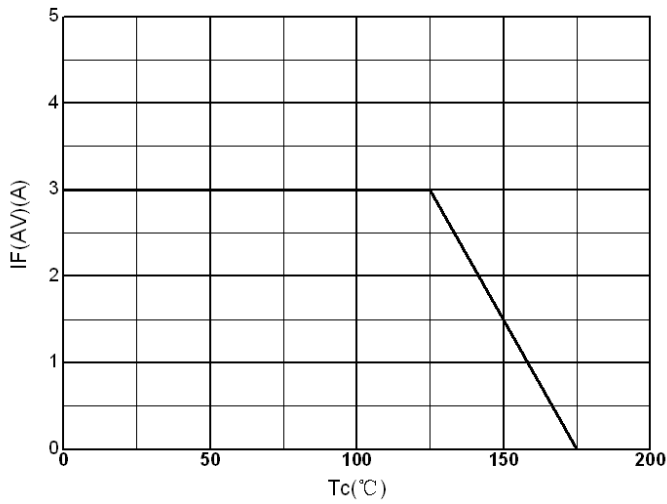
IF vs VF



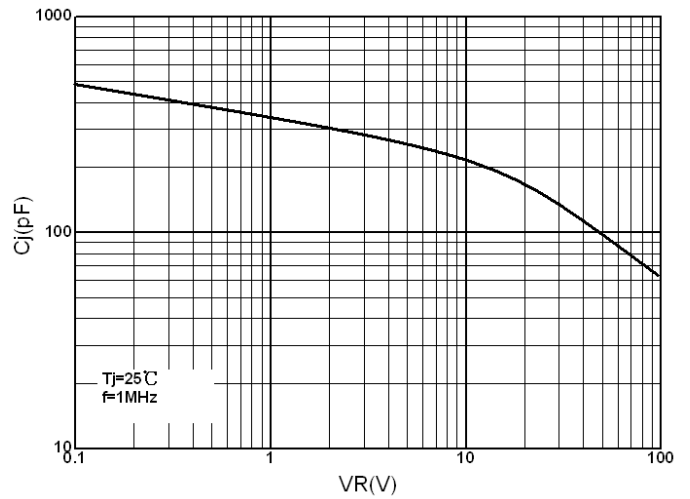
IR vs VR

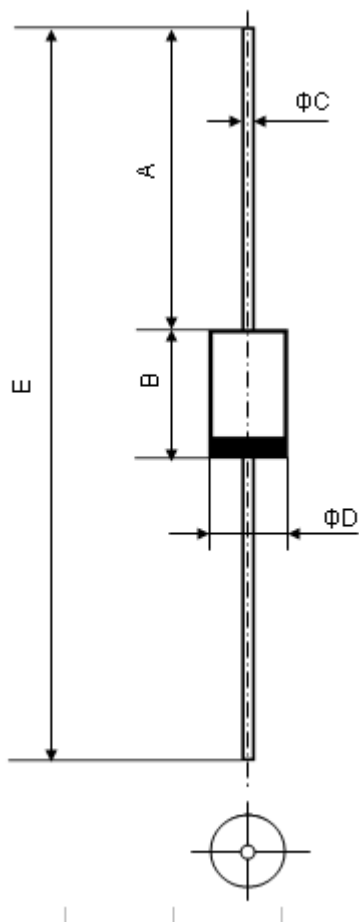


IF(AV) vs Tc



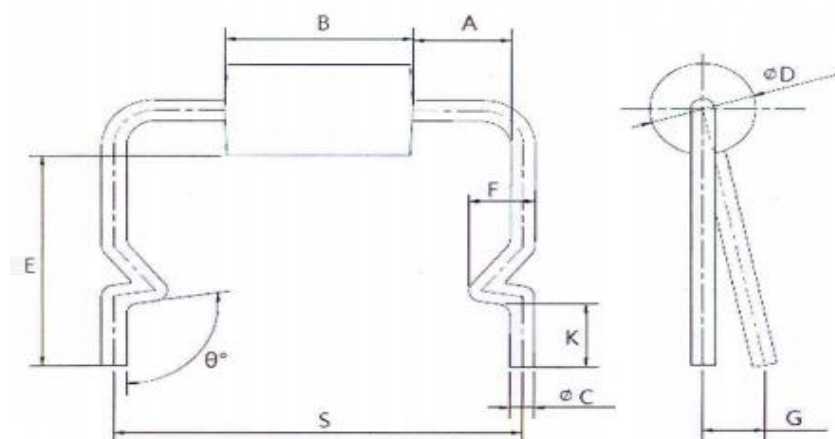
CJ vs VR





| 符号 Symbol | Min | Max |
|--------------|------|-----|
| A | 25.4 | -- |
| B | 8.5 | 9.5 |
| C | 1.2 | 1.3 |
| D | 5.0 | 5.6 |
| E | 59.5 | 64 |



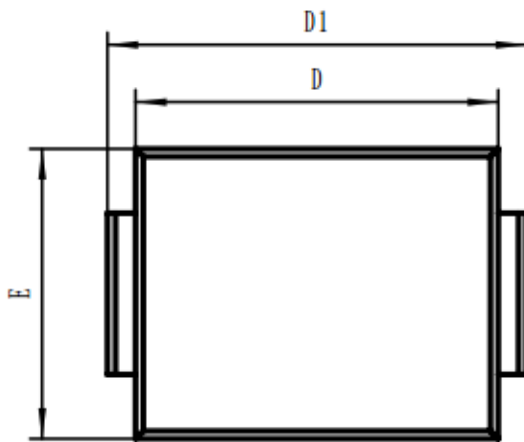
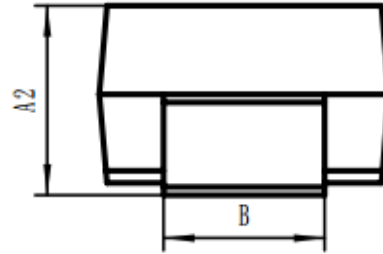
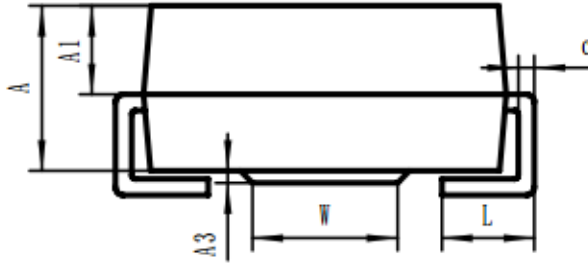


DO-201AD-B2 成型图

| 符号 Symbol | Min | Max |
|----------------|--------|------|
| A | 1.0 | — |
| B | 8.5 | 9.5 |
| C | 1.2 | 1.3 |
| D | 5.0 | 5.6 |
| E | (12.0) | |
| F | 2.2 | 2.8 |
| G | — | 2.0 |
| K | 3.5 | 4.0 |
| S | 19.5 | 20.5 |
| θ° | 100 | 140 |

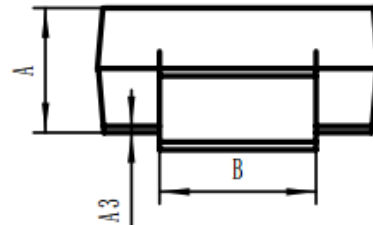
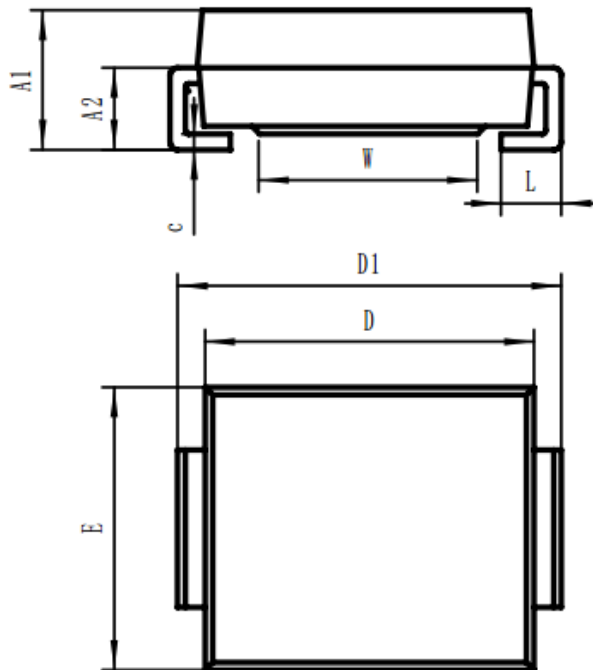
DO-201AD-B2 尺寸





| SYMBOL | MIN | MAX |
|--------|------|------|
| A | 1.85 | 2.25 |
| A1 | 0.90 | 1.30 |
| A2 | 2.10 | 2.60 |
| A3 | 0.10 | 0.20 |
| B | 1.80 | 2.20 |
| c | 0.10 | 0.30 |
| D | 4.30 | 4.70 |
| D1 | 4.95 | 5.45 |
| E | 3.40 | 3.80 |
| L | 0.80 | 1.50 |
| W | 1.60 | 2.00 |





| SYMBOL | MIN | MAX |
|--------|------|------|
| A | 2.30 | 2.70 |
| A1 | 2.40 | 3.00 |
| A2 | 1.30 | 1.90 |
| A3 | 0.10 | 0.20 |
| B | 2.80 | 3.10 |
| c | 0.15 | 0.25 |
| D | 6.70 | 7.10 |
| D1 | 7.70 | 8.30 |
| E | 5.80 | 6.20 |
| L | 0.90 | 1.60 |
| W | 4.30 | 4.70 |





注意事项

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3. 在电路设计时请不要超过器件的绝对最大额定值，否则会影响整机的可靠性。
4. 本说明书如有版本变更不另外告知

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2. We strongly recommend customers check carefully on the trademark when buying our product, if there is any question, please don't be hesitate to contact us.
3. Please do not exceed the absolute maximum ratings of the device when circuit designing.
4. Jilin Sino-microelectronics co., Ltd reserves the right to make changes in this specification sheet and is subject to change without prior notice.

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