

描述 / Descriptions

TO-251 塑封封装 PNP 半导体三极管。Silicon PNP transistor in a TO-251 Plastic Package.

特征 / Features

饱和压降低, 集电极耗散功率大,与 2SD880I 互补。

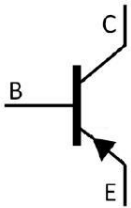
Low collector saturation voltage, collector power dissipation, complementary to 2SD880I.

用途 / Applications

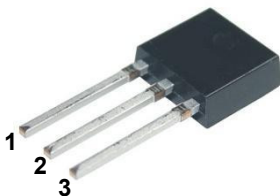
用于音频功率放大。

Audio frequency power amplifier applications.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN1 : Base PIN 2 : Collector PIN 3 : Emitter

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

| | | | |
|------------------------------------|--------|---------|---------|
| h_{FE} Classifications Symbol | O | Y | GR |
| h_{FE} Range | 60~120 | 100~200 | 150~300 |

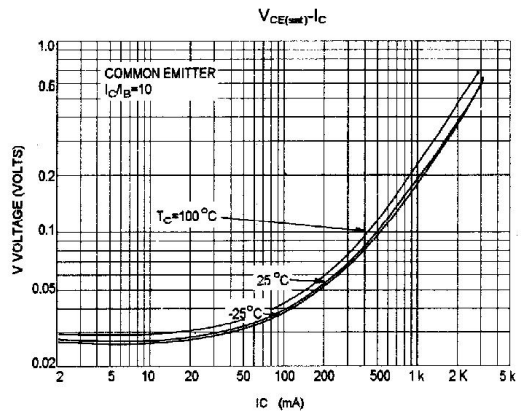
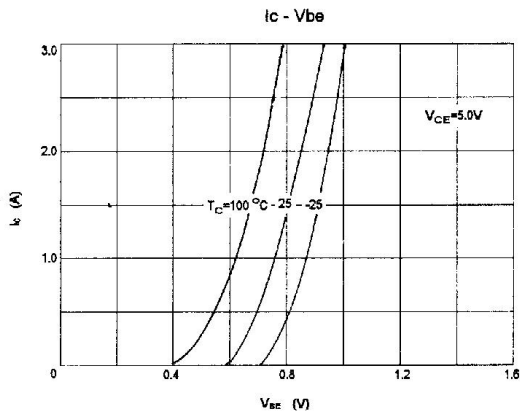
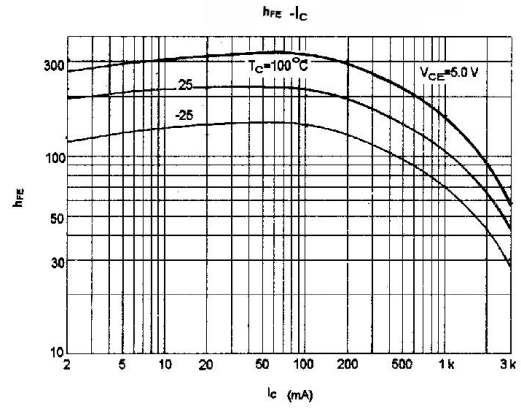
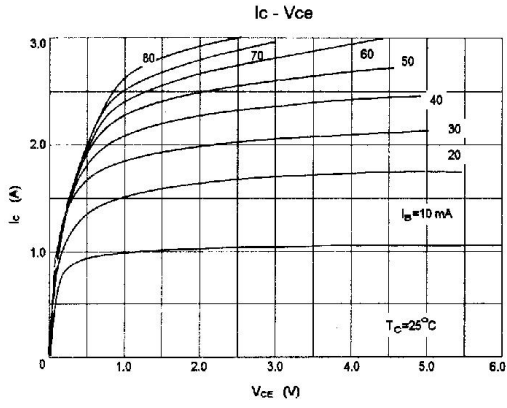
极限参数 / Absolute Maximum Ratings(Ta=25°C)

| 参数 Parameter | 符号 Symbol | 数值 Rating | 单位 Unit |
|--------------------------------|--------------|--------------|------------|
| Collector to Base Voltage | V_{CBO} | -60 | V |
| Collector to Emitter Voltage | V_{CEO} | -60 | V |
| Emitter to Base Voltage | V_{EBO} | -7.0 | V |
| Collector Current - Continuous | I_C | -3.0 | A |
| Base Current - Continuous | I_B | -0.5 | A |
| Collector Power Dissipation | P_C | 1.0 | W |
| Junction Temperature | T_j | 150 | °C |
| Storage Temperature Range | T_{stg} | -55~150 | °C |

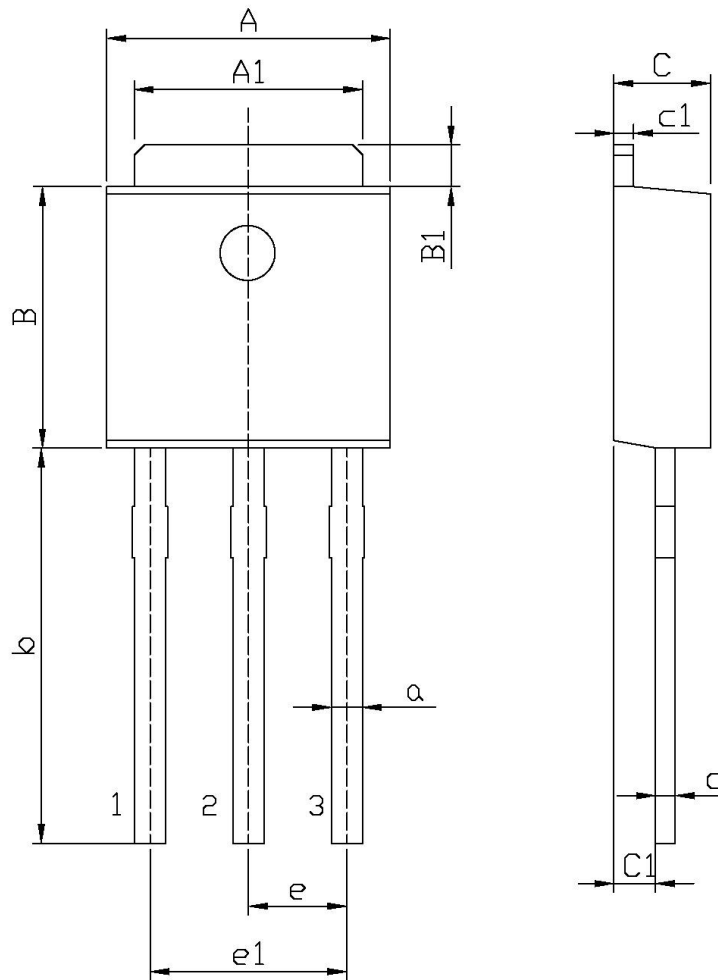
电性能参数 / Electrical Characteristics(Ta=25°C)

| 参数 Parameter | 符号 Symbol | 测试条件 Test Conditions | 最小值 Min | 典型值 Typ | 最大值 Max | 单位 Unit |
|---|---------------|-------------------------------------|------------|------------|------------|------------|
| Collector to Emitter Breakdown Voltage | V_{CEO} | $I_C=-50mA$ $I_B=0$ | -60 | | | V |
| Collector Cut-Off Current | I_{CBO} | $V_{CB}=-60V$ $I_E=0$ | | | -100 | μA |
| Emitter Cut-Off Current | I_{EBO} | $V_{EB}=-7.0V$ $I_C=0$ | | | -100 | μA |
| DC Current Gain | $h_{FE(1)}$ | $V_{CE}=-5.0V$ $I_C=-0.5A$ | 60 | | 300 | |
| | $h_{FE(2)}$ | $V_{CE}=-5.0V$ $I_C=-3.0A$ | 20 | | | |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=-3.0A$ $I_B=-0.3A$ | | -0.5 | -1.0 | V |
| Base to Emitter Voltage | V_{BE} | $V_{CE}=-5.0V$ $I_C=-0.5A$ | | -0.7 | -1.0 | V |
| Transition Frequency | f_T | $V_{CE}=-5.0V$ $I_C=-0.5A$ | | 9.0 | | MHz |
| Collector output capacitance | C_{ob} | $V_{CB}=-10V$ $I_E=0$ $f=1.0MHz$ | | 150 | | pF |
| Turn-On Time | t_{on} | $-I_{B1}=I_{B2}=0.2A$ | | 0.4 | | μS |
| Storage Time | t_{stg} | | | 1.7 | | |
| Fall Time | t_f | | | 0.5 | | |

电参数曲线图 / Electrical Characteristic Curve



外形尺寸图 / Package Dimensions

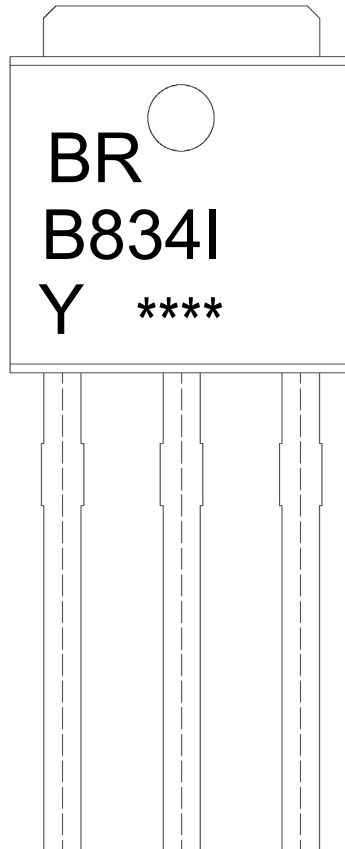


单位: mm

| Symbol | Dimensions In Millimeters | | Symbol | Dimensions In Millimeters | |
|--------|---------------------------|------|--------|---------------------------|------|
| | Min | Max | | Min | Max |
| A | 6.45 | 6.75 | a | 0.50 | 0.70 |
| A1 | 5.10 | 5.50 | b | 9.00 | 9.40 |
| B | 5.95 | 6.25 | c | 0.45 | 0.55 |
| B1 | 0.95 | 1.25 | c1 | 0.45 | 0.55 |
| C | 2.20 | 2.40 | e | 2.24 | 2.34 |
| C1 | 0.95 | 1.15 | e1 | 4.43 | 4.73 |

TO-251

印章说明 / Marking Instructions



说明：

BR： 为公司代码

B834I： 为型号代码

Y： 为 h_{FE} 分档代码

****： 为生产批号代码，随生产批号变化。

Note:

BR: Company Code

B834I: Product Type.

Y: h_{FE} Classifications Symbol

****: 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 25 ~ 150°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:25~150°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 封装形式 | Units 包装数量 | | | | | Dimension 包装尺寸 (unit: mm ³) | | |
|----------------------|------------------|-----------------------|------------------------|------------------------------|------------------------|---|-------------|-------------|
| | Units/Bag 只/袋 | Bags/Inner Box 袋/盒 | Units/Inner Box 只/盒 | Inner Boxes/Outer Box 盒/箱 | Units/Outer Box 只/箱 | Bag 袋 | Inner Box 盒 | Outer Box 箱 |
| TO-251 | 1,000 | 10 | 10,000 | 5 | 50,000 | 135×190 | 237×172×102 | 560×245×195 |

套管包装 / TUBE

| Package Type 封装形式 | Units 包装数量 | | | | | Dimension 包装尺寸 (unit: mm ³) | | |
|----------------------|--------------------|-------------------------|------------------------|------------------------------|------------------------|---|-------------|-------------|
| | Units/Tube 只/套管 | Tubes/Inner Box 套管/盒 | Units/Inner Box 只/盒 | Inner Boxes/Outer Box 盒/箱 | Units/Outer Box 只/箱 | Tube 套管 | Inner Box 盒 | Outer Box 箱 |
| TO-251/252 | 75 | 48 | 3,600 | 5 | 18,000 | 526×20.5×5.25 | 555×164×50 | 575×290×180 |

使用说明 / Notices