

描述 / Descriptions

SOT-323 塑封封装 NPN 半导体三极管。Silicon NPN transistor in a SOT-323 Plastic Package.

特征 / Features

特征频率高，共基极输出电容小。

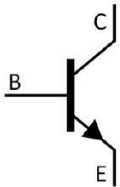
High transition frequency, small collector output capacitance complementary pair.

用途 / Applications

用于音频功率放大。

Audio frequency amplifier applications.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN1 : Emitter

PIN 2 : Base

PIN 3 : Collector

印章代码 / Marking

| h_{FE} Classifications Symbol | N | P | Q |
|------------------------------------|--------|--------|---------|
| h_{FE} Range | 56~120 | 82~180 | 120~270 |
| Marking | HAN | HNP | HNQ |

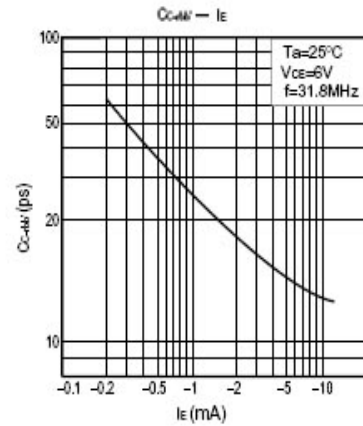
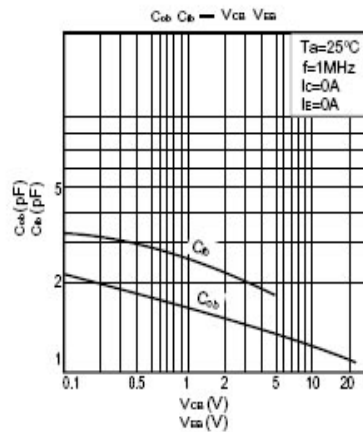
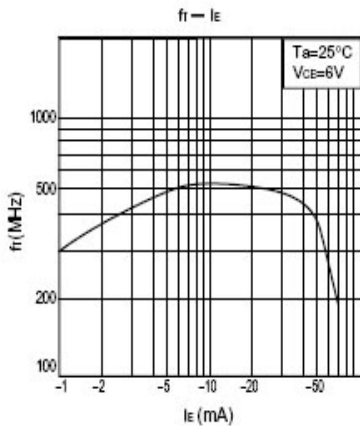
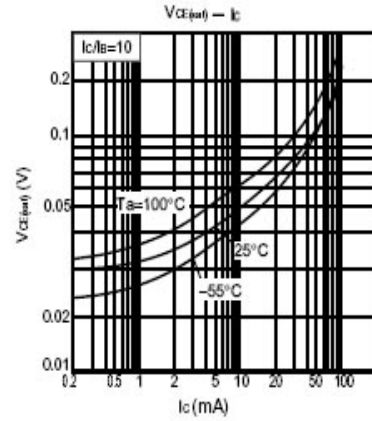
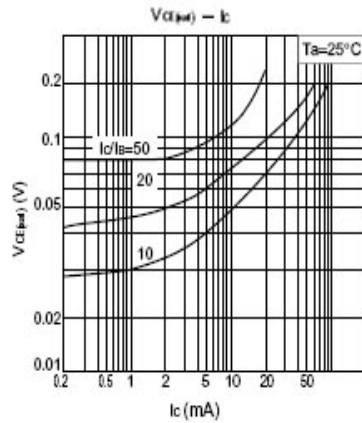
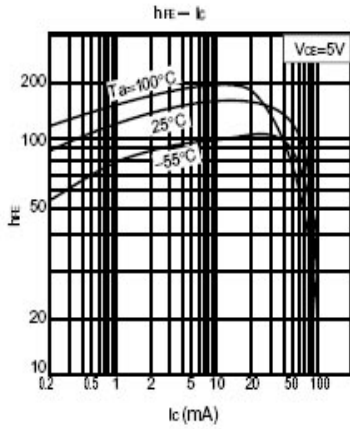
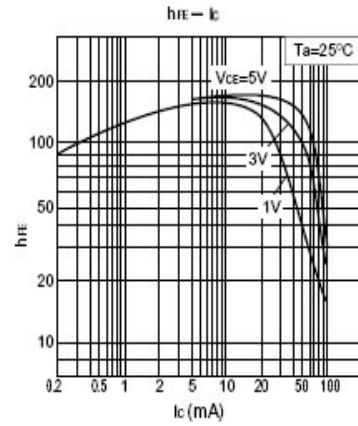
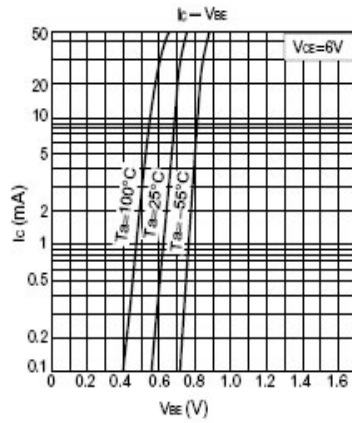
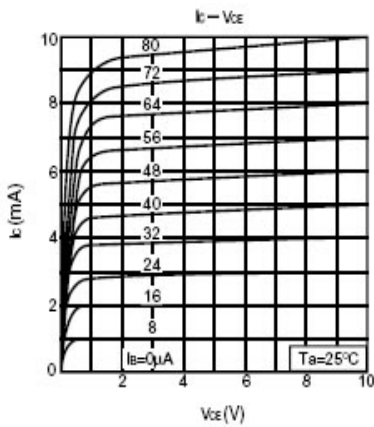
极限参数 / Absolute Maximum Ratings(Ta=25°C)

| 参数 Parameter | 符号 Symbol | 数值 Rating | 单位 Unit |
|--------------------------------|--------------|--------------|------------|
| Collector to Base Voltage | V_{CBO} | 40 | V |
| Collector to Emitter Voltage | V_{CEO} | 25 | V |
| Emitter to Base Voltage | V_{EBO} | 5.0 | V |
| Collector Current - Continuous | I_C | 50 | mA |
| Collector Power Dissipation | P_C | 200 | mW |
| 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 Base Breakdown Voltage | V_{CBO} | $I_C=50\mu A$ | 40 | | | V |
| Collector to Emitter Breakdown Voltage | V_{CEO} | $I_C=1.0mA$ | 25 | | | V |
| Emitter to Base Breakdown Voltage | V_{EBO} | $I_E=50\mu A$ | 5.0 | | | V |
| Collector Cut-Off Current | I_{CBO} | $V_{CB}=24V$ | | | 0.5 | μA |
| Emitter Base Cut-Off Current | I_{EBO} | $V_{EB}=3.0V$ | | | 0.5 | μA |
| DC Current Gain | h_{FE} | $V_{CE}=6.0V$ $I_C=1.0mA$ | 56 | | 270 | |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=10mA$ $I_B=1.0mA$ | | 0.1 | 0.3 | V |
| Transition Frequency | f_T | $V_{CE}=6.0V$ $f=100MHz$ $I_C=1.0mA$ | 150 | 300 | | MHz |
| Collector output capacitance | C_{ob} | $V_{CB}=6.0V$ $f=1.0MHz$ $I_E=0$ | | 1.3 | 2.2 | pF |

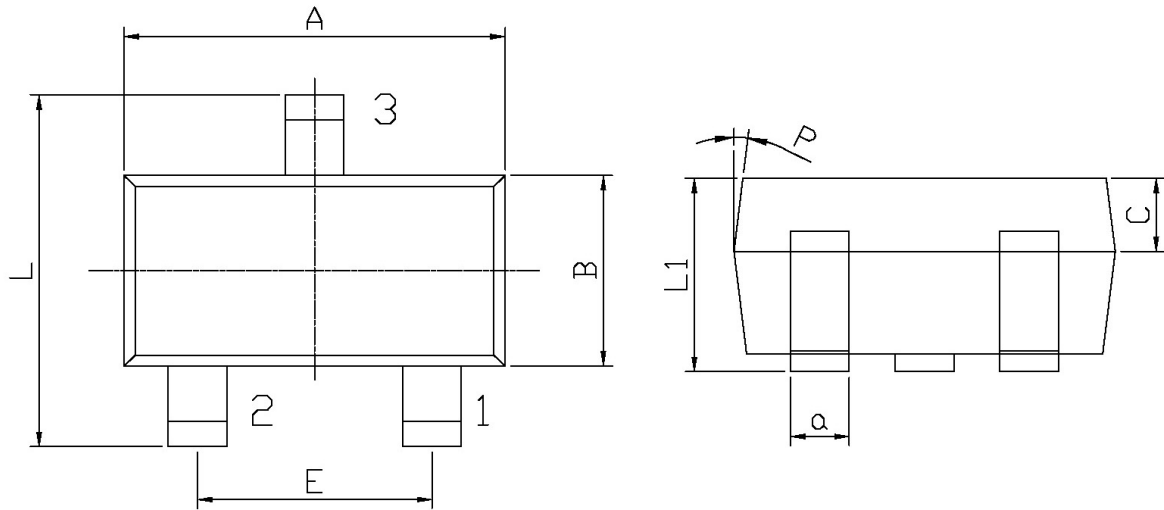
电参数曲线图 / Electrical Characteristic Curve



外形尺寸图 / Package Dimensions

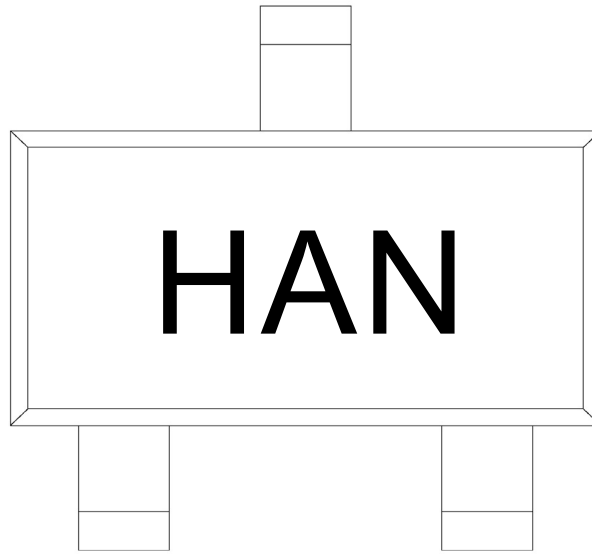
SOT-323

单位: mm



| Symbol | Dimensions In Millimeters | | Symbol | Dimensions In Millimeters | |
|--------|---------------------------|------|--------|---------------------------|------|
| | Min | Max | | Min | Max |
| A | 1.95 | 2.35 | C | 0.30 | 0.50 |
| L | 2.00 | 2.2 | L1 | 0.85 | 1.15 |
| E | 1.20 | 1.40 | a | 0.20 | 0.40 |
| B | 1.15 | 1.35 | P | 7° | |

印章说明 / Marking Instructions



说明：

- H： 为公司代码
- A： 为型号代码
- N： 为 h_{FE} 分档代码

Note:

- H: Company Code.
- A: Product Type.
- N: h_{FE} Classifications Symbol

回流焊温度曲线图(无铅) / Temperature Profile for IR Reflow Soldering(Pb-Free)



说明：

- 1、预热温度 25~150°C，时间 60~90sec;
- 2、峰值温度 245±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.:245±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：260±5°C 时间：10±1 sec.

Temp.:260±5°C Time:10±1 sec

包装规格 / Packaging SPEC.

卷盘包装 / REEL

| Package Type 封装形式 | Units 包装数量 | | | | | Dimension 包装尺寸 (unit: mm ³) | | |
|----------------------|--------------------|-------------------------|------------------------|------------------------------|------------------------|---|-------------|-------------|
| | Units/Reel 只/卷盘 | Reels/Inner Box 卷盘/盒 | Units/Inner Box 只/盒 | Inner Boxes/Outer Box 盒/箱 | Units/Outer Box 只/箱 | Reel | Inner Box 盒 | Outer Box 箱 |
| SOT-323 | 3,000 | 10 | 30,000 | 8 | 240,000 | 7" x8 | 180×120×180 | 385×257×392 |

使用说明 / Notices