

描述 / Descriptions

SOT-89 塑封封装 NPN 半导体三极管。Silicon NPN transistor in a SOT-89 Plastic Package.

特征 / Features

特征频率高, 电压高, 封装小, 与 2SA1201 互补。

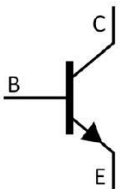
High f_T , high V_{CEO} , small flat package, complementary pair with 2SA1201.

用途 / Applications

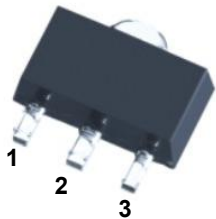
用于一般功率放大。

Power amplifier applications.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN1 : Base PIN 2 : Collector PIN 3 : Emitter

印章代码 / Marking

| | | |
|------------------------------------|------------|------------|
| h_{FE} Classifications Symbol | O | Y |
| h_{FE} Range | 80~160 | 120~240 |
| Marking | HCO * * | HCY * * |

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} | 120 | V |
| Collector to Emitter Voltage | V _{CEO} | 120 | V |
| Emitter to Base Voltage | V _{EBO} | 5.0 | V |
| Collector Current-Continuous | I _C | 800 | mA |
| Collector Base-Continuous | I _B | 160 | mA |
| Collector Power Dissipation | P _C | 500 | mW |
| Collector Power Dissipation* | *P _C | 1.0 | W |
| Junction Temperature | T _j | 150 | °C |
| Storage Temperature Range | T _{stg} | -55~150 | °C |

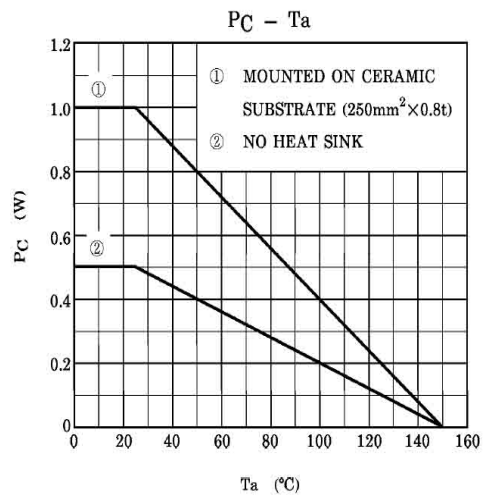
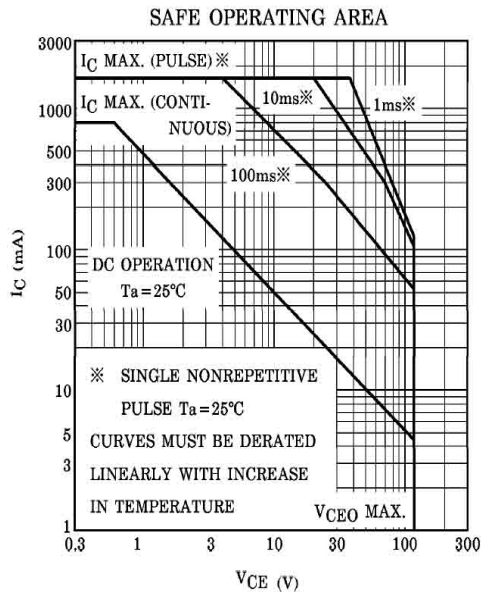
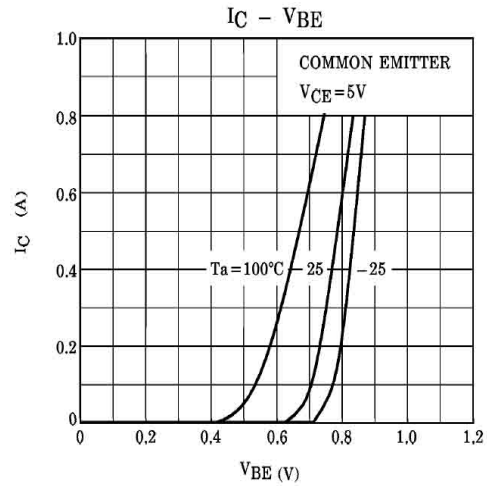
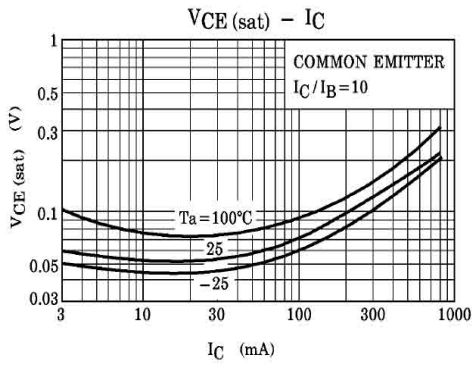
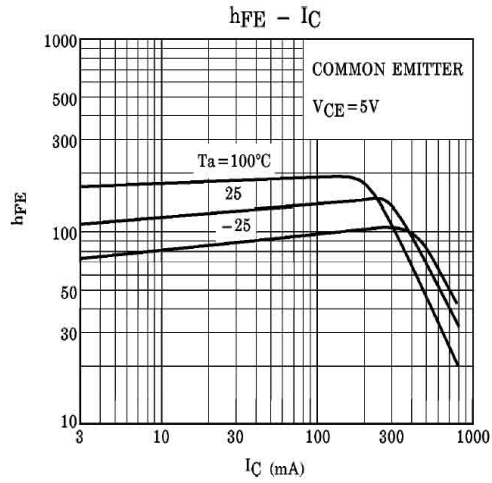
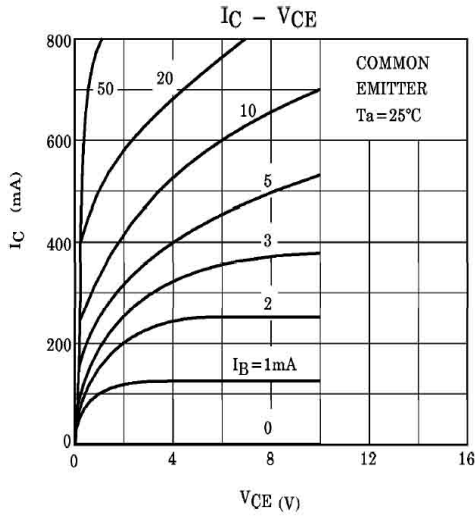
*Mounted on ceramic substrate(250mm²×0.8t)

*装于 250mm²×0.8t 的陶瓷上。

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 =10mA I _B =0 | 120 | | | V |
| Emitter to Base Breakdown Voltage | V _{EBO} | I _C =1.0mA I _C =0 | 5.0 | | | V |
| Collector Cut-Off Current | I _{CBO} | V _{CB} =120V I _E =0 | | | 0.1 | μA |
| Emitter Base Cut-Off Current | I _{EBO} | V _{EB} =5.0V I _C =0 | | | 0.1 | μA |
| DC Current Gain | h _{FE} | V _{CE} =5.0V I _C =100mA | 80 | | 240 | |
| Collector to Emitter Saturation Voltage | V _{CE(sat)} | I _C =500mA I _B =50mA | | | 1.0 | V |
| Emitter to Base Saturation Voltage | V _{BE} | V _{CE} =5.0V I _C =500mA | | | 1.0 | V |
| Transition Frequency | f _T | V _{CE} =5.0V I _C =100mA | | 120 | | MHz |
| Collector Output Capacitance | C _{ob} | V _{CB} =10V I _E =0 f=1.0MHz | | | 30 | pF |

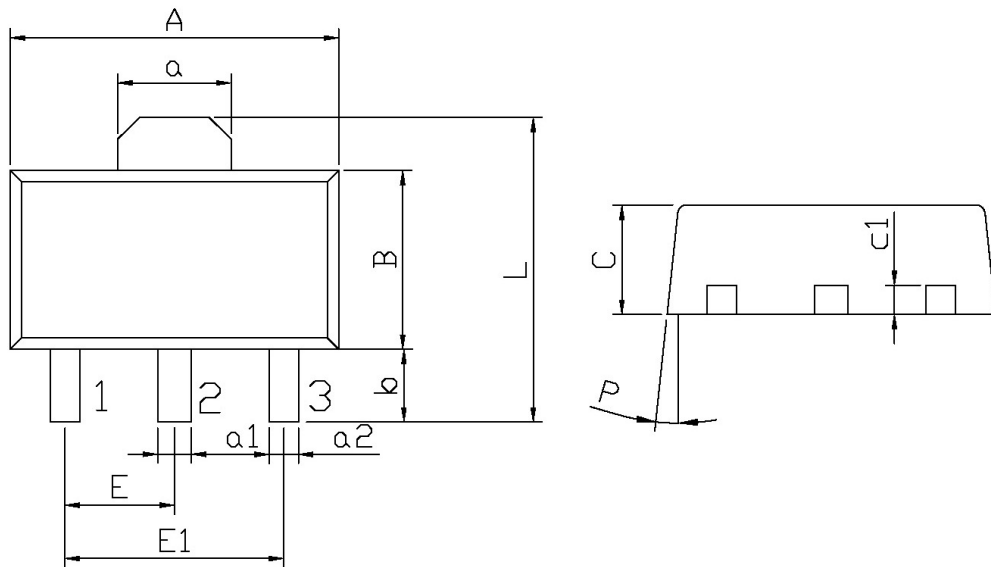
电参数曲线图 / Electrical Characteristic Curve



外形尺寸图 / Package Dimensions

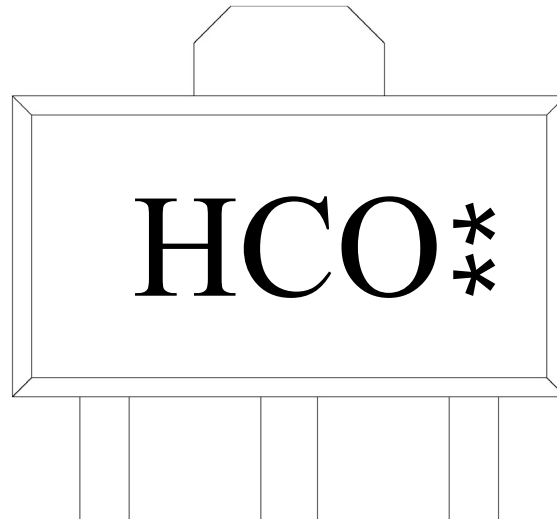
SOT-89

单位: mm



| Symbol | Dimensions In Millimeters | | Symbol | Dimensions In Millimeters | |
|--------|---------------------------|-------|--------|---------------------------|------|
| | Min | Max | | Min | Max |
| A | 4.4 | 4.7 | a1 | 0.36 | 0.56 |
| B | 2.35 | 2.65 | a2 | 0.30 | 0.50 |
| L | 3.878 | 4.478 | C | 1.40 | 1.70 |
| a | 1.45 | 1.65 | c1 | 0.35 | 0.50 |
| E | 1.40 | 1.60 | P | 6° | |
| E1 | 2.80 | 3.20 | | | |
| b | 0.80 | 1.20 | | | |

印章说明 / Marking Instructions



说明：

- H： 为公司代码
- C： 为型号代码
- O： 为档次代码
- **： 为生产批号代码，随生产批号变化。

Note:

- H: Company Code.
- C: Product Type.
- O: h_{FE} Classifications Symbol
- ** : Lot No. Code, code change with Lot No.

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-89 | 1,000 | 7 | 7,000 | 8 | 56,000 | 7" ×12 | 180×120×180 | 385×257×392 |

使用说明 / Notices

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