

描述 / Descriptions

SOT-23 塑封封装 NPN 半导体三极管。Silicon NPN transistor in a SOT-23 Plastic Package.

特征 / Features

放大特性好,与 KTA1505 互补。

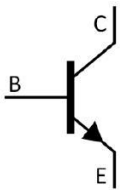
Excellent hFE linearity, complementary pair with KTA1505.

用途 / Applications

用于普通放大及开关电路。

General amplifier and switching application.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN 1 : Emitter PIN 2 : Base PIN 3 : Collector

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

| h _{FE} Classifications Symbol | O | Y | GR |
|--|--------|---------|---------|
| h _{FE} Range | 70~140 | 120~240 | 200~400 |
| Marking | HWO | HWY | HWG |

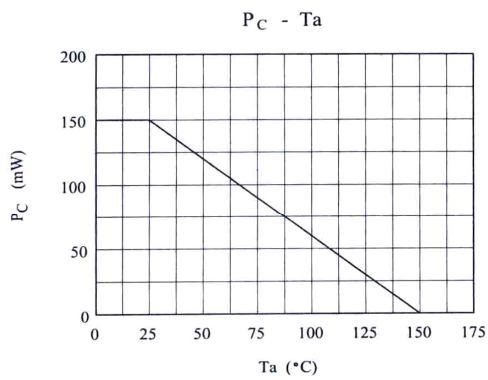
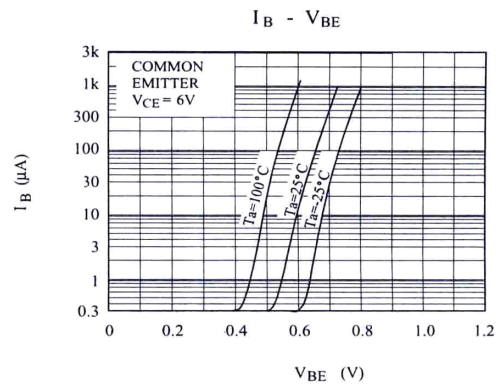
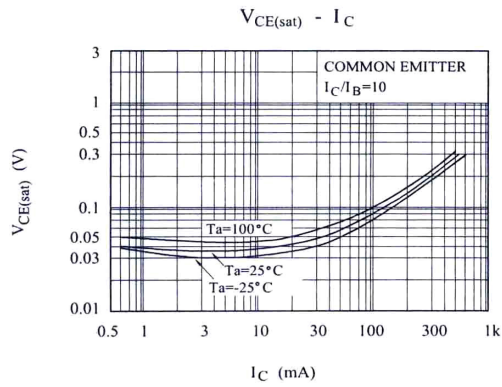
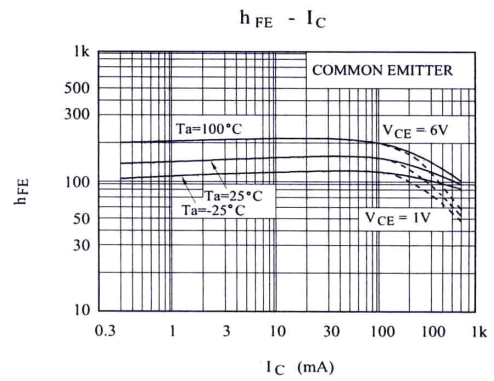
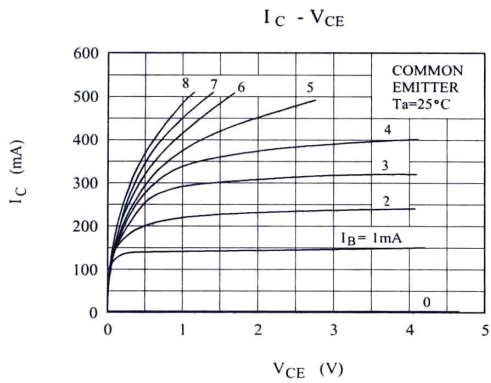
极限参数 / Absolute Maximum Ratings(Ta=25°C)

| 参数 Parameter | 符号 Symbol | 数值 Rating | 单位 Unit |
|------------------------------|--------------|--------------|------------|
| Collector to Base Voltage | V_{CBO} | 35 | V |
| Collector to Emitter Voltage | V_{CEO} | 30 | V |
| Emitter to Base Voltage | V_{EBO} | 5.0 | V |
| Collector Current | I_C | 500 | mA |
| Base Current | I_B | 50 | mA |
| Collector Power Dissipation | P_C | 150 | 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 Cut-Off Current | I_{CBO} | $V_{CB}=35V$ $I_E=0$ | | | 0.1 | μA |
| Emitter Cut-Off Current | I_{EBO} | $V_{EB}=5.0V$ $I_C=0$ | | | 0.1 | μA |
| DC Current Gain | $h_{FE(1)}$ | $V_{CE}=1.0V$ $I_C=100mA$ | 70 | | 400 | |
| | $h_{FE(2)}$ | $V_{CE}=6.0V$ $I_C=400mA$ | 25 | | | |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=100mA$ $I_B=10mA$ | | 0.1 | 0.25 | V |
| Base to Emitter Voltage | V_{BE} | $V_{CE}=1.0V$ $I_C=100mA$ | | 0.8 | 1.0 | V |
| Transition Frequency | f_T | $V_{CE}=6.0V$ $I_C=20mA$ | | 300 | | MHz |
| Collector Output Capacitance | C_{ob} | $V_{CE}=6.0V$ $f=1.0MHz$ | | 7.0 | | pF |

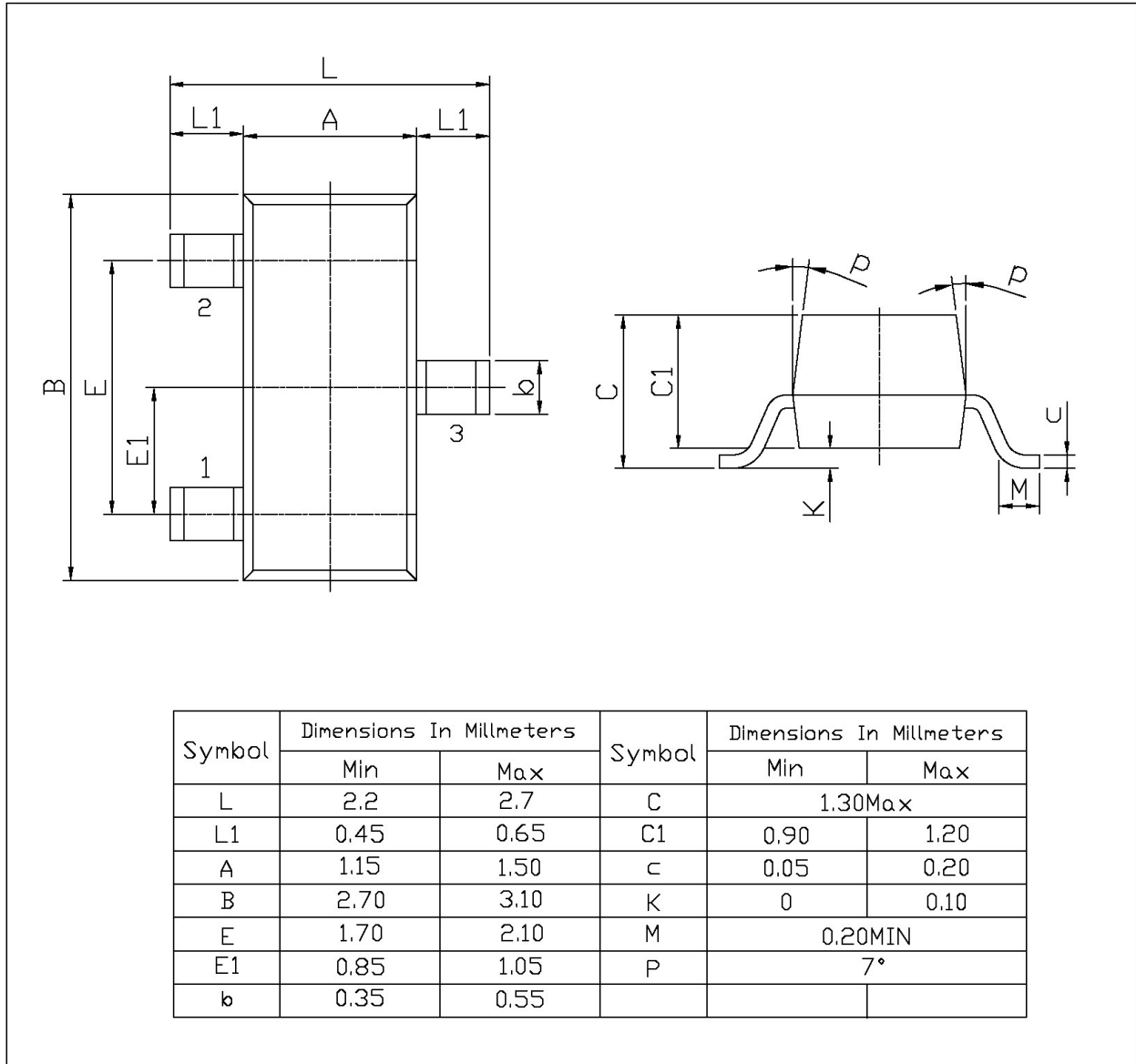
电参数曲线图 / Electrical Characteristic Curve



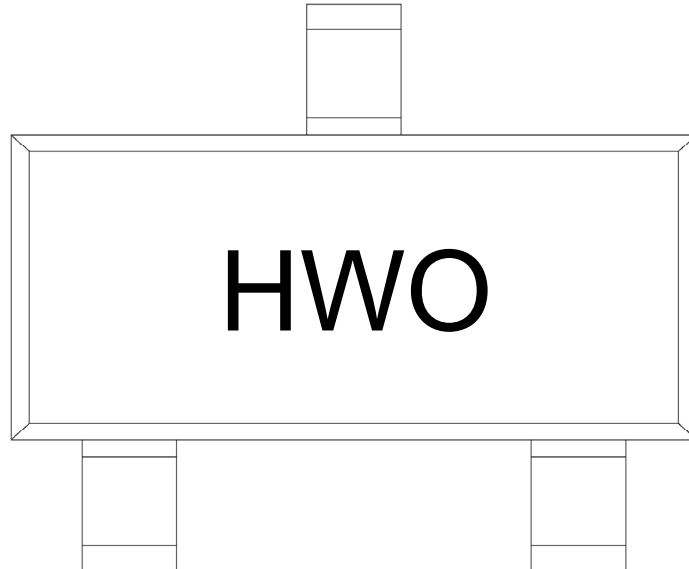
外形尺寸图 / Package Dimensions

SOT-23

单位: mm



印章说明 / Marking Instructions



说明：

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

Note:

- H： Company Code
- W： Product Type
- O： 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-23 | 3,000 | 10 | 30,000 | 8 | 240,000 | 7" x8 | 180×120×180 | 385×257×392 |

使用说明 / Notices