

描述 / Descriptions

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

特征 / Features

内装偏置电阻，简化线路设计，减少元件和制造流程。

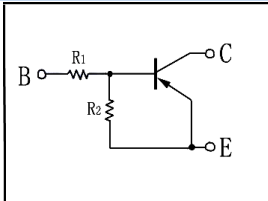
With built-in bias resistors, simplify circuit design, reduce a quantity of parts and manufacturing process.

用途 / Applications

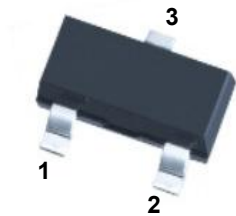
用于开关、反相电路、界面电路以及驱动电路中。

Switching, inverter circuit, interface circuit and driver circuit applications.

内部等效电路 / Equivalent Circuit



引脚排列 / Pinning



PIN 1 : Base

PIN 2 : Emitter

PIN 3 : Collector

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

| | |
|----------------|------|
| h_{FE} Range | >80 |
| Marking | HE32 |

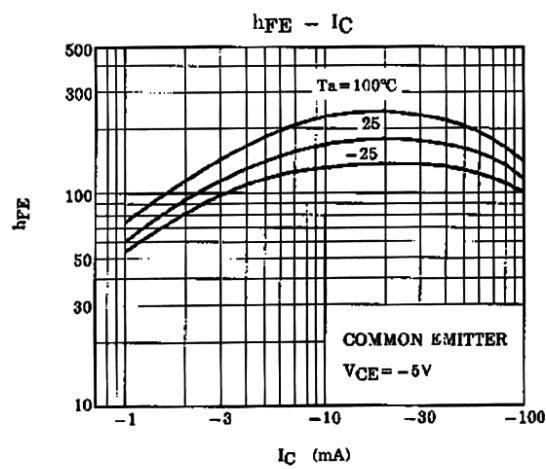
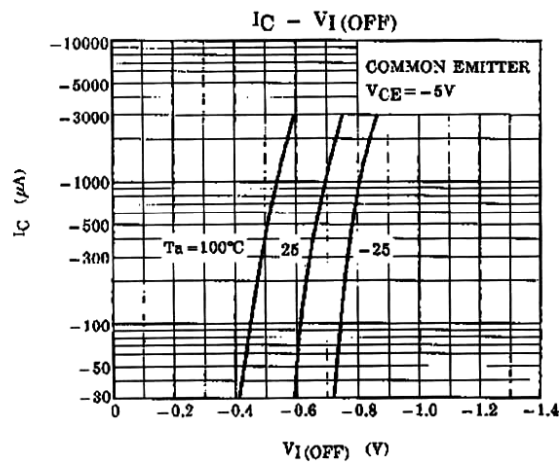
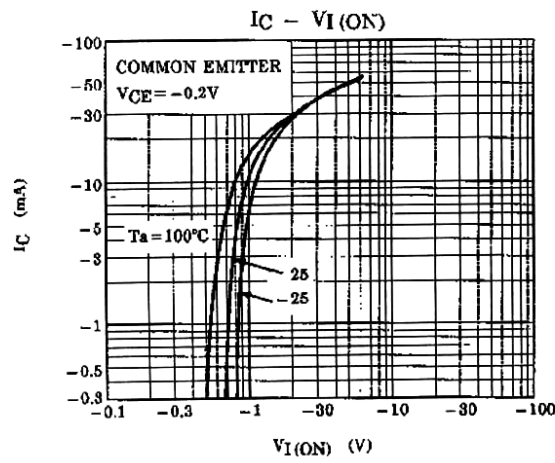
极限参数 / Absolute Maximum Ratings(Ta=25°C)

| 参数 Parameter | 符号 Symbol | 数值 Rating | 单位 Unit |
|------------------------------|--------------|--------------|------------|
| Collector to Base Voltage | V_{CBO} | -50 | V |
| Collector to Emitter Voltage | V_{CEO} | -50 | V |
| Emitter to Base Voltage | V_{EBO} | -5.0 | V |
| Collector Current | I_C | -100 | 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 |
|---|---------------|---------------------------------------|------------|------------|------------|------------|
| Input Voltage | $V_{I(ON)}$ | $V_{CE}=-0.2V$ $I_C=-5.0mA$ | -0.6 | | -1.1 | V |
| Input Voltage | $V_{I(OFF)}$ | $V_{CE}=-5.0V$ $I_C=-0.1mA$ | -0.5 | | -0.8 | V |
| Collector Cut-Off Current | I_{CBO} | $V_{CB}=-50V$ $I_E=0$ | | | -0.1 | μA |
| Collector Cut-Off Current | I_{CEO} | $V_{CE}=-50V$ $I_B=0$ | | | -0.5 | μA |
| Emitter Cut-Off Current | I_{EBO} | $V_{EB}=-5.0V$ $I_C=0$ | -0.078 | | -0.145 | mA |
| DC Current Gain | h_{FE} | $V_{CE}=-5.0V$ $I_C=-10mA$ | 80 | | | |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=-5.0mA$ $I_B=-0.25mA$ | | -0.1 | -0.3 | V |
| Transition Frequency | f_T | $V_{CE}=-10V$ $I_C=-5.0mA$ | | 200 | | MHz |
| Collector Output Capacitance | C_{ob} | $V_{CB}=-10V$ $I_E=0mA$ $f=1.0MHz$ | | 3.0 | 6.0 | pF |
| Input Resistor | R_1 | | 1.54 | 2.2 | 2.86 | KΩ |
| Resistor ratio | R_2/R_1 | | 19.4 | 21 | 23.7 | |

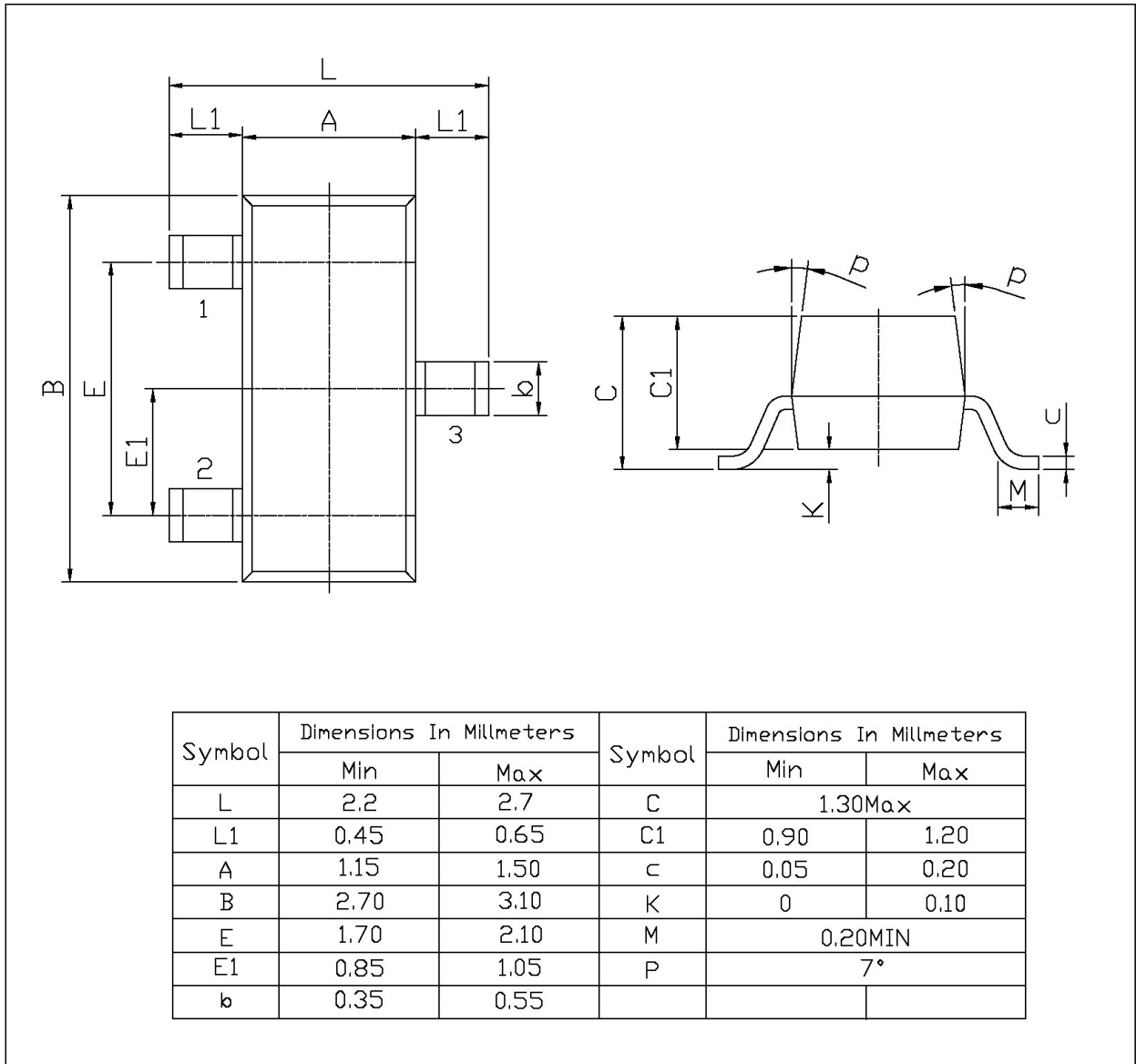
电参数曲线图 / Electrical Characteristic Curve



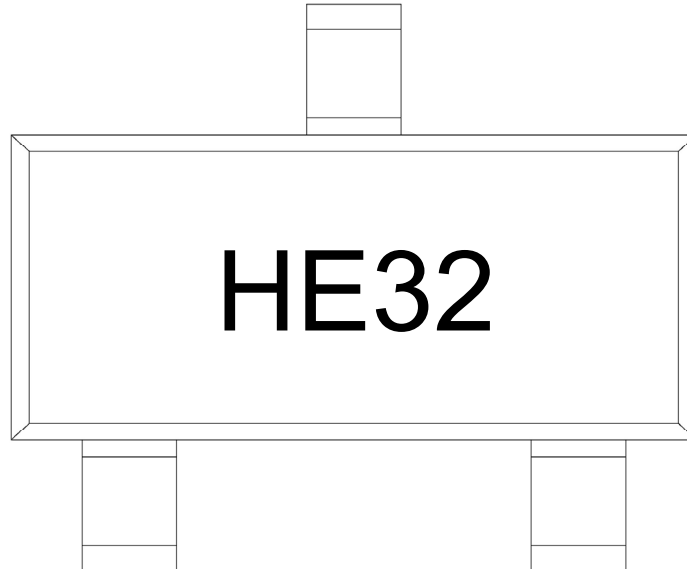
外形尺寸图 / Package Dimensions

SOT-23

单位: mm



印章说明 / Marking Instructions



说明：

H： 为公司代码

E32： 为型号代码

Note:

H： Company Code

E32： Product Type Code

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 | 6 | 180,000 | 7" x8 | 180×120×180 | 390×385×205 |

使用说明 / Notices