

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

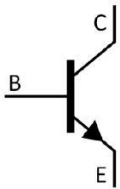
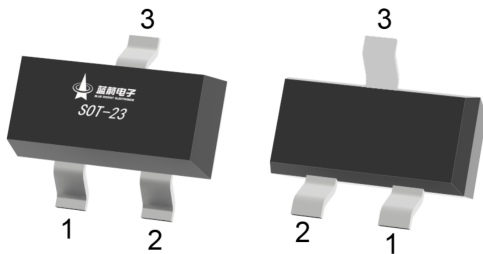
电压，电流，放大高，噪声低，放大线性好，符合 AEC-Q101 标准高可靠性要求，无卤产品。

High voltage, high current, high h_{FE} , low noise, excellent h_{FE} linearity, Qualified to AEC-Q101 Standards for High Reliability, HF Product.

用途 / Applications

用于普通音频放大，满足汽车应用的严格要求。

Audio frequency general purpose amplifier applications, Meet the stringent requirements of automotive applications.

内部等效电路 / Equivalent Circuit**引脚排列 / Pinning**

PIN1 : Base

PIN 2 : Emitter

PIN 3 : Collector

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

| | | | | |
|---------------------------------|--------|---------|---------|---------|
| h_{FE} Classifications Symbol | O | Y | GR | BL |
| h_{FE} Range | 70~140 | 120~240 | 200~400 | 350~700 |
| Marking | QLO | QLY | QLG | QLL |

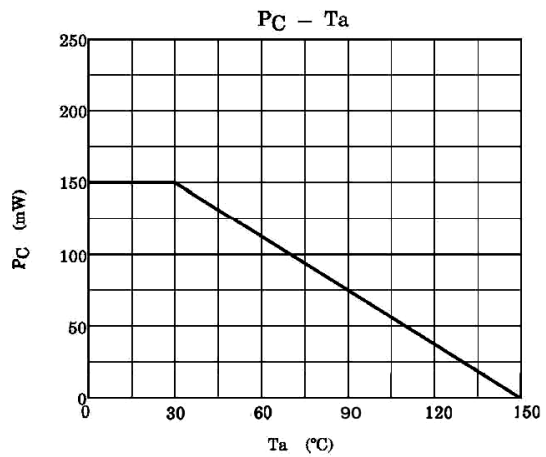
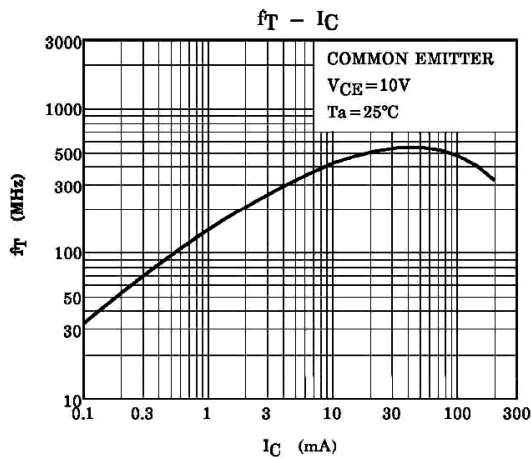
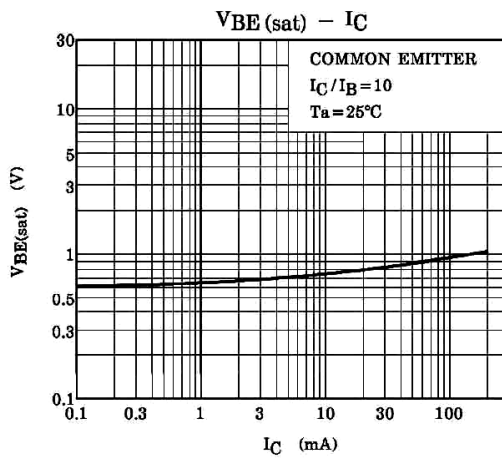
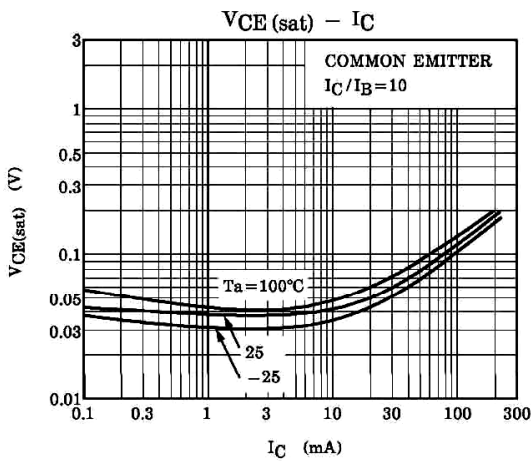
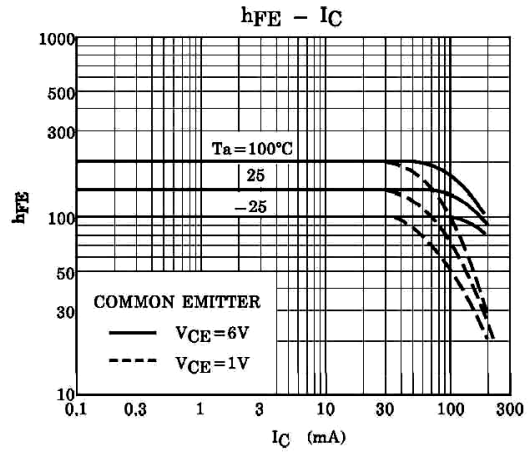
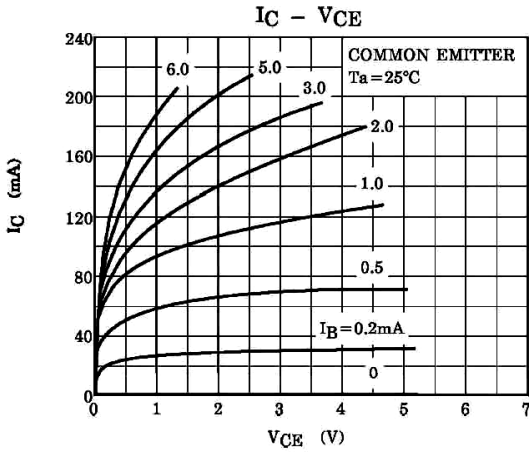
极限参数 / Absolute Maximum Ratings(Ta=25°C)

| 参数 Parameter | 符号 Symbol | 数值 Rating | 单位 Unit |
|------------------------------|------------------|--------------|------------|
| Collector to Base Voltage | V _{CB0} | 60 | V |
| Collector to Emitter Voltage | V _{CEO} | 50 | V |
| Emitter to Base Voltage | V _{EBO} | 5.0 | V |
| Collector Current | I _C | 150 | mA |
| Base Current | I _B | 30 | 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 _{CB0} | V _{CB} =60V 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} =6.0V I _C =2.0mA | 70 | | 700 | |
| Collector to Emitter Saturation Voltage | V _{CE(sat)} | I _C =100mA I _B =10mA | | 0.1 | 0.25 | V |
| Transition Frequency | f _T | V _{CE} =10V I _C =1.0mA | 80 | | | MHz |
| Collector Output Capacitance | C _{ob} | V _{CB} =10V f=1.0MHz I _E =0 | | 2.0 | 3.5 | pF |
| Noise Figure | NF | V _{CE} =6.0V I _C =0.1mA R _g =10KΩ f=1.0KHz | | 1.0 | 10 | dB |

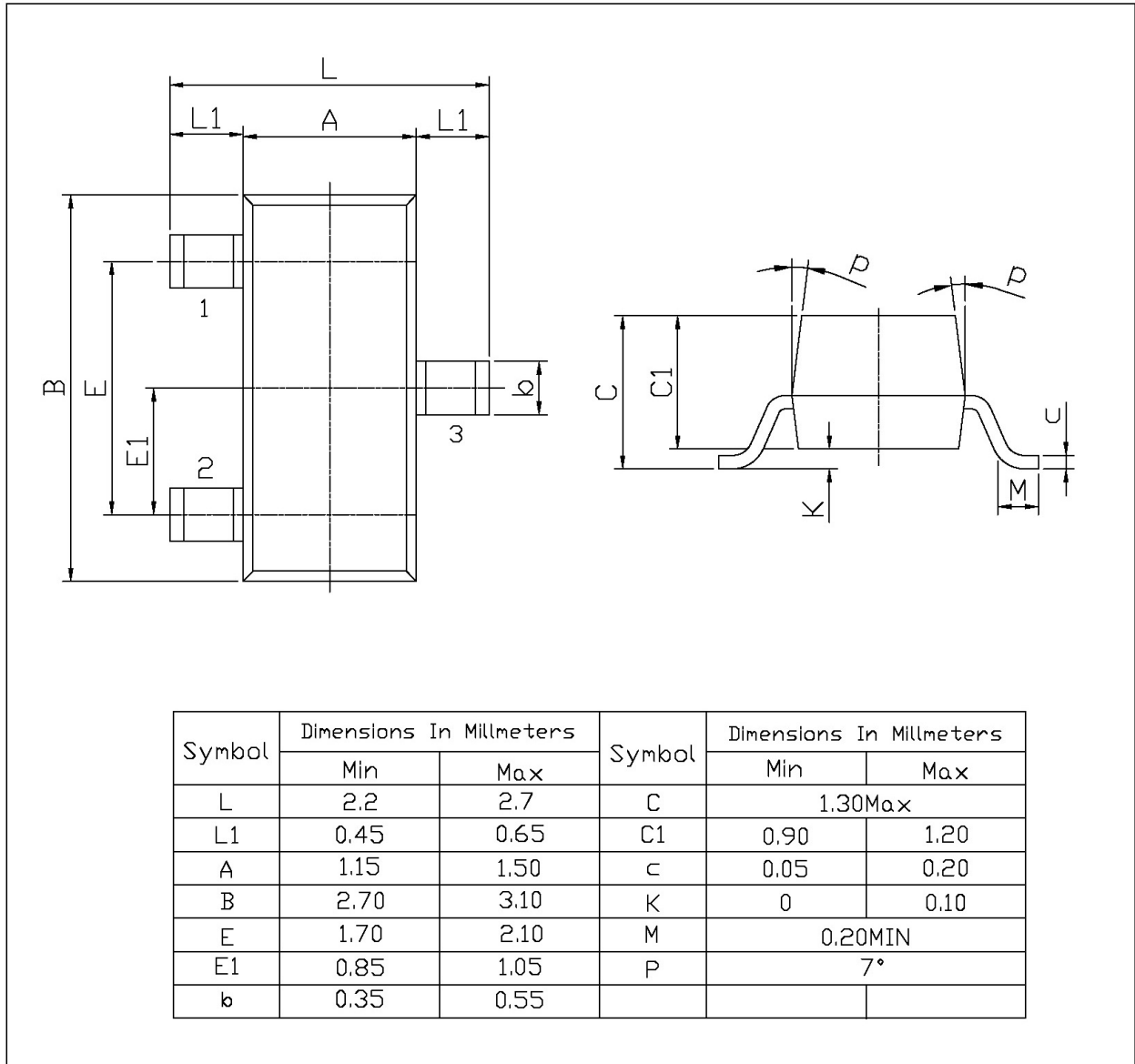
电参数曲线图 / Electrical Characteristic Curve



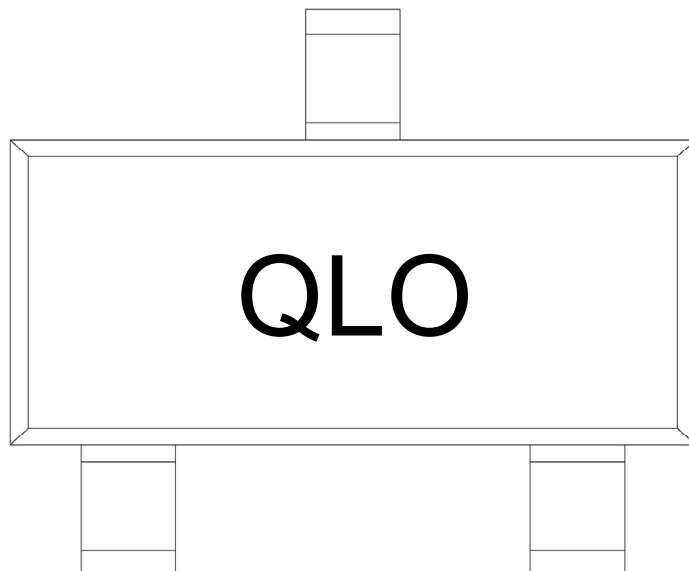
外形尺寸图 / Package Dimensions

SOT-23

单位: mm



印章说明 / Marking Instructions



说明：

Q： 为汽车无卤产品标识

L： 为型号代码

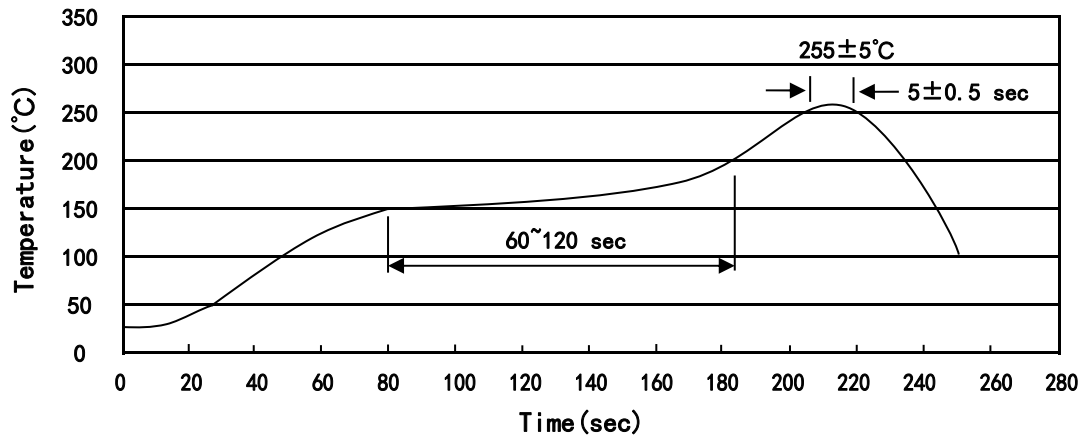
O： 为 h_{FE} 档次代码

Note:

Q: Automobile halogen-free product Code

L: Product Type Code

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 150~200°C，时间 60~120sec;
- 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:150~200°C, Time:60~120sec.
- 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：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" ×8 | 180×120×180 | 390×385×205 |

使用说明 / Notices