

## 📄 / Descriptions

SOT-23          NPN          Silicon NPN transistor in a SOT-23 Plastic Package.

## 🔑 / Features

High  $f_T$ .

## 📌 / Applications

100 $\mu$ A-20mA

Low noise UHF/VHF amplifiers, with collector currents in the 100  $\mu$ A to 20mA.

## 🔌 / Equivalent Circuit

## 📌 / Pinning



PIN1   Base          PIN 2   Emitter          PIN 3   Collector

## 🏷️ / Marking

|                |     |
|----------------|-----|
| $h_{FE}$ Range | >60 |
| Marking        | 3EH |

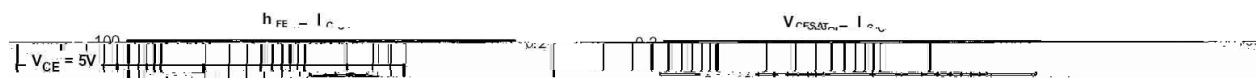
**绝对最大额定值 / Absolute Maximum Ratings(Ta=25 ℃)**

| Parameter                    | Symbol    | Rating    | Unit |
|------------------------------|-----------|-----------|------|
| Collector to Base Voltage    | $V_{CBO}$ | 30        | V    |
| Collector to Emitter Voltage | $V_{CEO}$ | 25        | V    |
| Emitter to Base Voltage      | $V_{EBO}$ | 3         | V    |
| Collector Current-Continuous | $I_C$     | 50        | mA   |
| Collector Power Dissipation  | $P_C$     | 225       | mW   |
| Junction Temperature         | $T_j$     | 150       |      |
| Storage Temperature Range    | $T_{stg}$ | -55 ~ 150 |      |

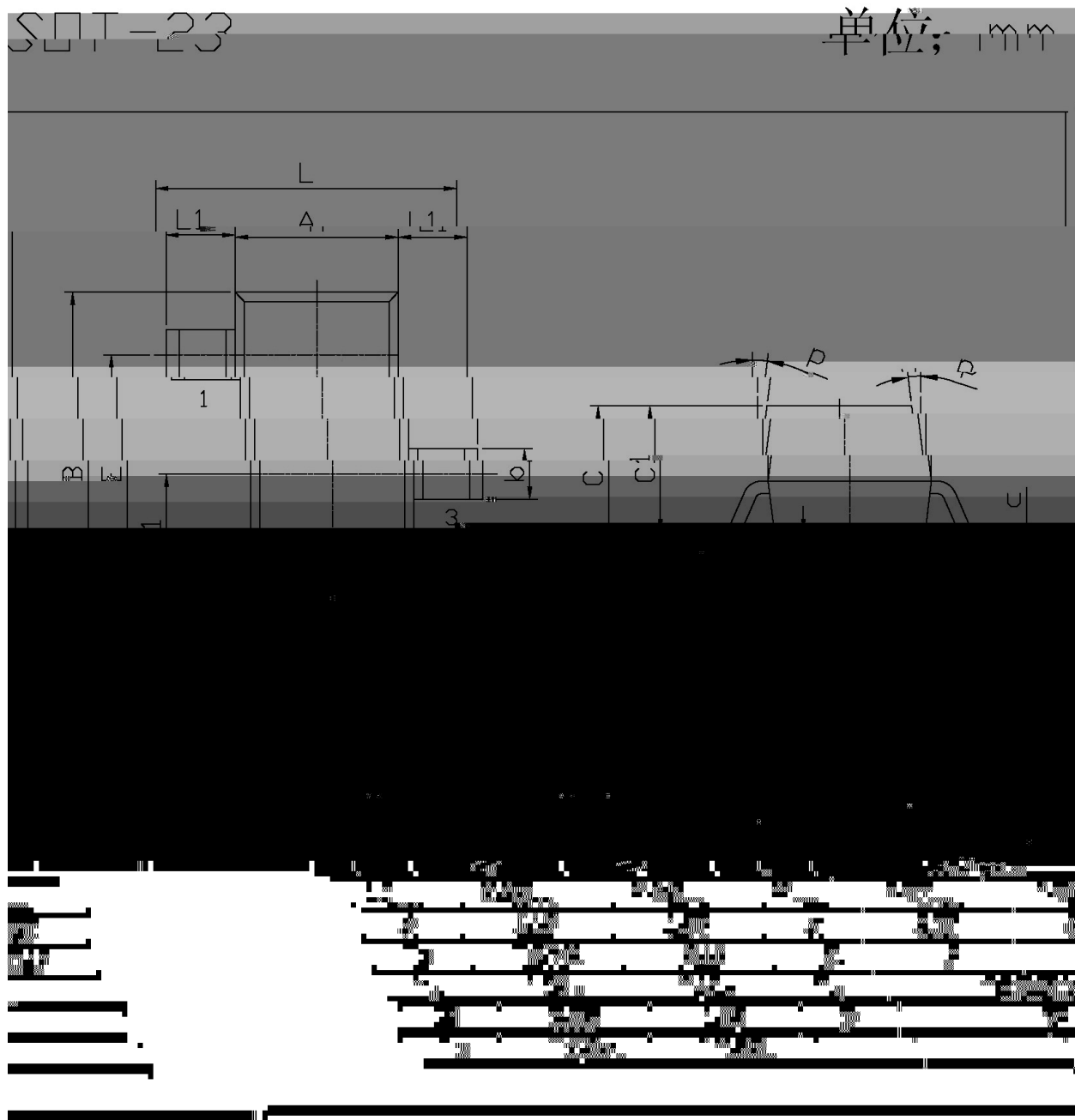
**电 气 特 性 / Electrical Characteristics(Ta=25 ℃)**

| Parameter                               | Symbol         | Test Conditions                                           | Min  | Typ | Max  | Unit |
|-----------------------------------------|----------------|-----------------------------------------------------------|------|-----|------|------|
| Collector to Base Breakdown Voltage     | $V_{CBO}$      | $I_C=100\text{ A}$ $I_E=0$                                | 30   |     |      | V    |
| Collector to Emitter Breakdown Voltage  | $V_{CEO}$      | $I_C=1.0\text{mA}$ $I_B=0$                                | 25   |     |      | V    |
| Emitter to Base Breakdown Voltage       | $V_{EBO}$      | $I_E=10\text{ A}$ $I_C=0$                                 | 3.0  |     |      | V    |
| Collector Cut-Off Current               | $I_{CBO}$      | $V_{CB}=25\text{ V}$ $I_E=0$                              |      |     | 0.1  | A    |
| Emitter Base Cut-Off Current            | $I_{EBO}$      | $V_{EB}=2.0\text{V}$ $I_C=0$                              |      |     | 0.1  | A    |
| DC Current Gain                         | $h_{FE}$       | $V_{CE}=10\text{V}$ $I_C=4.0\text{mA}$                    | 60   |     |      |      |
| Collector to Emitter Saturation Voltage | $V_{CE(sat)}$  | $I_C=4.0\text{mA}$ $I_B=0.4\text{mA}$                     |      |     | 0.5  | V    |
| Base-Emitter Voltage                    | $V_{BE}$       | $V_{CE}=10\text{V}$ $I_C=4.0\text{mA}$                    |      |     | 0.95 | V    |
| Transition Frequency                    | $f_T$          | $I_C=4.0\text{mA}$ $V_{CE}=10\text{V}$ $f=100\text{MHz}$  | 650  |     |      | MHz  |
| Collector-Base Capacitance              | $C_{cb}$       | $V_{CB}=10\text{V}$ $I_E=0$ $f=1.0\text{MHz}$             |      |     | 0.7  | pF   |
| Common-Base Feedback Capacitance        | $C_{rb}$       | $V_{CB}=10\text{V}$ $I_E=0$ $f=1.0\text{MHz}$             | 0.35 |     | 0.65 | pF   |
| Collector Base Time Constant            | $\tau_{rb}C_c$ | $V_{CB}=10\text{V}$ $I_C=4.0\text{mA}$ $f=31.8\text{MHz}$ |      |     | 9.0  | pS   |

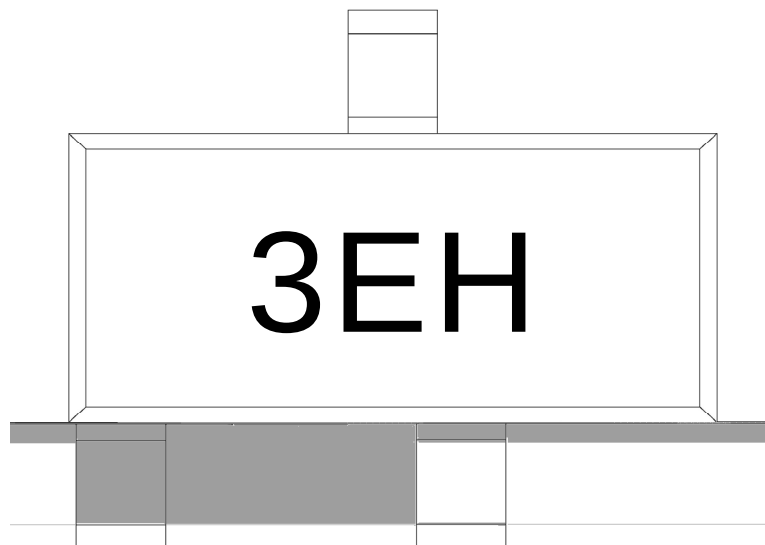
三、主要特性 / Electrical Characteristic Curve



⊂ É Ø L f / Package Dimensions



4. 1. 1 / Marking Instructions



3E

H

Note:

3E: Product Type Code

H: Company Code.

