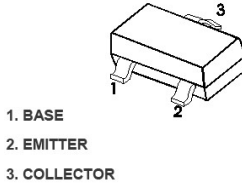


**SOT-23**
**SOT-23 贴片塑封三极管**
**SOT-23 Plastic-Encapsulate Transistors**

**Marking:**

|           |           |           |
|-----------|-----------|-----------|
| BC856A=3A | BC856B=3B |           |
| BC857A=3E | BC857B=3F | BC857C=3G |
| BC858A=3J | BC858B=3K | BC858C=3L |

**特征 Features**

- Complementary to BC846/BC847/BC848
- Power Dissipation of 200mW
- Ideally suited for automatic insertion
- For switching and AF amplifier applications

**机械数据 Mechanical Data**

- Small Outline Plastic Package
- Epoxy UL: 94V-0
- Mounting Position: Any

**极限值和温度特性** (TA = 25°C 除非另有规定)

**Maximum Ratings & Thermal Characteristics** (Ratings at 25°C ambient temperature unless otherwise specified.)

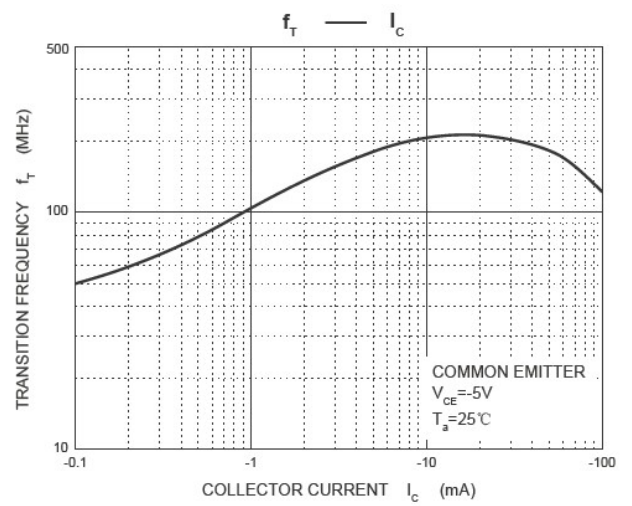
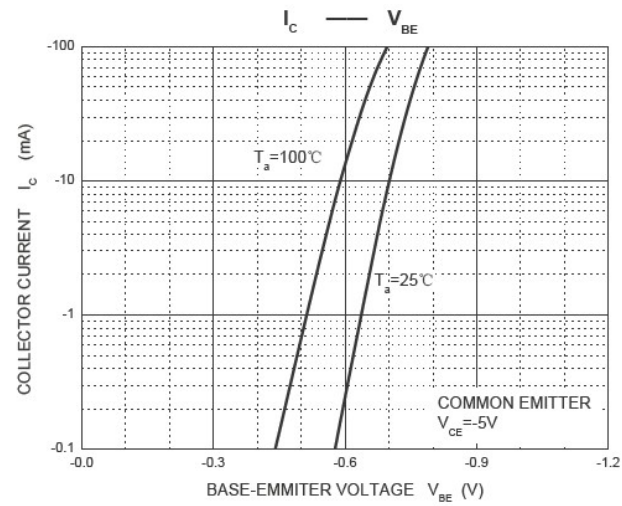
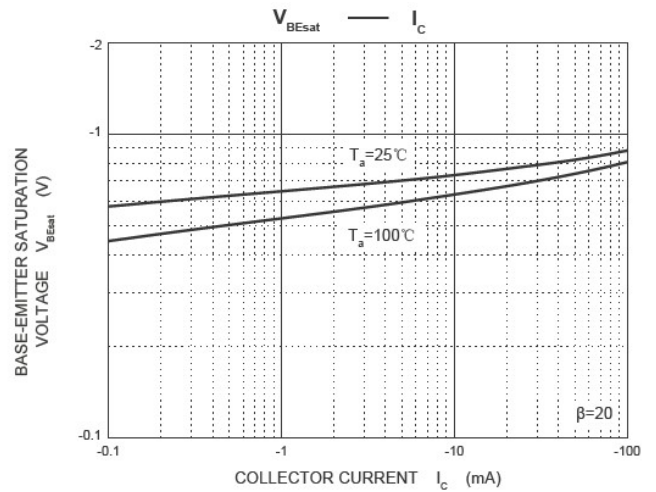
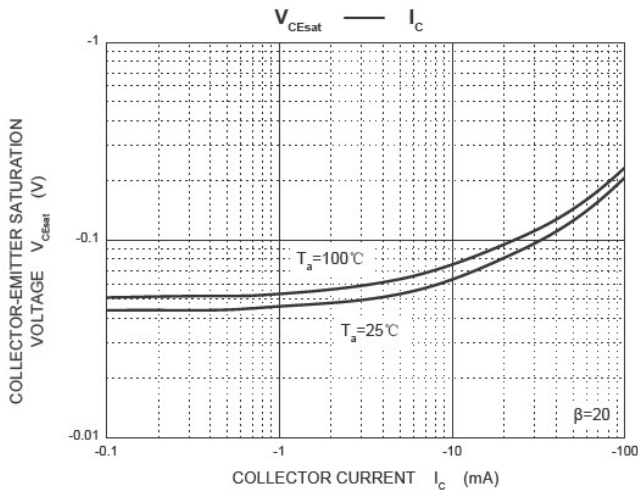
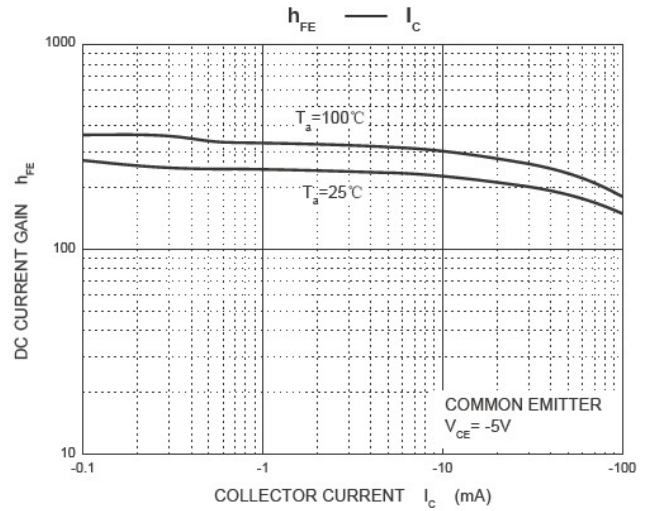
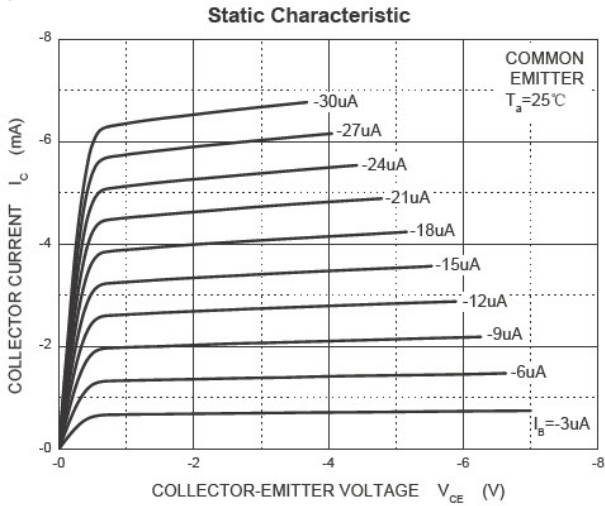
| 参数 Parameters                               | 符号 Symbol        |                         | 数值 Value          | 单位 Unit |
|---|------------------|-------------------------|-------------------|---------|
| Collector-Base Voltage                      | V <sub>CBO</sub> | BC856<br>BC857<br>BC858 | -80<br>-50<br>-30 | V       |
| Collector-Emitter Voltage                   | V <sub>CEO</sub> | BC856<br>BC857<br>BC858 | -65<br>-45<br>-30 | V       |
| Emitter -Base Voltage                       | V <sub>EBO</sub> |                         | -6                | V       |
| Collector Current-Continuous                | I <sub>C</sub>   |                         | -100              | mA      |
| Collector Power Dissipation                 | P <sub>C</sub>   |                         | 200               | mW      |
| Junction Temperature                        | T <sub>j</sub>   |                         | 150               | °C      |
| Storage Temperature                         | T <sub>stg</sub> |                         | -55-+150          | °C      |
| Thermal resistance From junction to ambient | R <sub>θJA</sub> |                         | 625               | °C/W    |

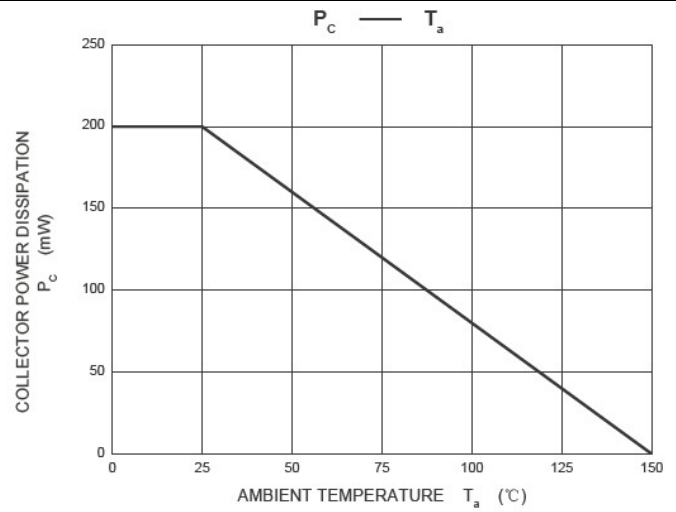
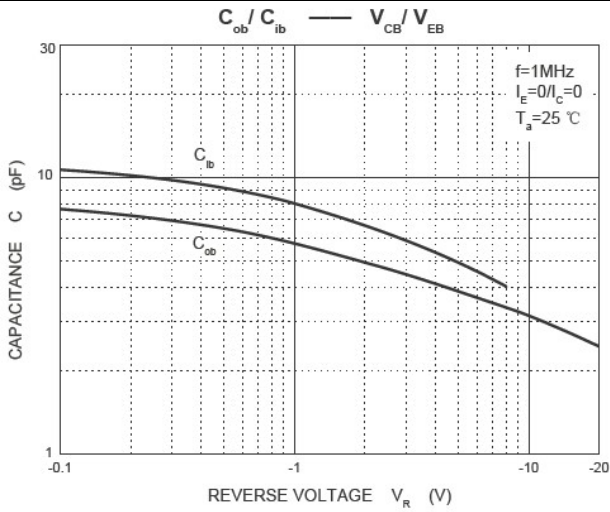
**电特性** (TA = 25°C 除非另有规定)

**Electrical Characteristics** (Ratings at 25°C ambient temperature unless otherwise specified.)

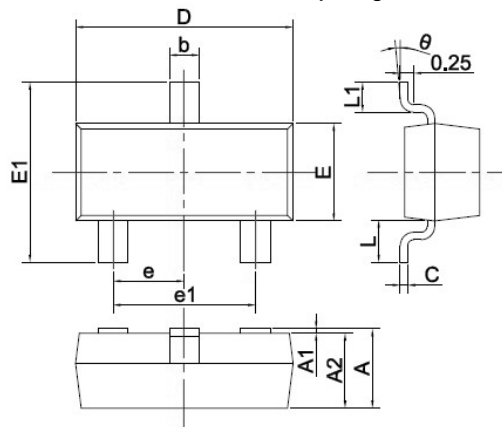
| 参数<br>Parameter                      | 符号<br>Symbols        | 测试条件<br>Test Condition   | 界限 Limits   |                   | 单位<br>Unit        |
|--------------------------------------|----------------------|--|---|-------------------|-------------------|
|                                      |                      |  | Min   | Max               |                   |
| Collector-base breakdown voltage     | V <sub>(BR)CBO</sub> | I <sub>C</sub> =-10μA, I <sub>E</sub> =0   | BC856<br>BC857<br>BC858                                       | -80<br>-50<br>-30 | V                 |
| Collector-emitter breakdown voltage  | V <sub>(BR)CEO</sub> | I <sub>C</sub> =-10mA, I <sub>B</sub> =0   | BC856<br>BC857<br>BC858                                       | -65<br>-45<br>-30 | V                 |
| Emitter-base breakdown voltage       | V <sub>(BR)EBO</sub> | I <sub>E</sub> =10μA, I <sub>C</sub> =0  |   | -6                | V                 |
| Collector cut-off current            | I <sub>CBO</sub>     | V <sub>CB</sub> =-70V, I <sub>E</sub> =0<br>V <sub>CB</sub> =-45V, I <sub>E</sub> =0<br>V <sub>CB</sub> =-25V, I <sub>E</sub> =0 | BC856<br>BC857<br>BC858                                       | -100              | nA                |
| Collector cut-off current            | I <sub>CEO</sub>     | V <sub>CE</sub> =-60V, I <sub>B</sub> =0<br>V <sub>CE</sub> =-40V, I <sub>B</sub> =0<br>V <sub>CE</sub> =-25V, I <sub>B</sub> =0 | BC856<br>BC857<br>BC858                                       | -100              | nA                |
| Emitter cut-off current              | I <sub>EBO</sub>     | V <sub>EB</sub> =-5V, I <sub>C</sub> =0  |   | -100              | nA                |
| DC current gain                      | h <sub>FE</sub>      | V <sub>CE</sub> =-5V, I <sub>C</sub> =-2mA   | BC856A;BC857A;BC858A<br>BC856B;BC857B;BC858B<br>BC857C;BC858C | 125<br>220<br>420 | 250<br>475<br>800 |
| Collector-emitter saturation voltage | V <sub>CE(sat)</sub> | I <sub>C</sub> =-100mA, I <sub>B</sub> =-5mA   |   | -0.50             | V                 |
| Base -emitter saturation voltage     | V <sub>BE(sat)</sub> | I <sub>C</sub> =-100mA, I <sub>B</sub> =-5mA   |   | -1.10             | V                 |
| Transition frequency                 | f <sub>T</sub>       | V <sub>CE</sub> =-5V, I <sub>C</sub> =-10mA, f=100MHz  |   | 100               | MHz               |
| Collector output capacitance         | C <sub>ob</sub>      | V <sub>CB</sub> =-10V, f=1MHz  |   | 4.5               | pF                |

Typical characteristics





## SOT-23 PACKAGE OUTLINE Plastic surface mounted package

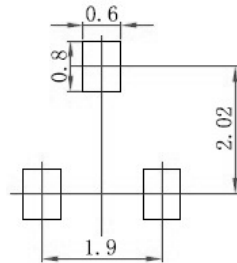


| SYMBOL | DIMENSIONS |       |
|--------|------------|-------|
|        | MIN.       | MAX.  |
| A      | 0.900      | 1.150 |
| A1     | 0.000      | 0.100 |
| A2     | 0.900      | 1.050 |
| b      | 0.300      | 0.500 |
| c      | 0.080      | 0.150 |
| D      | 2.800      | 3.000 |
| E      | 1.200      | 1.400 |
| E1     | 2.250      | 2.550 |
| e      | 0.950TYP   |       |
| e1     | 1.800      | 2.000 |
| L      | 0.550REF   |       |
| L1     | 0.300      | 0.500 |
| θ      | 0°         | 8°    |

Unit: mm

### 焊盘设计参考 Precautions: PCB Design

Recommended land dimensions for SOT-23 diode. Electrode patterns for PCBs



- Note:
1. Controlling dimension: In millimeters.
  2. General tolerance: ±0.05mm.
  3. The pad layout is for reference purposes only.

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