



# 安徽富信半导体科技有限公司

ANHUI FOSAN SEMICONDUCTOR TECHNOLOGY CO., LTD.

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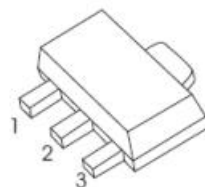
## SOT-89 Bipolar Transistor 双极型三极管

### ■ Features 特点

NPN Low Saturation Voltage 低饱和压降

### ■ Absolute Maximum Ratings 最大额定值

- 1. BASE
- 2. COLLECTOR
- 3. EMITTER



| Characteristic 特性参数                         | Symbol 符号                   | Rat 额定值                    | Unit 单位                   |
|---|-----------------------------|----------------------------|---------------------------|
| Collector-Base Voltage 集电极基极电压              | $V_{CBO}$                   | 50                         | V                         |
| Collector-Emitter Voltage 集电极发射极电压          | $V_{CEO}$                   | 50                         | V                         |
| Emitter-Base Voltage 发射极基极电压                | $V_{EBO}$                   | 5                          | V                         |
| Collector Current 集电极电流                     | $I_C$                       | 3000                       | mA                        |
| Power dissipation 耗散功率                      | $P_C(T_a=25^\circ\text{C})$ | 500                        | mW                        |
| Thermal Resistance Junction-Ambient 热阻      | $R_{\theta JA}$             | 250                        | $^\circ\text{C}/\text{W}$ |
| Junction and Storage Temperature<br>结温和储藏温度 | $T_J, T_{stg}$              | -55to+150 $^\circ\text{C}$ |                           |

### ■ Device Marking 产品打标

|          |            |            |
|----------|------------|------------|
| $H_{FE}$ | 120-240(R) | 170-340(S) |
| Mark     | 1H         |            |

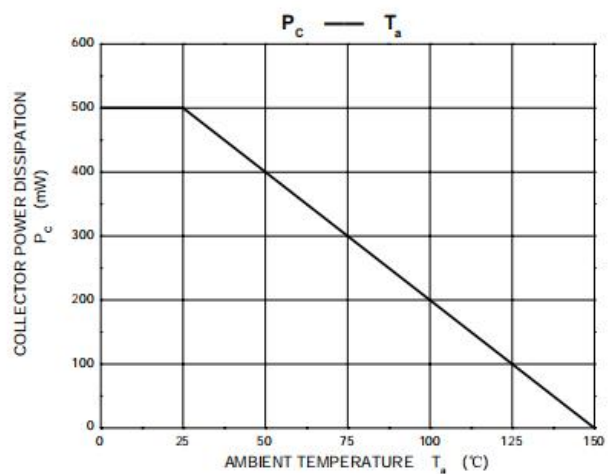
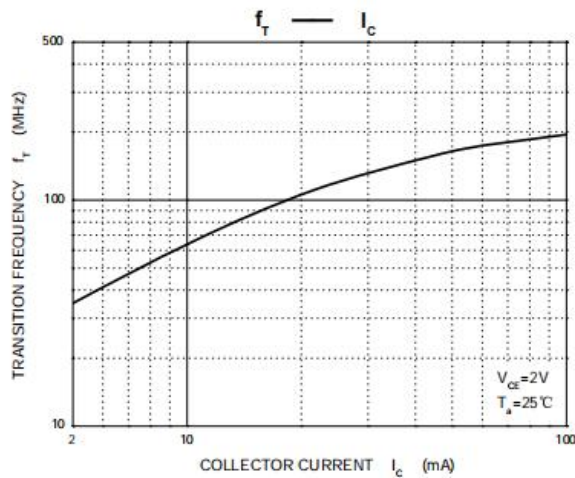
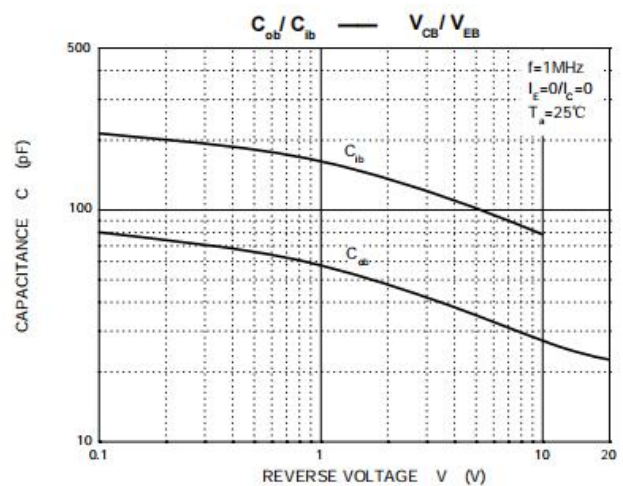
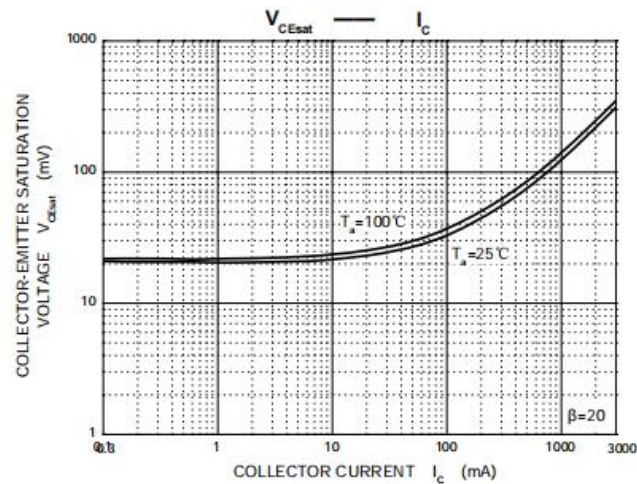
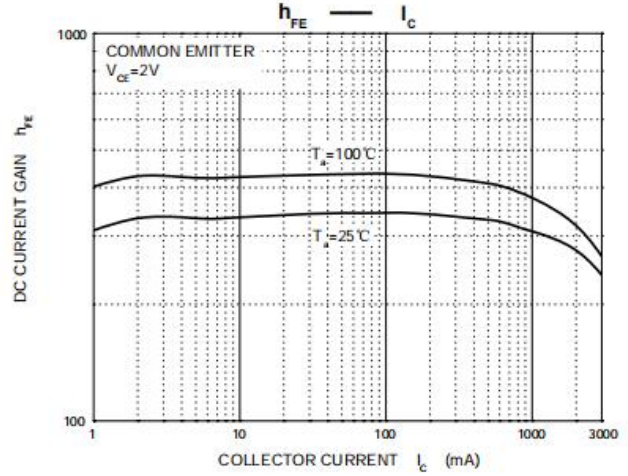
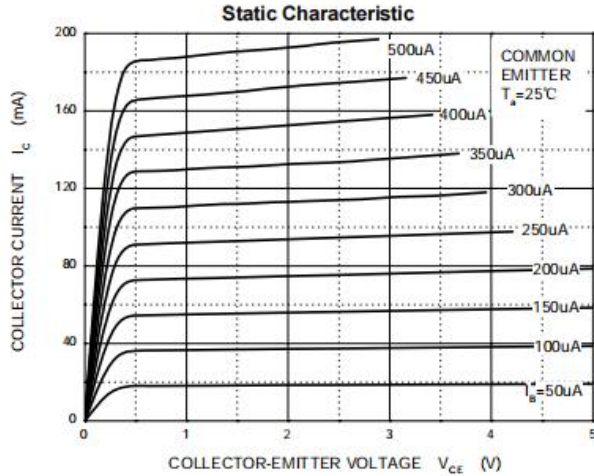


## ■ Electrical Characteristics 电特性

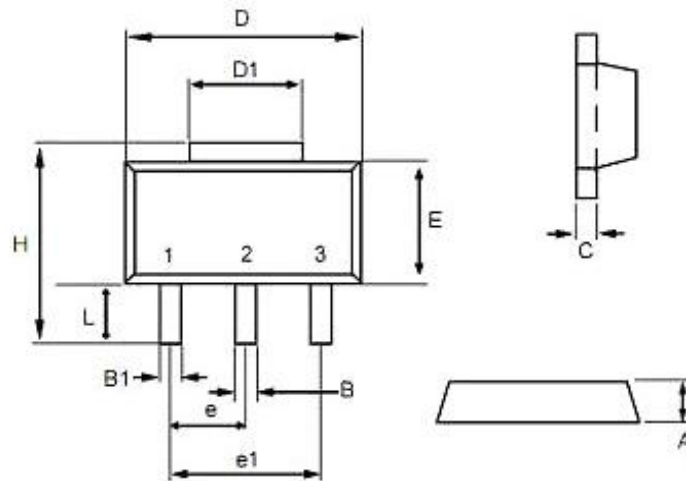
( $T_A=25^{\circ}\text{C}$  unless otherwise noted 如无特殊说明, 温度为  $25^{\circ}\text{C}$ )

| Characteristic<br>特性参数   | Symbol<br>符号  | Min<br>最小值 | Type<br>典型值 | Max<br>最大值 | Unit<br>单位    |
|--|---------------|------------|-------------|------------|---------------|
| Collector-Base Breakdown Voltage<br>集电极基极击穿电压( $I_C=10\mu\text{A}$ , $I_E=0$ )                                   | $BV_{CBO}$    | 50         | —           | —          | V             |
| Collector-Emitter Breakdown Voltage<br>集电极发射极击穿电压( $I_C=1\text{mA}$ , $I_B=0$ )                                  | $BV_{CEO}$    | 50         | —           | —          | V             |
| Emitter-Base Breakdown Voltage<br>发射极基极击穿电压( $I_E=10\mu\text{A}$ , $I_C=0$ )                                     | $BV_{EBO}$    | 5          | —           | —          | V             |
| Collector-Base Leakage Current<br>集电极基极漏电流( $V_{CB}=50\text{V}$ , $I_E=0$ )                                      | $I_{CBO}$     | —          | —           | 1          | $\mu\text{A}$ |
| Emitter-Base Leakage Current<br>发射极基极漏电流( $V_{EB}=5\text{V}$ , $I_C=0$ )   | $I_{EBO}$     | —          | —           | 1          | $\mu\text{A}$ |
| DC Current Gain( $V_{CE}=2\text{V}$ , $I_C=200\text{mA}$ )<br>直流电流增益( $V_{CE}=2\text{V}$ , $I_C=1000\text{mA}$ ) | $H_{FE}$      | 120<br>60  | —           | 340        |               |
| Collector-Emitter Saturation Voltage<br>集电极发射极饱和压降( $I_C=1\text{A}$ , $I_B=50\text{mA}$ )                        | $V_{CE(sat)}$ | —          | —           | 0.3        | V             |
| Base-Emitter Saturation Voltage<br>基极发射极饱和压降( $I_C=1\text{A}$ , $I_B=50\text{mA}$ )                              | $V_{BE(sat)}$ | —          | —           | 1.2        | V             |
| Transition Frequency<br>特征频率( $V_{CE}=10\text{V}$ , $I_C=50\text{mA}$ )  | $f_T$         | —          | 80          | —          | MHz           |
| Output Capacitance<br>输出电容( $V_{CB}=10\text{V}$ , $I_E=0$ , $f=1\text{MHz}$ )                                    | $C_{ob}$      | —          | 60          | —          | pF            |

## Typical Characteristic Curve 典型特性曲线



## ■Dimension 外形封装尺寸



| Dim | min      | max  |
|-----|----------|------|
| A   | 1.40     | 1.60 |
| B   | 0.40     | 0.56 |
| B1  | 0.35     | 0.48 |
| C   | 0.35     | 0.44 |
| D   | 4.40     | 4.60 |
| D1  | 1.35     | 1.83 |
| e   | 1.50 BSC |      |
| e1  | 3.00 BSC |      |
| E   | 2.29     | 2.60 |
| H   | 3.75     | 4.25 |
| L   | 0.80     | 1.20 |