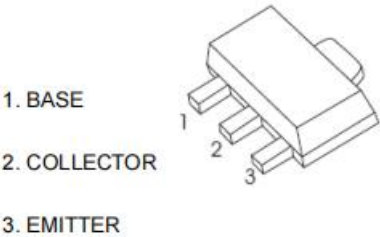


SOT-89 Bipolar Transistor 双极型三极管

■Features 特点

PNP Low Saturation Voltage 低饱和压降

■Absolute Maximum Ratings 最大额定值



| 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              | $V_{CBO}$              | -40                   | V             |
| Collector-Emitter Voltage 集电极发射极电压          | $V_{CEO}$              | -32                   | V             |
| Emitter-Base Voltage 发射极基极电压                | $V_{EBO}$              | -5                    | V             |
| Collector Current 集电极电流                     | $I_C$                  | -2000                 | mA            |
| Power dissipation 耗散功率                      | $P_C(T_a=25^{\circ}C)$ | 500                   | mW            |
| Thermal Resistance Junction-Ambient 热阻      | $R_{\theta JA}$        | 250                   | $^{\circ}C/W$ |
| Junction and Storage Temperature<br>结温和储藏温度 | $T_J, T_{stg}$         | -55to+150 $^{\circ}C$ |               |

■Device Marking 产品打标

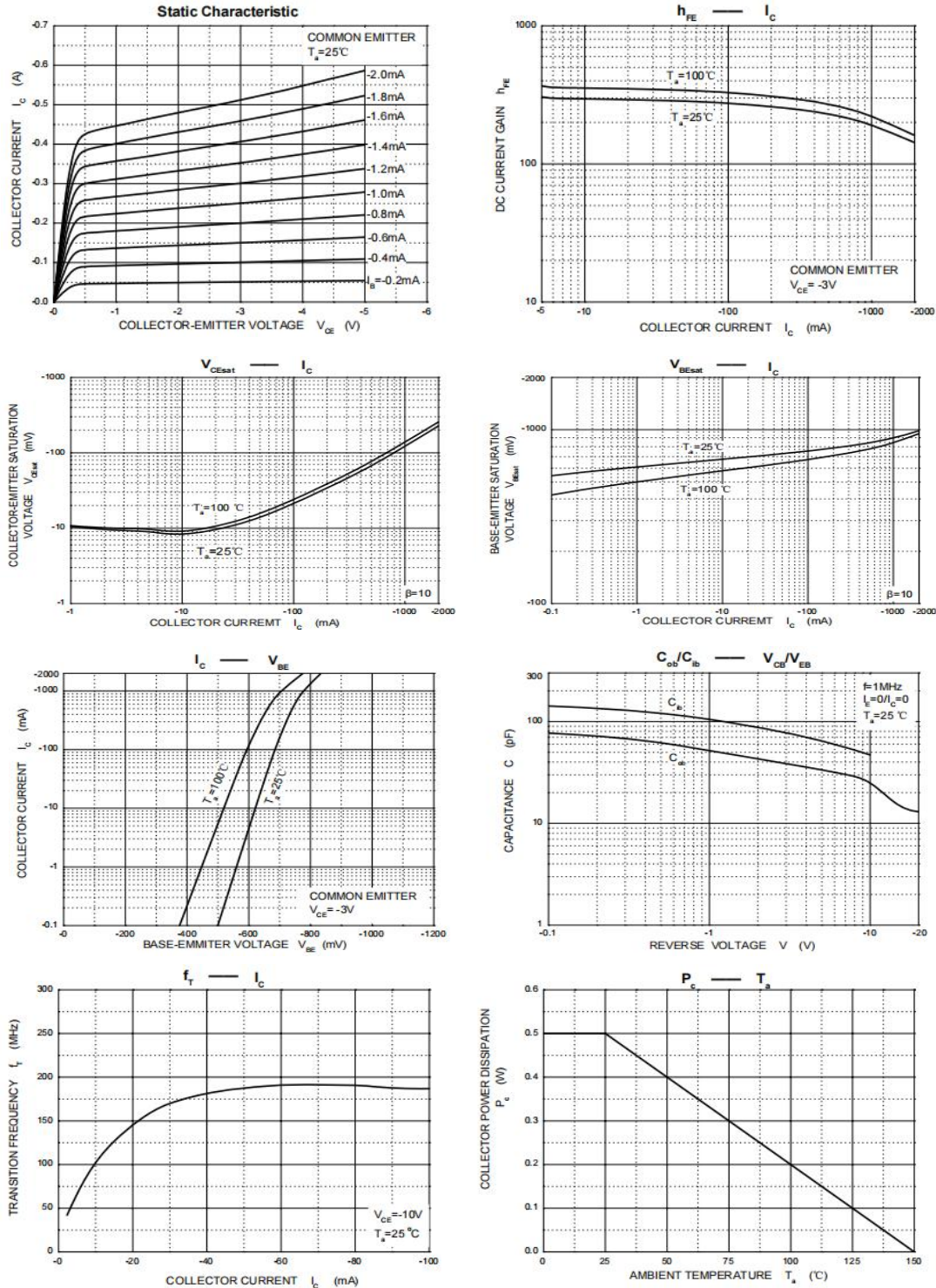
|          |           |            |            |
|----------|-----------|------------|------------|
| $H_{FE}$ | 82-180(P) | 120-270(Q) | 180-390(R) |
| Mark     | BCP       | BCQ        | BCR        |

# **■Electrical Characteristics 电特性**

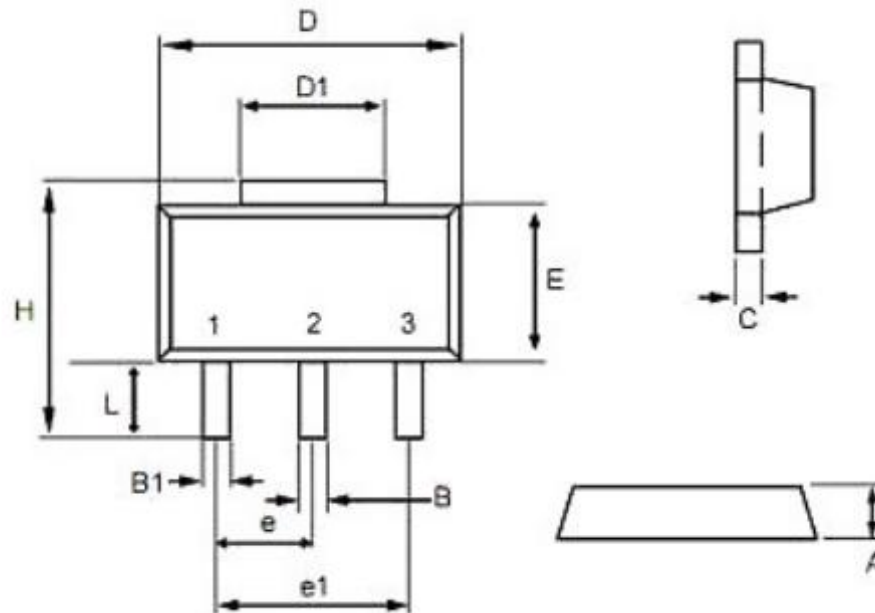
( $T_A=25^{\circ}\text{C}$  unless otherwise noted 如无特殊说明, 温度为  $25^{\circ}\text{C}$ )

| 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( $I_C = -50\mu\text{A}$ , $I_E = 0$ )             | $BV_{CBO}$    | -40        | —           | —          | V             |
| Collector-Emitter Breakdown Voltage<br>集电极发射极击穿电压( $I_C = -1\text{mA}$ , $I_B = 0$ )            | $BV_{CEO}$    | -32        | —           | —          | V             |
| Emitter-Base Breakdown Voltage<br>发射极基极击穿电压( $I_E = -50\mu\text{A}$ , $I_C = 0$ )               | $BV_{EBO}$    | -5         | —           | —          | V             |
| Collector-Base Leakage Current<br>集电极基极漏电流( $V_{CB} = -20\text{V}$ , $I_E = 0$ )                | $I_{CBO}$     | —          | —           | -1         | $\mu\text{A}$ |
| Emitter-Base Leakage Current<br>发射极基极漏电流( $V_{EB} = -4\text{V}$ , $I_C = 0$ )                   | $I_{EBO}$     | —          | —           | -1         | $\mu\text{A}$ |
| DC Current Gain<br>直流电流增益( $V_{CE} = -3\text{V}$ , $I_C = -500\text{mA}$ )                      | $H_{FE}$      | 82         | —           | 390        |               |
| Collector-Emitter Saturation Voltage<br>集电极发射极饱和压降( $I_C = -2\text{A}$ , $I_B = -0.2\text{A}$ ) | $V_{CE(sat)}$ | —          | —           | -0.8       | V             |
| Base-Emitter Saturation Voltage<br>基极发射极饱和压降( $I_C = -2\text{A}$ , $I_B = -0.2\text{A}$ )       | $V_{BE(sat)}$ | —          | —           | -2         | V             |
| Base-Emitter On Voltage<br>基极发射极导通电压( $V_{CE} = -10\text{V}$ , $I_C = -500\text{mA}$ )          | $V_{BE(on)}$  | —          | —           | -2         | V             |
| Transition Frequency<br>特征频率( $V_{CE} = -5\text{V}$ , $I_C = -500\text{mA}$ )                   | $f_T$         | —          | 100         | —          | MHz           |
| Output Capacitance<br>输出电容( $V_{CB} = -10\text{V}$ , $I_E = 0$ , $f = 1\text{MHz}$ )            | $C_{ob}$      | —          | 50          | —          | pF            |

■ Typical Characteristic Curve 典型特性曲线



■Dimension 外形封装尺寸



| Symbol | Dimensions In Millimeters |      | Dimensions In Inches |       |
|--------|---------------------------|------|----------------------|-------|
|        | Min                       | Max  | Min                  | Max   |
| A      | 1.40                      | 1.60 | 0.055                | 0.063 |
| B      | 0.40                      | 0.56 | 0.016                | 0.022 |
| B1     | 0.35                      | 0.48 | 0.014                | 0.019 |
| C      | 0.35                      | 0.44 | 0.014                | 0.017 |
| D      | 4.40                      | 4.60 | 0.173                | 0.181 |
| D1     | 1.35                      | 1.83 | 0.053                | 0.072 |
| e      | 1.45                      | 1.55 | 0.057                | 0.061 |
| e1     | 2.95                      | 3.05 | 0.116                | 0.120 |
| E      | 2.29                      | 2.60 | 0.090                | 0.102 |
| H      | 3.75                      | 4.25 | 0.148                | 0.167 |
| L      | 0.80                      | 1.20 | 0.031                | 0.047 |