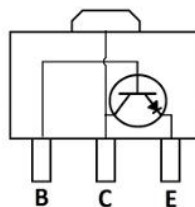


**SOT-89-3L Bipolar Transistor 双极型三极管**
**■ Features 特点**


NPN General Purpose 通用


**■ Absolute Maximum Ratings 最大额定值**

| Characteristic<br>特性参数                      | Symbol<br>符号           | BCX54/<br>-10/-16<br>-2AF | BCX55/<br>-10/-16<br>-2AF | BCX56/<br>-10/-16<br>-2AF | Unit<br>单位    |
|---------------------------------------------|------------------------|---------------------------|---------------------------|---------------------------|---------------|
| Collector-Base Voltage<br>集电极基极电压           | $V_{CBO}$              | 45                        | 60                        | 100                       | V             |
| Collector-Emitter Voltage<br>集电极发射极电压       | $V_{CEO}$              | 45                        | 60                        | 80                        | V             |
| Emitter-Base Voltage<br>发射极基极电压             | $V_{EBO}$              | 5                         |                           |                           | V             |
| Collector Current<br>集电极电流                  | $I_C$                  | 1000                      |                           |                           | mA            |
| Power dissipation<br>耗散功率                   | $P_C(T_a=25^{\circ}C)$ | 500                       |                           |                           | mW            |
| Thermal Resistance<br>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**

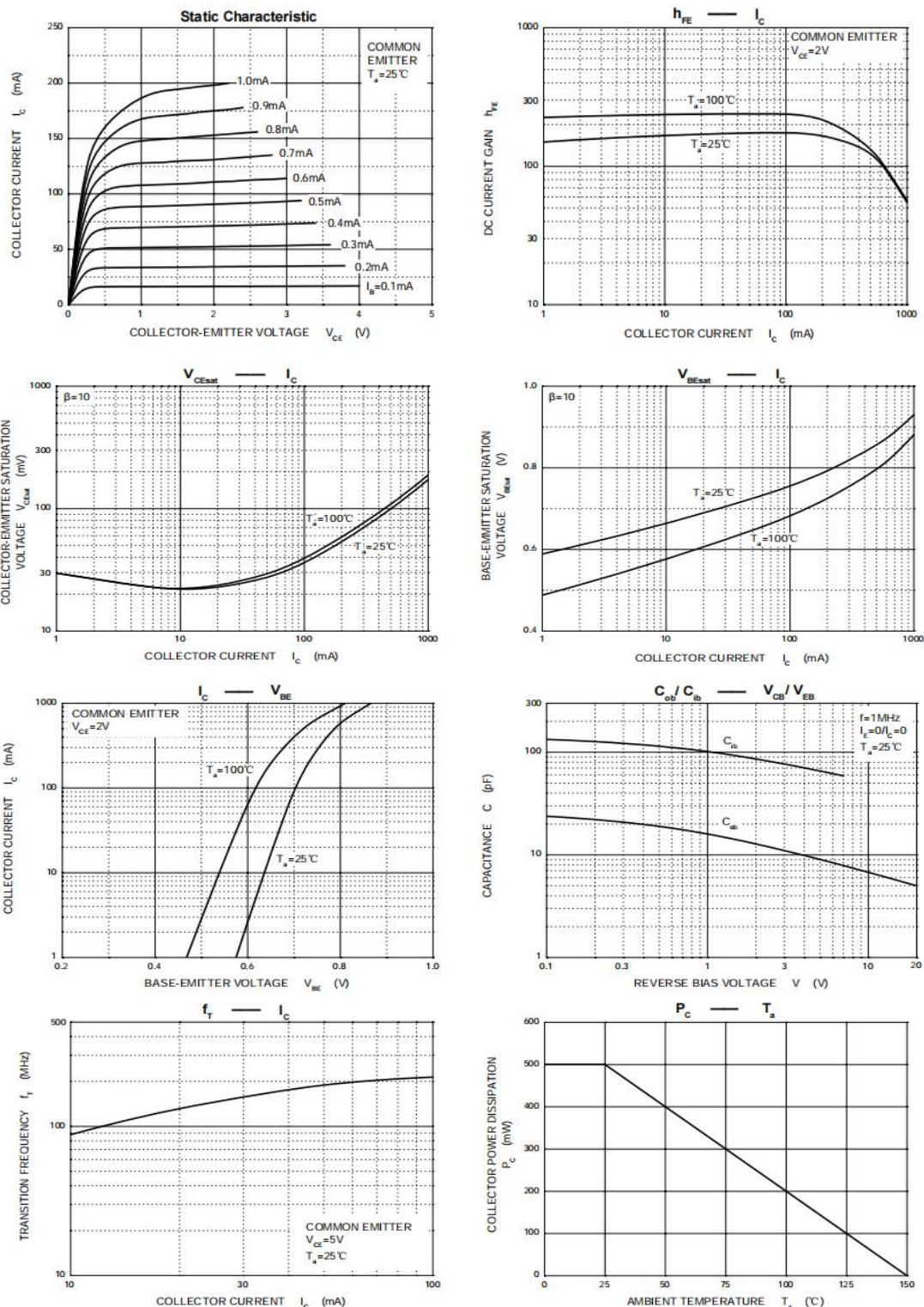
| $H_{FE}(2)$ |       | 63-250(-2AF) | 63-160(-10-2AF) | 100-250(-16-2AF) |
|-------------|-------|--------------|-----------------|------------------|
| Mark        | BCX54 | BA           | BC              | BD               |
|             | BCX55 | BE           | BG              | BM               |
|             | BCX56 | BH           | BK              | BL               |

**■Electrical Characteristics 电特性**

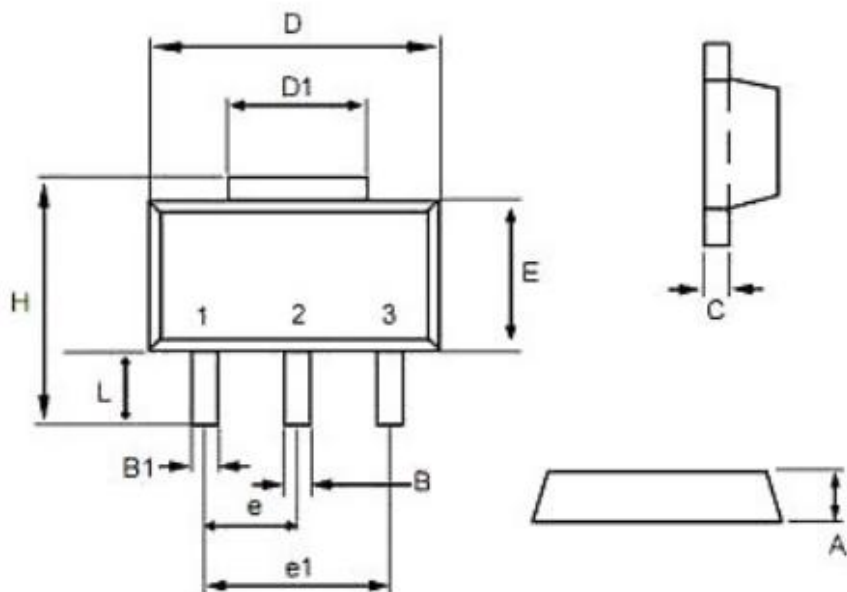
(TA=25°C unless otherwise noted 如无特殊说明, 温度为 25°C)

| 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<br>(IC= 100uA, IE=0)     | BCX54/-10/-16-2AF<br>BCX55/-10/-16-2AF<br>BCX56/-10/-16-2AF                                                                                        | BV <sub>CBO</sub>    | 45<br>60<br>100 | —           | —                 | V          |
| Collector-Emitter Breakdown Voltage<br>集电极发射极击穿电压<br>(IC= 10mA, IB=0)  | BCX54/-10/-16-2AF<br>BCX55/-10/-16-2AF<br>BCX56/-10/-16-2AF                                                                                        | BV <sub>CEO</sub>    | 45<br>60<br>80  | —           | —                 | V          |
| Emitter-Base Breakdown Voltage<br>发射极基极击穿电压(IE= 100uA, IC=0)           |                                                                                                                                                    | BV <sub>EBO</sub>    | 5               | —           | —                 | V          |
| Collector-Base<br>Leakage Current<br>集电极基极漏电流                          | BCX54/-10/-16-2AF (V <sub>CB</sub> = 30V,IE=0)<br>BCX55/-10/-16-2AF (V <sub>CB</sub> = 50V,IE=0)<br>BCX56/-10/-16-2AF (V <sub>CB</sub> = 80V,IE=0) | I <sub>CBO</sub>     | —               | —           | 100               | nA         |
| Emitter-Base Leakage Current<br>发射极基极漏电流(V <sub>EB</sub> = 5V, IC=0)   |                                                                                                                                                    | I <sub>EBO</sub>     | —               | —           | 100               | nA         |
| DC Current Gain<br>直流电流增益(V <sub>CE</sub> = 2V,IC= 5mA)                |                                                                                                                                                    | H <sub>FE</sub> (1)  | 40              | —           | —                 |            |
| DC Current Gain<br>直流电流增益<br>(V <sub>CE</sub> =2V,IC=0.15A)            | BCX54/BCX55/BCX56-2AF<br>BCX54/BCX55/BCX56-10-2AF<br>BCX54/BCX55/BCX56-16-2AF                                                                      | H <sub>FE</sub> (2)  | 63<br>63<br>100 | —           | 250<br>160<br>250 |            |
| DC Current Gain<br>直流电流增益(V <sub>CE</sub> = 2V,IC= 0.5A)               |                                                                                                                                                    | H <sub>FE</sub> (3)  | 25              | —           | —                 |            |
| Collector-Emitter Saturation Voltage<br>集电极发射极饱和压降(IC= 0.5A, IB= 50mA) |                                                                                                                                                    | V <sub>CE(sat)</sub> | —               | —           | 0.5               | V          |
| Base-Emitter Saturation Voltage<br>基极发射极饱和压降(IC= 500mA, IB= 50mA)      |                                                                                                                                                    | V <sub>BE(sat)</sub> | —               | —           | 1                 | V          |
| Base-Emitter On Voltage<br>基极发射极导通电压(V <sub>CE</sub> = 2V,IC= 0.5A)    |                                                                                                                                                    | V <sub>BE(on)</sub>  | —               | —           | 1                 | V          |
| Transition Frequency<br>特征频率(V <sub>CE</sub> = 5V, IC= 10mA)           |                                                                                                                                                    | f <sub>T</sub>       | —               | 130         | —                 | MHz        |
| Output Capacitance<br>输出电容(V <sub>CB</sub> = 10V, IE=0, f=1MHz)        |                                                                                                                                                    | C <sub>ob</sub>      | —               | 15          | —                 | 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 |