



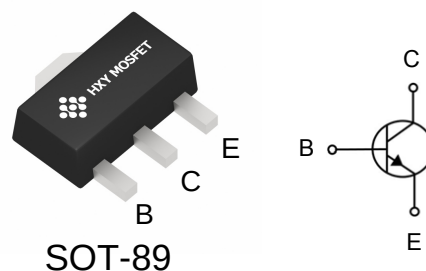
## Features

- Collector Current:  $I_C = 1A$
- Power Dissipation of 500mW

## Package Marking and Ordering Information

| Product ID        | Pack   | Marking | Qty(PCS) |
|-------------------|--------|---------|----------|
| BCX54,BCX55,BCX56 | SOT-89 | BCX5x   | 1000     |

x:From 4,4-10,4-16  
5,5-10,5-16  
6,6-10,6-16



## Maximum Ratings (Ta=25°C unless otherwise noted)

| Symbol    | Parameter                    | Value        | Unit |
|-----------|------------------------------|--------------|------|
| $V_{CBO}$ | Collector-Base Voltage       | BCX54<br>45  | V    |
|           |                              | BCX55<br>60  |      |
|           |                              | BCX56<br>100 |      |
| $V_{CEO}$ | Collector-Emitter Voltage    | BCX54<br>45  | V    |
|           |                              | BCX55<br>60  | V    |
|           |                              | BCX56<br>80  | V    |
| $V_{EBO}$ | Emitter-Base Voltage         | 5            | V    |
| $I_C$     | Collector Current-Continuous | 1            | A    |
| $P_C$     | Collector Power Dissipation  | 500          | mW   |
| $T_j$     | Junction Temperature         | 150          | °C   |
| $T_{stg}$ | Storage Temperature          | -55-150      | °C   |



### Electrical Characteristics(Ta=25°C unless otherwise specified)

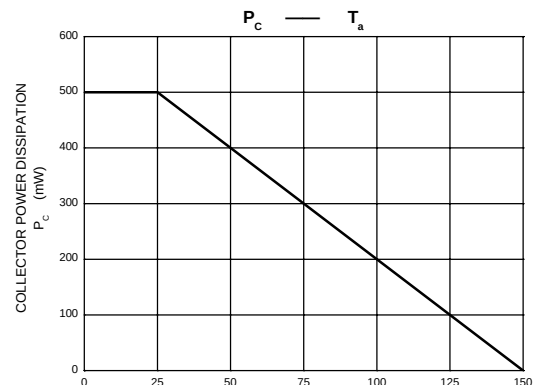
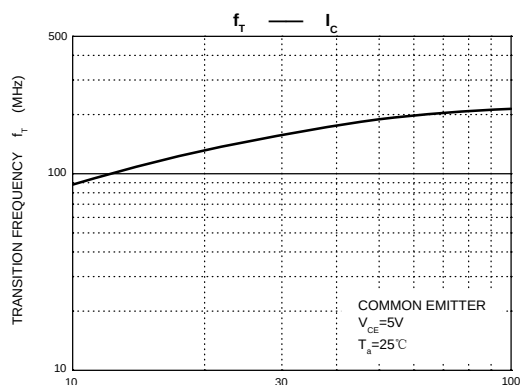
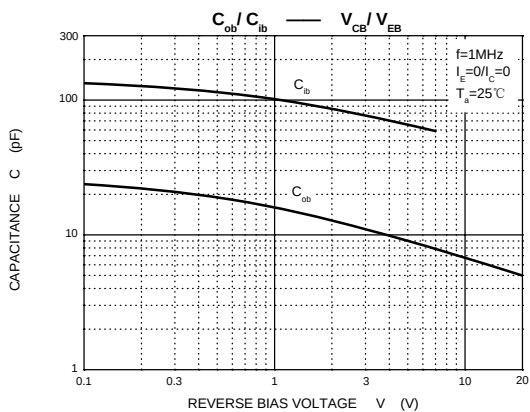
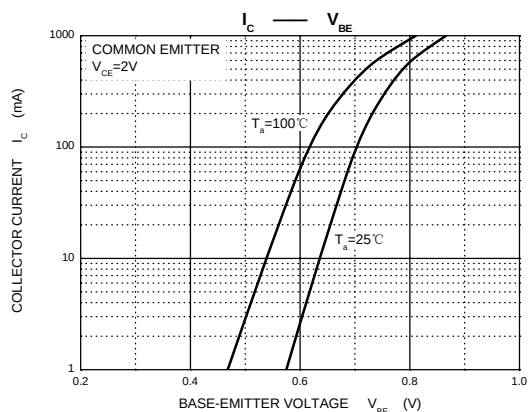
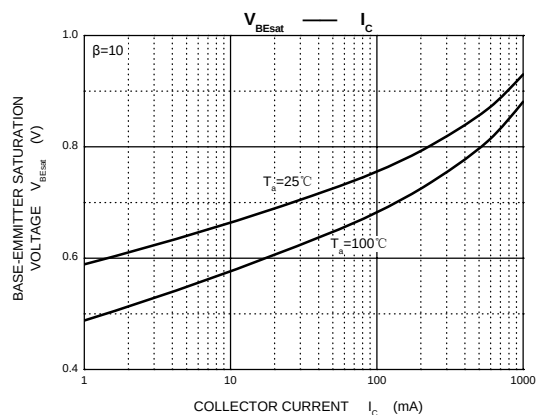
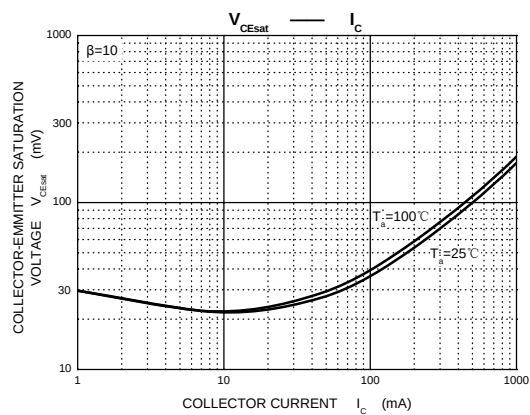
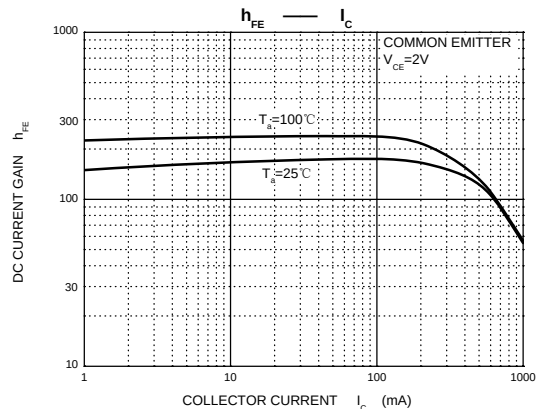
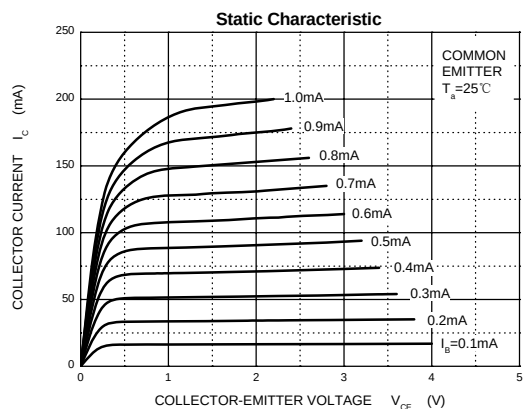
| Parameter                            | Symbol          | Test conditions                 | Min   | Typ | Max | Unit    |
|--------------------------------------|-----------------|---------------------------------|-------|-----|-----|---------|
| Collector-base breakdown voltage     | $V_{(BR)CBO}$   | $I_C=100\mu A, I_E=0$           | BCX54 | 45  |     | V       |
|                                      |                 |                                 | BCX55 | 60  |     |         |
|                                      |                 |                                 | BCX56 | 100 |     |         |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO^*}$ | $I_C=10mA, I_B=0$               | BCX54 | 45  |     | V       |
|                                      |                 |                                 | BCX55 | 60  |     |         |
|                                      |                 |                                 | BCX56 | 80  |     |         |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$   | $I_E=10\mu A, I_C=0$            | 5     |     |     | V       |
| Collector cut-off current            | $I_{CBO}$       | $V_{CB}=30V, I_E=0$             |       |     | 0.1 | $\mu A$ |
| Emitter cut-off current              | $I_{EBO}$       | $V_{EB}=5V, I_C=0$              |       |     | 0.1 | $\mu A$ |
| DC current gain                      | $h_{FE(1)^*}$   | $V_{CE}=2V, I_C=5mA$            | 40    |     |     |         |
|                                      | $h_{FE(2)^*}$   | $V_{CE}=2V, I_C=150mA$          | 63    |     | 250 |         |
|                                      | $h_{FE(3)^*}$   | $V_{CE}=2V, I_C=0.5A$           | 25    |     |     |         |
| Collector-emitter saturation voltage | $V_{CE(sat)^*}$ | $I_C=0.5A, I_B=50mA$            |       |     | 0.5 | V       |
| Base -emitter voltage                | $V_{BE^*}$      | $V_{CE}=2V, I_C=0.5A$           |       |     | 1   | V       |
| Transition frequency                 | $f_T$           | $V_{CE}=5V, I_C=10mA, f=100MHz$ |       | 130 |     | MHz     |

### Classification Of $h_{FE}$

| Rank  | BCX54,BCX55<br>BCX56 | BCX54-10,BCX55-10<br>BCX56-10 | BCX54-16,BCX55-16<br>BCX56-16 |
|-------|----------------------|-------------------------------|-------------------------------|
| Range | 63-250               | 63-160                        | 100-250                       |

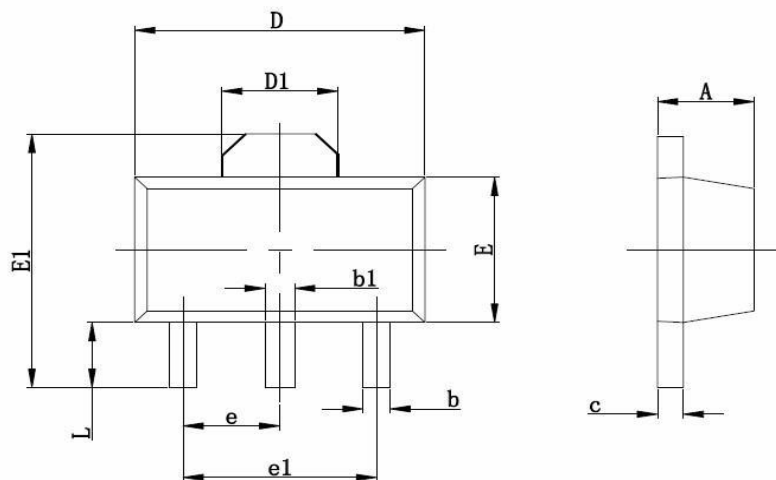


## Typical Characteristics





## SOT-89 Package Outline Dimensions



| Symbol | Dimensions In Millimeters |       | Dimensions In Inches |       |
|--------|---------------------------|-------|----------------------|-------|
|        | Min                       | Max   | Min                  | Max   |
| A      | 1.400                     | 1.600 | 0.055                | 0.063 |
| b      | 0.320                     | 0.520 | 0.013                | 0.020 |
| b1     | 0.400                     | 0.580 | 0.016                | 0.023 |
| c      | 0.350                     | 0.440 | 0.014                | 0.017 |
| D      | 4.400                     | 4.600 | 0.173                | 0.181 |
| D1     | 1.550 REF.                |       | 0.061 REF.           |       |
| E      | 2.300                     | 2.600 | 0.091                | 0.102 |
| E1     | 3.940                     | 4.250 | 0.155                | 0.167 |
| e      | 1.500 TYP.                |       | 0.060 TYP.           |       |
| e1     | 3.000 TYP.                |       | 0.118 TYP.           |       |
| L      | 0.900                     | 1.200 | 0.035                | 0.047 |



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