

#### **FEATURES**

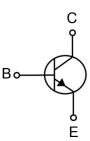
- PNP Complements to BCX51,BCX52,BCX53
- Low Voltage



# **Package Marking and Ordering Information**

| Product ID | Pack     | Qty(PCS) |
|------------|----------|----------|
| BCX54      | SOT89-3L | 1000     |
| BCX55      | SOT89-3L | 1000     |
| BCX56      | SOT89-3L | 1000     |

|            | 63-250  | 63-160 | 100-250 |  |  |
|------------|---------|--------|---------|--|--|
| Product ID | Marking |        |         |  |  |
| BCX54      | ВА      | ВС     | BD      |  |  |
| BCX55      | BE      | BG     | ВМ      |  |  |
| BCX56      | ВН      | ВК     | BL      |  |  |



# MAXIMUM RATINGS (Ta=25 unless otherwise noted)

| Parameter                                   |       | Symbol           | Limit    | Unit |
|---|-------|------------------|----------|------|
|   | BCX54 |                  | 45       |      |
| Collector-Base Voltage                      | BCX55 | V <sub>CBO</sub> | 60       | V    |
|   | BCX56 |                  | 100      |      |
|   | BCX54 |                  | 45       |      |
| Collector-Emitter Voltage                   | BCX55 | $V_{CEO}$        | 60       | V    |
|   | BCX56 |                  | 80       |      |
| Emitter-Base Voltage                        |       | $V_{EBO}$        | 5        | V    |
| Collector Current                           |       | I <sub>c</sub>   | 1        | А    |
| Collector Power Dissipation                 |       | P <sub>c</sub>   | 500      | mW   |
| Thermal Resistance From Junction To Ambient |       | R <sub>OJA</sub> | 250      | °CW  |
| Junction Temperature                        |       | T <sub>j</sub>   | 150      | °C   |
| Storage Temperature                         |       | T <sub>stg</sub> | -55∼+150 | °C   |

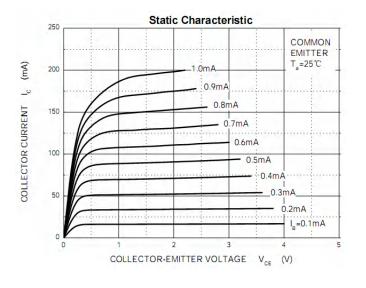


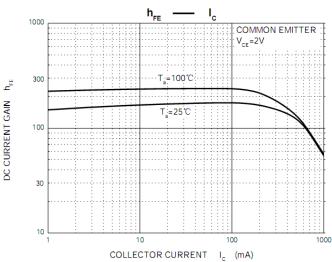
## **ELECTRICAL CHARACTERISTICS (Ta=25℃ unless otherwise specified)**

| Parameter                            | Symbol                | Test conditions                            |       | Min | Тур | Max | Unit |
|--------------------------------------|-----------------------|--|-------|-----|-----|-----|------|
|                                      |                       |  | BCX54 | 45  |     |     |      |
| Collector-base breakdown voltage     | $V_{(BR)CBO}$         | I <sub>C</sub> =100μA,I <sub>E</sub> =0    | BCX55 | 60  |     |     | V    |
|                                      |                       |  | BCX56 | 100 |     |     |      |
|                                      | V <sub>(BR)CEO*</sub> |  | BCX54 | 45  |     |     | V    |
| Collector-emitter breakdown voltage  |                       | $I_C=10mA,I_B=0$                           | 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 <sub>CBO</sub>      | V <sub>CB</sub> =30V,I <sub>E</sub> =0     |       |     |     | 0.1 | μΑ   |
| Emitter cut-off current              | I <sub>EBO</sub>      | V <sub>EB</sub> =5V,I <sub>C</sub> =0      |       |     |     | 0.1 | μΑ   |
|                                      | h <sub>FE(1)*</sub>   | V <sub>CE</sub> =2V, I <sub>C</sub> =5mA   |       | 40  |     |     |      |
| DC current gain                      | h <sub>FE(2)*</sub>   | V <sub>CE</sub> =2V, I <sub>C</sub> =150mA |       | 63  |     | 250 |      |
|                                      | h <sub>FE(3)*</sub>   | V <sub>CE</sub> =2V, I <sub>C</sub> =0.5A  |       | 25  |     |     |      |
| Collector-emitter saturation voltage | V <sub>CE(sat)*</sub> | I <sub>C</sub> =0.5A,I <sub>B</sub> =50mA  |       |     |     | 0.5 | V    |
| Base -emitter voltage                | $V_{BE^*}$            | V <sub>CE</sub> =2V, I <sub>C</sub> =0.5A  |       |     |     | 1   | V    |
| Transition frequency                 | f⊤                    | VcE=5V,lc=10mA, f=100MHz                   |       |     | 130 |     | MHz  |

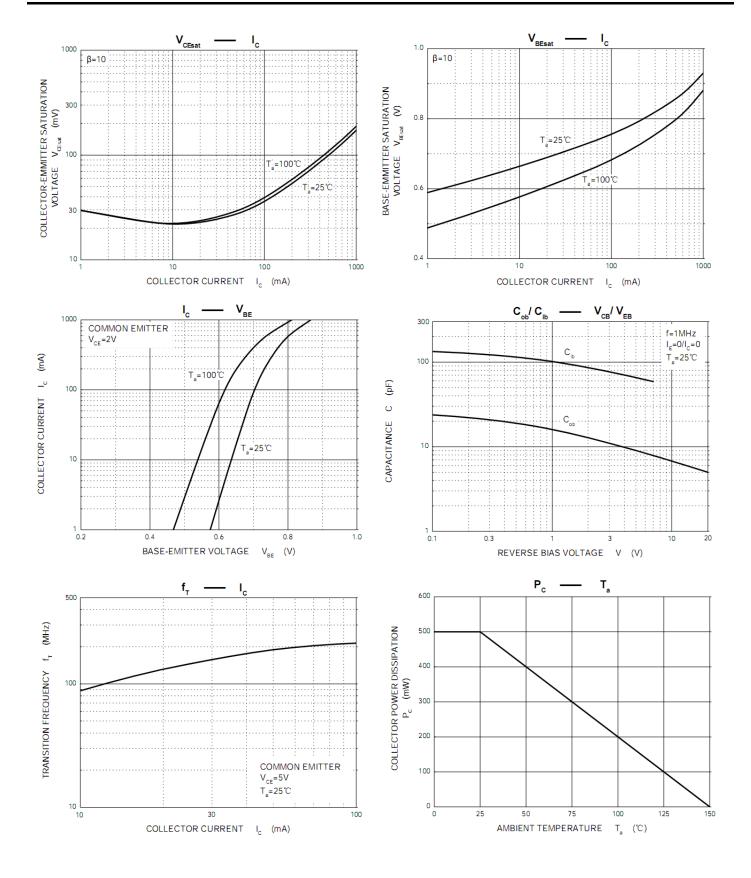
<sup>\*</sup> Pulse Test

### **Typical Characteristics**



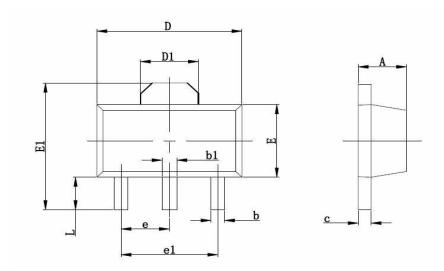








## **SOT89-3L Package Outline Dimensions**



| Symbol | Dimensions | In Millimeters | Dimensions In Inches |       |  |
|--------|------------|----------------|----------------------|-------|--|
|        | Min        | Max            | Min                  | Max   |  |
| Α      | 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 |  |
| С      | 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 |  |
| е      | 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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