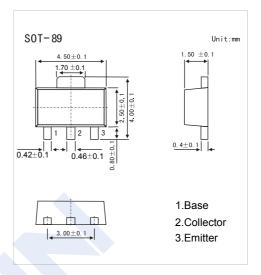
SMD Type Transistors

# NPN Transistors BCX54,BCX55,BCX56 (KCX54,KCX55,KCX56)

#### ■ Features

- High current (max. 1 A).
- Low voltage (max. 80 V).



#### ■ Absolute Maximum Ratings Ta = 25°C

| Parameter  |          | Symbol   | Rating      | Unit                   |
|--|----------|----------|-------------|------------------------|
| Collector-base voltage                           | BCX54    | Vсво     | 45          | V                      |
|  | BCX55    |          | 60          | V                      |
|  | BCX56    |          | 100         | V                      |
| Collector-emitter voltage                        | BCX54    | VCEO     | 45          | V                      |
|  | BCX55    |          | 60          | V                      |
|  | BCX56    |          | 80          | V                      |
| Emitter-base voltage                             |          | VEBO     | 5           | V                      |
| Collector current                                |          | Ic       | 1           | А                      |
| Peak collector current                           |          | Ісм      | 1.5         | А                      |
| Peak base current                                |          | Івм      | 0.2         | Α                      |
| Total power dissipation                          |          | Ptot     | 1.3         | W                      |
| Storage temperature                              |          | Tstg     | -65 to +150 | $^{\circ}\!\mathbb{C}$ |
| Junction temperature                             |          | Tj       | 150         | $^{\circ}$ C           |
| Operating ambient temperature                    |          | Tamb     | -65 to +150 | $^{\circ}$             |
| Thermal resistance from junction to an           | Rth(j-a) | 94       | K/W         |                        |
| Thermal resistance from junction to solder point |          | Rth(j-s) | 14          | K/W                    |

SMD Type Transistors

## BCX54,BCX55,BCX56

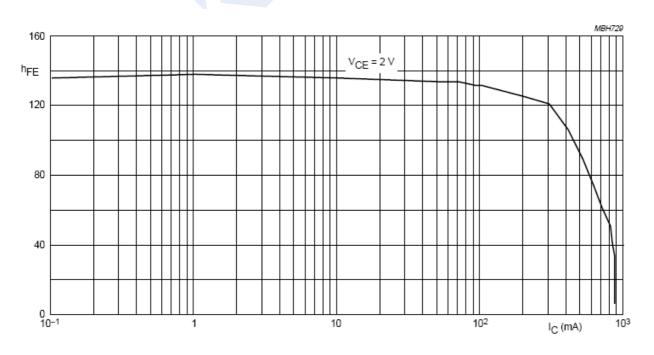
#### ■ Electrical Characteristics Ta = 25°C

| Parameter  | Symbol     | Testconditions                     | Min | Тур | Max | Unit |
|--|------------|------------------------------------|-----|-----|-----|------|
| Collector cutoff current                         | Ісво       | VcB = 30 V, IE = 0                 |     |     | 100 | nA   |
|  |            | VcB = 30 V, IE = 0; Tj = 125°C     |     |     | 10  | uA   |
| Emitter cutoff current                           | ІЕВО       | VEB = 5 V, IC = 0                  |     |     | 100 | nA   |
| DC current gain                                  | hfe        | Ic = 5 mA; VcE = 2 V               | 63  |     |     |      |
|  |            | Ic = 150 mA; VcE = 2 V             | 63  |     | 250 |      |
|  |            | Ic = 500 mA; VcE = 2 V             | 40  |     |     |      |
| DC current gain BCX54-10,BCX55-10,BCX56-10       | hfe        | Ic = 150 mA; VcE = 2 V             | 63  |     | 160 |      |
| BCX54-16,BCX55-16,BCX56-16                       |            | Ic = 150 mA; VcE = 2 V             | 100 |     | 250 |      |
| Collector-emitter saturation voltage             | VCE(sat)   | Ic = 500 mA; IB = 50 mA            |     |     | 0.5 | V    |
| Base to emitter voltage                          | VBE        | Ic = 500 mA; VcE = 2 V             |     |     | 1   | V    |
| Transition frequency                             | fτ         | Ic = 10 mA; VcE = 5 V; f = 100 MHz |     | 130 |     | MHz  |
| DC current gain ratio of the complementary pairs | hFE<br>hFE | Ic   = 150 mA;   VcE   = 2V        |     | 1.3 | 1.6 |      |

#### ■ hFE Classification

| TYPE    | BCX54 | BCX54-10 | BCX54-16 |  |  |  |
|---------|-------|----------|----------|--|--|--|
| Marking | BA    | ВС       | BD       |  |  |  |
|         |       |          |          |  |  |  |
| TYPE    | BCX55 | BCX55-10 | BCX55-16 |  |  |  |
| Marking | BE    | BG       | ВМ       |  |  |  |
|         |       |          |          |  |  |  |
| TYPE    | BCX56 | BCX56-10 | BCX56-16 |  |  |  |
| Marking | ВН    | BK       | BL       |  |  |  |
|         |       |          |          |  |  |  |

#### ■ Typical Characterisitics



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