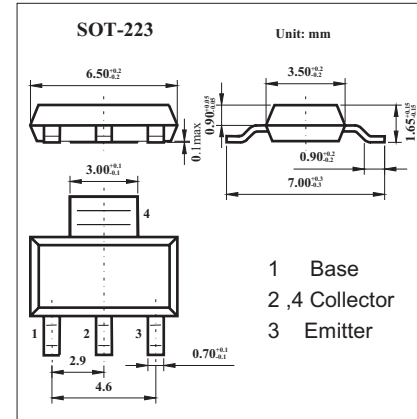
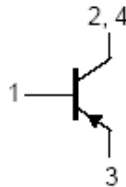


## PNP medium power transistor

### KCP69

#### ■ Features

- High current (max. 1 A)
- Low voltage (max. 20 V).



#### ■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

| Parameter   | Symbol        | Rating      | Unit             |
|---|---------------|-------------|------------------|
| Collector-base voltage                                  | $V_{CB0}$     | -32         | V                |
| Collector-emitter voltage                               | $V_{CEO}$     | -20         | V                |
| Emitter-base voltage                                    | $V_{EBO}$     | -5          | V                |
| Collector current (DC)                                  | $I_C$         | -1          | A                |
| Peak collector current                                  | $I_{CM}$      | -2          | A                |
| Peak base current                                       | $I_{BM}$      | -200        | mA               |
| Total power dissipation $T_{amb} \leq 25^\circ\text{C}$ | $P_D$         | 1.35        | W                |
| Storage temperature                                     | $T_{stg}$     | -65 to +150 | $^\circ\text{C}$ |
| Junction temperature                                    | $T_j$         | 150         | $^\circ\text{C}$ |
| Operating ambient temperature                           | $T_{amb}$     | -65 to +150 | $^\circ\text{C}$ |
| Thermal resistance from junction to ambient             | $R_{th(j-a)}$ | 91          | K/W              |
| Thermal resistance from junction to solder point        | $R_{th(j-s)}$ | 10          | K/W              |

#### ■ Electrical Characteristics $T_a = 25^\circ\text{C}$

| Parameter                            | Symbol               | Testconditions   | Min | Typ  | Max  | Unit          |
|--------------------------------------|----------------------|--|-----|------|------|---------------|
| Collector cutoff current             | $I_{CBO}$            | $I_E = 0\text{ A}; V_{CB} = -25\text{ V}$                          |     |      | -100 | nA            |
|                                      |                      | $I_E = 0\text{ A}; V_{CB} = -25\text{ V}; T_j = 150^\circ\text{C}$ |     |      | -10  | $\mu\text{A}$ |
| Emitter cutoff current               | $I_{EBO}$            | $I_C = 0\text{ A}; V_{EB} = -5\text{ V}$                           |     |      | -100 | nA            |
| DC current gain                      | $h_{FE}$             | $V_{CE} = -10\text{ V}; I_C = -5\text{ mA}$                        | 50  |      |      |               |
|                                      |                      | $V_{CE} = -1\text{ V}; I_C = -500\text{ mA}$                       | 85  |      | 375  |               |
|                                      |                      | $V_{CE} = -1\text{ V}; I_C = -1\text{ A}$                          | 60  |      |      |               |
| DC current gain                      | BCP69-16<br>BCP69-25 | $V_{CE} = -1\text{ V}; I_C = -500\text{ mA}$                       | 100 |      | 250  |               |
|                                      |                      |  | 160 |      | 375  |               |
| Collector-emitter saturation voltage | $V_{CEsat}$          | $I_C = -1\text{ A}; I_B = -100\text{ mA};$                         |     |      | -500 | mV            |
| Base-emitter voltage                 | $V_{BE}$             | $V_{CE} = -10\text{ V}; I_C = -5\text{ mA}$                        |     | -620 |      | mV            |
|                                      |                      | $V_{CE} = -1\text{ V}; I_C = -1\text{ A}$                          |     |      | -1   | V             |
| Collector capacitance                | $C_c$                | $I_E = I_C = 0\text{ A}; V_{CB} = -5\text{ V}; f = 1\text{ MHz}$   |     | 48   |      | pF            |
| Transition frequency                 | $f_T$                | $I_C = -10\text{ mA}; V_{CE} = -5\text{ V}; f = 100\text{ MHz}$    | 40  |      |      | MHz           |

#### ■ Marking

|         |       |
|---------|-------|
| Marking | BCP69 |
|---------|-------|

## KCP69

## ■ Typical Characteristics

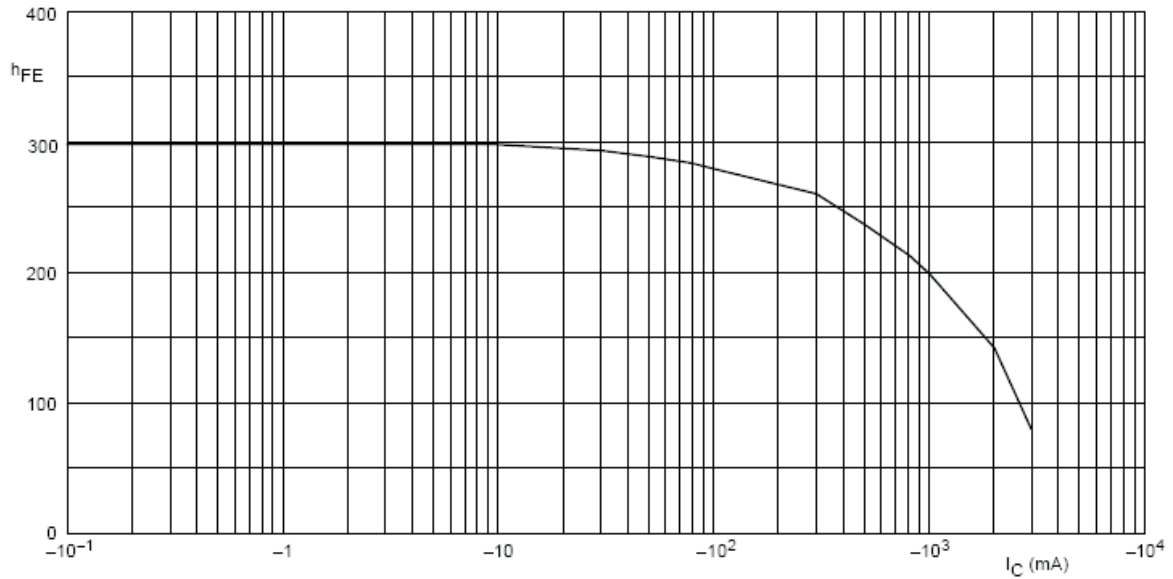
 $V_{CE} = -1$  V.

Fig.1 DC current gain; typical values.