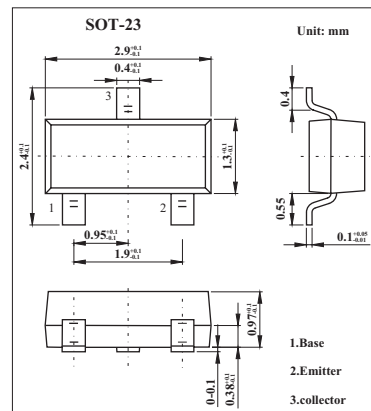


## PNP Silicon AF Transistors

### KC807A(BC807A)

#### ■ Features

- For general AF applications.
- High collector current.
- High current gain.
- Low collector-emitter saturation voltage.



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

| Parameter                 | Symbol    | Rating      | Unit             |
|---------------------------|-----------|-------------|------------------|
| Collector-base voltage    | $V_{CBO}$ | -50         | V                |
| Collector-emitter voltage | $V_{CEO}$ | -45         | V                |
| Emitter-base voltage      | $V_{EBO}$ | -5          | V                |
| Collector current (DC)    | $I_C$     | -500        | mA               |
| Peak collector current    | $I_{CM}$  | -1          | A                |
| Base current              | $I_B$     | -100        | mA               |
| power dissipation         | $P_D$     | 310         | mW               |
| Junction temperature      | $T_j$     | 150         | $^\circ\text{C}$ |
| Storage temperature       | $T_{stg}$ | -65 to +150 | $^\circ\text{C}$ |

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

| Parameter                              | Symbol        | Testconditons                                                   | Min | Typ | Max  | Unit          |
|----------------------------------------|---------------|-----------------------------------------------------------------|-----|-----|------|---------------|
| Collector-to-base breakdown voltage    | $V_{CBO}$     | $I_C = -10 \mu\text{A}, I_E = 0$                                | -50 |     |      | V             |
| Collector-to-emitter breakdown voltage | $V_{CEO}$     | $I_C = -10 \text{mA}, I_B = 0$                                  | -45 |     |      | V             |
| Emitter-to-base breakdown voltage      | $V_{EBO}$     | $I_E = -10 \mu\text{A}, I_C = 0$                                | -5  |     |      | V             |
| Collector cutoff current               | $I_{CBO}$     | $V_{CB} = -25 \text{V}, I_E = 0$                                |     |     | -100 | nA            |
|                                        |               | $V_{CB} = -25 \text{V}, I_E = 0, T_A = 150^\circ\text{C}$       |     |     | -50  | $\mu\text{A}$ |
| Emitter cutoff current                 | $I_{EBO}$     | $V_{EB} = -4 \text{V}, I_C = 0$                                 |     |     | -100 | nA            |
| DC current gain *                      | KC807A-16     | $h_{FE}$<br>$I_C = -100 \text{mA}, V_{CE} = -1 \text{V}$        | 100 | 160 | 250  |               |
|                                        | KC807A-25     |                                                                 | 160 | 250 | 400  |               |
|                                        | KC807A-40     |                                                                 | 250 | 350 | 630  |               |
| Collector saturation voltage *         | $V_{CE(sat)}$ | $I_C = -500 \text{mA}, I_B = -50 \text{mA}$                     |     |     | -0.7 | V             |
| Base to emitter voltage *              | $V_{BE(sat)}$ | $I_C = -500 \text{mA}, I_B = -50 \text{mA}$                     |     |     | -1.2 | V             |
| Collector-base capacitance             | $C_{cb}$      | $V_{CB} = -10 \text{V}, f = 1 \text{MHz}$                       |     | 10  |      | pF            |
| Emitter-base capacitance               | $C_{eb}$      | $V_{EB} = -0.5 \text{V}, f = 1 \text{MHz}$                      |     | 60  |      | pF            |
| Transition frequency                   | $f_T$         | $I_C = -50 \text{mA}, V_{CE} = -5 \text{V}, f = 100 \text{MHz}$ |     | 200 |      | MHz           |

\* Pulsed:  $PW \leq 350 \mu\text{s}$ , duty cycle  $\leq 2\%$

#### ■ Marking

| NO.     | KC807A-16 | KC807A-25 | KC807A-40 |
|---------|-----------|-----------|-----------|
| Marking | 5A        | 5B        | 5C        |