

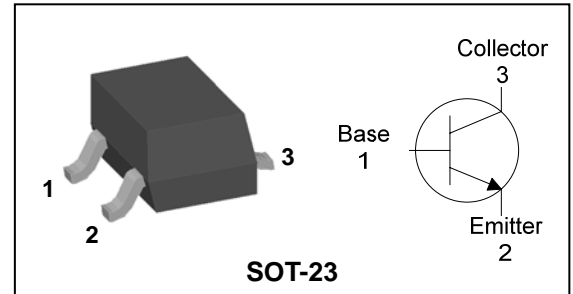
## Descriptions

- High current application
- Switching application



## Features

- Suitable for AF-Driver stage and low power output stages
- Complementary pair with BC807

## PIN Connection



## Ordering Information

| Type NO. | Marking   | Package Code |
|----------|---|--------------|
| BC817    | NA  <br>① ② ③ | SOT-23       |

① Device Code ② hFE Rank ③ Year&Week Code

## Absolute maximum ratings

(Ta=25°C)

| Characteristic            | Symbol    | Ratings   | Unit |
|---------------------------|-----------|-----------|------|
| Collector-Base voltage    | $V_{CBO}$ | 50        | V    |
| Collector-Emitter voltage | $V_{CEO}$ | 35        | V    |
| Emitter-Base voltage      | $V_{EBO}$ | 5         | V    |
| Collector current         | $I_C$     | 800       | mA   |
| Collector dissipation     | $P_C$     | 200       | mW   |
| Junction temperature      | $T_j$     | 150       | °C   |
| Storage temperature       | $T_{stg}$ | -55 ~ 150 | °C   |

## Electrical Characteristics

(Ta=25°C)

| Characteristic                       | Symbol        | Test Condition              | Min. | Typ. | Max. | Unit |
|--------------------------------------|---------------|-----------------------------|------|------|------|------|
| Collector-Emitter breakdown voltage  | $BV_{CEO}$    | $I_C=1mA, I_E=0$            | 35   | -    | -    | V    |
| Base-Emitter turn on voltage         | $V_{BE(ON)}$  | $V_{CE}=1V, I_C=300mA$      | -    | -    | 1.2  | V    |
| Collector-Emitter saturation voltage | $V_{CE(sat)}$ | $I_C=500mA, I_B=50mA$       | -    | -    | 700  | mV   |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB}=25V, I_E=0$         | -    | -    | 100  | nA   |
| DC current gain                      | $h_{FE}^*$    | $V_{CE}=1V, I_C=100mA$      | 100  | -    | 630  | -    |
| Transition frequency                 | $f_T$         | $V_{CB}=5V, I_C=10mA$       | -    | 100  | -    | MHz  |
| Collector output capacitance         | $C_{ob}$      | $V_{CB}=10V, I_E=0, f=1MHz$ | -    | 16   | -    | pF   |

\* :  $h_{FE}$  rank / 16(A) : 100 ~ 250, 25(B) : 160 ~ 400, 40(C) : 250 ~ 630

## Electrical Characteristic Curves

Fig. 1  $P_C - T_a$

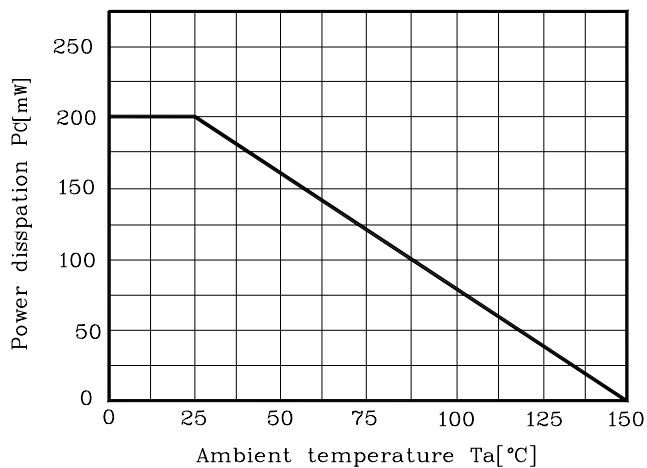


Fig. 2  $I_C - V_{BE}$

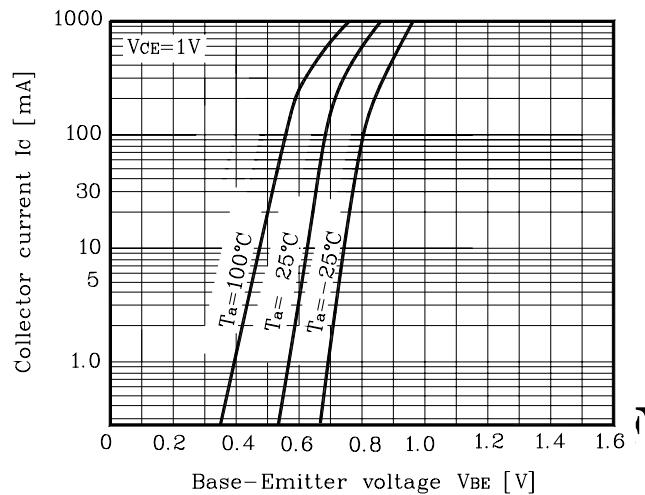


Fig. 3  $I_C - V_{CE}$

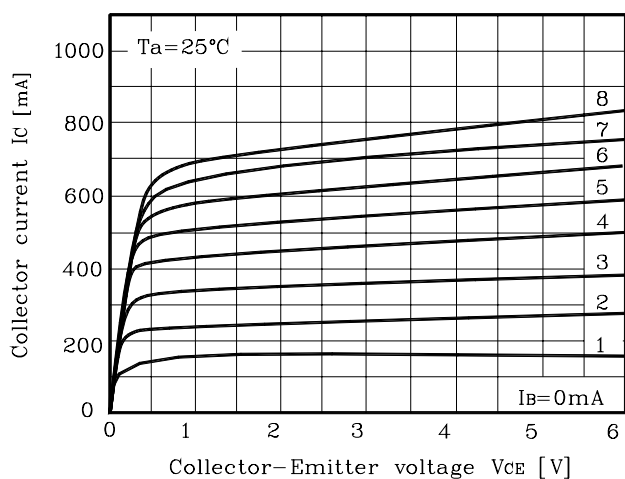


Fig. 4  $V_{CE(sat)} - I_C$

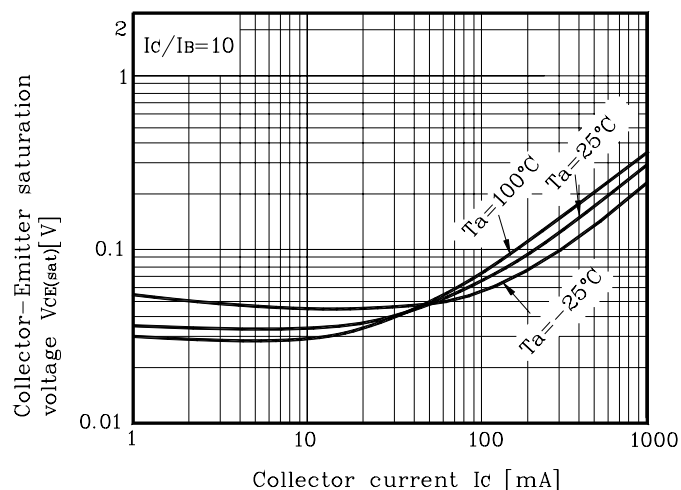
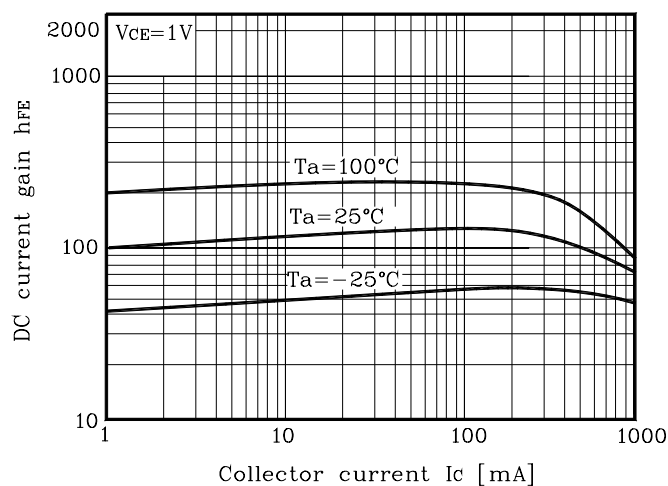
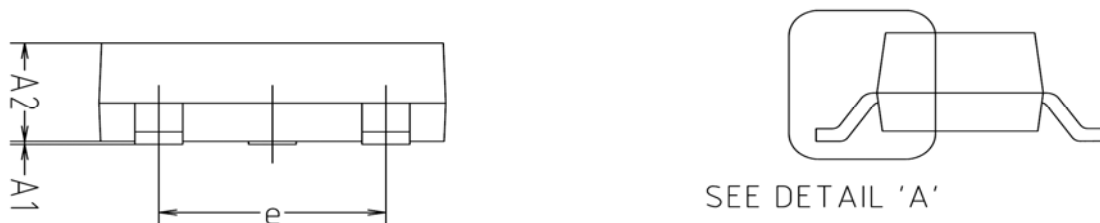
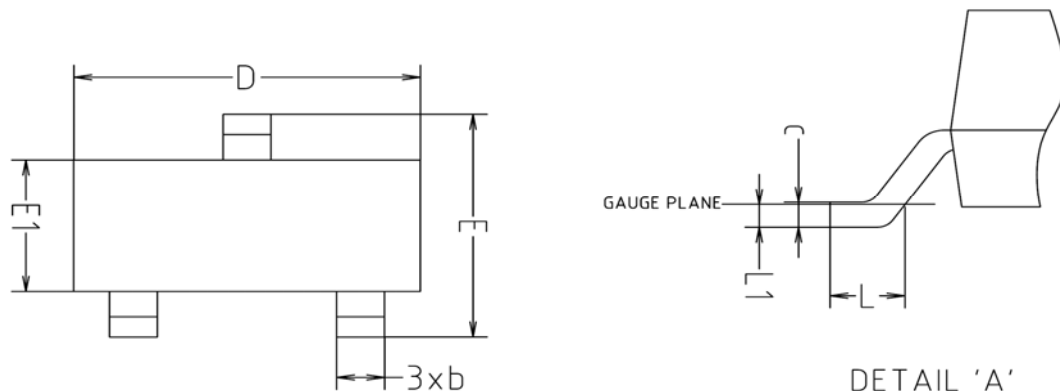


Fig. 5  $h_{FE} - I_C$

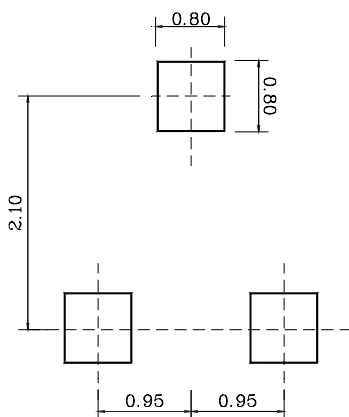


Outline Dimension



| SYMBOL | MILLIMETERS |         |         | NOTE |
|--------|-------------|---------|---------|------|
|        | MINIMUM     | NOMINAL | MAXIMUM |      |
| A1     | 0.00        | -       | 0.10    |      |
| A2     | 0.82        | -       | 1.02    |      |
| b      | 0.39        | 0.42    | 0.45    |      |
| c      | 0.09        | 0.12    | 0.15    |      |
| D      | 2.80        | 2.90    | 3.00    |      |
| E      | 2.20        | 2.40    | 2.60    |      |
| E1     | 1.20        | 1.30    | 1.40    |      |
| e      | 1.90BSC     |         |         |      |
| L      | 0.20        | -       | -       |      |
| L1     | 0.12BSC     |         |         |      |

※Recommend PCB solder land [Unit: mm]



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