

## Description

- Audio power amplifier application

## Features

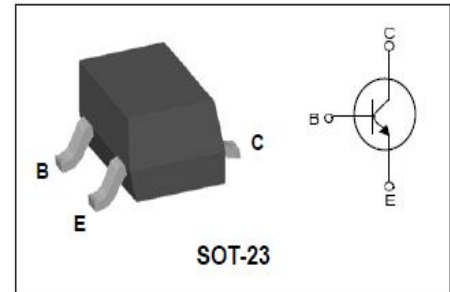
- High  $h_{FE}$  :  $h_{FE}=100\sim 320$
- Complementary pair with KA1981S

## Ordering Information

| Type NO. | Marking          | Package Code |
|----------|------------------|--------------|
| KC5344S  | FA □ □.<br>① ② ③ | SOT-23       |

① Device Code ② HFE Rank ③ Year & Week Code • Dalian

## PIN Connection



## Absolute maximum ratings

 $T_a=25^{\circ}\text{C}$ 

| Characteristic            | Symbol    | Ratings | Unit               |
|---------------------------|-----------|---------|--------------------|
| Collector-Base voltage    | $V_{CBO}$ | 30      | V                  |
| Collector-Emitter voltage | $V_{CEO}$ | 35      | V                  |
| Emitter-Base voltage      | $V_{EBO}$ | 5       | V                  |
| Collector current         | $I_C$     | 800     | mA                 |
| Collector dissipation     | PC*       | 350     | mW                 |
| Junction temperature      | $T_j$     | 150     | $^{\circ}\text{C}$ |
| Storage temperature range | $T_{stg}$ | -55~150 | $^{\circ}\text{C}$ |

\* Package mounted on 99.5% alumina  $10\times 8\times 0.6\text{mm}$

## Electrical Characteristics

 $T_a=25^{\circ}\text{C}$ 

| Characteristic                       | Symbol        | Test Condition                            | Min. | Typ. | Max. | Unit          |
|--------------------------------------|---------------|-------------------------------------------|------|------|------|---------------|
| Collector-Base breakdown voltage     | $BV_{CBO}$    | $I_C=100\mu\text{A}, I_E=0$               | 35   | -    | -    | V             |
| Collector Emitter breakdown voltage  | $BV_{CEO}$    | $I_C=1\text{mA}, I_B=0$                   | 30   | -    | -    | V             |
| Emitter-Base breakdown voltage       | $BV_{EBO}$    | $I_E=10\mu\text{A}, I_C=0$                | 5    | -    | -    | V             |
| Collector cut-off current            | $I_{CBO}$     | $V_{CB}=35\text{V}, I_E=0$                | -    | -    | 0.1  | $\mu\text{A}$ |
| Emitter cut-off current              | $I_{EBO}$     | $V_{EB}=5\text{V}, I_C=0$                 | -    | -    | 0.1  | $\mu\text{A}$ |
| DC current gain                      | $h_{FE}^*$    | $V_{CE}=1\text{V}, I_C=100\text{mA}$      | 100  | -    | 320  | -             |
| Collector-Emitter saturation voltage | $V_{CE(sat)}$ | $I_C=500\text{mA}, I_B=50\text{mA}$       | -    | -    | 0.5  | V             |
| Transition frequency                 | $f_T$         | $V_{CE}=5\text{V}, I_C=10\text{mA}$       | -    | 120  | -    | MHz           |
| Collector output capacitance         | $C_{ob}$      | $V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$ | -120 | 13   | -    | pF            |

\* :  $h_{FE}$  rank / O : 100 ~ 200, Y : 160 ~ 320

## Electrical Characteristic Curves

Fig. 1  $P_C - T_a$

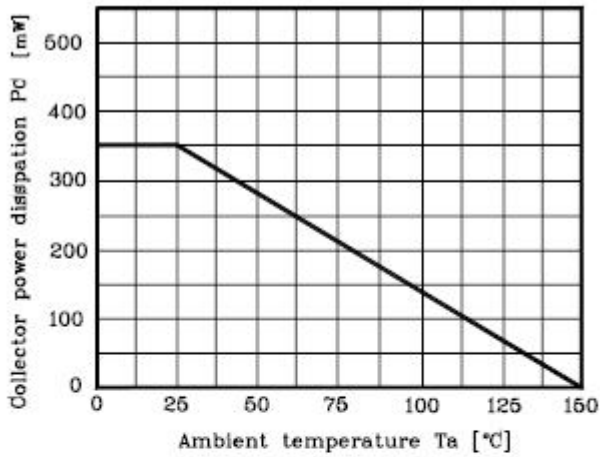


Fig. 2  $I_C - V_{BE}$

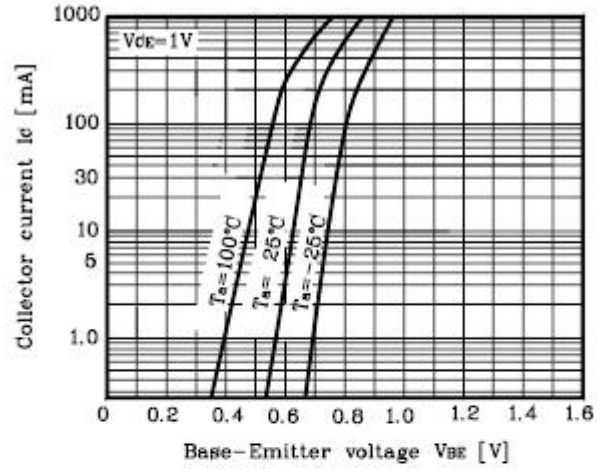


Fig. 3  $I_C - V_{CE}$

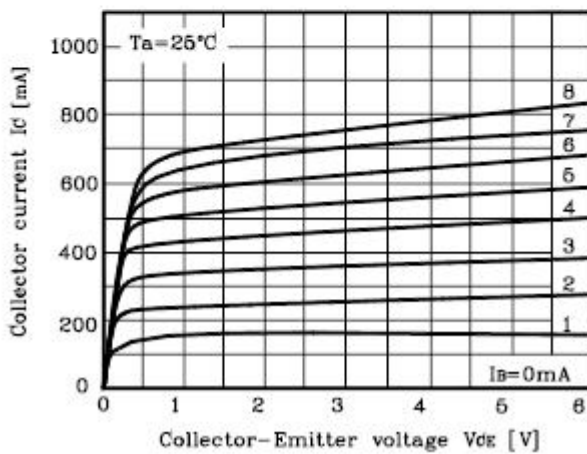


Fig. 4  $V_{CE(sat)} - I_C$

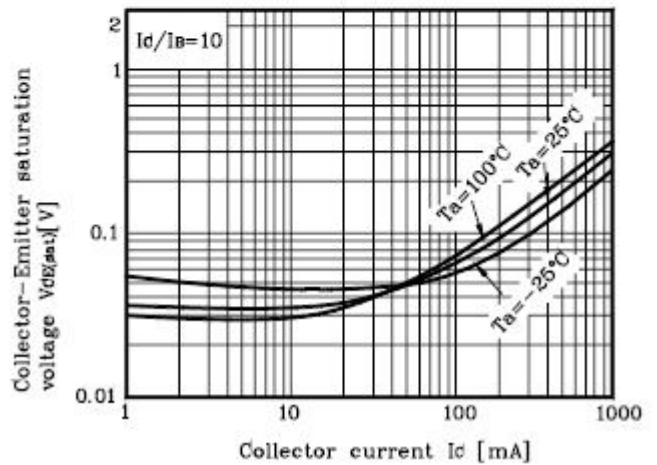
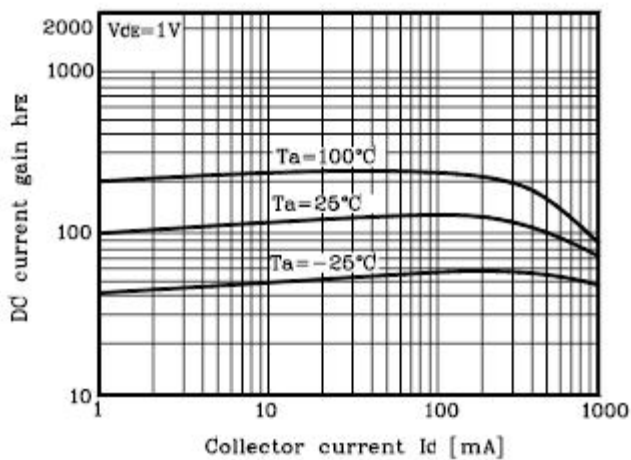
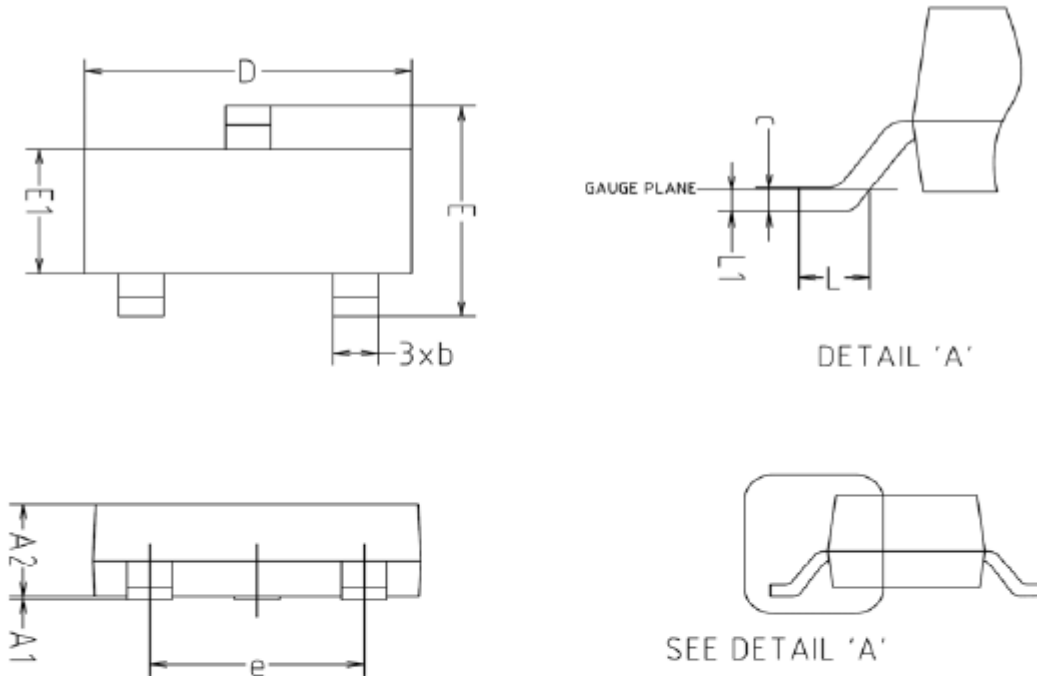


Fig. 5  $h_{FE} - I_C$

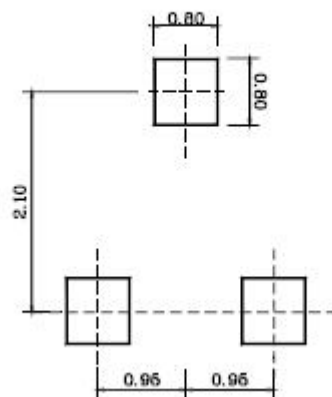


## Outline Dimension



| 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]



**The AUK Dalian Corp. products are intended for the use as components in general electronic equipment (Office and communication equipment, measuring equipment, home appliance, etc.).**

**Please make sure that you consult with us before you use these AUK Dalian Corp. products in equipments which require high quality and / or reliability, and in equipments which could have major impact to the welfare of human life(atomic energy control, airplane, spaceship, transportation, combustion control, all types of safety device, etc.). AUK Dalian Corp. cannot accept liability to any damage which may occur in case these AUK Dalian Corp. products were used in the mentioned equipments without prior consultation with AUK Dalian Corp..**

**Specifications mentioned in this publication are subject to change without notice.**