

# 产品规格书

批准	审核	校核	编制
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2018.09.07	2018.09.07	2018.09.07	2018.09.07

## 规格书更改履历:

序号	更改内容	履历号	更改时间	责任人
1	新规制定	000	2017.11.02	郑羿
2	增加决裁	001	2018.08.22	郑羿
3	增加 TAPING 标准	003	2018.09.07	郑羿

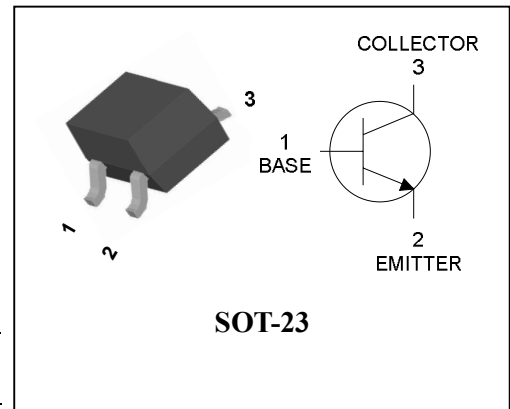
## Descriptions

- General purpose Bipolar Transistor

### Features

- Large collector current
- Suitable for low-Voltage operation because of Its low saturation voltage
- Complementary pair with K8550S

## PIN Connection



## Ordering Information

Type NO.	Marking	Package Code
K8050S	KL □ □ ● ① ② ③	SOT-23

①Device Code ②HFE Grade ③Year& Week Code ●AUK Dalian

## Absolute maximum ratings

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

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	$V_{\text{CBO}}$	40	V
Collector-Emitter voltage	$V_{\text{CEO}}$	25	V
Emitter-base voltage	$V_{\text{EBO}}$	6	V
Collector current	$I_{\text{C}}$	500	mA
Collector dissipation	$P_{\text{C}}$	350	mW
Junction temperature	$T_{\text{j}}$	150	$^{\circ}\text{C}$
Storage temperature range	$T_{\text{stg}}$	-55~150	$^{\circ}\text{C}$

## Electrical Characteristics

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

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	$BV_{\text{CBO}}$	$I_{\text{C}}=100\mu\text{A}, I_{\text{E}}=0$	40	-	-	V
Collector-Emitter breakdown voltage	$BV_{\text{CEO}}$	$I_{\text{C}}=1\text{mA}, I_{\text{B}}=0$	25	-	-	V
Emitter-Base breakdown voltage	$BV_{\text{EBO}}$	$I_{\text{E}}=100\mu\text{A}, I_{\text{C}}=0$	6	-	-	V
Collector cut-off current	$I_{\text{CBO}}$	$V_{\text{CB}}=30\text{V}, I_{\text{E}}=0$	-	-	0.1	$\mu\text{A}$
Emitter cut-off current	$I_{\text{EBO}}$	$V_{\text{EB}}=6\text{V}, I_{\text{C}}=0$	-	-	0.1	$\mu\text{A}$
DC current gain	$h_{\text{FE1}}$	$V_{\text{CE}}=1\text{V}, I_{\text{C}}=50\text{mA}$	85	-	300	-
Collector-Emitter saturation voltage	$V_{\text{CE(sat)}}$	$I_{\text{C}}=500\text{mA}, I_{\text{B}}=50\text{mA}$	-	-	0.5	V
Transition frequency	$*f_{\text{T}}$	$V_{\text{CE}}=6\text{V}, I_{\text{C}}=20\text{mA},$	-	200	-	MHz
Collector Output Capacitance	$*C_{\text{ob}}$	$V_{\text{CB}}=6\text{V}, I_{\text{E}}=0, f=1\text{MHz}$	-	7.5	-	pF

\* \* 非关键参数按照顾客要求标注

### HFE Grade:

Rank	B	C	D
Range	85~160	120~200	160~300
Mark Name	KL7	KL8	KL9

Electrical Characteristic Curves

Fig. 1  $P_c - T_a$

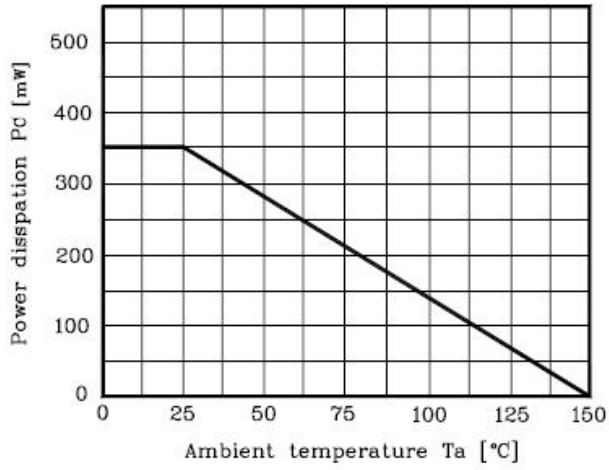


Fig. 2  $I_c - V_{BE}$

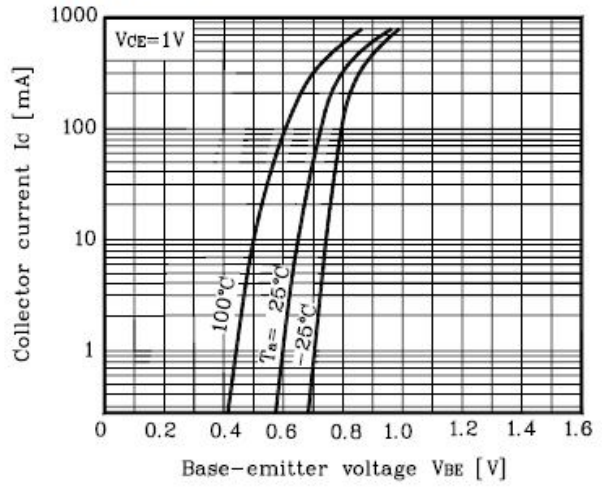


Fig. 3  $I_c - V_{CE}$

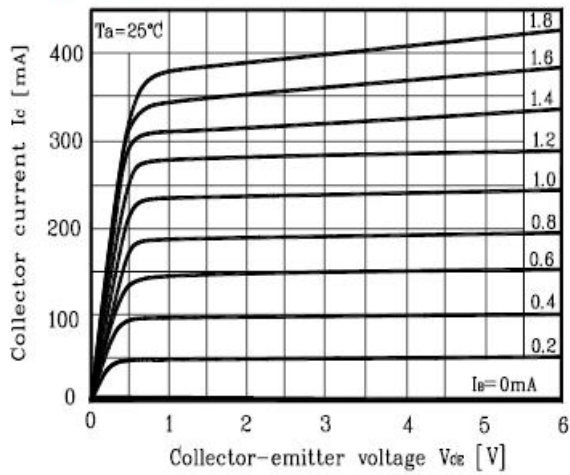


Fig. 4  $V_{CE(SAT)} - I_c$

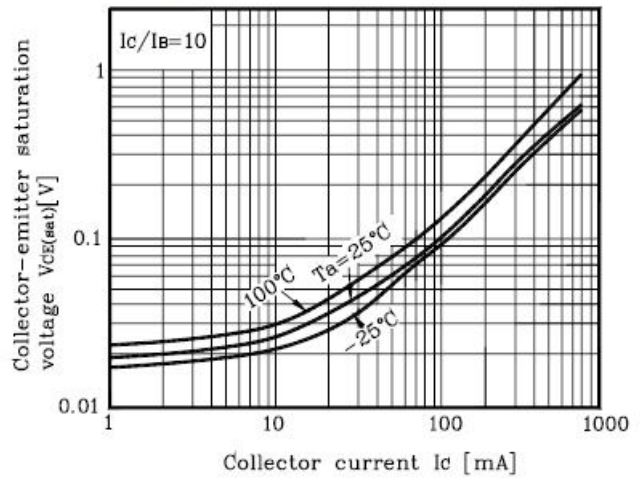


Fig. 5  $h_{FE} - I_c$

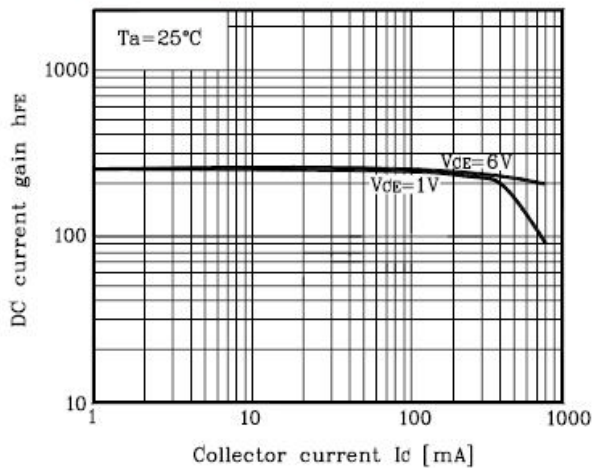
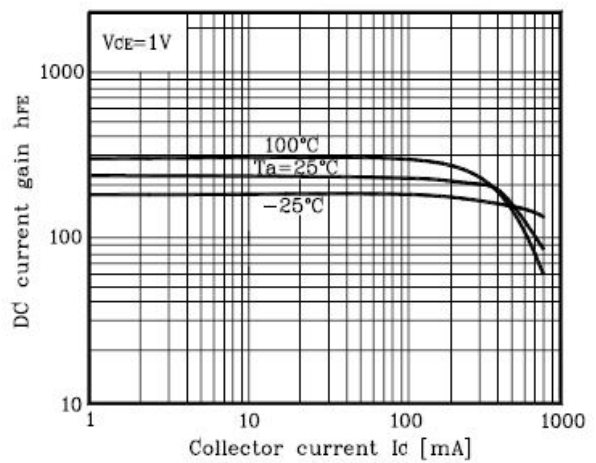
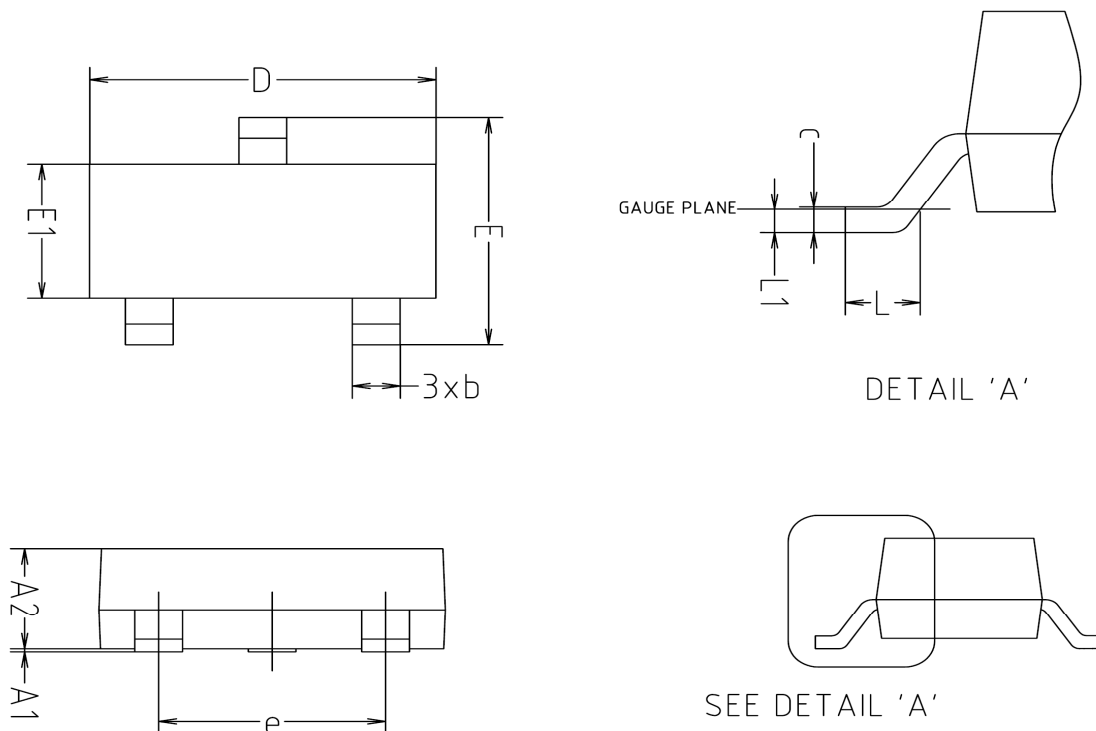


Fig. 6  $h_{FE} - I_c$

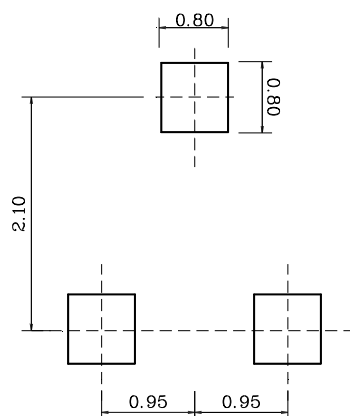


## Outline Dimension



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]**



Packing Specification


**4. Dimensions of Box** [Unit : mm]

1) Inner Box (Loaded 10 reels)

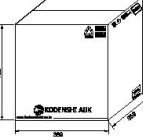


Quantity : 3,000×10reel = 30Kpcs

2) Out Box



# 2-1 (Loaded 4 inner boxes)  
Quantity : 30K×4reel=120Kpcs



# 2-2 (Loaded 8 inner boxes)  
Quantity : 30K×8reel=240Kpcs

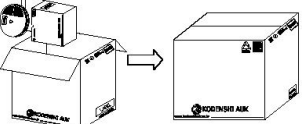
**Inner Box LABEL**

DVC: \_\_\_\_\_  
 LOT: \_\_\_\_\_ QTY: \_\_\_\_\_ SN: \_\_\_\_\_  
 W/D: \_\_\_\_\_ MADE IN XXXXXX [RoHS]  
 KODENSHI AUK

**Out Box LABEL**

DVC: \_\_\_\_\_  
 LOT No: \_\_\_\_\_ QTY: \_\_\_\_\_ [RoHS]  
 BOX No: \_\_\_\_\_ KODENSHI AUK

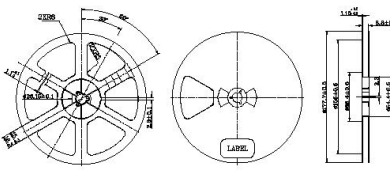
**5. Packing flow**



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**KODENSHI AUK SOT-23, SOT-23F Packing Specification**

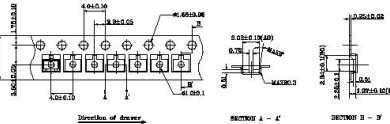
**1. Dimensions of reel** [Unit : mm]



Quantity : 3,000pcs/reel

DVC: \_\_\_\_\_  
 LOT: \_\_\_\_\_ QTY: \_\_\_\_\_ SN: \_\_\_\_\_  
 W/D: \_\_\_\_\_ MADE IN XXXXXX [RoHS]  
 KODENSHI AUK

**2. Dimensions of tape**



**3. Taping format**

(END)			(Start)
Unloaded Tape	SOT-23, SOT-23F Package	Unloaded tape	Sealing tape (Cover Tape)

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