KODENSHI AUK

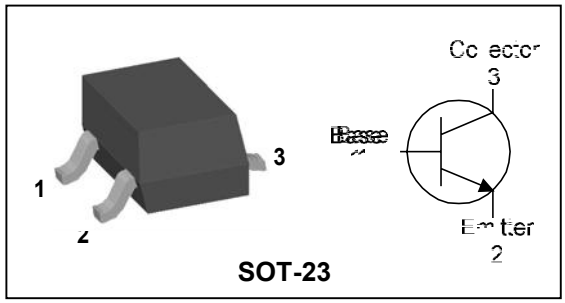
KBC847

NPN Silicon Transistor

Descriptions

- General purpose application
- Switching application
- High voltage : V_{CEO}=45V
- Complementary pair with KBC857

PIN Connection



Ordering Information

Type NO.	Marking	Package Code
KBC847	RR □ □. ① ② ③	SOT-23

① Device Code ② hFE Rank ③ Year&Week Code . Dalian

Absolute maximum ratings

(Ta=25 C)

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	V_{CBO}	50	V
Collector-Emitter voltage	V_{CEO}	45	V
Emitter-base voltage	V_{EBO}	5	V
Collector current	I_C	100	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-Base breakdown voltage	BV_{CBO}	I_C=100uA, I_E=0	50	-	-	V
Collector-Emitter breakdown voltage	BV_{CEO}	I_C=1mA, I_B=0	45	-	-	V
Emitter-Base breakdown voltage	BV_{EBO}	I_E=10uA, I_C=0	5	-	-	V
Base-Emitter turn on voltage	$V_{BE(ON)}$	V_{CE}=5V, I_C=2mA	0.55	-	0.7	V
Base-Emitter saturation voltage	$V_{BE(sat)}$	I_C=100mA, I_B=5mA	-	0.9	1.1	V
Collector-Emitter saturation voltage	$V_{CE(sat)}$	I_C=100mA, I_B=5mA	-	-	0.6	V
Collector-base cut-off current	I_{CBO}	V_{CB}=35V, I_E=0	-	-	15	nA
Collector-emitter cut-off current	I_{CEO}	V_{CE}=30V, I_B=0	-	-	1	uA
Emitter-base cut-off current	I_{EBO}	V_{EB}=5V, I_C=0	-	-	100	nA
DC current gain	h_{FE}*	V_{CE}=5V, I_C=2mA	110	-	800	-
Transition frequency	f_T	V_{CE}=5V, I_C=10mA f=100MHz	-	150	-	MHz
Collector output capacitance	C_{ob}	V_{CB}=10V, I_E=0, f=1MHz	-	-	4.5	pF
Noise figure	NF	V_{CE}=5V, I_C=200μA, f=1KHz, Rg=2KΩ	-	-	10	dB

* : h_{FE} rank / A : 110 ~ 220, B : 200 ~ 450, C : 420 ~ 800

Electrical Characteristic Curves

Fig. 1 P_C –T_a

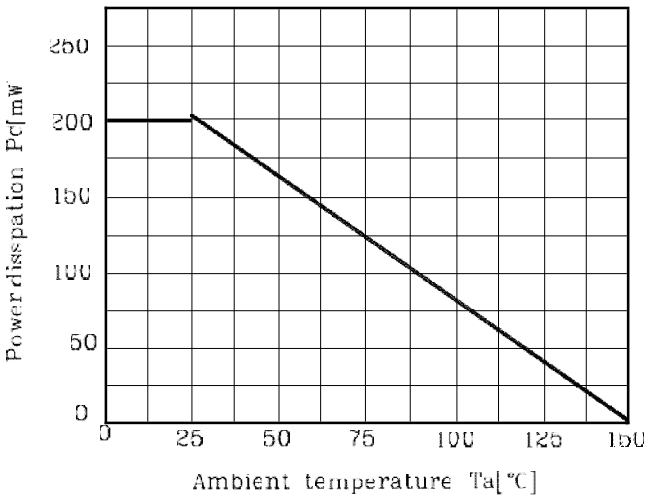


Fig. 2 I_C -V_{BE}

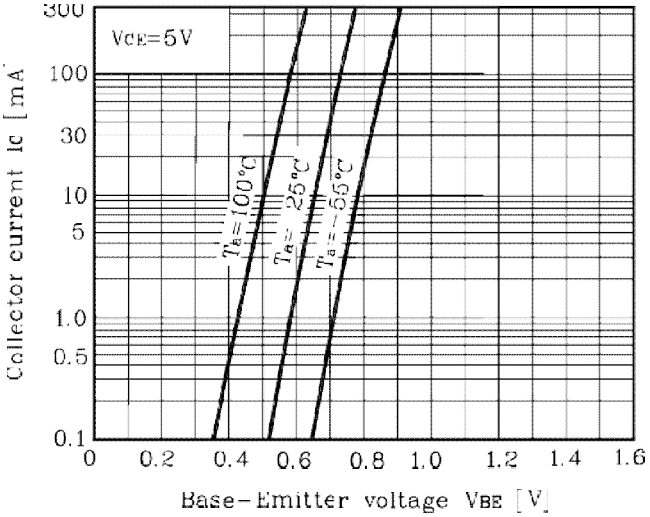


Fig. 3 I_C -V_{CE}

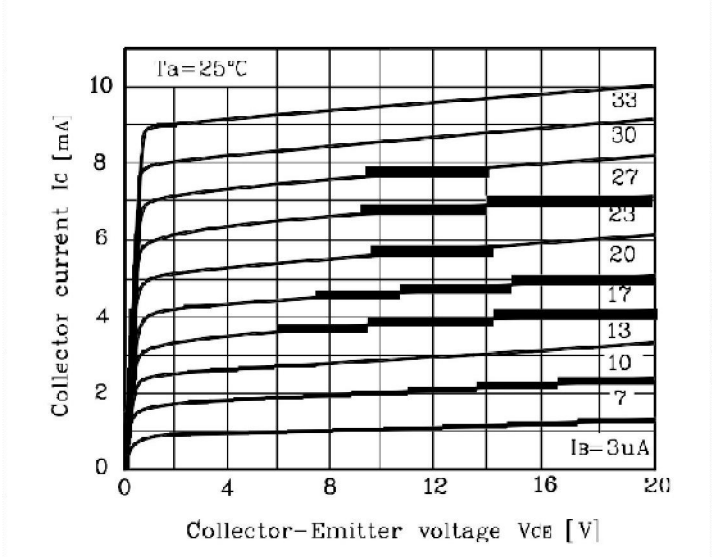


Fig. 4 h_{FE} -I_C

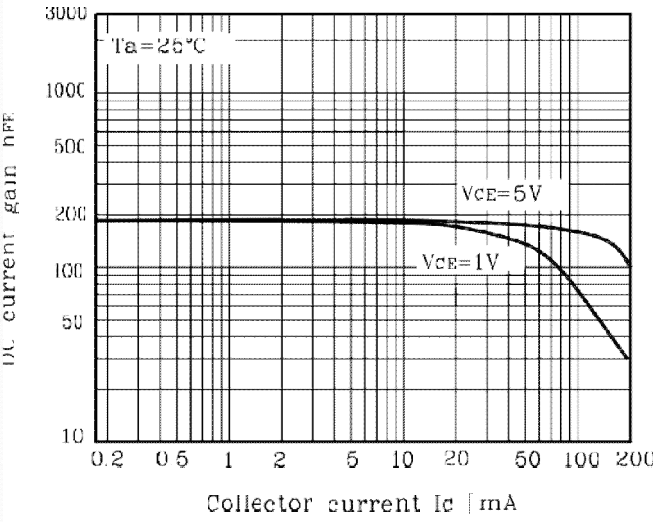
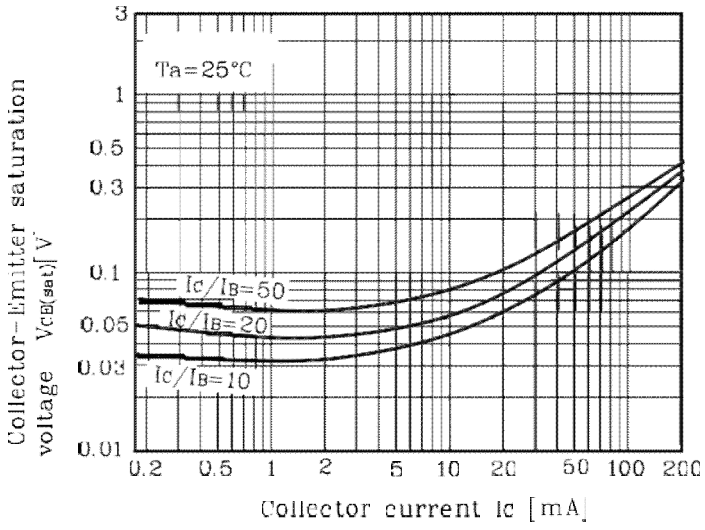
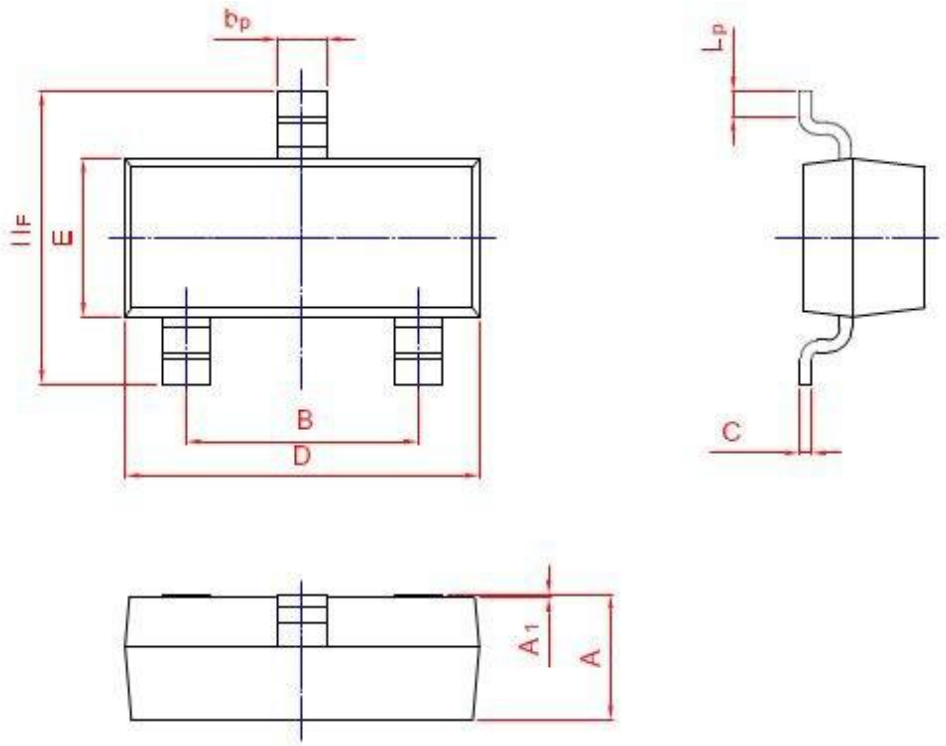


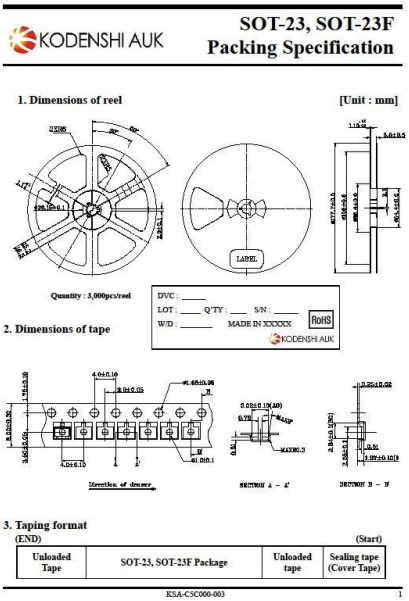
Fig. 5 $V_{CE(sat)}$ -I_C



Outline Dimension



UNIT	A	B	bp	C	D	E	HE	A1	Lp
mm	1.40 0.95	2.04 1.78	0.50 0.35	0.19 0.08	3.10 2.70	1.65 1.20	3.00 2.20	0.100 0.013	0.50 0.20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SOT-23, SOT-23F
Packing Specification

1. Dimensions of reel [Unit : mm]

Quantity : 3,000pcs/reel

DVC : ____
LOT : ____ Q'TY : ____ S/N : ____
W/D : ____ MADE IN XXXXX RoHS
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2. Dimensions of tape

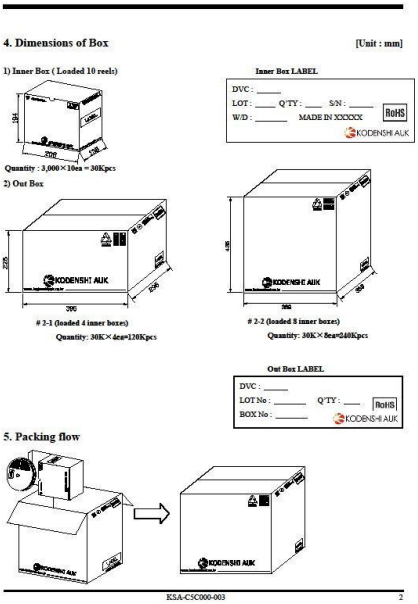
Direction of drawer

3. Taping format

(END) (Start)

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

KSA-C5C000-003 1


4. Dimensions of Box [Unit : mm]

1) Inner Box (Loaded 10 reels)

Quantity : 3,000×10ea = 30Kpcs

Inner Box LABEL

DVC : ____
LOT : ____ Q'TY : ____ S/N : ____
W/D : ____ MADE IN XXXXX RoHS
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2) Out Box

2-1 (loaded 4 inner boxes)
Quantity: 30K×4ea=120Kpcs

2-2 (loaded 8 inner boxes)
Quantity: 30K×8ea=240Kpcs

Out Box LABEL

DVC : ____
LOT No : ____ Q'TY : ____ RoHS
BOX No : ____ KODENSHI AUK

5. Packing flow

KSA-C5C000-003 2

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