

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	2018.03.02	郑羿
2	增加 TAPING 标准	001	2018.09.07	郑羿

Descriptions

- General small signal application
- Switching application

Features

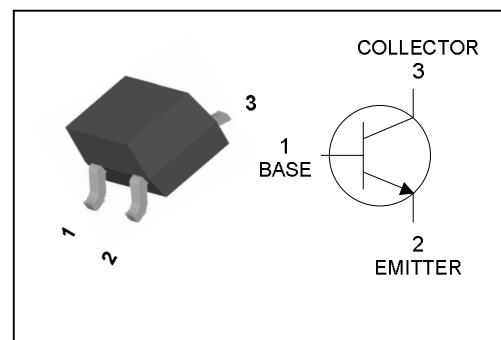
- Low collector saturation voltage
- Collector output capacitance
- Complementary pair with KBT3906C

Ordering Information

Type NO.	Marking	Package Code
KBT3904C	$\frac{1A}{\text{①}}$ $\frac{\square}{\text{②}}$ •	SOT-23

① Device Code ② Year & Week Code • Dalian

PIN Connection



Absolute maximum ratings

Ta=25°C

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	V_{CBO}	60	V
Collector-Emitter voltage	V_{CEO}	40	V
Emitter-base voltage	V_{EBO}	6	V
Collector current	I_C	200	mA
Collector dissipation	P_C	350	mW
Junction temperature	T_j	150	°C
Storage temperature range	T_{stg}	-55~150	°C

Electrical Characteristics

Ta=25°C

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	BV_{CBO}	$I_C=10\mu A, I_E=0$	60	-	-	V
Collector-Emitter breakdown voltage	BV_{CEO}	$I_C=1mA, I_B=0$	40	-	-	V
Emitter-Base breakdown voltage	BV_{EBO}	$I_E=10\mu A, I_C=0$	6	-	-	V
Collector cut-off current	I_{CEX}	$V_{CE}=30V, V_{BE(OFF)}=3V$	-	-	50	nA
DC current gain	h_{FE1}	$V_{CE}=1V, I_C=10mA$	100	-	300	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C=50mA, I_B=5mA$	-	-	0.3	V
Transition frequency	f_T	$V_{CE}=20V, I_C=10mA, f=100MHz$	300	-	-	MHz
Collector output capacitance	C_{ob}	$V_{CB}=5V, I_E=0, f=1MHz$	-	-	4	pF
Delay time	t_d	$V_{CC}=3V_{dc}, V_{BE(OFF)}=0.5V$ $I_C=10mA_{dc}, I_{B1}=1mA_{dc}$	-	-	35	ns
Rise time	t_r		-	-	35	ns
Storage time	t_s	$V_{CC}=3V_{dc}, I_C=10mA_{dc}, I_{B1}=I_{B2}=1mA_{dc}$	-	-	200	ns
Fall time	t_f		-	-	50	ns

Electrical Characteristic Curves

Fig. 1 P_C - T_a

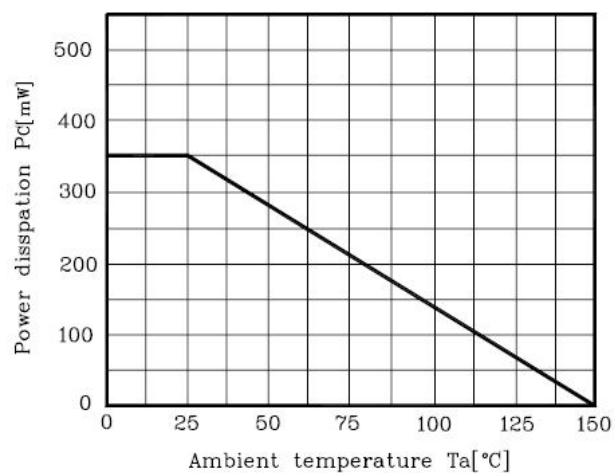


Fig. 2 h_{FE} - I_C

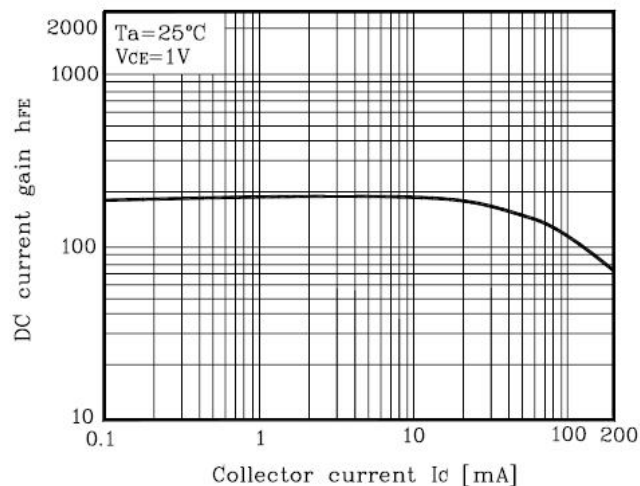
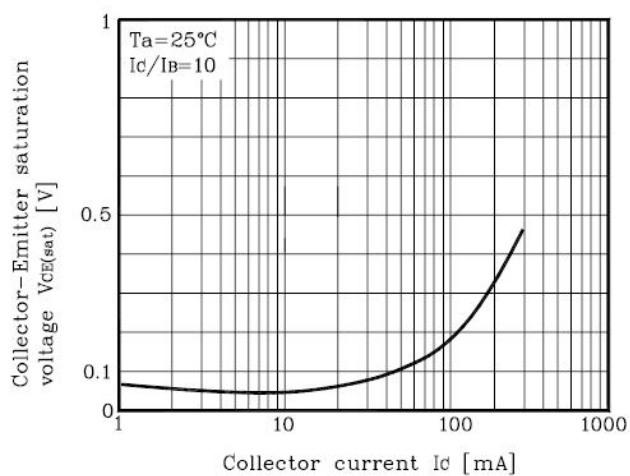
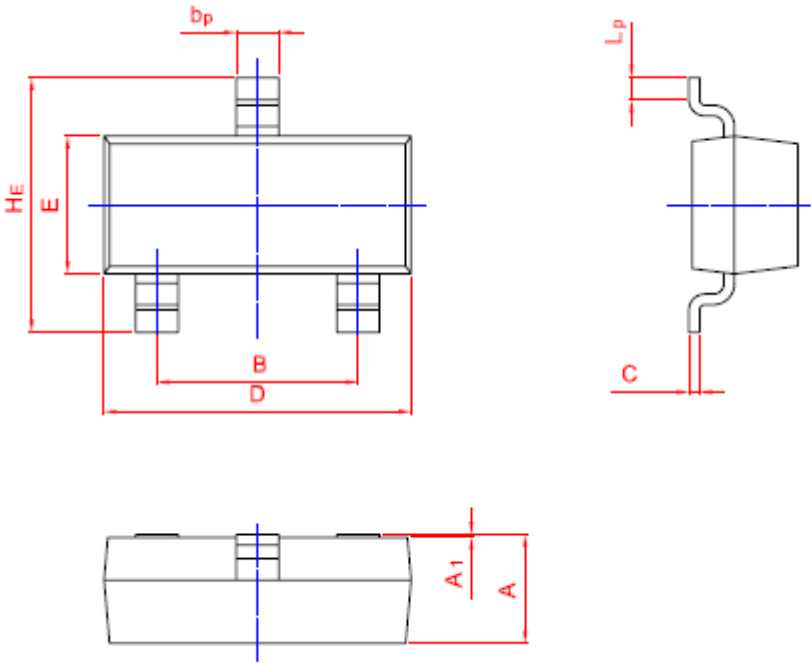


Fig. 3 $V_{CE(sat)}$ - I_C



Outline Dimension



UNIT	A	B	b_p	C	D	E	H_E	A_1	L_p
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

Packing Specification

4. Dimensions of Box

[Unit : mm]

1) Inner Box (Loaded 10 reels)



Quantity : 3,000×100a=30Kpcs

2) Out Box

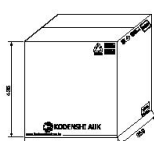


2-1 (Loaded 4 inner boxes)

Quantity: 30K×4a=120Kpcs

Inner Box LABEL

DVC: _____
 LOT: _____ Q'TY: _____ S/N: _____
 W/D: _____ MADE IN XXXXXX



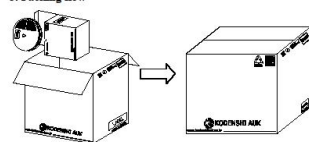
2-2 (Loaded 8 inner boxes)

Quantity: 30K×8a=240Kpcs

Out Box LABEL

DVC: _____
 LOT No: _____ Q'TY: _____ [RoHS]
 BOX No: _____

5. Packing flow



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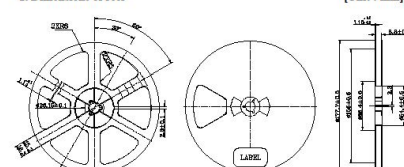
2



SOT-23, SOT-23F Packing Specification

1. Dimensions of reel

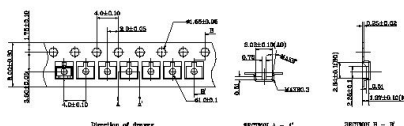
[Unit : mm]



Quantity : 3,000pieces

DVC: _____
 LOT: _____ Q'TY: _____ S/N: _____
 W/D: _____ MADE IN XXXXXX

2. Dimensions of tape



3. Taping format

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

KSA-CSC000-003

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