

产品规格书

批准	审核	校核	编制
纪春华	朴致均	赵宇辉	郑羿
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

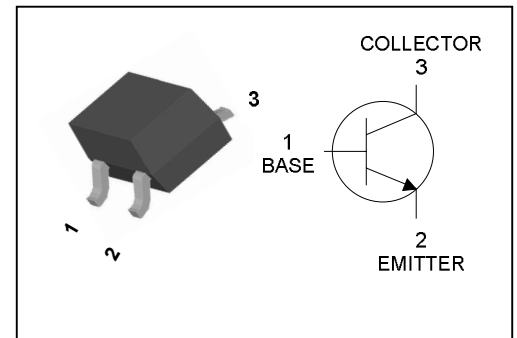
- Low collector saturation voltage
- Collector output capacitance
- Complementary pair with KBT3906C

Ordering Information

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

① Device Code ② Year & Week Code • Dalian

PIN Connection



Absolute maximum ratings

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

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	V_{CB0}	60	V
Collector-Emitter voltage	V_{CE0}	40	V
Emitter-base voltage	V_{EB0}	6	V
Collector current	I_C	200	mA
Collector dissipation	P_C	350	mW
Junction temperature	T_j	150	$^{\circ}\text{C}$
Storage temperature range	T_{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_{CB0}	$I_C=10\mu\text{A}, I_E=0$	60	-	-	V
Collector-Emitter breakdown voltage	BV_{CE0}	$I_C=1\text{mA}, I_B=0$	40	-	-	V
Emitter-Base breakdown voltage	BV_{EB0}	$I_E=10\mu\text{A}, I_C=0$	6	-	-	V
Collector cut-off current	I_{CEX}	$V_{CE}=30\text{V}, V_{BE(OFF)}=3\text{V}$	-	-	50	nA
DC current gain	h_{FE1}	$V_{CE}=1\text{V}, I_C=10\text{mA}$	100	-	300	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C=50\text{mA}, I_B=5\text{mA}$	-	-	0.3	V
Transition frequency	f_T	$V_{CE}=20\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	300	-	-	MHz
Collector output capacitance	C_{ob}	$V_{CB}=5\text{V}, I_E=0, f=1\text{MHz}$	-	-	4	pF
Delay time	t_d	$V_{CC}=3V_{dc}, V_{BE(OFF)}=0.5\text{V}$ $I_C=10\text{mA}_{dc}, I_{B1}=1\text{mA}_{dc}$	-	-	35	ns
Rise time	t_r		-	-	35	ns
Storage time	t_s	$V_{CC}=3V_{dc}, I_C=10\text{mA}_{dc}$ $I_{B1}=I_{B2}=1\text{mA}_{dc}$	-	-	200	ns
Fall time	t_f		-	-	50	ns

Electrical Characteristic Curves

Fig. 1 P_C - T_a

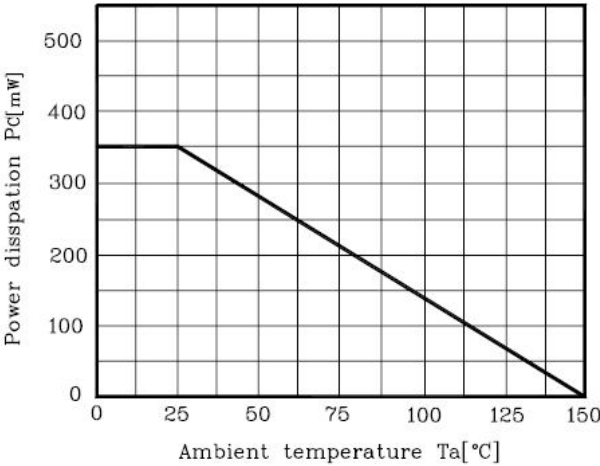


Fig. 2 h_{FE} - I_C

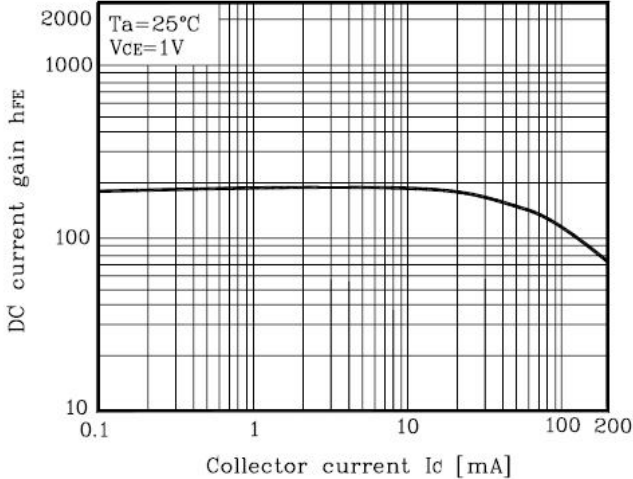
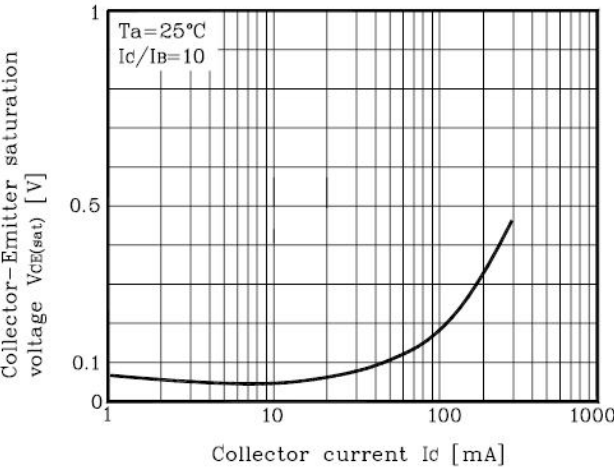
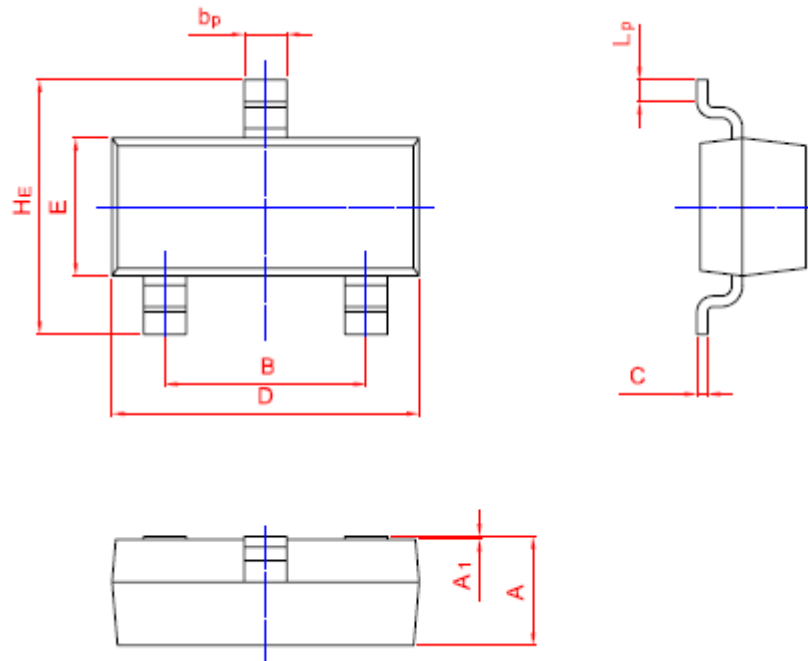


Fig. 3 $V_{CE(sat)}$ - I_C

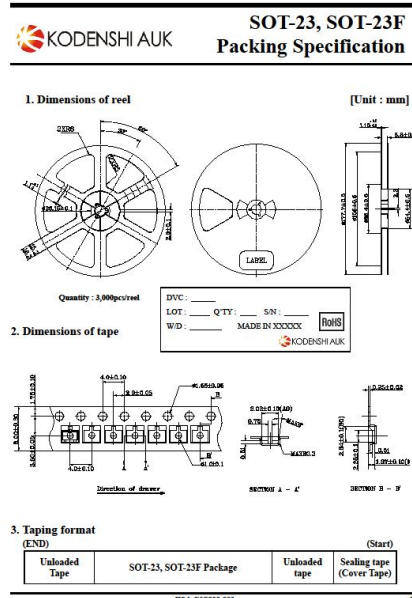
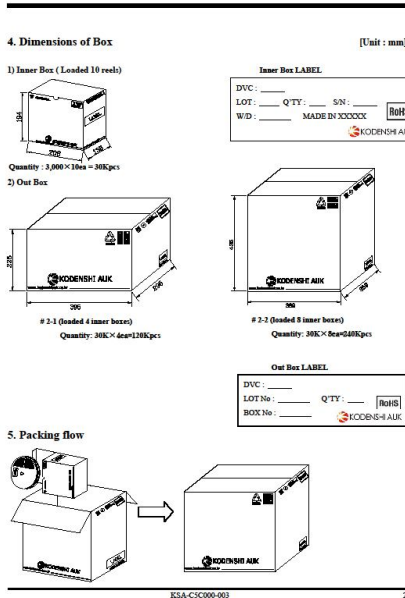


Outline Dimension



UNIT	A	B	b_p	C	D	E	H_E	A_1	L_p
mm	1.40	2.04	0.50	0.19	3.10	1.65	3.00	0.100	0.50
	0.95	1.78	0.35	0.08	2.70	1.20	2.20	0.013	0.20

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