

# 产品规格书

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2018.03.28	2018.03.28	2018.03.28	2018.03.28

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	2018.03.28	郑羿

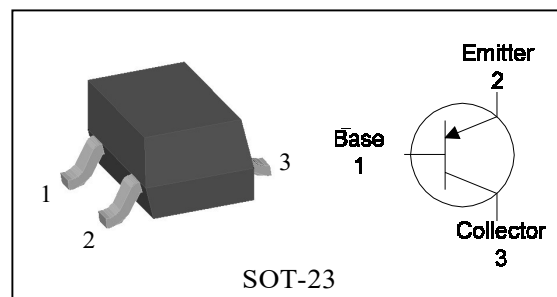
## Descriptions

General purpose application  
Switching application

## Features

Low Leakage current  
Low collector saturation voltage enabling  
low voltage operation  
Complementary pair with KBT2222AC

## PIN Connection



## Ordering Information

Type NO.	Marking	Package Code
KBT2907AC	2F □ ●	SOT-23
	① ②	
	① Device Code ② Year & Week Code ● Dalian	

## Absolute maximum ratings

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

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	$V_{CBO}$	-60	V
Collector-Emitter voltage	$V_{CEO}$	-60	V
Emitter-base voltage	$V_{EBO}$	-5	V
Collector current	$I_C$	-0.6	A(DC)
	$I_{CP}^*$	-1.2	A(Pulse)
Collector dissipation	$P_C^{**}$	350	mW
Operating Junction temperature range	$T_J$	-55~150	C
Storage temperature range	$T_{stg}$	-55~150	C

\* : Single pulse,  $t_p=300\text{ }\mu\text{s}$

\*\* : Package mounted on 99.5% alumina 10 8 0.6mm

## Electrical Characteristics

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

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	$BV_{CBO}$	$I_C=-10\mu\text{A}, I_E=0$	-60	-	-	V
Collector-Emitter breakdown voltage	$BV_{CEO}$	$I_C=-1\text{mA}, I_B=0$	-60	-	-	V
Emitter-Base breakdown voltage	$BV_{EBO}$	$I_E=-10\mu\text{A}, I_C=0$	-5	-	-	V
Collector cut-off current	$I_{CBO}$	$V_{CB}=-60\text{V}, I_E=0$	-	-	-20	nA
Collector cut-off current	$I_{CEX}$	$V_{CE}=-30\text{V}, V_{EB}=-0.5\text{V}$	-	-	-50	nA
DC current gain	$h_{FE}$	$V_{CE}=-10\text{V}, I_C=-10\text{mA}$	100	-	-	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C=-150\text{mA}, I_B=-15\text{mA}$	-	-	-0.4	V
Transition frequency	$f_T$	$V_{CE}=-5.0\text{V}, I_C=-20\text{mA}, f=100\text{MHz}$	200	-	-	MHz
Collector output capacitance	$C_{ob}$	$V_{CB}=-10\text{V}, I_E=0, f=1\text{MHz}$	-	-	8	pF
Turn-on time	$t_{on}$	$V_{CC}=-30\text{V}_{dc}, I_C=-150\text{mA}_{dc}, I_{B1}=-15\text{mA}_{dc}$	-	-	45	ns
Delay time	$t_d$		-	-	10	ns
Rise time	$t_r$		-	-	40	ns
Turn-off time	$t_{off}$	$V_{CC}=-6.0\text{V}_{dc}, I_C=-150\text{mA}_{dc}, I_{B1}=I_{B2}=-15\text{mA}_{dc}$	-	-	100	ns
Storage time	$t_s$		-	-	80	ns
Fall time	$t_f$		-	-	30	ns

## Electrical Characteristic Curves

Fig. 1  $P_C - T_a$

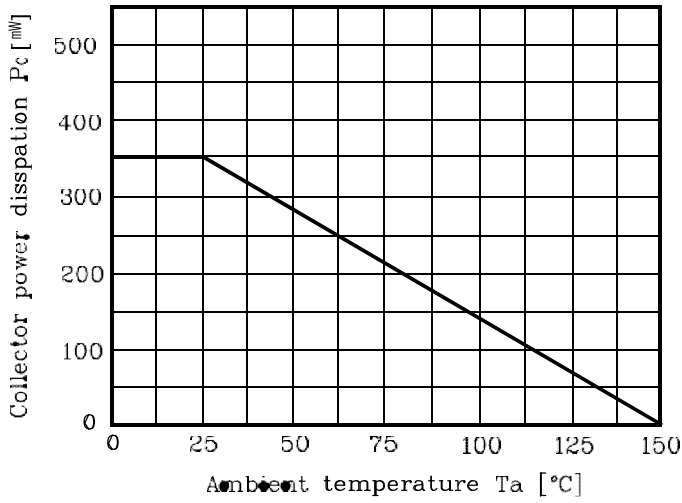


Fig. 2  $h_{FE} - I_C$

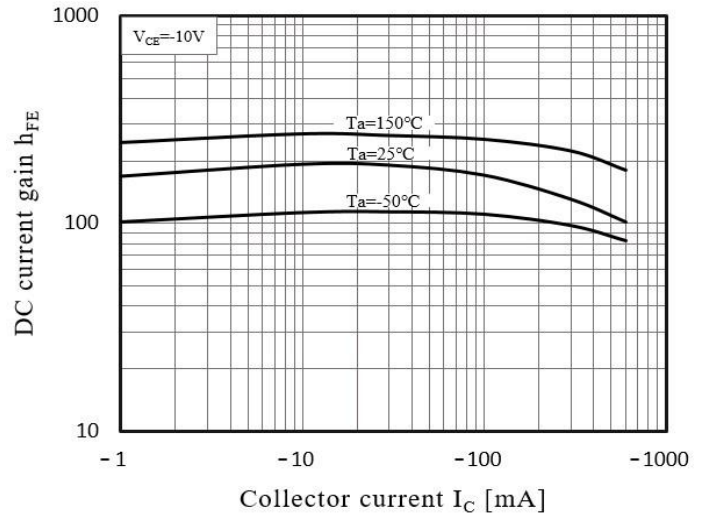


Fig. 3  $I_C - V_{CE(SAT)}$

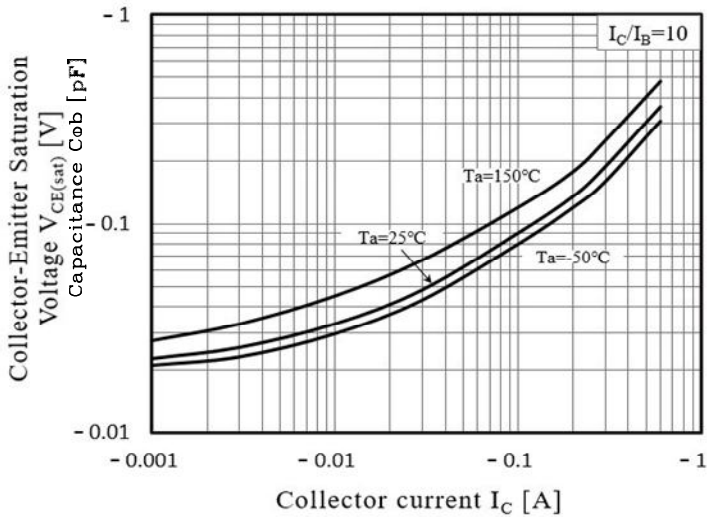


Fig. 4  $I_C - V_{BE(SAT)}$

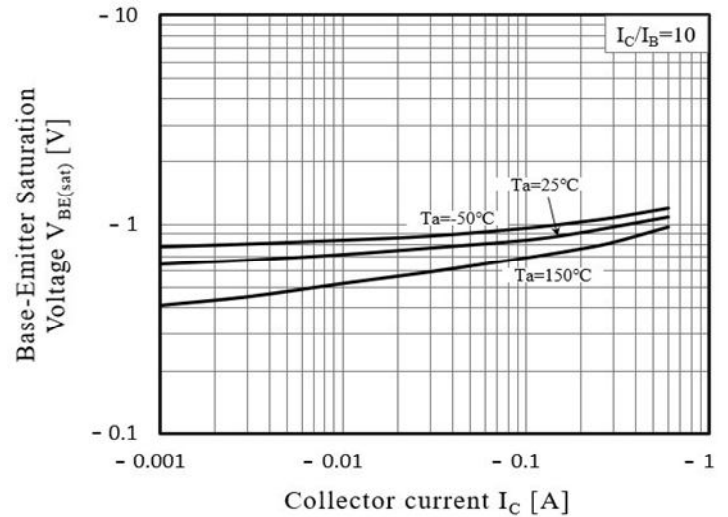
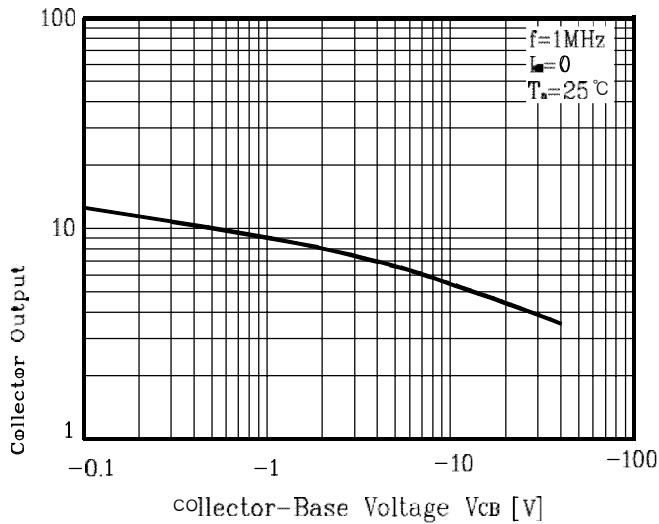
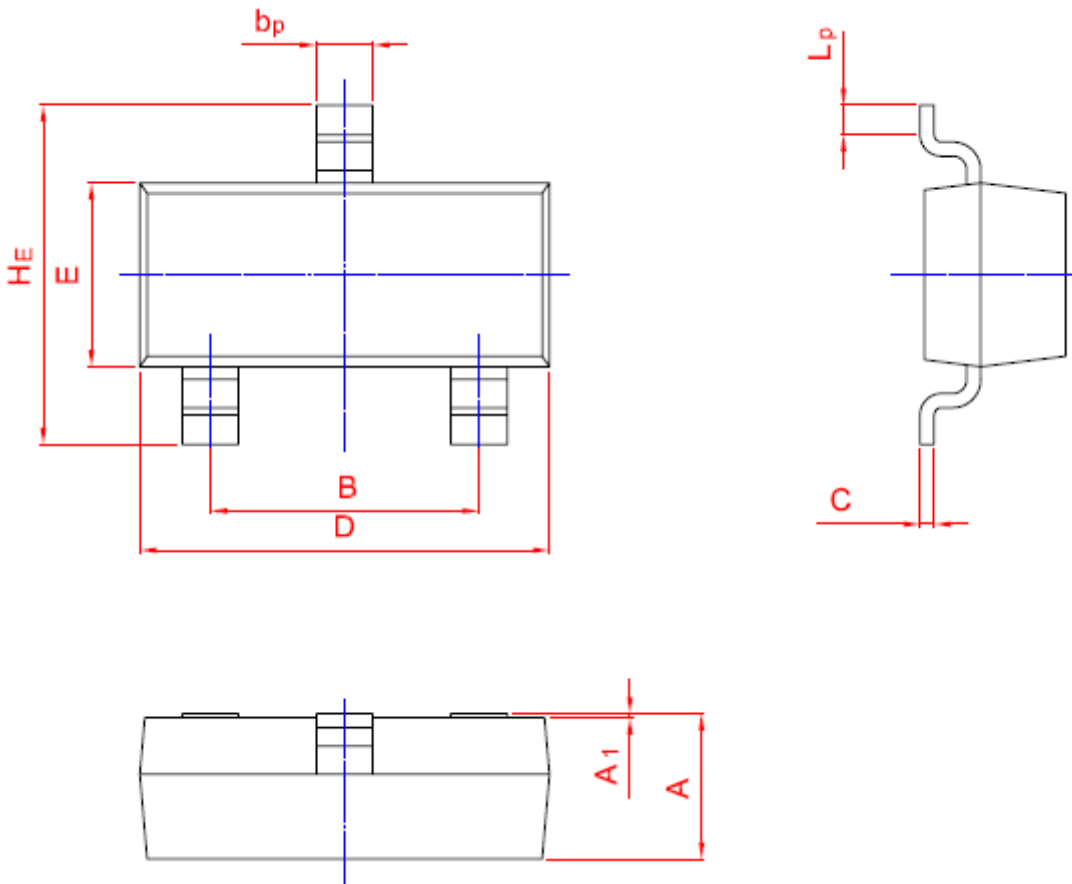


Fig. 5  $C_{ob} - V_{CB}$



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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