

产品规格书

批准	审核	校核	编制
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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

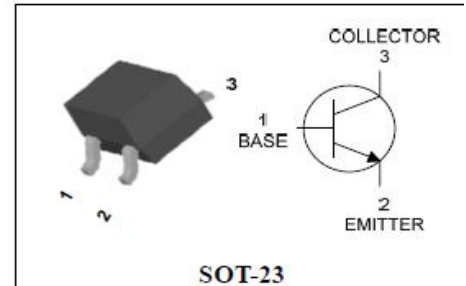
- Low Leakage current
- Low collector saturation voltage enabling low voltage operation
- Complementary pair with KBT2907AC

Ordering Information

Type NO.	Marking	Package Code
KBT2222AC	$\frac{1P}{\text{① ②}}$	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}	75	V
Collector-Emitter voltage	V_{CE0}	40	V
Emitter-Base voltage	V_{EB0}	5	V
Collector current	I_C	0.6	A(DC)
	I_{CP}^*	1.2	A(Pulse)
Collector dissipation	P_C^{**}	350	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature range	T_{stg}	-50~150	$^\circ\text{C}$

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

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

Thermal Characteristics

Characteristic	Symbol	Ratings	Unit
Thermal resistance Junction-Ambient	$R_{th(J-A)}^{**}$	357	C/W
Thermal resistance Junction-Case	$R_{th(J-C)}^{**}$	200	C/W

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

Electrical Characteristics**T_a=25 °C**

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	BV _{CBO}	I _C =10μA, I _E =0	75	-	-	V
Collector-Emitter breakdown voltage	BV _{CEO}	I _C =1mA, I _B =0	40	-	-	V
Emitter-Base breakdown voltage	BV _{EBO}	I _E =10μA, I _C =0	5	-	-	V
Collector cut-off current	I _{CBO}	V _{CB} =75V, I _E =0	-	-	20	nA
Collector cut-off current	I _{CEX}	V _{CE} =30V, V _{EB} =0.5V	-	-	50	nA
DC current gain	h _{FE}	V _{CE} =10V, I _C =10mA	100	-	-	-
Collector-Emitter saturation voltage	V _{CE(sat)}	I _C =150mA, I _B =15mA	-	-	0.4	V
Transition frequency	f _r	V _{CE} =20V, I _C =20mA, f=100MHz	250	-	-	MHz
Collector output capacitance	C _{ob}	V _{CB} =10V, I _E =0, f=1MHz	-	-	8	pF
Delay time	t _d	V _{CC} =30V _{dc} , V _{BE(off)} =0.5V _{dc} , I _C =150mA _{dc} , I _{B1} =15mA _{dc}	-	-	10	ns
Rise time	t _r		-	-	25	ns
Storage time	t _s	V _{CC} =30V _{dc} , I _C =150mA _{dc} , I _{B1} =I _{B2} =15mA _{dc}	-	-	225	ns
Fall Time	T _f		-	-	60	ns

Electrical Characteristic Curves

Fig. 1 $P_C - T_a$

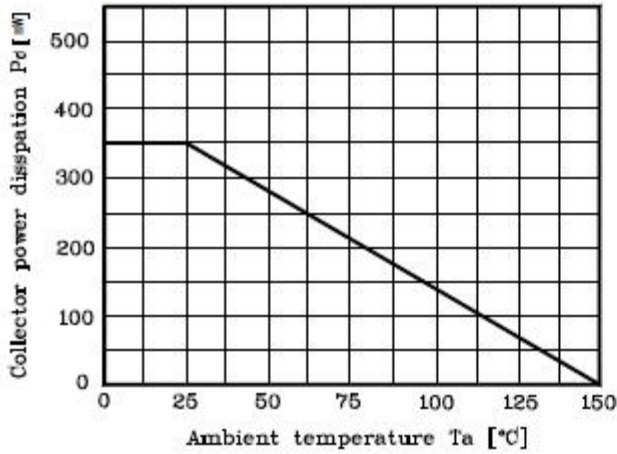


Fig. 2 $h_{FE} - I_C$

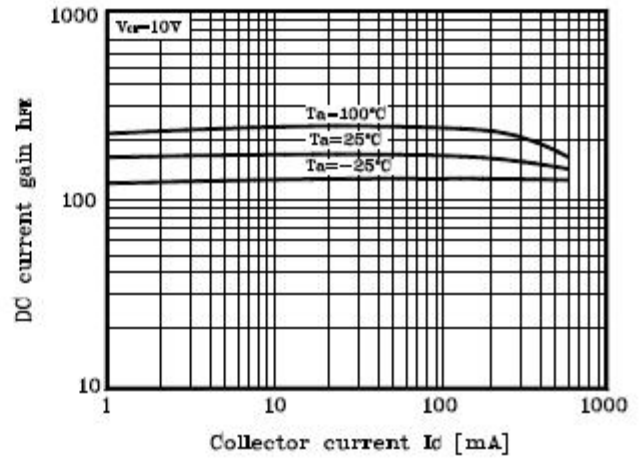


Fig. 3 $I_C - V_{CE(SAT)}$

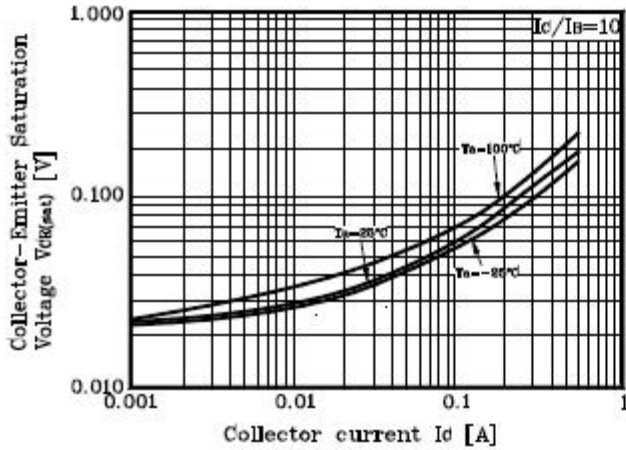


Fig. 4 $I_C - V_{BE(SAT)}$

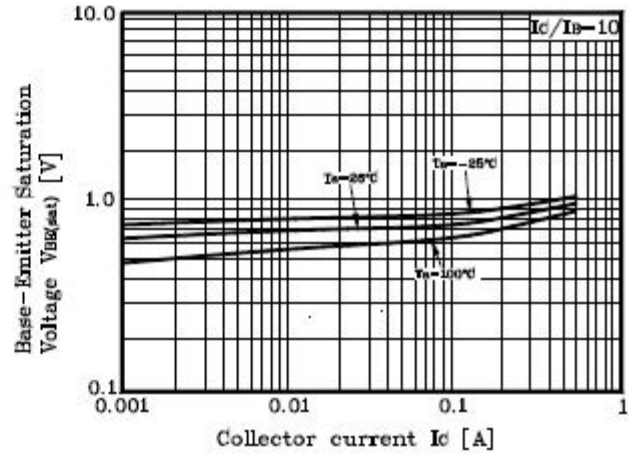
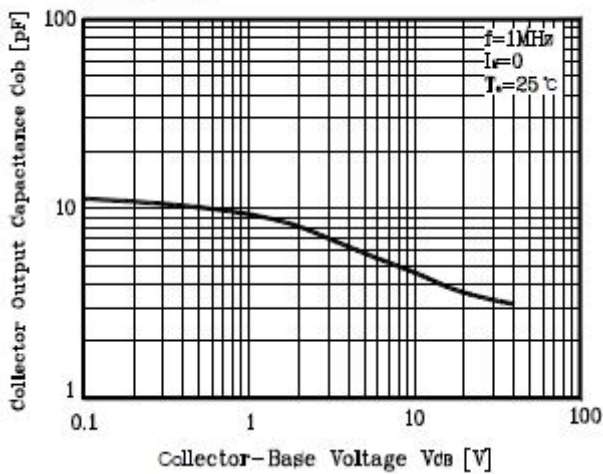
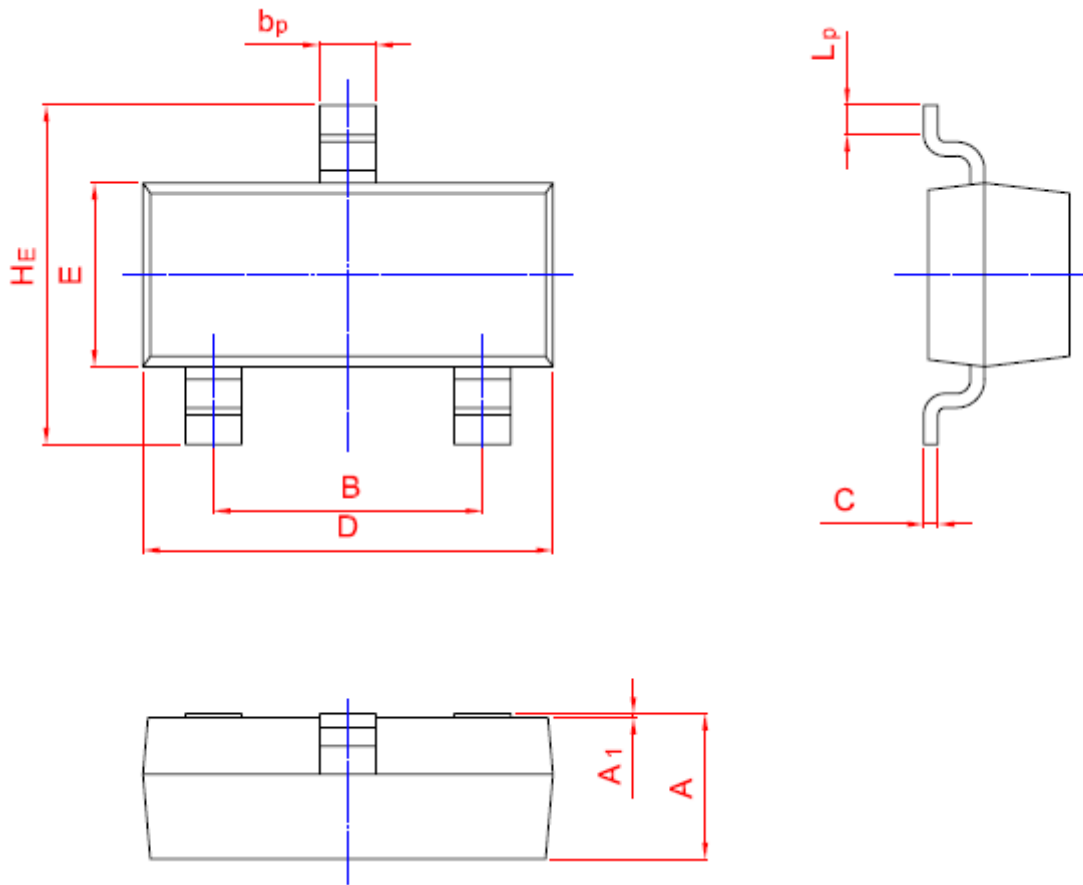


Fig. 5 $C_{ob} - V_{CB}$



Outline Dimension (Unit: mm)



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

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