

产品规格书

批准	审核	校核	编制
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2018.03.02	2018.03.02	2018.03.02	2018.03.02

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

Descriptions

- General purpose amplifier
- High voltage application

Features

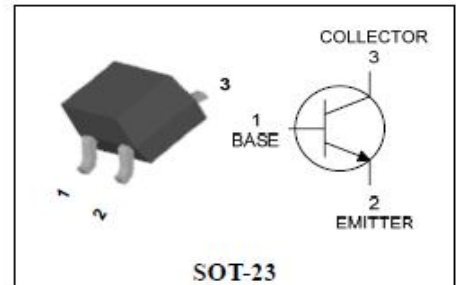
- High collector breakdown voltage:
 $V_{CB0} = 180V$, $V_{CE0} = 160V$
- Low collector saturation voltage:
 $V_{CE(sat)} = 0.5V(MAX.)$
- Complementary pair with KBT5401C

Ordering Information

Type NO.	Marking	Package Code
KBT5551C	FNF □ • ① ②	SOT-23

① Device Code ② Year & Week Code Dalian

PIN Connection



Absolute maximum ratings

 $T_a = 25^\circ C$

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	V_{CB0}	180	V
Collector-Emitter voltage	V_{CE0}	160	V
Emitter-Base voltage	V_{EB0}	6	V
Collector current	I_c	600	mA
Collector dissipation	P_c	200	mW
Junction temperature	T_j	150	$^\circ C$
Storage temperature	T_{stg}	-50~150	$^\circ C$

Electrical Characteristics

T_a=25 °C

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Base breakdown voltage	BV _{CBO}	I _C =100 μA, I _E =0	180	-	-	V
Collector-Emitter breakdown voltage	BV _{CEO}	I _C =1mA, I _B =0	160	-	-	V
Emitter-Base breakdown voltage	BV _{EBO}	I _E =10 μA, I _C =0	6	-	-	V
Collector cut-off current	I _{CBO}	V _{CB} =120V, I _E =0	-	-	50	nA
Emitter cut-off current	I _{EBO}	V _{EB} =4V, I _C =0	-	-	100	nA
DC current gain	h _{FE} (1)	V _{CE} =5V, I _C =1mA	80	-	-	-
DC current gain	h _{FE} (2)	V _{CE} =5V, I _C =10mA	80	-	250	-
DC current gain	h _{FE} (3)	V _{CE} =5V, I _C =50mA	30	-	-	-
Collector-Emitter saturation voltage	V _{CE(sat)(1)} *	I _C =10mA, I _B =1mA	-	-	0.2	V
Collector-Emitter saturation voltage	V _{CE(sat)(2)} *	I _C =50mA, I _B =5mA	-	-	0.5	V
Base-Emitter saturation voltage	V _{BE(sat)(1)} *	I _C =10mA, I _B =1mA	-	-	1	V
Base-Emitter saturation voltage	V _{BE(sat)(2)} *	I _C =50mA, I _B =5mA	-	-	1	V
Transition frequency	f _T	V _{CE} =10V, I _C =10mA	100	-	400	MHz
Collector output capacitance	C _{ob}	V _{CB} =10V, I _E =0, f=1MHz	-	-	6	pF

* : Pulse Tester : Pulse Width ≤ 300 μs, Duty Cycle ≤ 2.0%

Electrical Characteristic Curves

Fig. 1 $h_{FE} - I_C$

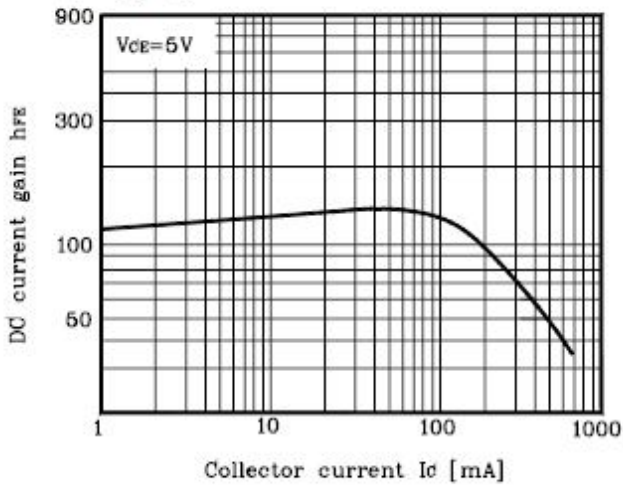


Fig. 2 $I_C - V_{BE}$

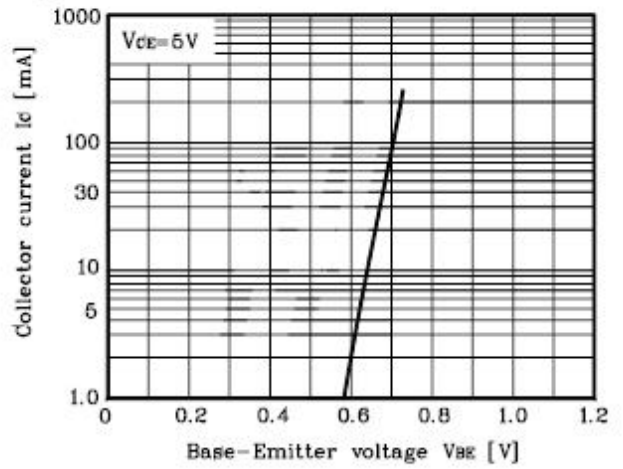


Fig. 3 $f_T - I_C$

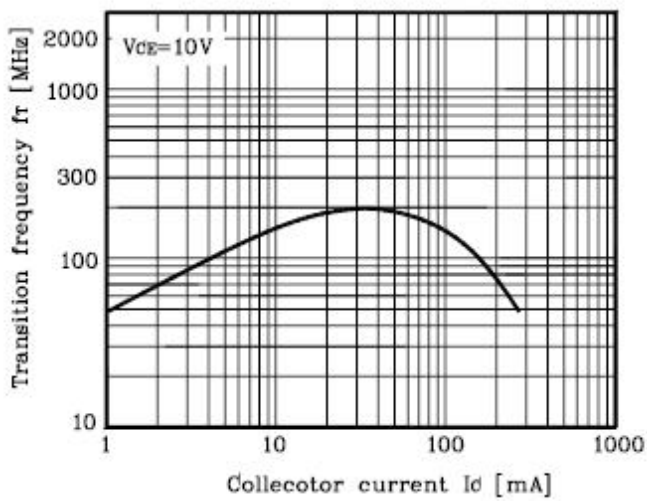


Fig. 4 $V_{CE(sat)}, V_{BE(sat)} - I_C$

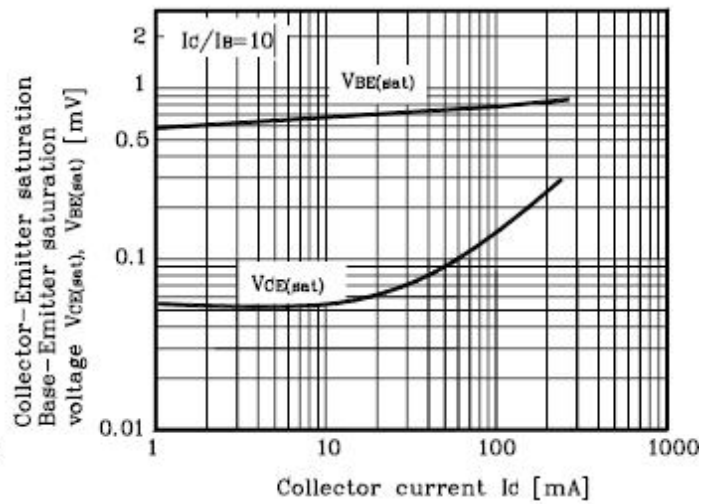
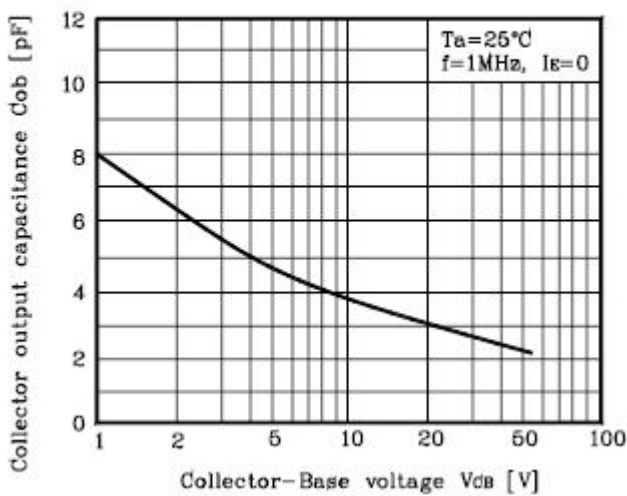
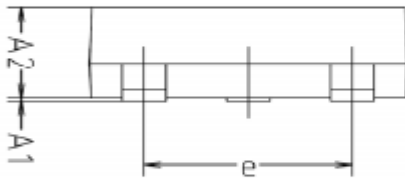
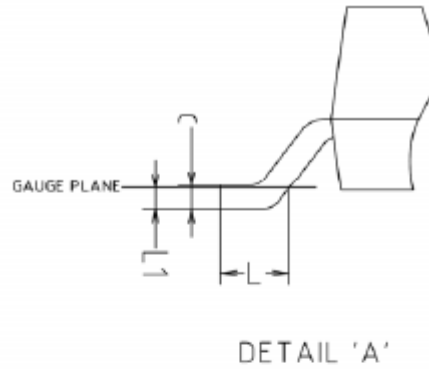
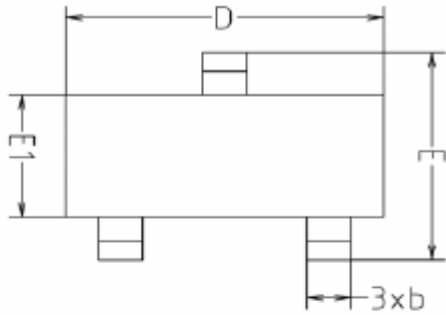


Fig. 5 $C_{ob} - V_{CB}$

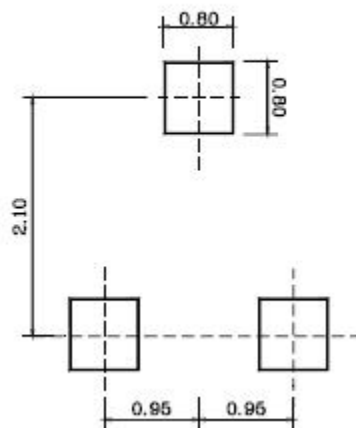


Outline Dimension



SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A1	0.00	-	0.10	
A2	0.82	-	1.02	
b	0.39	0.42	0.45	
c	0.09	0.12	0.15	
D	2.80	2.90	3.00	
E	2.20	2.40	2.60	
E1	1.20	1.30	1.40	
e	1.90BSC			
L	0.20	-	-	
L1	0.12BSC			

※Recommend PCB solder land [Unit: mm]



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