

Descriptions

- High current application
- Radio in class B push-pull operation

Feature

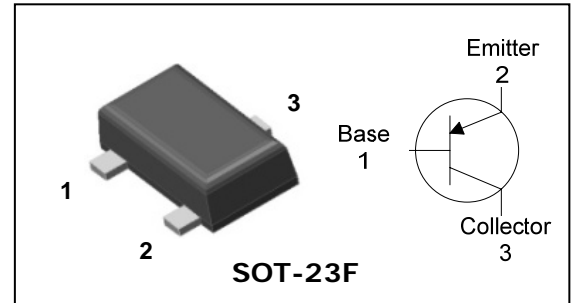
- Complementary pair with STC8050SF

Ordering Information

Type NO.	Marking	Package Code
STA8550SF	$\frac{8B}{\textcircled{1} \textcircled{2} \textcircled{3}}$	SOT-23F

①Device Code ②hFE Rank ③Year&Week Code

PIN Connection



Absolute Maximum Ratings

(Ta=25°C)

Characteristic	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-30	V
Collector-emitter voltage	V_{CEO}	-25	V
Emitter-base voltage	V_{EBO}	-6	V
Collector current	I_C	-800	mA
Collector power dissipation	P_C^*	350	mW
Junction temperature	T_J	150	°C
Storage temperature range	T_{stg}	-55 ~ 150	°C

* : Package mounted on 99.5% Alumina 10×8×0.6mm

Electrical Characteristics

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-emitter breakdown voltage	BV_{CEO}	$I_C = -1\text{mA}, I_B = 0$	-25	-	-	V
Collector cut-off current	I_{CBO}	$V_{CB} = -30\text{V}, I_E = 0$	-	-	-50	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = -6\text{V}, I_C = 0$	-	-	-50	nA
DC current gain	h_{FE}^*	$V_{CE} = -1\text{V}, I_C = -50\text{mA}$	85	-	300	-
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -500\text{mA}, I_B = -50\text{mA}$	-	-	-0.5	V
Base-emitter voltage	V_{BE}	$V_{CE} = -1\text{V}, I_C = -500\text{mA}$	-	-0.85	-1.2	V
Transition frequency	f_T	$V_{CE} = -5\text{V}, I_C = -10\text{mA}$	-	200	-	MHz
Collector output capacitance	C_{ob}	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$	-	19	-	pF

* : h_{FE} Rank / B : 85~160, C : 120~200, D : 160~300

Electrical Characteristic Curves

Fig. 1 $P_c - T_a$

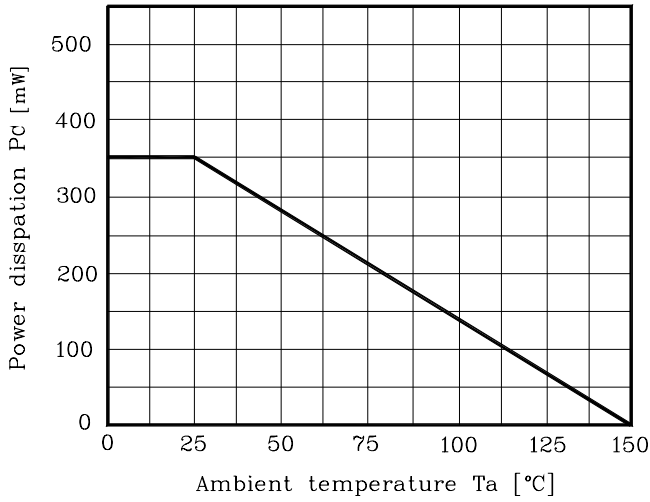


Fig. 2 $I_c - V_{BE}$

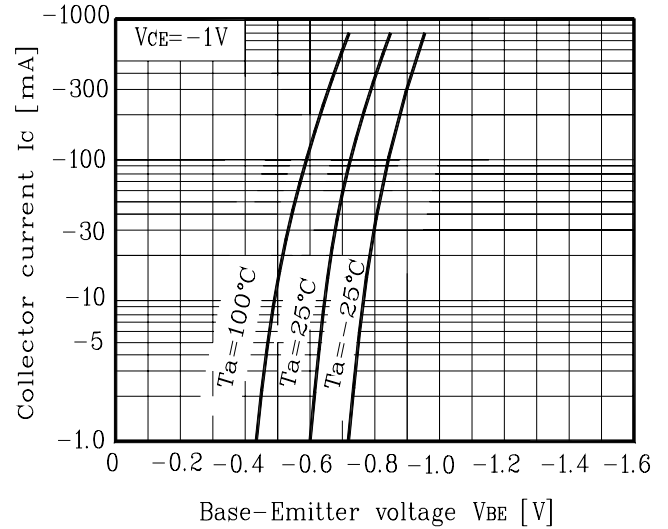


Fig. 3 $I_c - V_{CE}$

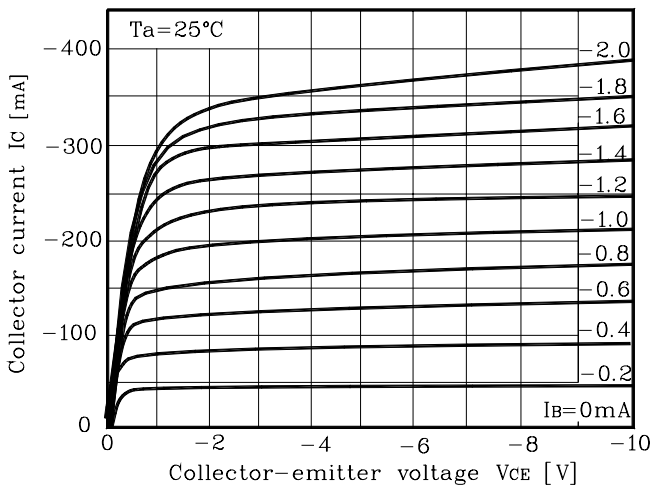


Fig. 4 $V_{CE(SAT)} - I_c$

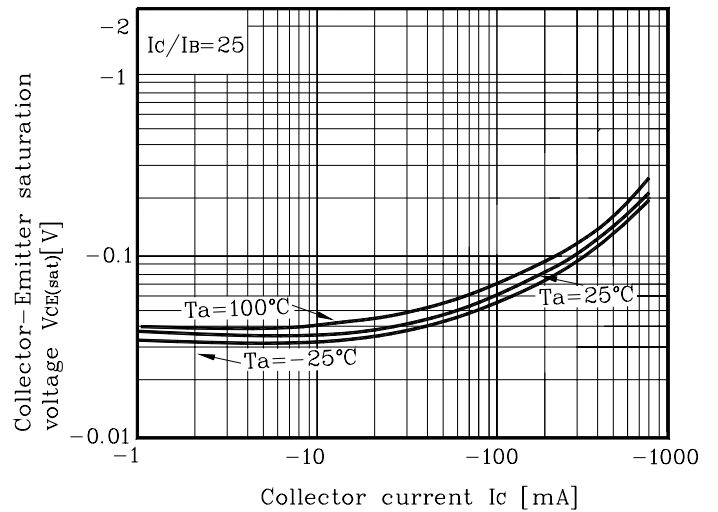


Fig. 5 $h_{FE} - I_c$

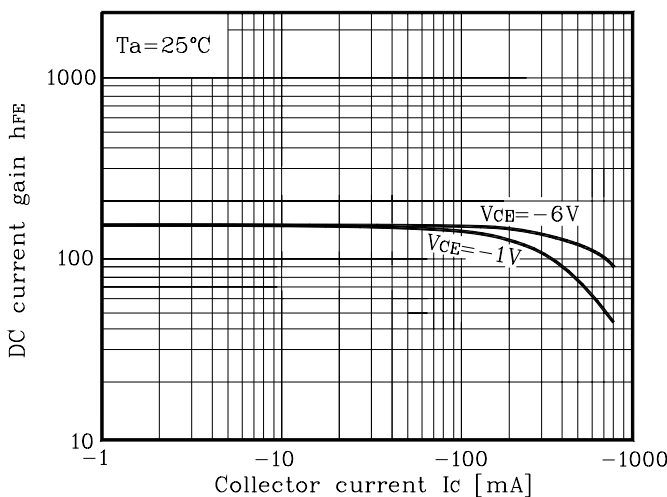
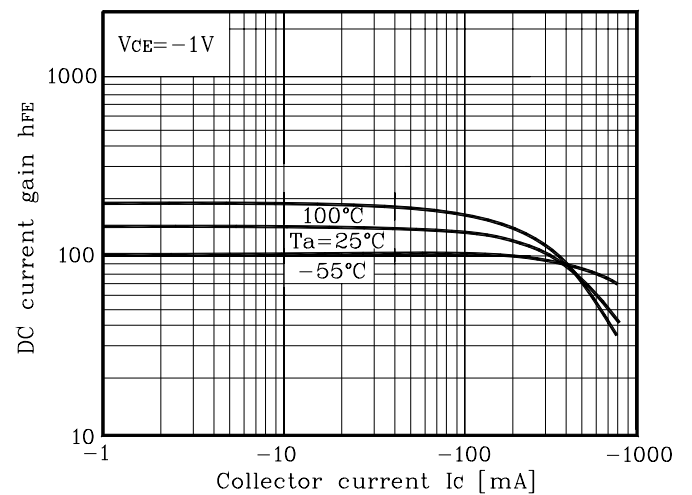
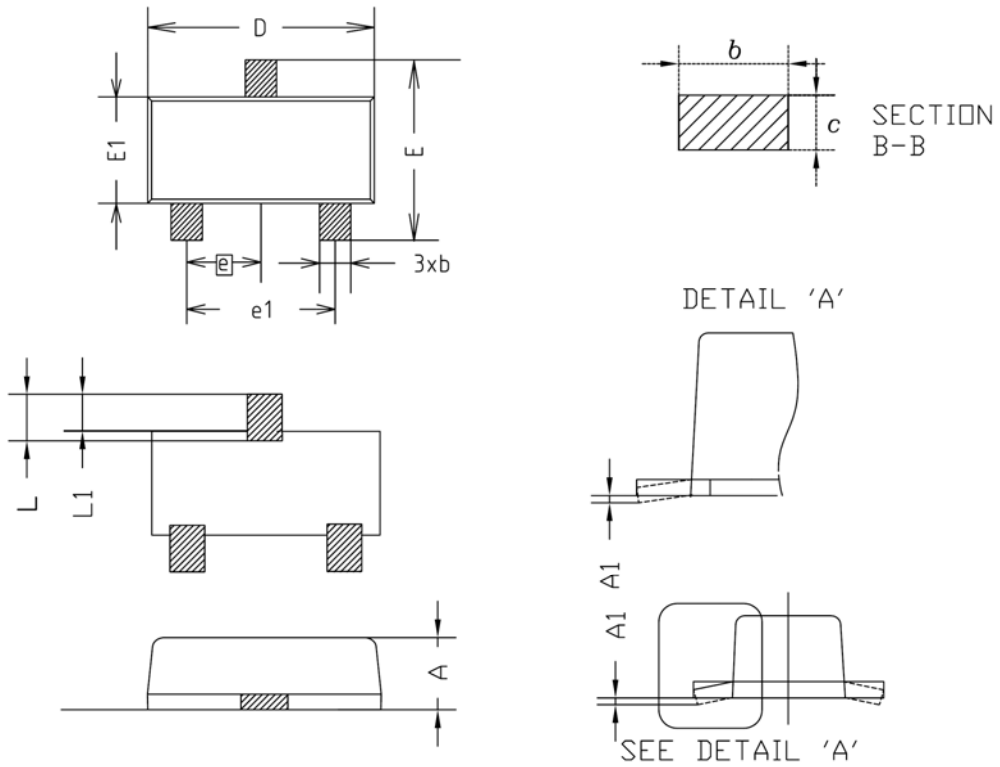


Fig. 6 $h_{FE} - I_c$

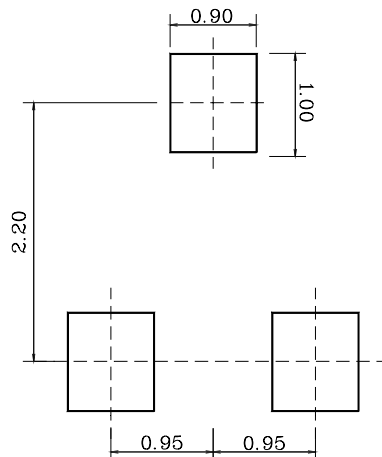


Outline Dimension



SYMBOL	MILLIMETER(mm)			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	0.80	0.90	1.00	
A1	0.00	-	0.10	
b	0.35	0.40	0.45	
c	0.10	0.15	0.20	
D	2.80	2.90	3.00	
E	2.30	2.40	2.50	
E1	1.50	1.60	1.70	
e	0.95BSC			
e1	1.80	1.90	2.00	
L	0.48	0.58	0.68	
L1	0.30	-	0.50	

※Recommend PCB solder land [Unit: mm]



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