

Description

- Audio power amplifier application

Features

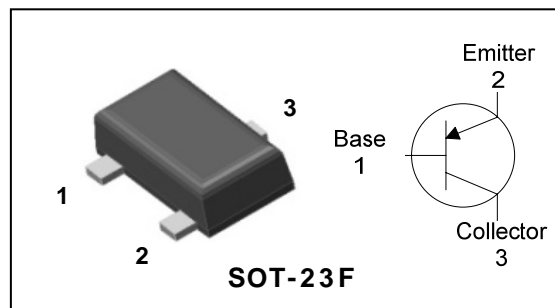
- High h_{FE} : $h_{FE}=100\sim 320$
- Complementary pair with 2SC5344SF

Ordering Information

Type NO.	Marking	Package Code
2SA1981SF	EA □ □ ① ② ③	SOT-23F

①Device Code ②hFE Rank ③Year&Week Code

PIN Connection



Absolute maximum ratings

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

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	V_{CB0}	-35	V
Collector-Emitter voltage	V_{CEO}	-30	V
Emitter-Base voltage	V_{EBO}	-5	V
Collector current	I_C	-800	mA
Collector dissipation	P_C	200	mW
Junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature	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}	$I_C=-500\mu\text{A}$, $I_E=0$	-35	-	-	V
Collector-Emitter breakdown voltage	BV_{CEO}	$I_C=-1\text{mA}$, $I_B=0$	-30	-	-	V
Emitter-Base breakdown voltage	BV_{EBO}	$I_E=-50\mu\text{A}$, $I_C=0$	-5	-	-	V
Collector cut-off current	I_{CB0}	$V_{CB}=-35\text{V}$, $I_E=0$	-	-	-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=-5\text{V}$, $I_C=0$	-	-	-0.1	μA
DC current gain	h_{FE}^*	$V_{CE}=-1\text{V}$, $I_C=-100\text{mA}$	100	-	320	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C=-500\text{mA}$, $I_B=-20\text{mA}$	-	-	-0.5	V
Transition frequency	f_T	$V_{CE}=-5\text{V}$, $I_E=10\text{mA}$	-	120	-	MHz
Collector output capacitance	C_{ob}	$V_{CB}=-10\text{V}$, $I_E=0$, $f=1\text{MHz}$	-	19	-	pF

* : h_{FE} rank / O : 100~200, Y : 160~320

Electrical Characteristic Curves

Fig. 1 Pc-Ta

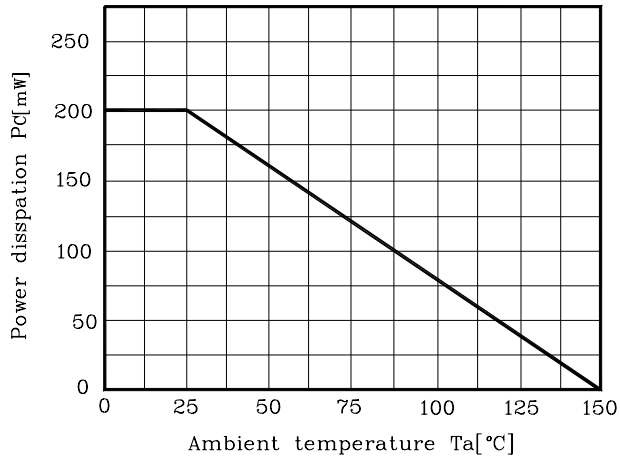


Fig. 2 IC - V_{BE}

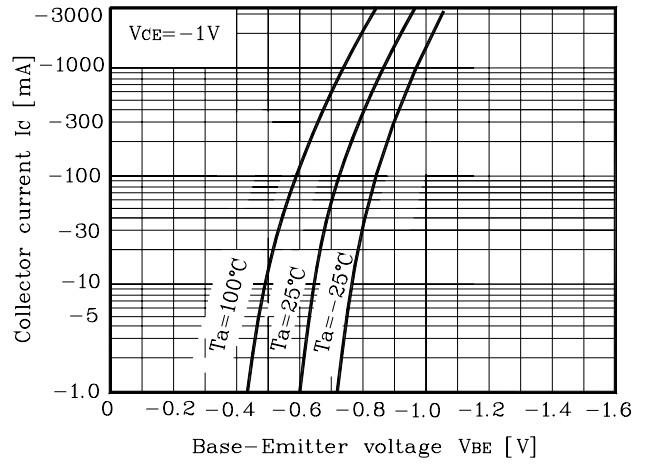


Fig. 3 IC - V_{CE}

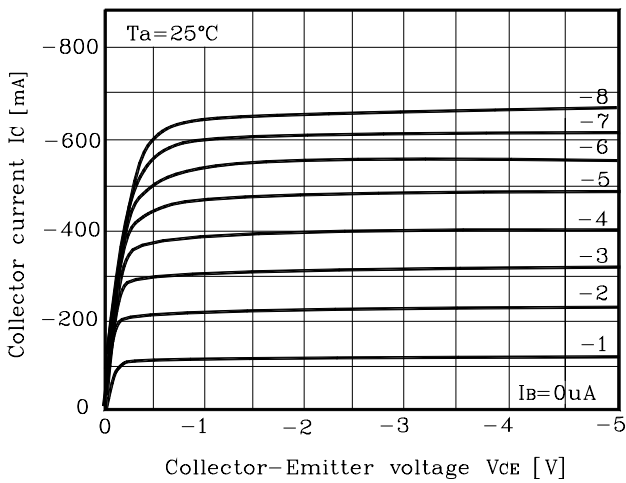


Fig. 4 h_{FE} - IC

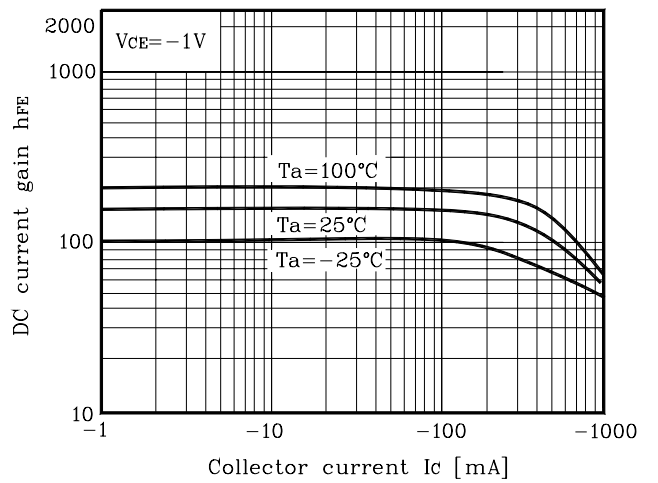
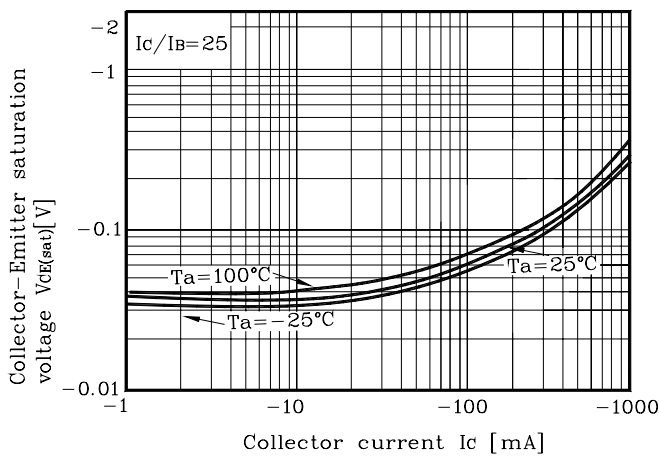
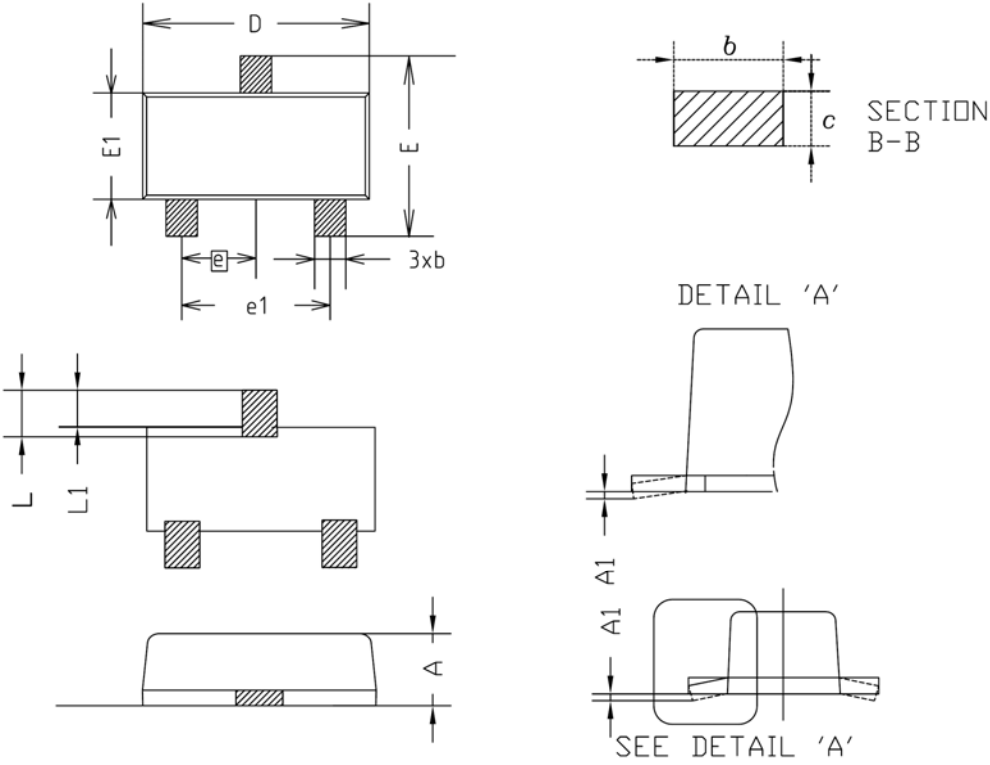


Fig. 5 V_{CE(SAT)} - IC

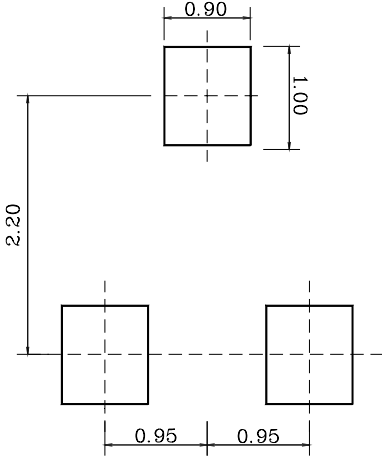


Outline Dimension



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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