

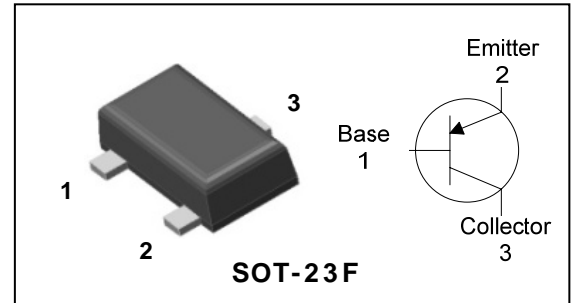
Description

- Medium power amplifier

Features

- Large collector current : $I_{CMax} = -500\text{mA}$
- Suitable for low-Voltage operation because of its low saturation voltage
- Complementary pair with 2SC5342SF

PIN Connection



Ordering Information

Type NO.	Marking	Package Code
2SA1979SF	AA □ □ ① ② ③	SOT-23F

①Device Code ②hFE Rank ③Year&Week Code

Absolute maximum ratings

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

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	V_{CB0}	-40	V
Collector-Emitter voltage	V_{CEO}	-32	V
Emitter-Base voltage	V_{EBO}	-5	V
Collector current	I_C	-500	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}	$I_C = -100\mu\text{A}$, $I_E = 0$	-40	-	-	V
Collector-Emitter breakdown voltage	BV_{CEO}	$I_C = -1\text{mA}$, $I_B = 0$	-32	-	-	V
Emitter-Base breakdown voltage	BV_{EBO}	$I_E = -10\mu\text{A}$, $I_C = 0$	-5	-	-	V
Collector cut-off current	I_{CB0}	$V_{CB} = -40\text{V}$, $I_E = 0$	-	-	-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}^*	$V_{CE} = -1\text{V}$, $I_C = -100\text{mA}$	70	-	240	-
Collector-Emitter saturation voltage	$V_{CE(sat)}$	$I_C = -100\text{mA}$, $I_B = -10\text{mA}$	-	-	-0.25	V
Transistor frequency	f_T	$V_{CE} = -6\text{V}$, $I_C = -20\text{mA}$	-	200	-	MHz
Collector output capacitance	C_{ob}	$V_{CB} = -6\text{V}$, $I_E = 0$, $f = 1\text{MHz}$	-	7.5	-	pF

* : h_{FE} rank / O : 70~140, Y : 120~240

Electrical Characteristic Curves

Fig. 1 $P_C - T_a$

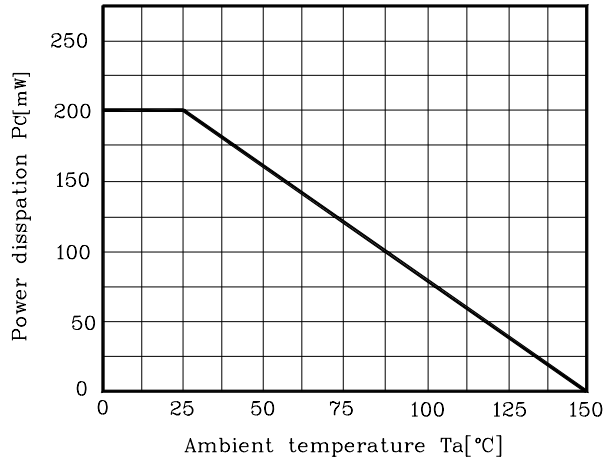


Fig. 2 $I_C - V_{BE}$

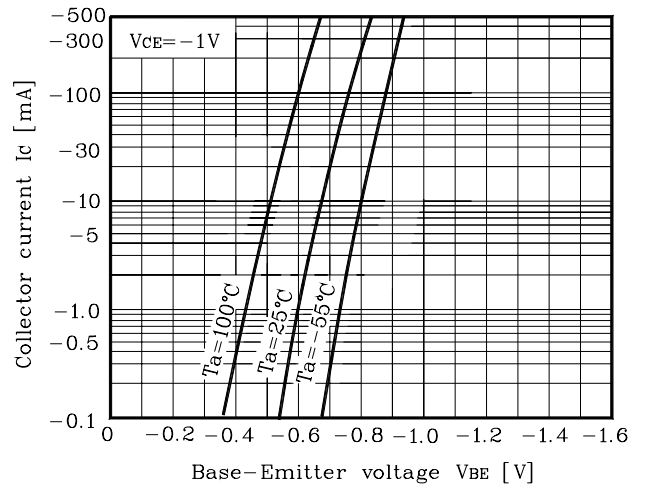


Fig. 3 $I_C - V_{CE}$

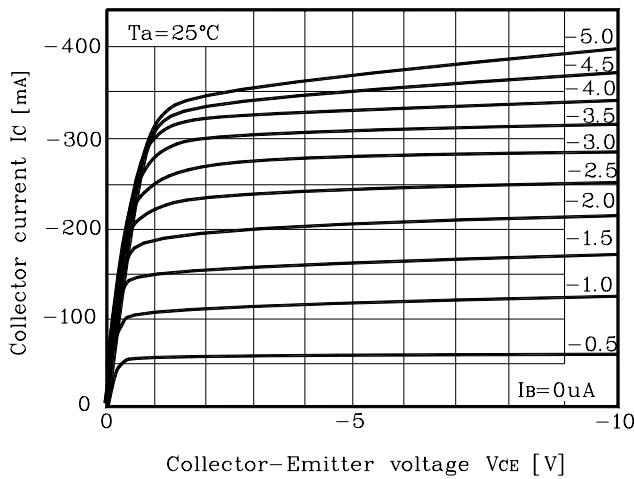


Fig. 4 $V_{CE(sat)} - I_C$

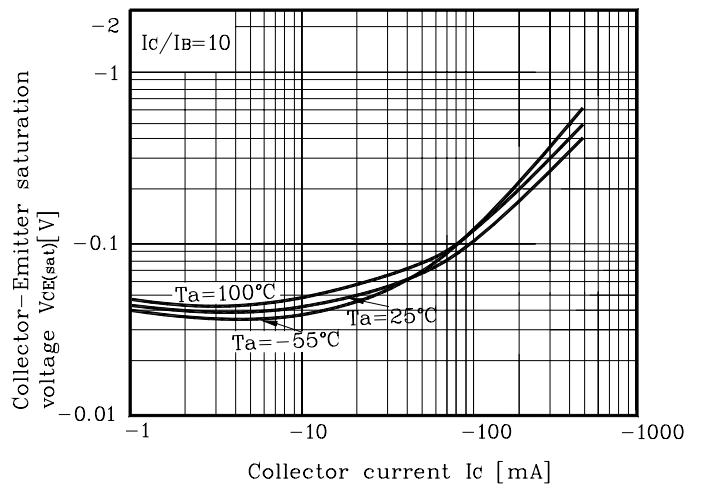


Fig. 5 $h_{FE} - I_C$

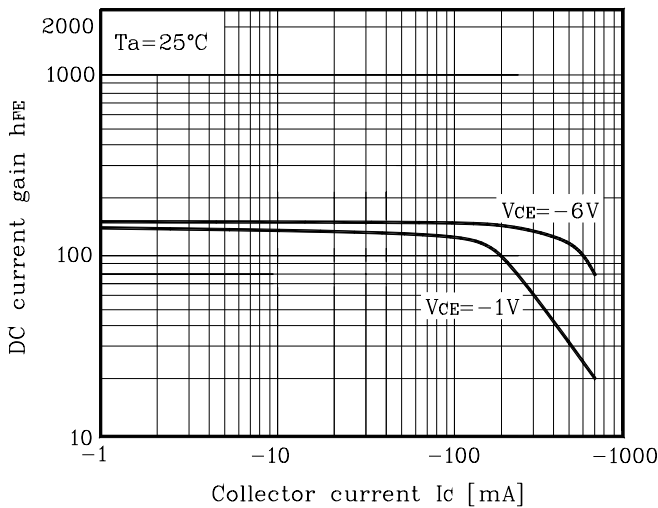
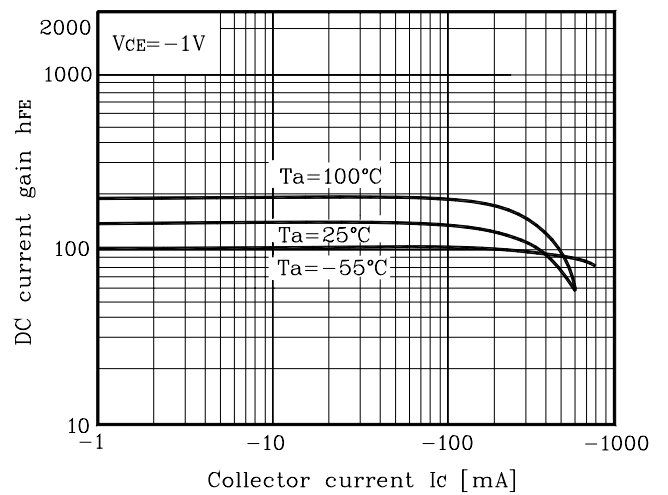
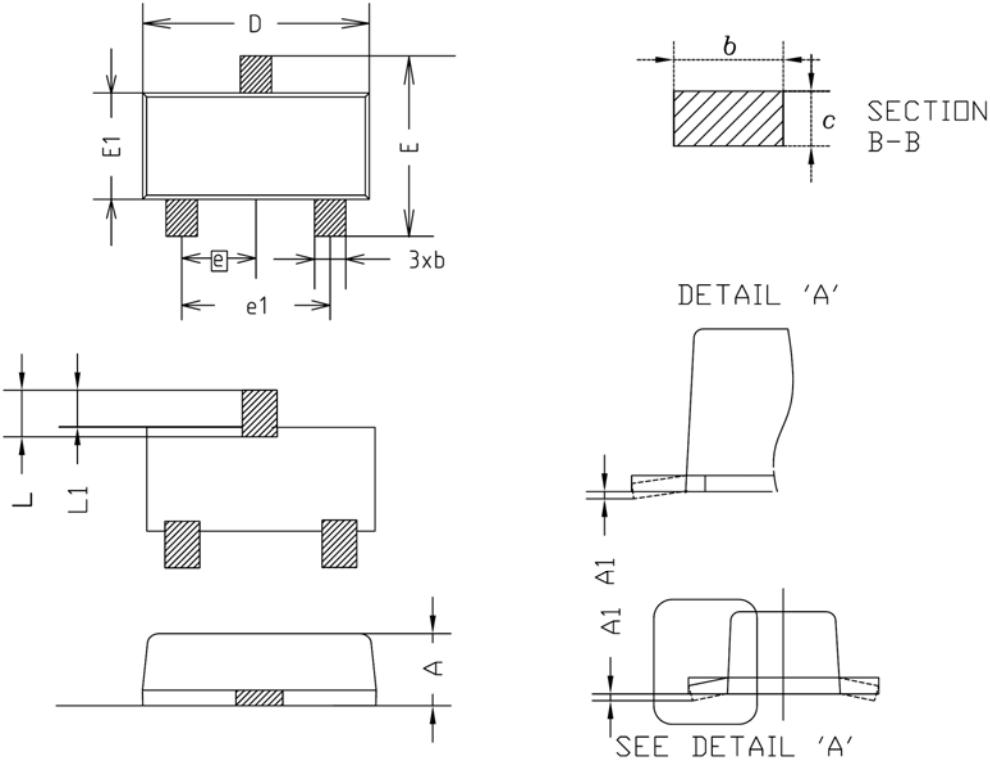


Fig. 6 $h_{FE} - I_C$

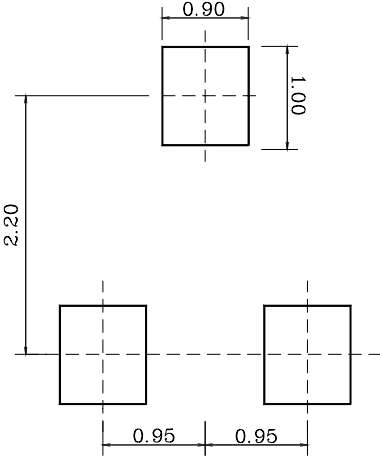


Outline Dimension



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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