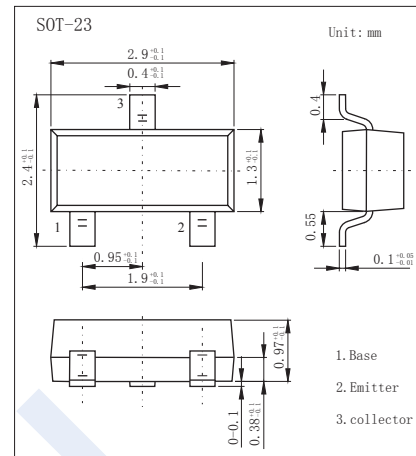


PNP Transistors

2SA1981SF

■ Features

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

■ Absolute Maximum Ratings $T_a = 25^\circ\text{C}$

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-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 to +150	$^\circ\text{C}$

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V_{CBO}	$I_C = -500 \mu\text{A}$, $I_E = 0$	-35			V
Collector- emitter breakdown voltage	V_{CEO}	$I_C = -1 \text{ mA}$, $I_B = 0$	-30			
Emitter - base breakdown voltage	V_{EBO}	$I_E = -100 \mu\text{A}$, $I_C = 0$	-5			
Collector-base cut-off current	I_{CBO}	$V_{CB} = -35 \text{ V}$, $I_E = 0$			-100	nA
Emitter cut-off current	I_{EBO}	$V_{EB} = -5 \text{ V}$, $I_C = 0$			-100	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -500 \text{ mA}$, $I_B = -20 \text{ mA}$			-0.5	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = -500 \text{ mA}$, $I_B = -20 \text{ mA}$			-1.2	
DC current gain	h_{FE}	$V_{CE} = -1 \text{ V}$, $I_C = -100 \text{ mA}$	100		320	
Output capacitance	C_{ob}	$V_{CE} = -10 \text{ V}$, $I_E = 0$, $f = 1 \text{ MHz}$		19		pF
Transition frequency	f_T	$V_{CE} = -5 \text{ V}$, $I_E = -10 \text{ mA}$		120		MHz

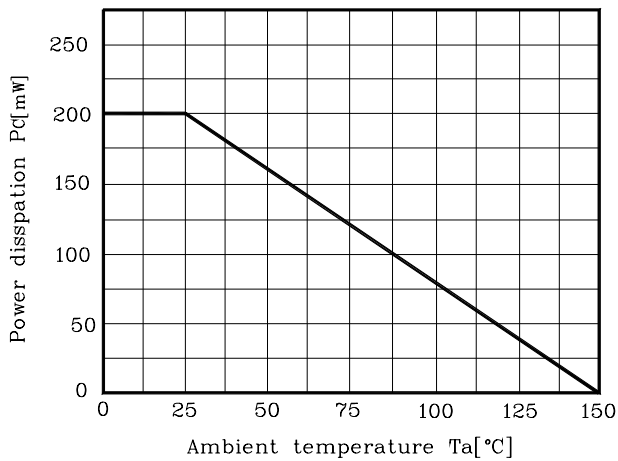
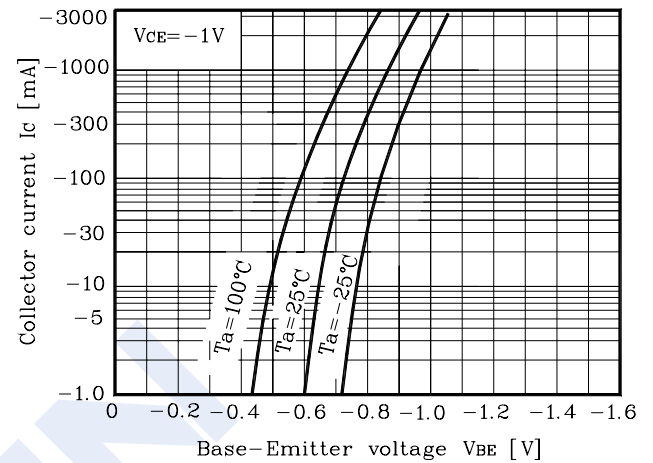
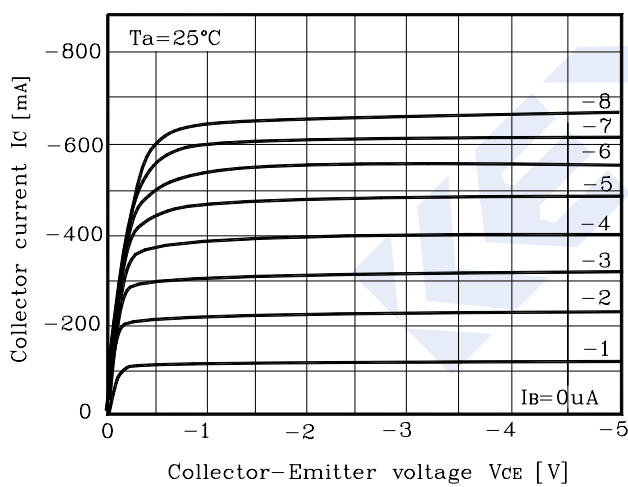
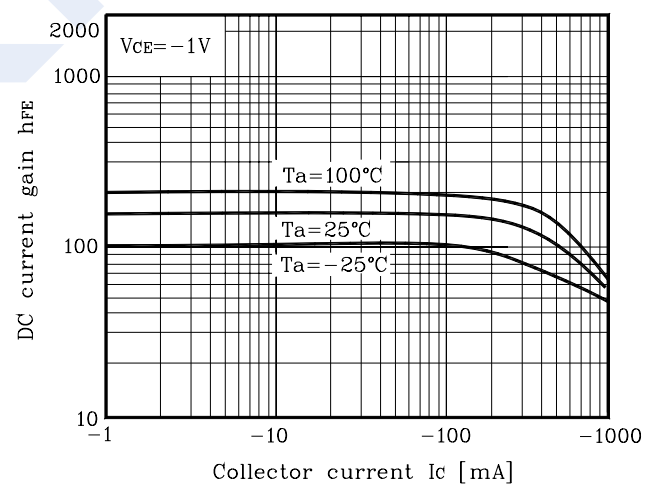
■ Classification of $h_{FE}(1)$

Marking	EAO*	EAY*
Rank	O	Y
h_{FE}	100~200	160~320

PNP Transistors

2SA1981SF

■ Typical Characteristics

Fig. 1 P_c - T_a Fig. 2 I_C - V_{BE} Fig. 3 I_C - V_{CE} Fig. 4 h_{FE} - I_C Fig. 5 $V_{CE(SAT)}$ - I_C 