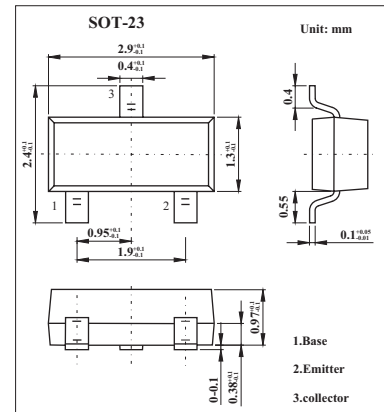


## PNP Silicon Transistor

### 2SA1981SF

#### ■ Features

- High  $h_{fe}$ :  $h_{FE}=100$  to  $320$



#### ■ 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	Testconditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$BV_{CBO}$	$I_C=-500\mu\text{A}$ , $I_E=0$	-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 cutoff current	$I_{CBO}$	$V_{CB}=-35\text{V}$ , $I_E=0$			-0.1	$\mu\text{A}$
Emitter cutoff current	$I_{EBO}$	$V_{EB}=-5\text{V}$ , $I_C=0$			-0.1	$\mu\text{A}$
DC current transfer ratio	$h_{FE}$	$V_{CE}=-1\text{V}$ , $I_C=-100\text{mA}$	100		320	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C/I_B=-500\text{mA}/-20\text{mA}$			-0.5	V
Transition frequency	$f_T$	$V_{CE}=-5\text{V}$ , $I_E=10\text{mA}$ ,		120		MHz
Output capacitance	$C_{ob}$	$V_{CB}=-10\text{V}$ , $I_E=0$ , $f=1\text{MHz}$		19		pF

#### ■ $h_{FE}$ Classification

Marking	EA	
	Rank	O
$h_{FE}$	100~200	160~320