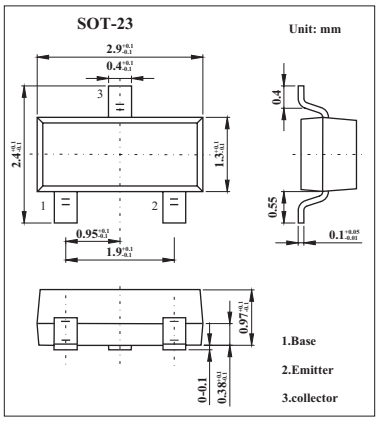
PNP Epitaxial Silicon Transistor

2SA1977



■ Features

- High f_T :f_T = 8.5 GHz TYP.
- High gain

  $|S_{21e}|^2$ = 12.0 dB TYP. @f = 1.0 GHz, V_{CE} = -8 V, I_C = -20 mA
- High-speed switching characterstics

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	-20	V
Collector-emitter voltage	V_{CEO}	-12	V
Emitter-base voltage	V_{EBO}	-3.0	V
Collector current	I_C	-50	mA
Total power dissipation	P_T	200	mW
Junction temperature	T_j	150	℃
Storage temperature	T_{stg}	-55 to +150	℃

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = -10 V			-0.1	μA
Emitter cutoff current	I_{EBO}	V_{EB} = -1 V			-0.1	μA
DC current gain	h_{FE}	V_{CE} = -8 V, I_C = -20 mA	20		100	
Gain Bandwidth Product	fT	V_{CE} = -8 V, I_C = -20 mA, f = 1 GHz	6.0	8.5		V
Collector Capacitance	Cre*	V_{CB} = -10 V, I_E = 0, f = 1 MHz		0.5	1	V
Insertion Power Gain	$\|S_{21e}\|^2$	V_{CE} = -8 V, I_C = -20 mA, f = 1.0 GHz	8.0	12.0		MHz
Noise Figure	NF	V_{CE} = -8 V, I_C = -3 mA, f = 1 GHz		1.5	3	pF

*.Mesured by a 3-terminal bridge. Emitter and Case should be connected to the guard terminal.

■ h_{FE} Classification

Marking	T92
Rank	FB
hFE	20～100