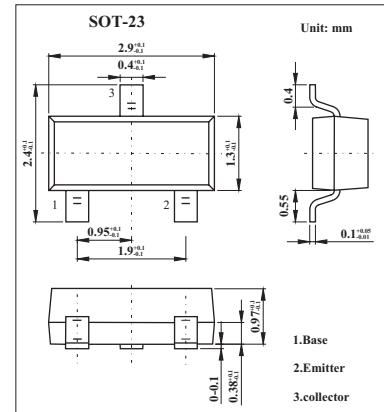


## PNP Silicon Epitaxial Transistor

## 2SA1330

## ■ Features

- High DC current gain.
- High voltage.

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	-200	V
Collector-emitter voltage	$V_{CE0}$	-200	V
Emitter-base voltage	$V_{EB0}$	-5	V
Collector current	$I_C$	-100	mA
Total power dissipation	$P_T$	200	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-55 to +150	$^\circ\text{C}$

## 2SA1330

## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	IcBO	V <sub>CB</sub> = -200V, I <sub>E</sub> =0			-100	nA
Emitter cutoff current	I <sub>EBO</sub>	V <sub>EB</sub> = -5V, I <sub>C</sub> =0			-100	nA
DC current gain *	h <sub>FE</sub>	V <sub>CE</sub> = -10V, I <sub>C</sub> = -10mA	90	200	450	
		V <sub>CE</sub> = -10V, I <sub>C</sub> = -50mA	50	195		
Base-emitter voltage *	V <sub>BE</sub>	V <sub>CE</sub> = -10V, I <sub>C</sub> = -10mA	-0.6	-0.65	-0.7	V
Collector-emitter saturation voltage *	V <sub>CE(sat)</sub>	I <sub>C</sub> = -50mA, I <sub>B</sub> = -5mA		-0.21	-0.3	V
Base saturation voltage *	V <sub>BE(sat)</sub>	I <sub>C</sub> = -50mA, I <sub>B</sub> = -5mA		-0.8	-1.2	V
Gain bandwidth product	f <sub>T</sub>	V <sub>CE</sub> = -10V, I <sub>E</sub> = 10mA		120		MHz
Output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = -30V, I <sub>E</sub> = 0, f = 1.0MHz		3.6		pF
Turn-on time	t <sub>on</sub>	I <sub>C</sub> = -10mA, I <sub>B1</sub> = -I <sub>B2</sub> = -1mA, V <sub>CC</sub> = -10 V V <sub>BE(off)</sub> = 2.5V		0.16		μs
Storage time	t <sub>stg</sub>			1.3		μs
Fall time	t <sub>f</sub>			0.18		μs

\* Pulse test: t<sub>p</sub> ≤ 350 μs; d ≤ 0.02.

■ h<sub>FE</sub> Classification

Marking	O5	O6	O7
h <sub>FE</sub>	90~180	135~270	200~450