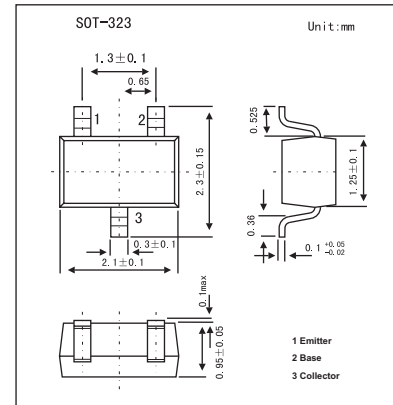


## NPN Silicon Epitaxia

### 2SC4179

#### ■ Features

- High gain bandwidth product.
- Low output capacitance.
- Low noise figure.



#### ■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	V <sub>CB0</sub>	50	V
Collector-emitter voltage	V <sub>CEO</sub>	30	V
Emitter-base voltage	V <sub>EB0</sub>	5	V
Collector current	I <sub>C</sub>	50	mA
Total power dissipation	P <sub>T</sub>	150	mW
Junction temperature	T <sub>J</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55 to +150	°C

#### ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	I <sub>CBO</sub>	V <sub>CB</sub> = 50V, I <sub>E</sub> = 0			0.1	μA
Emitter cutoff current	I <sub>EBO</sub>	V <sub>EB</sub> = 5V, I <sub>C</sub> = 0			0.1	μA
DC current gain *	h <sub>FE</sub>	V <sub>CE</sub> = 6V, I <sub>C</sub> = 1.0mA	60	100	180	
Base-emitter voltage *	V <sub>BE</sub>	V <sub>CE</sub> = 6V, I <sub>C</sub> = 1.0mA	0.65	0.70	0.75	V
Collector-emitter saturation voltage *	V <sub>CE(sat)</sub>	I <sub>C</sub> = 10mA, I <sub>B</sub> = 1.0mA		0.08	0.3	V
Gain bandwidth product	f <sub>T</sub>	V <sub>CE</sub> = 6V, I <sub>E</sub> = -1.0mA	150	250		MHz
Output capacitance	C <sub>ob</sub>	V <sub>CE</sub> = 6V, I <sub>E</sub> = 0, f = 1MHz		1.9	2.2	pF
Collector to base time constant	C <sub>c'rb'b</sub>	V <sub>CB</sub> = 6V, I <sub>E</sub> = -10mA, f = 31.9MHz		10	15	ps
Noise figure	NF	V <sub>CE</sub> = 6V, I <sub>E</sub> = -1.0mA, R <sub>g</sub> = 500Ω, f = 1.0MHz		2	4	dB

\*. PW ≤ 350μs, duty cycle ≤ 2%

#### ■ hFE Classification

Marking	FA3	FA4
hFE	60~120	90~180