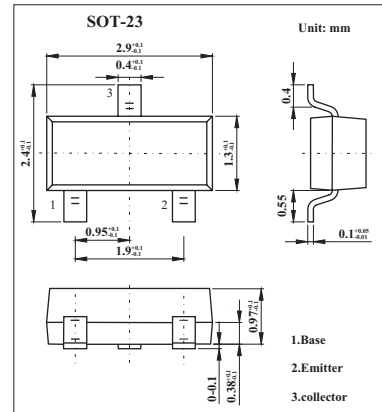


■ Features

- High DC current gain.hFE=90 to 450
- High voltage V<sub>CEO</sub>=200V



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	V <sub>CB0</sub>	200	V
Collector-emitter voltage	V <sub>CEO</sub>	200	V
Emitter-base voltage	V <sub>EB0</sub>	5	V
Collector current	I <sub>C</sub>	100	mA
Total power dissipation	P <sub>T</sub>	200	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	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I <sub>CBO</sub>	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 *	hFE	V <sub>CE</sub> = 10V, I <sub>C</sub> = 10mA	90	200	450	
		V <sub>CE</sub> = 10V, I <sub>C</sub> = 50mA	50	200		
Base-emitter voltage *	V <sub>BE</sub>	V <sub>CE</sub> = 10V, I <sub>C</sub> = 10mA	0.6	0.64	0.7	V
Collector-emitter saturation voltage *	V <sub>CE(sat)</sub>	I <sub>C</sub> = 50mA, I <sub>B</sub> = 5mA		0.1	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		160		MHz
Output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = 30V, I <sub>E</sub> = 0, f = 1.0MHz		2.8		pF
Turn-on time	t <sub>on</sub>	I <sub>C</sub> = 10mA, I <sub>B1</sub> = -I <sub>B2</sub> = 1mA,		0.15		μs
Storage time	t <sub>stg</sub>	V <sub>CC</sub> = 10 V		1.3		μs
Fall time	t <sub>f</sub>	V <sub>BE(off)</sub> = -2.5V		0.3		μs

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

■ hFE Classification

Marking	N15	N16	N17
hFE	90~180	135~270	200~450