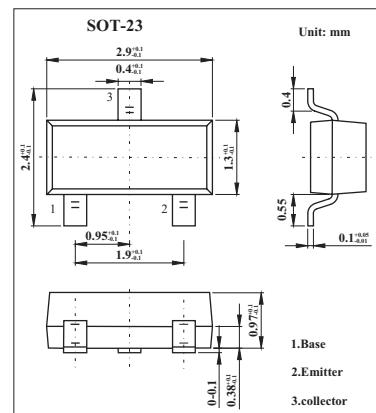


## NPN High-Voltage Transistors

### BF820,BF822

#### ■ Features

- Low current (max. 50 mA)
- High voltage (max. 300 V).



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

Parameter	Symbol	Rating	Unit
Collector-base voltage BF820	V <sub>CBO</sub>	300	V
BF822	V <sub>CBO</sub>	250	V
Collector-emitter voltage BF820	V <sub>CBO</sub>	300	V
BF822	V <sub>CBO</sub>	250	V
Emitter-base voltage	V <sub>EBO</sub>	5	V
Collector current	I <sub>C</sub>	50	mA
Peak collector current	I <sub>CM</sub>	100	mA
Peak base current	I <sub>BM</sub>	50	mA
Total power dissipation *	P <sub>tot</sub>	250	mW
Storage temperature	T <sub>stg</sub>	-65 to +150	°C
Junction temperature	T <sub>j</sub>	150	°C
Operating ambient temperature	T <sub>amb</sub>	-65 to +150	°C
Thermal resistance from junction to ambient *	R <sub>th j-a</sub>	500	K/W

\* Transistor mounted on an FR4 printed-circuit board.

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

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	I <sub>CB0</sub>	I <sub>E</sub> = 0; V <sub>CB</sub> = 200 V			10	nA
		I <sub>E</sub> = 0; V <sub>CB</sub> = 200 V; T <sub>j</sub> = 150 °C			10	μA
Emitter cutoff current	I <sub>EBO</sub>	I <sub>C</sub> = 0; V <sub>EB</sub> = 5 V			50	nA
DC current gain *	h <sub>FE</sub>	I <sub>C</sub> = 25 mA; V <sub>CE</sub> = 20 V	50			
collector-emitter saturation voltage	V <sub>CESat</sub>	I <sub>C</sub> = 30 mA; I <sub>B</sub> = 5 mA			600	mV
Feedback capacitance	C <sub>re</sub>	I <sub>C</sub> = I <sub>B</sub> = 0; V <sub>CB</sub> = 30 V; f = 1 MHz			1.6	pF
Transition frequency	f <sub>T</sub>	I <sub>C</sub> = 10 mA; V <sub>CE</sub> = 10 V; f = 100 MHz	60			MHz

#### ■ hFE Classification

TYPE	BF820	BF822
Marking	1V	1X