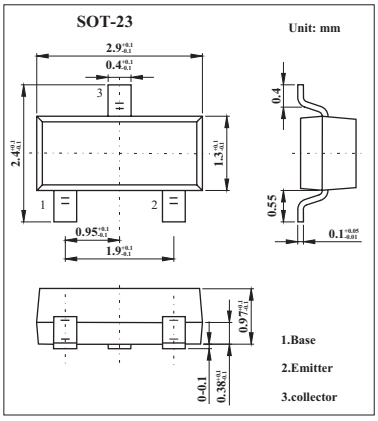
NPN High-Voltage Transistors

BF820,BF822



Features

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

Absolute Maximum Ratings Ta = 25℃

Parameter		Symbol	Rating	Unit
Collector-base voltage	BF820	V_{CBO}	300	V
	BF822		250	V
Collector-emitter voltage	BF820	V_{CEO}	300	V
	BF822		250	V
Emitter-base voltage		V_{EBO}	5	V
Collector current		I_C	50	mA
Peak collector current		I_{CM}	100	mA
Peak base current		I_{BM}	50	mA
Total power dissipation *		P_{tot}	250	mW
Storage temperature		T_{stg}	-65 to +150	℃
Junction temperature		T_j	150	℃
Operating ambient temperature		R_{amb}	-65 to +150	℃
Thermal resistance from junction to ambient *		$R_{th\ j\text{-}a}$	500	K/W

* Transistor mounted on an FR4 printed-circuit board.

Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	I_E = 0; V_{CB} = 200 V			10	nA
		I_E = 0; V_{CB} = 200 V; T_j = 150 ℃			10	μA
Emitter cutoff current	I_{EBO}	I_C = 0; V_{EB} = 5 V			50	nA
DC current gain *	h_{FE}	I_C = 25 mA; V_{CE} = 20 V	50			
collector-emitter saturation voltage	V_{CEsat}	I_C = 30 mA; I_B = 5 mA			600	mV
Feedback capacitance	C_{re}	I_C = ic = 0; V_{CB} = 30 V; f = 1 MHz			1.6	pF
Transition frequency	f_T	I_C = 10 mA; V_{CE} = 10 V; f = 100 MHz	60			MHz

h_{FE} Classification

TYPE	BF820	BF822
Marking	1V	1X