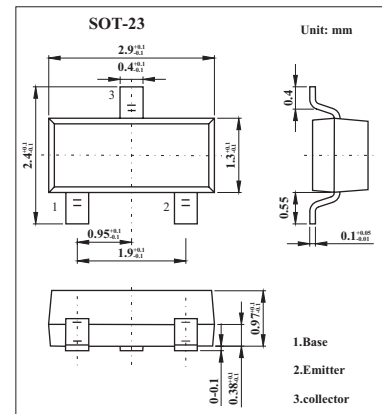


PNP High-Voltage Transistors

BF821, BF823

■ Features

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

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

Parameter	Symbol	Rating	Unit
Collector-base voltage	BF821	-300	V
	BF823	-250	V
Collector-emitter voltage	BF821	-300	V
	BF823	-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	$^\circ\text{C}$
Junction temperature	T_j	150	$^\circ\text{C}$
Operating ambient temperature	R_{amb}	-65 to +150	$^\circ\text{C}$
Thermal resistance from junction to ambient *	$R_{th\ j-a}$	500	K/W

* Transistor mounted on an FR4 printed-circuit board.

■ Electrical Characteristics $T_a = 25^\circ\text{C}$

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	$I_E = 0; V_{CB} = -200\text{ V}$			-10	nA
		$I_E = 0; V_{CB} = -200\text{ V}; T_j = 150^\circ\text{C}$			-10	μA
Emitter cutoff current	I_{EBO}	$I_C = 0; V_{EB} = -5\text{ V}$			-50	nA
DC current gain	h_{FE}	$I_C = -25\text{ mA}; V_{CE} = -20\text{ V}$	50			
collector-emitter saturation voltage	V_{CEsat}	$I_C = -30\text{ mA}; I_B = -5\text{ mA}$			-800	mV
Feedback capacitance	C_{re}	$I_C = I_C = 0; V_{CB} = -30\text{ V}; f = 1\text{ MHz}$			1.6	pF
Transition frequency	f_r	$I_C = -10\text{ mA}; V_{CE} = -10\text{ V}; f = 100\text{ MHz}$	60			MHz

■ hFE Classification

TYPE	BF821	BF823
Marking	1W	1Y