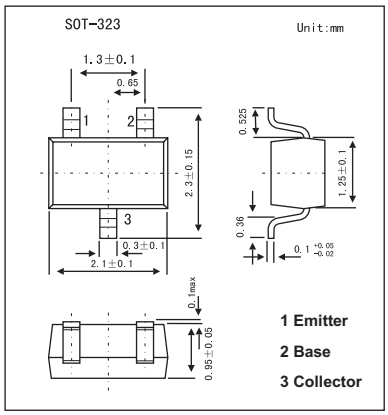
NPN High-Voltage Transistor

BF820W



Features

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

Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage (open emitter)	V_{CBO}	300	V
Collector-emitter voltage (open base)	V_{CEO}	300	V
Emitter-base voltage (open collector)	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 * $T_{amb} \leqslant 25℃$	P_{tot}	200	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 *	$R_{th\ j\text{-}a}$	625	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; Tj = 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 = 0; V_{CB} = 30 V; f = 1 MHz			1.6	pF
Transition frequency	f_T	I_C = 10 mA; V_{CE} = 10 V; f=100MHz	60			MHz

* Pulse test: tp ⩽ 300 μs; δ ⩽ 0.02.

Marking

Marking	1V