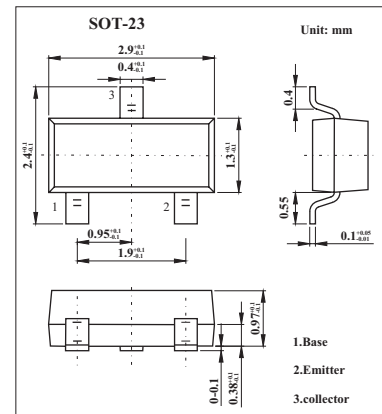


PNP High-Voltage Transistors

BSR20,BSR20A

■ Features

- Low current (max. 300 mA)
- High voltage (max. 150 V).



■ Absolute Maximum Ratings Ta = 25°C

Parameter		Symbol	Rating	Unit
Collector-base voltage	BSR20	V _{CBO}	-130	V
	BSR20A		-160	V
Collector-emitter voltage	BSR20	V _{CEO}	-120	V
	BSR20A		-150	V
Emitter-base voltage		V _{EBO}	-5	V
Collector current		I _C	-300	mA
Peak collector current		I _{CM}	-600	mA
Base current		I _B	-100	mA
Total power dissipation *		P _{tot}	250	mW
Storage temperature		T _{stg}	-65 to +150	°C
Junction temperature		T _j	150	°C
Operating ambient temperature		R _{amb}	-65 to +150	°C
Thermal resistance from junction to ambient *		R _{th j-a}	500	K/W

* Transistor mounted on an FR4 printed-circuit board.

BSR20,BSR20A

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current BSR20	ICBO	IE = 0; VCB = -100 V			-100	nA
		IE = 0; VCB = -100 V; Tamb = 100 °C			-100	μA
Collector cutoff current BSR20A	ICBO	IE = 0; VCB = -120 V			-50	nA
		IE = 0; VCB = -120 V; Tamb = 100 °C			-50	μA
Emitter cutoff current	IEBO	IC = 0; VEB = -4 V			-50	nA
DC current gain BSR20 BSR20A	hFE	IC = -1 mA; VCE = -5 V	30			
			50			
DC current gain BSR20 BSR20A	hFE	IC = -10 mA; VCE = -5 V	40		180	
			60		240	
DC current gain BSR20 BSR20A	hFE	IC = -50 mA; VCE = -5 V	40			
			50			
base-emitter saturation voltage	VCEsat	IC = -10 mA; IB = -1 mA			-200	mV
		IC = -50 mA; IB = -5 mA			-500	mV
Collector capacitance	Cc	IE = ie = 0; VCB = -10 V; f = 1 MHz			6	pF
Transition frequency BSR20 BSR20A	fr	IC = -10 mA; VCE = -10 V; f = 100 MHz	100		400	MHz
			100		300	MHz

■ hFE Classification

TYPE	BSR20	BSR20A
Marking	T35	T36