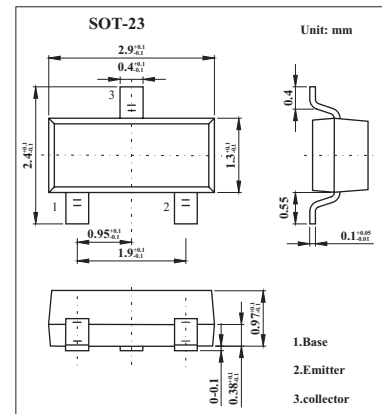


NPN High-Voltage Transistors

BSR19,BSR19A

■ Features

- Low current (max. 300 mA)
- High voltage (max. 160 V).



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	BSR19	160	V
	BSR19A	180	V
Collector-emitter voltage	BSR19	140	V
	BSR19A	160	V
Emitter-base voltage	VEBO	6	V
Collector current	IC	300	mA
Peak collector current	ICM	600	mA
Base current	IB	100	mA
Peak base current	IBM	100	mA
Total power dissipation *	Ptot	250	mW
Storage temperature	Tstg	-65 to +150	°C
Junction temperature	Tj	150	°C
Operating ambient temperature	Ramb	-65 to +150	°C
Thermal resistance from junction to ambient *	Rth j-a	500	K/W

* Transistor mounted on an FR4 printed-circuit board.

BSR19,BSR19A

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	BSR19	ICBO	IE = 0; VCB = 100 V		100	nA
			IE = 0; VCB = 100 V; Tamb = 100 °C		100	μA
Collector cutoff current	BSR19A	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 *	BSR19	hFE	IC = 10 mA; VCE = 5 V		60	250
	BSR19A				80	
DC current gain *	BSR19	hFE	IC = 50 mA; VCE = 5 V		20	
	BSR19A				30	
collector-emitter saturation voltage		VCEsat	IC = 10 mA; IB = 1 mA		150	mV
collector-emitter saturation voltage	BSR19	VCEsat	IC = 50 mA; IB = 5 mA		250	mV
	BSR19A				200	mV
Collector capacitance		Cc	IE = ie = 0; VCB = 10 V; f = 1 MHz		6	pF
Transition frequency		ft	IC = 10 mA; VCE = 10 V; f = 100 MHz		100	MHz

■ hFE Classification

TYPE	BSR19	BSR19A
Marking	U35	U36