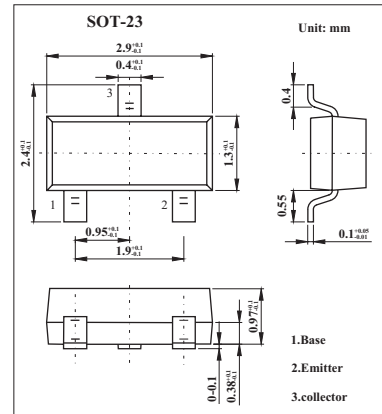


BSR20,BSR20A

■ 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	-130	V
	BSR20A	-160	V
Collector-emitter voltage	BSR20	-120	V
	BSR20A	-150	V
Emitter-base voltage	VEBO	-5	V
Collector current	IC	-300	mA
Peak collector current	ICM	-600	mA
Base current	IB	-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.

BSR20,BSR20A

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit	
Collector cutoff current	BSR20	I _{CBO}	I _E = 0; V _{CB} = -100 V		-100	nA	
			I _E = 0; V _{CB} = -100 V; T _{amb} = 100 °C		-100	µA	
Collector cutoff current	BSR20A	I _{CBO}	I _E = 0; V _{CB} = -120 V		-50	nA	
			I _E = 0; V _{CB} = -120 V; T _{amb} = 100 °C		-50	µA	
Emitter cutoff current	I _{EBO}	I _C = 0; V _{EB} = -4 V			-50	nA	
DC current gain	BSR20	h _{FE}	I _C = -1 mA; V _{CE} = -5 V		30		
	BSR20A				50		
DC current gain	BSR20	h _{FE}	I _C = -10 mA; V _{CE} = -5 V		40	180	
	BSR20A				60	240	
DC current gain	BSR20	h _{FE}	I _C = -50 mA; V _{CE} = -5 V		40		
	BSR20A				50		
base-emitter saturation voltage	V _{CEsat}	I _C = -10 mA; I _B = -1 mA			-200	mV	
		I _C = -50 mA; I _B = -5 mA			-500	mV	
Collector capacitance	C _c	I _E = i _e = 0; V _{CB} = -10 V; f = 1 MHz			6	pF	
Transition frequency	BSR20	f _r	I _C = -10 mA; V _{CE} = -10 V; f = 100 MHz		100	400	MHz
	BSR20A				100	300	MHz

■ hFE Classification

TYPE	BSR20	BSR20A
Marking	T35	T36