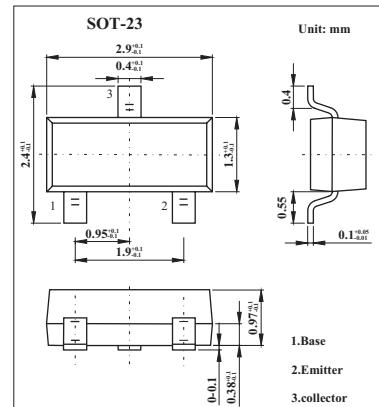


NPN General Purpose Transistors

BCX19

■ Features

- High current (max. 500 mA).
- Low voltage (max. 45 V).



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector-base voltage	V _{CBO}	50	V
Collector-emitter voltage	V _{CEO}	45	V
Emitter-base voltage	V _{EBO}	5	V
Collector current	I _C	500	mA
Peak collector current	I _{CM}	1	A
Peak base current	I _{BM}	200	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.

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I _{CBO}	I _E = 0; V _{CB} = 20 V			100	nA
	I _{CBO}	I _E = 0; V _{CB} = 20 V; T _j = 150 °C			5	µA
Emitter cutoff current	I _{EBO}	I _C = 0; V _{EB} = 5 V			100	nA
DC current gain *	h _{FE}	I _C = 100mA; V _{CE} = 1 V	100		600	
		I _C = 300 mA; V _{CE} = 1 V	70			
		I _C = 500 mA; V _{CE} = 1 V	40			
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = 500 mA; I _B = 50 mA			620	mV
Base to emitter voltage *	V _{BE}	I _C = 500 mA; V _{CE} = 1 V			1.2	V
Collector capacitance	C _c	I _E = i _e = 0; V _{CB} = 10 V; f = 1 MHz		5		pF
Transition frequency	f _T	I _C = 10 mA; V _{CE} = 5 V; f = 100 MHz	100			MHz

* Pulse test: t_p ≤ 300 µs; d ≤ 0.02.

■ Marking

Marking	U1
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