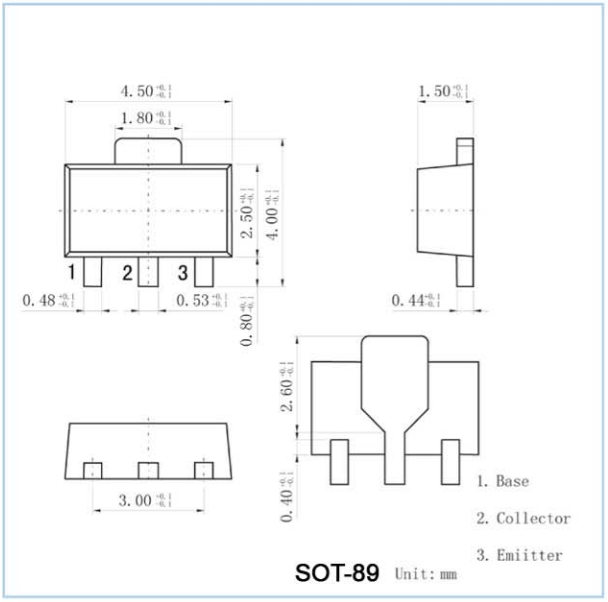
BCX54

■ Features

- High current (max. 1 A).
- Low voltage (max. 45 V).



■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	45	V
Collector-emitter voltage	V_{CEO}	45	V
Emitter-base voltage	V_{EBO}	5	V
Collector current (DC)	I_C	1	A
Peak collector current	I_{CM}	1.5	A
Peak base current	I_{BM}	0.2	A
Power dissipation Ta ≤25 ℃ *	P_D	1.3	W
Operating ambient temperature	R_{amb}	-65 to +150	℃
Thermal resistance from junction to ambient *	$R_{th(j-a)}$	94	K/W
Thermal resistance from junction to solder point	$R_{th(j-s)}$	14	K/W
Junction temperature	T_j	150	℃
Storage temperature	T_{stg}	-65 to +150	℃

* Device mounted on a printed-circuit board, single sided copper, tinplated, mounting pad for collector 6 cm^2.

■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	I_{CBO}	V_{CB} = 30 V, I_E = 0			100	nA
		V_{CB} = 30 V, I_E = 0; Tj = 125℃			10	ìA
Emitter cutoff current	I_{EBO}	V_{EB} = 5 V, I_C = 0			100	nA
DC current gain	h_{FE}	I_C = 5 mA; V_{CE} = 2 V	40			
		I_C = 150 mA; V_{CE} = 2 V	63		250	
		I_C = 500 mA; V_{CE} = 2 V	25			
DC current gain BCX54-10	h_{FE}	I_C = 150 mA; V_{CE} = 2 V;	63		160	
BCX54-16			100		250	
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C = 500 mA; I_B = 50 mA			0.5	V
Base to emitter voltage	V_{BE}	I_C = 500 mA; V_{CE} = 2 V			1	V
DC current gain ratio of the complementary pairs	$\frac{h_{FE}}{h_{FE}}$	$\lvert I_C \rvert$ = 150 mA; $\lvert V_{CE} \rvert$ = 2V		1.3	1.6	
Transition frequency	f_T	I_C = 10 mA; V_{CE} = 5 V; f = 100 MHz		130		MHz

■ h_{FE} Classification

TYPE	BCX54	BCX54-10	BCX54-16
Marking	BA	BC	BD