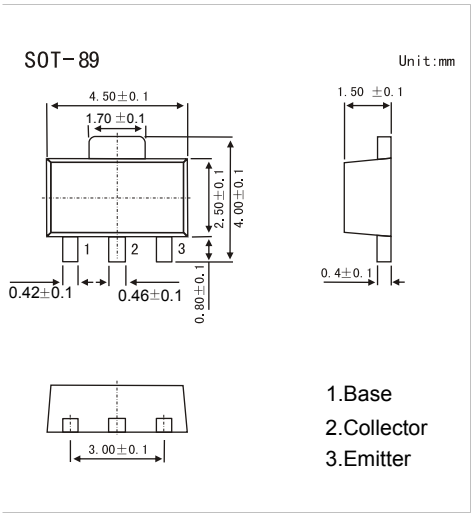
NPN Transistors

BCX54,BCX55,BCX56



■ Features

- High current (max. 1 A).
- Low voltage (max. 80 V).

■ Absolute Maximum Ratings Ta = 25℃

Parameter		Symbol	Rating	Unit
Collector-base voltage	BCX54	V_{CBO}	45	V
	BCX55		60	V
	BCX56		100	V
Collector-emitter voltage	BCX54	V_{CEO}	45	V
	BCX55		60	V
	BCX56		80	V
Emitter-base voltage		V_{EBO}	5	V
Collector current		I_C	1	A
Peak collector current		I_{CM}	1.5	A
Peak base current		I_{BM}	0.2	A
Total power dissipation		P_{tot}	1.3	W
Storage temperature		T_{stg}	-65 to +150	℃
Junction temperature		T_j	150	℃
Operating ambient temperature		T_{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

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■ Electrical Characteristics Ta = 25℃

Parameter	Symbol	Testconditions	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	uA
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	63			
		I_C = 150 mA; V_{CE} = 2 V	63		250	
		I_C = 500 mA; V_{CE} = 2 V	40			
DC current gain BCX54-10,BCX55-10,BCX56-10	h_{FE}	I_C = 150 mA; V_{CE} = 2 V	63		160	
BCX54-16,BCX55-16,BCX56-16		I_C = 150 mA; V_{CE} = 2 V	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
Transition frequency	f_T	I_C = 10 mA; V_{CE} = 5 V; f = 100 MHz		130		MHz
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	

■ h_{FE} Classification

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

TYPE	BCX55	BCX55-10	BCX55-16
Marking	BE	BG	BM

TYPE	BCX56	BCX56-10	BCX56-16
Marking	BH	BK	BL

■ Typical Characterisitics