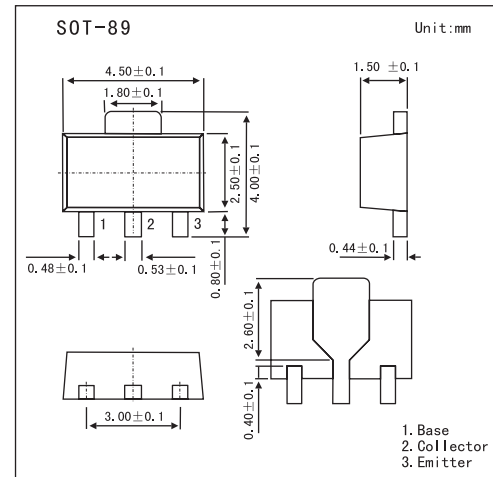


## NPN Medium Power Transistors

## BCX54,BCX55,BCX56

## ■ Features

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

■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Rating	Unit
Collector-base voltage	BCX54	45	V
	BCX55	60	V
	BCX56	100	V
Collector-emitter voltage	BCX54	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	$^\circ\text{C}$
Junction temperature	$T_j$	150	$^\circ\text{C}$
Operating ambient temperature	$R_{amb}$	-65 to +150	$^\circ\text{C}$
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

**BCX54,BCX55,BCX56**

## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit
Collector cutoff current	IcBO	V <sub>CB</sub> = 30 V, I <sub>E</sub> = 0			100	nA
		V <sub>CB</sub> = 30 V, I <sub>E</sub> = 0; T <sub>j</sub> = 125°C			10	μA
Emitter cutoff current	I <sub>EBO</sub>	V <sub>EB</sub> = 5 V, I <sub>C</sub> = 0			100	nA
DC current gain	h <sub>FE</sub>	I <sub>C</sub> = 5 mA; V <sub>CE</sub> = 2 V	63			
		I <sub>C</sub> = 150 mA; V <sub>CE</sub> = 2 V	63		250	
		I <sub>C</sub> = 500 mA; V <sub>CE</sub> = 2 V	40			
DC current gain BCX54-10,BCX55-10,BCX56-10 BCX54-16,BCX55-16,BCX56-16	h <sub>FE</sub>	I <sub>C</sub> = 150 mA; V <sub>CE</sub> = 2 V	63		160	
		I <sub>C</sub> = 150 mA; V <sub>CE</sub> = 2 V	100		250	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = 500 mA; I <sub>B</sub> = 50 mA			0.5	V
Base to emitter voltage	V <sub>BE</sub>	I <sub>C</sub> = 500 mA; V <sub>CE</sub> = 2 V			1	V
Transition frequency	f <sub>T</sub>	I <sub>C</sub> = 10 mA; V <sub>CE</sub> = 5 V; f = 100 MHz		130		MHz
DC current gain ratio of the complementary pairs	$\frac{h_{FE}}{h_{FE}}$	I <sub>C</sub>   = 150 mA;   V <sub>CE</sub>   = 2V		1.3	1.6	

## ■ hFE 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