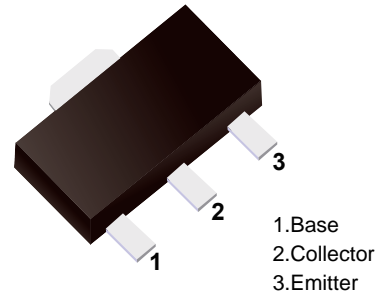


## NPN Transistors

### ■ Features

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



### ■ Simplified outline(SOT-89)

### ■ Absolute Maximum Ratings Ta = 25°C

Parameter		Symbol	Rating	Unit
Collector-base voltage	BCX54	V <sub>CB0</sub>	45	V
	BCX55		60	V
	BCX56		100	V
Collector-emitter voltage	BCX54	V <sub>CEO</sub>	45	V
	BCX55		60	V
	BCX56		80	V
Emitter-base voltage		V <sub>EB0</sub>	5	V
Collector current		I <sub>C</sub>	1	A
Peak collector current		I <sub>CM</sub>	1.5	A
Peak base current		I <sub>BM</sub>	0.2	A
Total power dissipation		P <sub>tot</sub>	1.3	W
Storage temperature		T <sub>stg</sub>	-65 to +150	°C
Junction temperature		T <sub>j</sub>	150	°C
Operating ambient temperature		T <sub>amb</sub>	-65 to +150	°C
Thermal resistance from junction to ambient		R <sub>th(j-a)</sub>	94	K/W
Thermal resistance from junction to solder point		R <sub>th(j-s)</sub>	14	K/W

## Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	I <sub>CB0</sub>	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>EB0</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>   = 2 V		1.3	1.6	

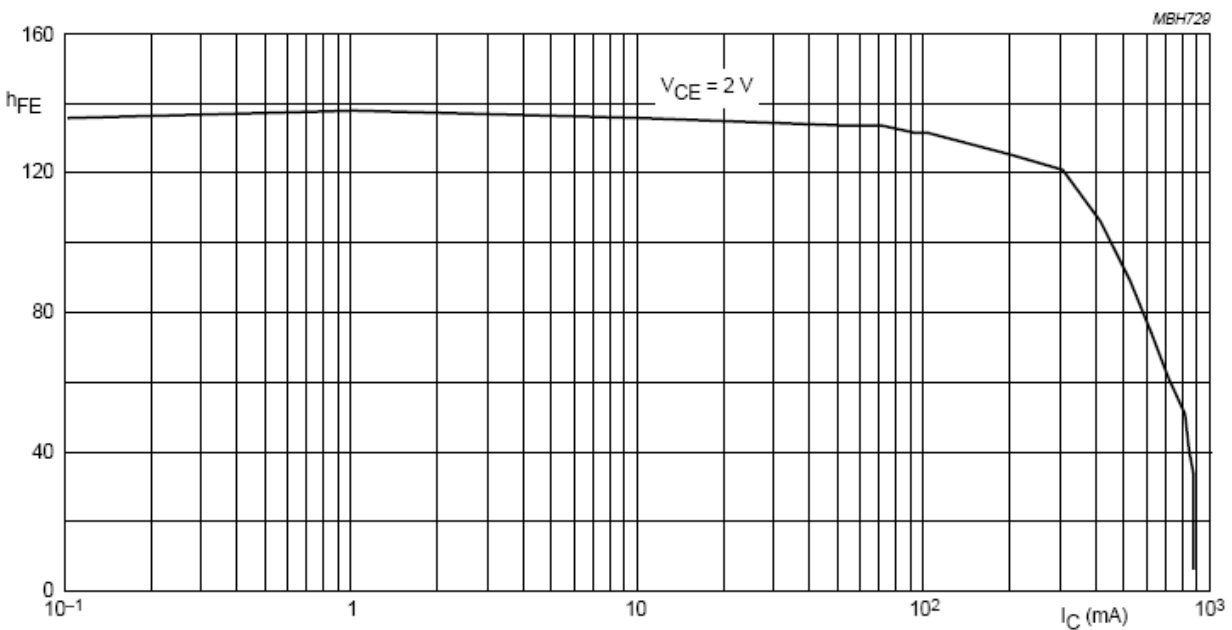
## h<sub>FE</sub> Classification

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

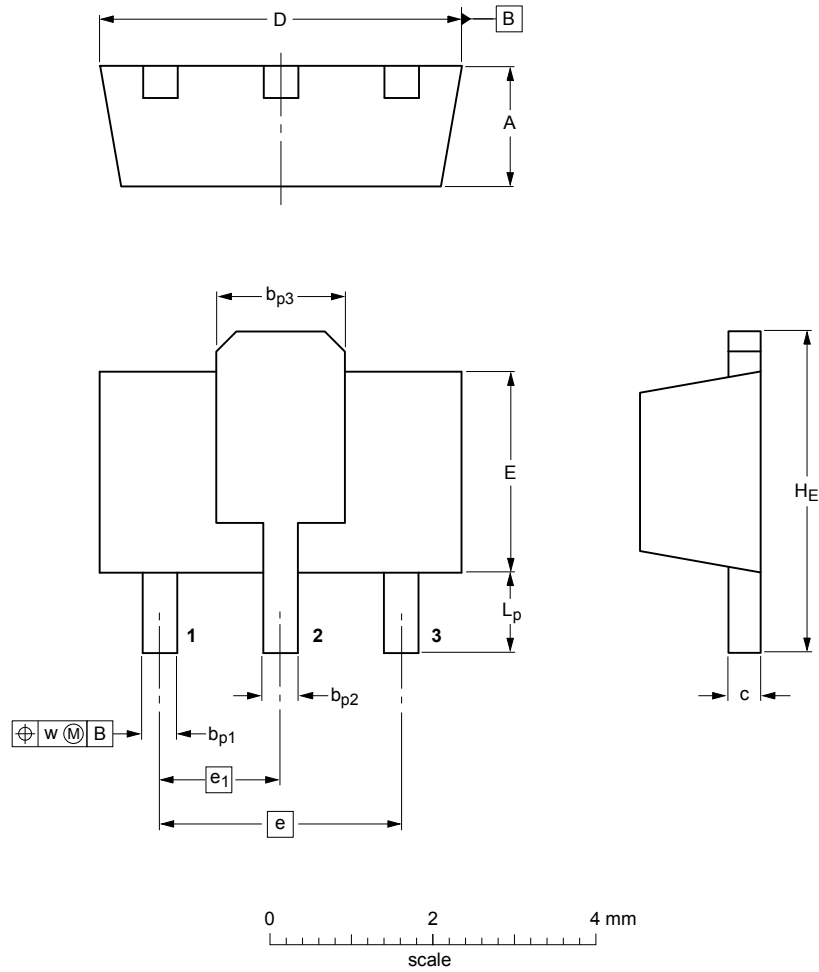
TYPE	BCX55	BCX55-10	BCX55-16
Marking	BE	BG	BM

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

## Typical Characteristics



■ SOT-89



**DIMENSIONS (mm are the original dimensions)**

UNIT	A	$b_{p1}$	$b_{p2}$	$b_{p3}$	c	D	E	e	$e_1$	$H_E$	$L_p$	w
mm	1.6	0.48	0.53	1.8	0.44	4.6	2.6	3.0	1.5	4.25	1.2	0.13
	1.4	0.35	0.40	1.4	0.23	4.4	2.4					