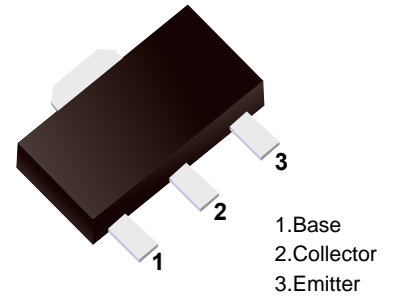


■ NPN Transistors



■ Simplified outline(SOT-89)

■ Features

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

■ Absolute Maximum Ratings Ta = 25°C

Parameter		Symbol	Rating	Unit
Collector-base voltage	BCX54	V _{CB0}	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 _{EB0}	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	°C
Junction temperature		T _j	150	°C
Operating ambient temperature		T _{amb}	-65 to +150	°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

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	ICBO	V _{CB} = 30 V, I _E = 0			100	nA
		V _{CB} = 30 V, I _E = 0; T _j = 125°C			10	uA
Emitter cutoff current	IEBO	VEB = 5 V, I _C = 0			100	nA
DC current gain	hFE	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 BCX54-16,BCX55-16,BCX56-16	hFE	I _C = 150 mA; V _{CE} = 2 V	63		160	
		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	$\frac{hFE}{hFE}$	I _C = 150 mA; V _{CE} = 2V		1.3	1.6	

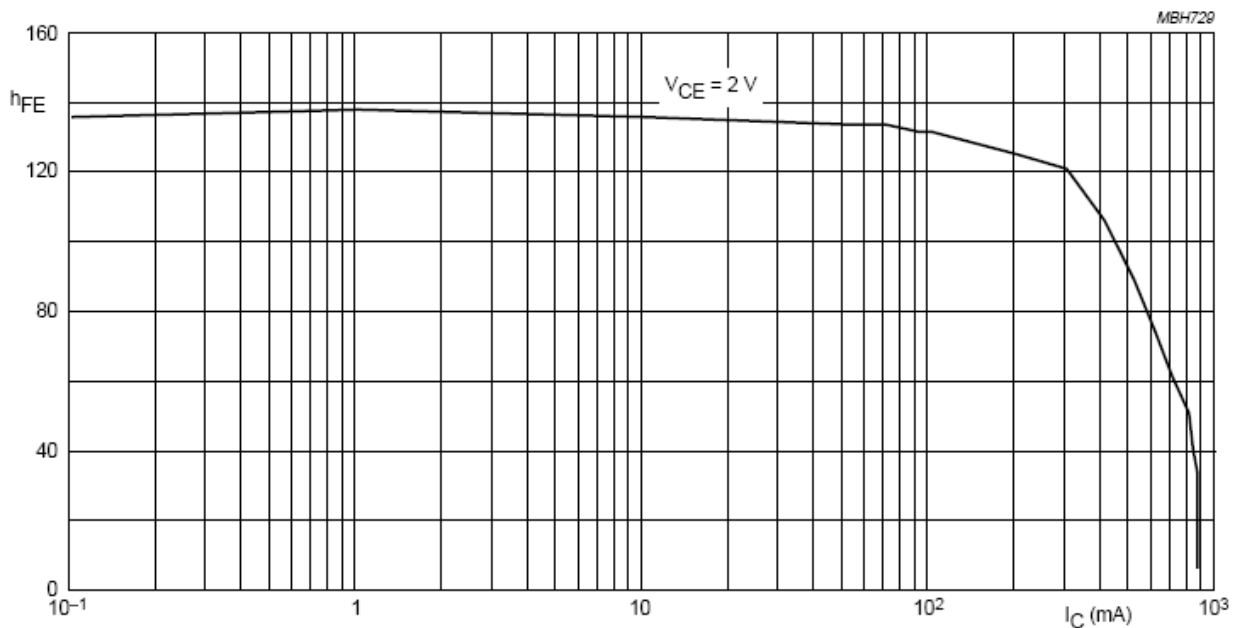
■ hFE Classification

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

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

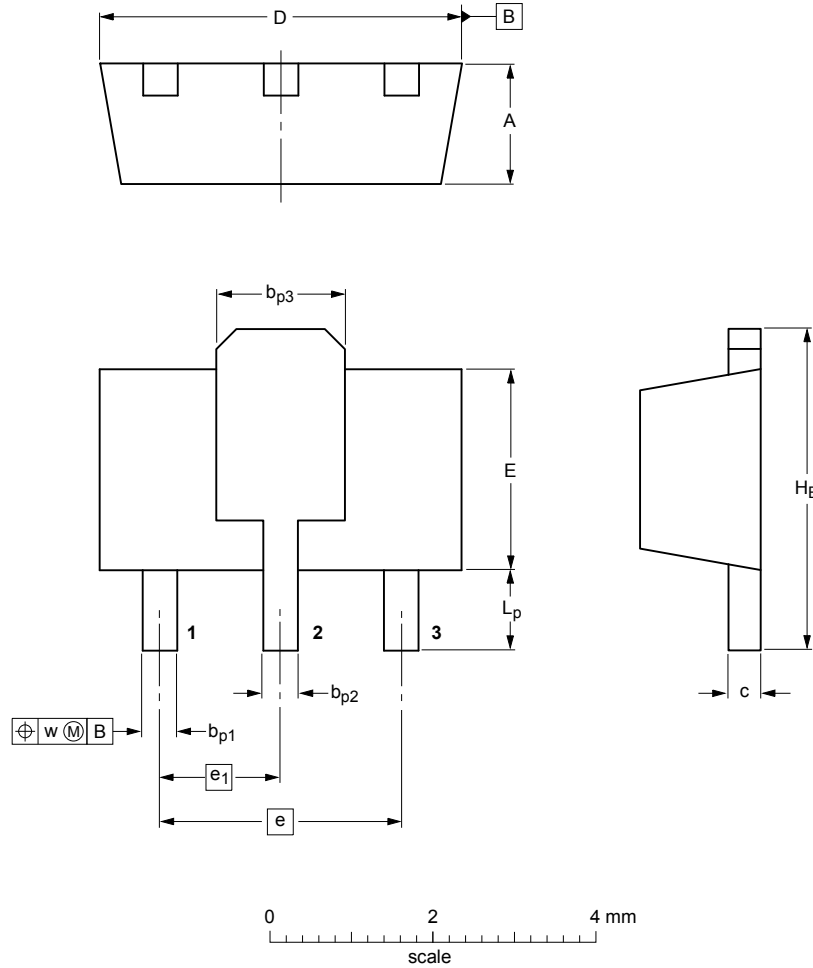
TYPE	BCX56	BCX56-10	BCX56-16
Marking	BH	BK	BL

■ Typical Characteristics



Package Outline

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 1.4	0.48 0.35	0.53 0.40	1.8 1.4	0.44 0.23	4.6 4.4	2.6 2.4	3.0	1.5	4.25 3.75	1.2 0.8	0.13

Summary of Packing Options

Package	Package Description	Packing Quantity	Industry Standard
SOT-89	Tape/Reel, 7" reel	1000	EIA-481-1