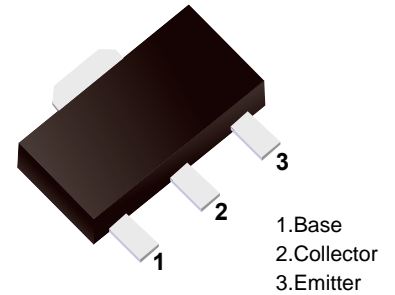


BCX54/BCX55/BCX56

NPN Transistors



■ Features

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

■ Simplified outline(SOT-89)

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

Parameter		Symbol	Rating	Unit
Collector-base voltage	BCX54	V_{CB0}	45	V
	BCX55		60	V
	BCX56		100	V
Collector-emitter voltage	BCX54	V_{CE0}	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	$^\circ\text{C}$
Junction temperature		T_j	150	$^\circ\text{C}$
Operating ambient temperature		T_{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

■ Electrical Characteristics Ta = 25°C

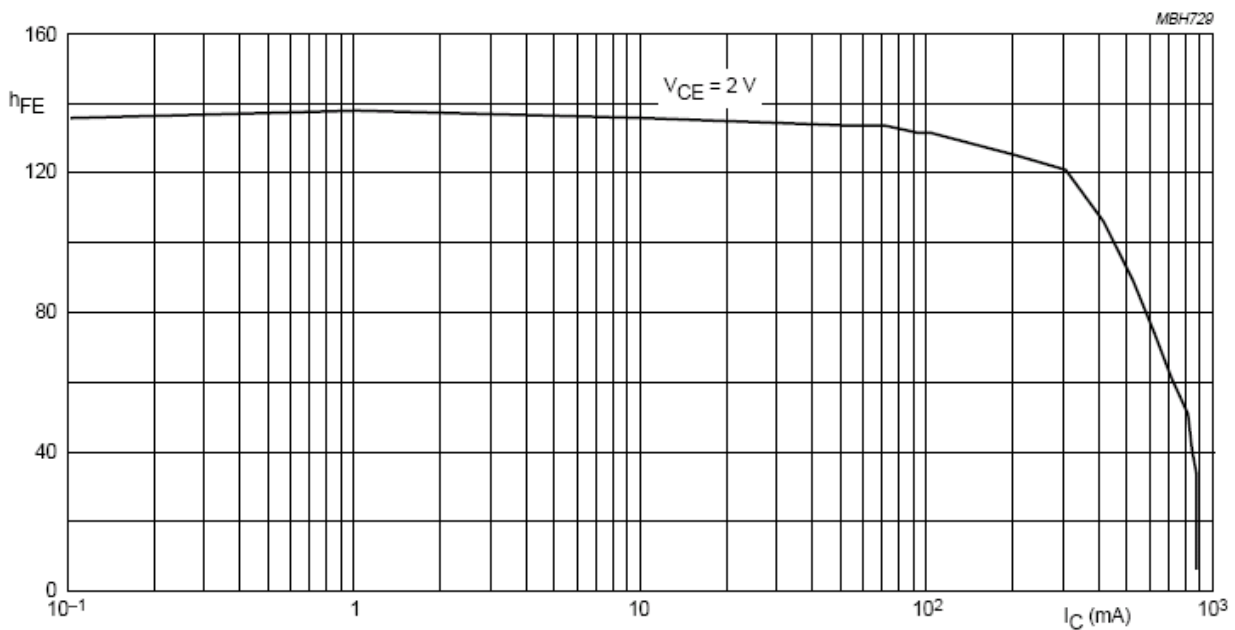
Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	I _{CB0}	V _{CB} = 30 V, I _E = 0			100	nA
		V _{CB} = 30 V, I _E = 0; T _j = 125°C			10	μA
Emitter cutoff current	I _{EB0}	V _{EB} = 5 V, I _C = 0			100	nA
DC current gain	h _{FE}	I _C = 5 mA; V _{CE} = 2 V	63			
		I _C = 150 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 BCX54-16,BCX55-16,BCX56-16	h _{FE}	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	$\frac{h_{FE}}{h_{FE}}$	I _C = 150 mA; V _{CE} = 2 V		1.3	1.6	

■ hFE Classification

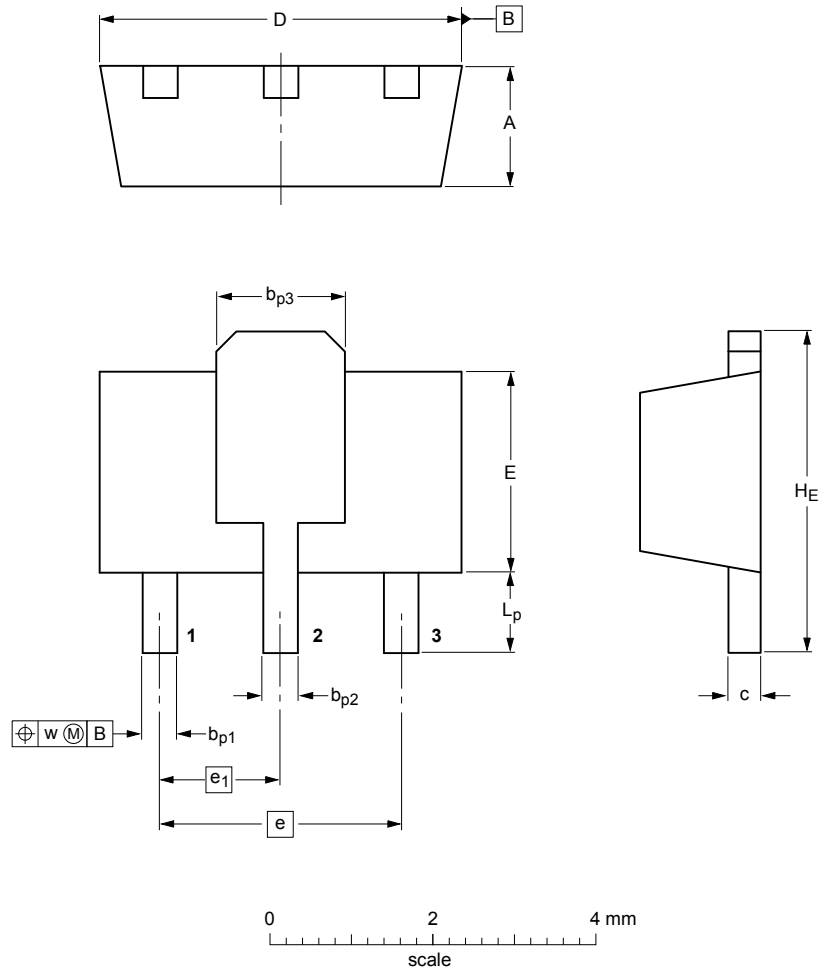
TYPE	BCX54	BCX54-10	BCX54-16
Marking	BA	BC	BD

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

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

■ Typical Characteristics


■ 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					