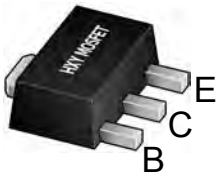
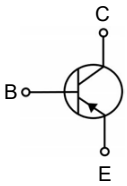
BCX51,BCX52,BCX53
PNP Plastic-Encapsulate Transistors

Features

- Collector Current: I_C= 1A
- Power Dissipation of 500mW



SOT-89



Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
BCX51 BCX52,BCX53	SOT-89	Ax	1000

x: BCX51=A; BCX51-10=C; BCX51-16=D;
BCX52=E; BCX52-10=G; BCX52-16=M;
BCX53=H; BCX53-10=K; BCX53-16=L.

Maxmim Ratings (Ta=25℃ unless otherwise noted)

Parameter	Symbol	BCX51	BCX52	BCX53	Unit
Collector-base voltage	V_{CBO}	-45	-60	-100	V
Collector-emitter voltage	V_{CEO}	-45	-60	-80	V
Emitter-base voltage	V_{EBO}	-5			V
Collector continuous current	I_C	-1			A
Collector power dissipation	P_C [1)]	0.5			W
Thermal resistance from junction to ambient	$R_{\theta JA}$ [1)]	250			°C/W
Collector power dissipation	P_C [2)]	2			W
Thermal resistance from junction to ambient	$R_{\theta JA}$ [2)]	61.5			°C/W
Operating junction and storage temperature range	T_j, T_{stg}	-55 ~ 150			°C

Electrcal Charcteristics (Ta=25℃unless otherwise specified)

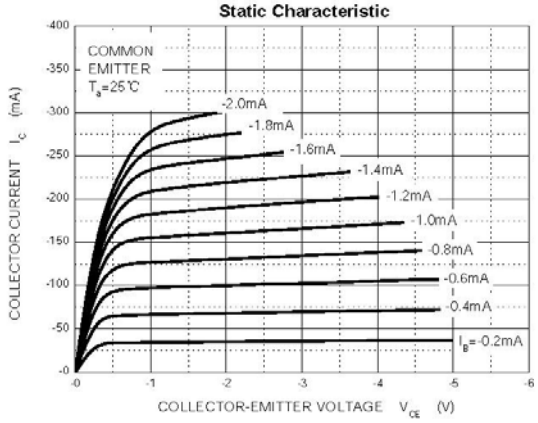
Parameter		Symbol	Test condition	Min	Typ	Max	Unit
Collector-base breakdown voltage	BCX51	$V_{(BR)CBO}$	I_C = -0.1mA, I_E = 0A	-45	-	-	V
	BCX52			-60	-	-	
	BCX53			-100	-	-	
Collector-emitter breakdown voltage	BCX51	$V_{(BR)CEO}$ [3]	I_C = -10mA, I_B = 0A	-45	-	-	V
	BCX52			-60	-	-	
	BCX53			-80	-	-	
Base-emitter breakdown voltage		$V_{(BR)EBO}$	I_E = -100μA, I_C = 0A	-5	-	-	V
Collector-base cut-off current		I_{CBO}	V_{CB} = -30V, I_E = 0A	-	-	-0.1	μA
Emitter-base cut-off current		I_{EBO}	V_{EB} = -5V, I_C = 0A	-	-	-0.1	μA
DC current gain		$h_{FE(1)}$ [3]	V_{CE} = -2V, I_C = -5mA	63	-	-	-
		$h_{FE(2)}$ [3]	V_{CE} = -2V, I_C = -150mA	63	-	250	
		$h_{FE(3)}$ [3]	V_{CE} = -2V, I_C = -500mA	40	-	-	
Collector-emitter saturation voltage		$V_{CE(sat)}$ [3]	I_C = -500mA, I_B = -50mA	-	-	-0.5	V
Base-emitter voltage		V_{BE} [3]	I_C = -500mA, V_{CE} = -2V	-	-	-1	V
Transition frequency		f_T	V_{CE} = -5V, I_C = -10mA, f = 100MHz	-	50	-	MHz

Classifiction Of h_{FE}

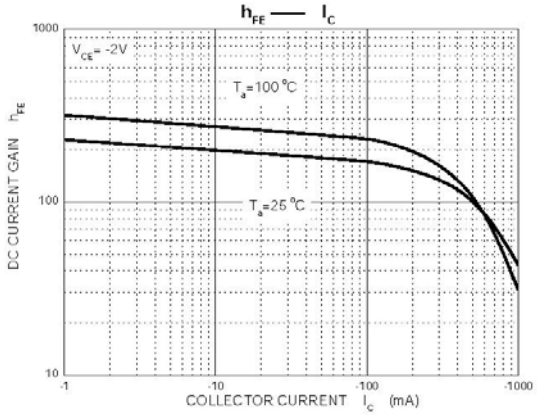
Rank	BCX51,BCX52 BCX53	BCX51-10,BCX52-10, BCX53-10	BCX51-16,BCX52-16, BCX53-16
Range	63-250	63-160	100-250

Typical Characteristics

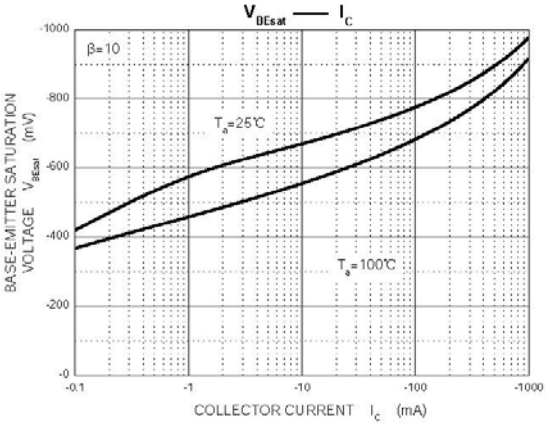
Static Characteristic



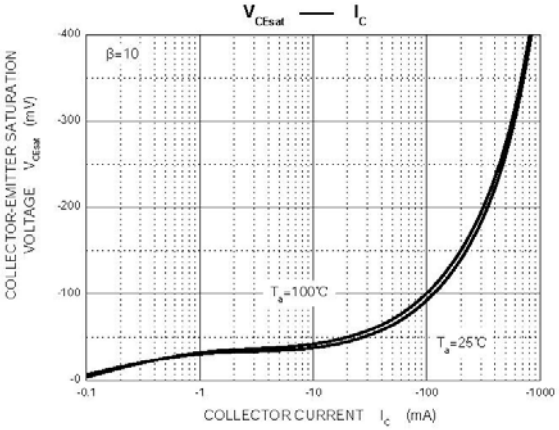
h_{FE} — I_C



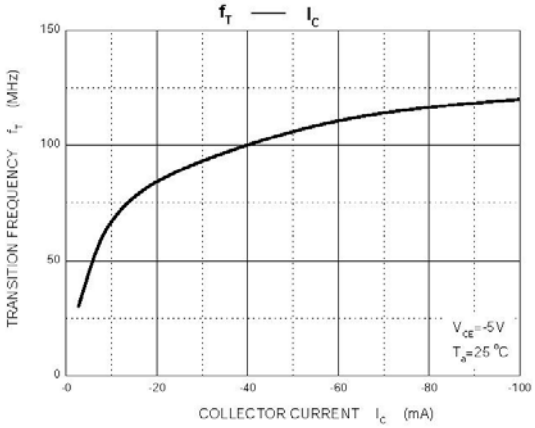
V_{BEsat} — I_C



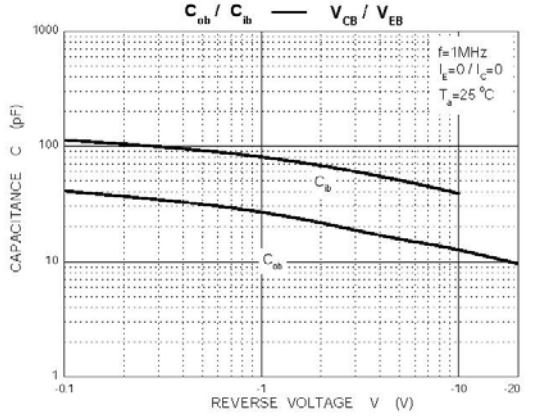
V_{CEsat} — I_C



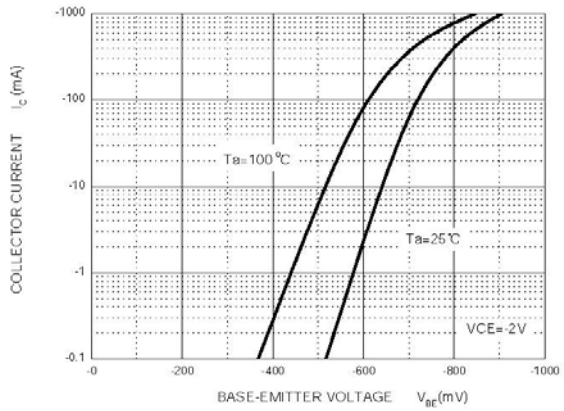
f_T — I_C



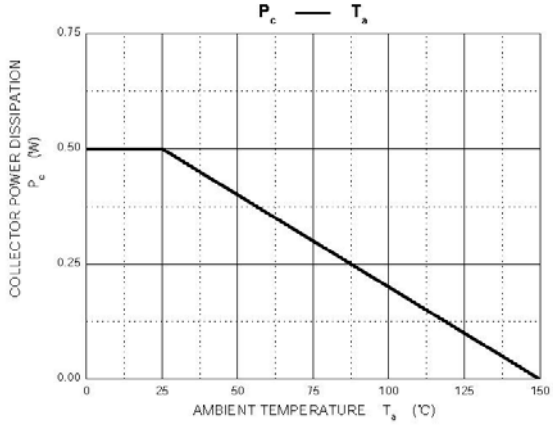
C_{ob} / C_{ib} — V_{CB} / V_{EB}



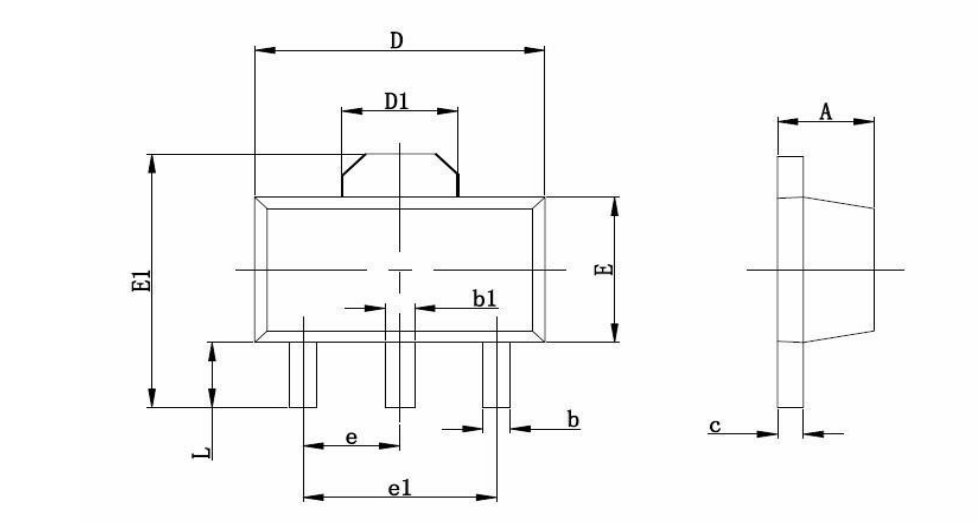
I_C — V_{BE}



P_c — T_a



SOT-89 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	1.400	1.600	0.055	0.063
b	0.320	0.520	0.013	0.020
b1	0.400	0.580	0.016	0.023
c	0.350	0.440	0.014	0.017
D	4.400	4.600	0.173	0.181
D1	1.550 REF.		0.061 REF.	
E	2.300	2.600	0.091	0.102
E1	3.940	4.250	0.155	0.167
e	1.500 TYP.		0.060 TYP.	
e1	3.000 TYP.		0.118 TYP.	
L	0.900	1.200	0.035	0.047

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