

BCX51, BCX52, BCX53 TRANSISTOR (PNP)

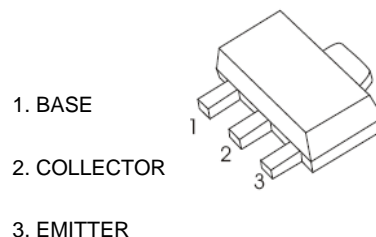
FEATURES

- NPN Complements to BCX54, BCX55, BCX56
- Low Voltage
- High Current

APPLICATIONS

- Driver Stages of Audio Amplifiers

SOT- 89- 3L



MARKING: BCX51:AA, BCX51- 10:AC, BCX51- 16:AD
BCX52:AE, BCX52- 10:AG, BCX52- 16:AM
BCX53:A H, BCX53- 10:AK, BCX53- 16:AL

MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	BCX51	-45
		BCX52	-60
		BCX53	-100
V _{CEO}	Collector-Emitter Voltage	BCX51	-45
		BCX52	-60
		BCX53	-80
V _{EBO}	Emitter-Base Voltage	-5	V
I _C	Collector Current	-1	A
P _C	Collector Power Dissipation	500	mW
R _{θJA}	Thermal Resistance From Junction To Ambient	250	°C/W
T _j	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-55~+150	°C



BCX51 ~ BCX53

ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

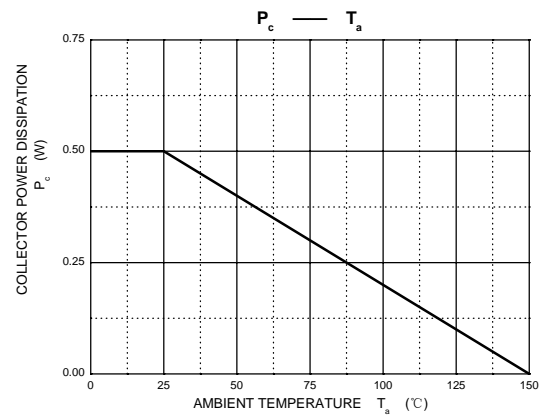
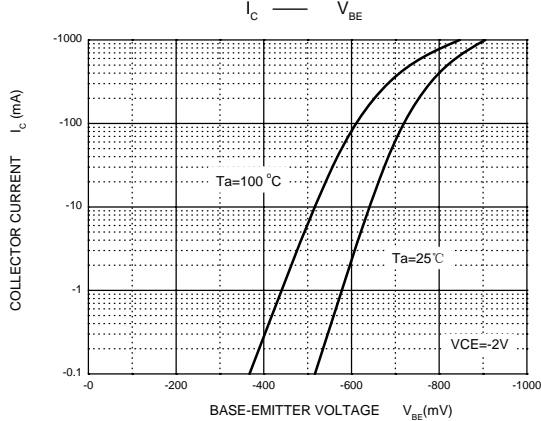
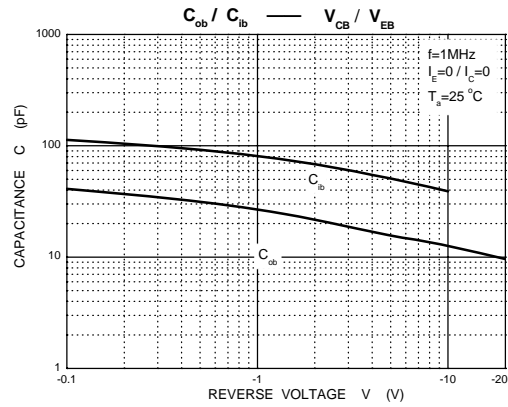
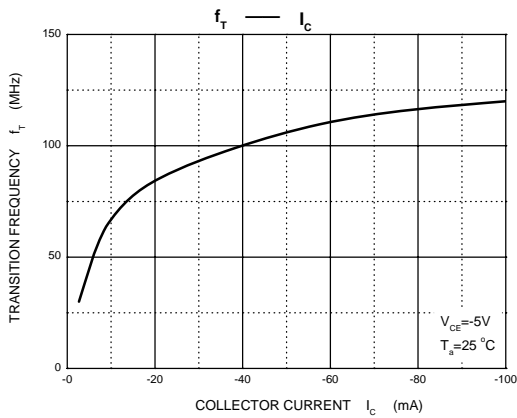
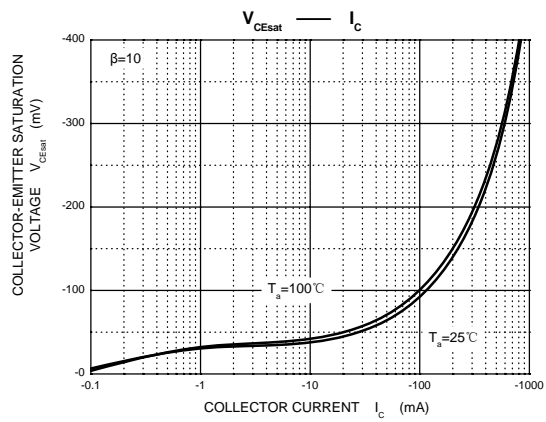
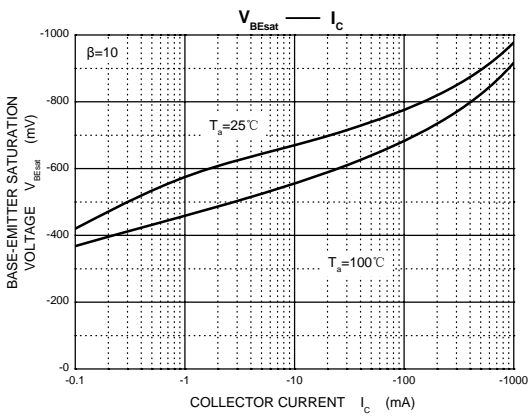
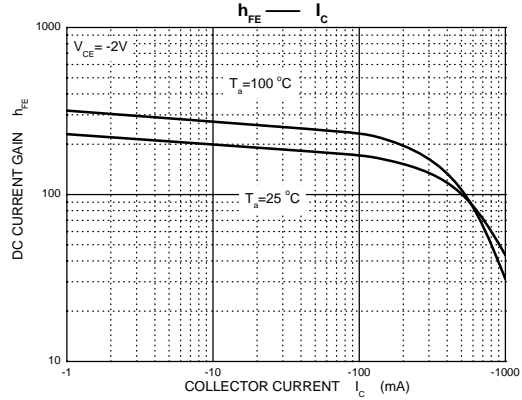
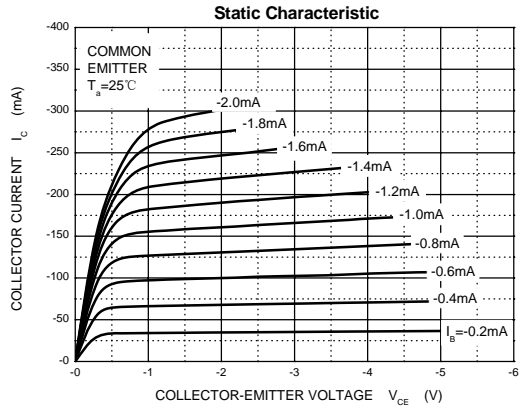
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit	
Collector - base breakdown voltage	V _{(BR)CBO}	I _C =-100μA, I _E =0	BCX51	-45			V
			BCX52	-60			
			BCX53	-100			
Collector - emitter breakdown voltage	V _{(BR)CEO*}	I _C =-10mA, I _B =0	BCX51	-45			V
			BCX52	-60			
			BCX53	-80			
Emitter - base breakdown voltage	V _{(BR)EBO}	I _E =-100μA, I _C =0	-5			V	
Collector cut - off current	I _{CBO}	V _{CB} =-30V, I _E =0			-0.1	μA	
Emitter cut - off current	I _{EBO}	V _{EB} =-5V, I _C =0			-0.1	μA	
DC current gain	h _{FE(1)*}	V _{CE} =-2V, I _C =-5mA	63				
	h _{FE(2)*}	V _{CE} =-2V, I _C =-150mA	63		250		
	h _{FE(3)*}	V _{CE} =-2V, I _C =-0.5A	40				
Collector - emitter saturation voltage	V _{CE(sat)*}	I _C =-0.5A, I _B =-50mA			-0.5	V	
Base - emitter voltage	V _{BE*}	V _{CE} =-2V, I _C =-0.5A			-1	V	
Transition frequency	f _T	V _{CE} =-5V, I _C =-10mA, f=100MHz		50		MHz	

* Pulse Test

CLASSIFICATION OF h_{FE(2)}

RANK	BCX51 BCX52 BCX53	BCX51 - 10 BCX52 - 10 BCX53 - 10	BCX51 - 16 BCX52 - 16 BCX53 - 16
RANGE	63-250	63-160	100-250

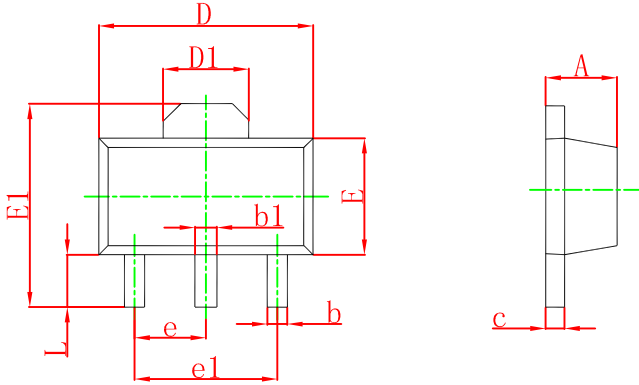
Typical Characteristics





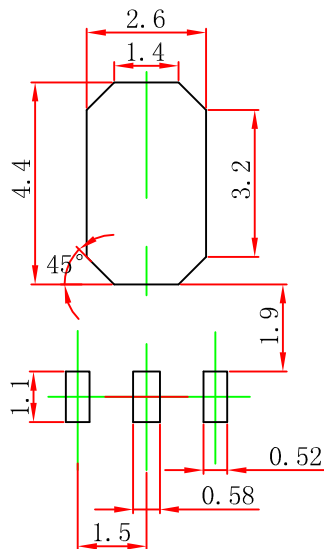
BCX51 ~ BCX53

SOT-89-3L 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

SOT-89-3L Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.