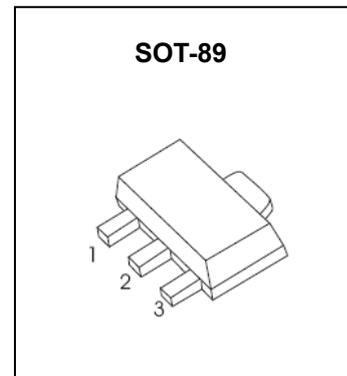


### FEATURES

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

### APPLICATIONS

- Medium Power General Purposes
- Driver Stages of Audio Amplifiers



### MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
$V_{CBO}$	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
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	250	$^\circ\text{C}/\text{W}$
$T_J, T_{stg}$	Operation Junction and Storage Temperature Range	-55~+150	$^\circ\text{C}$

### ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ unless otherwise specified)

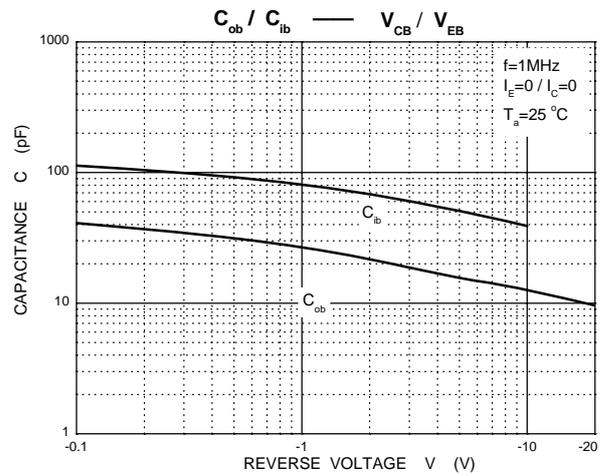
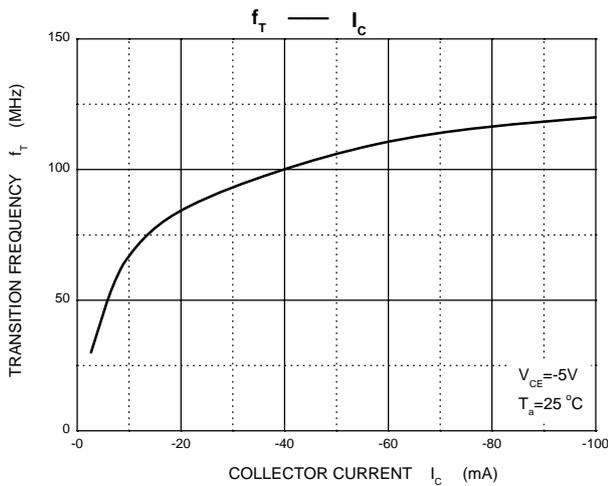
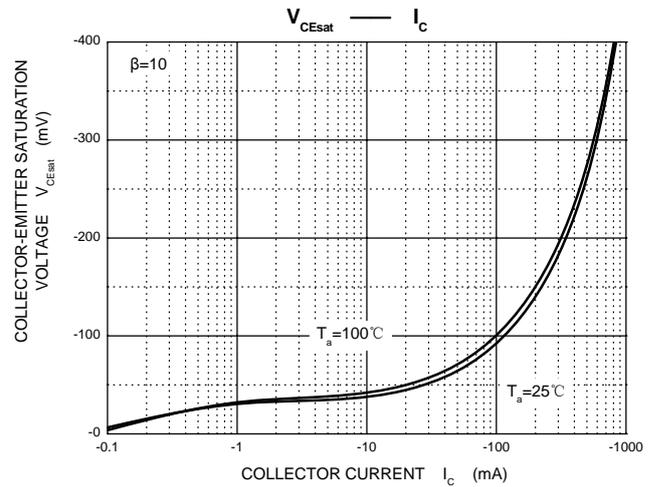
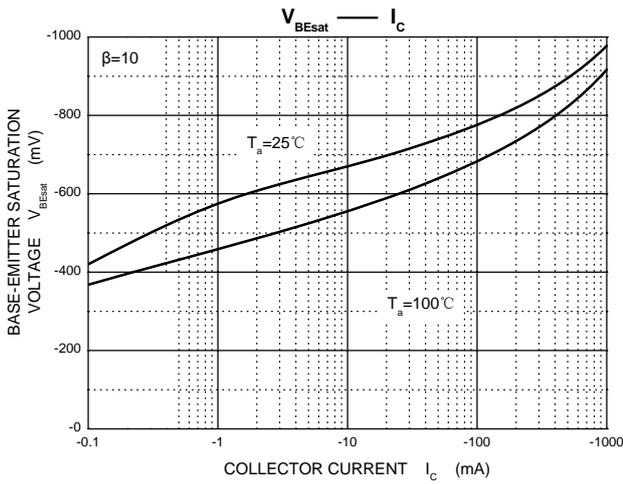
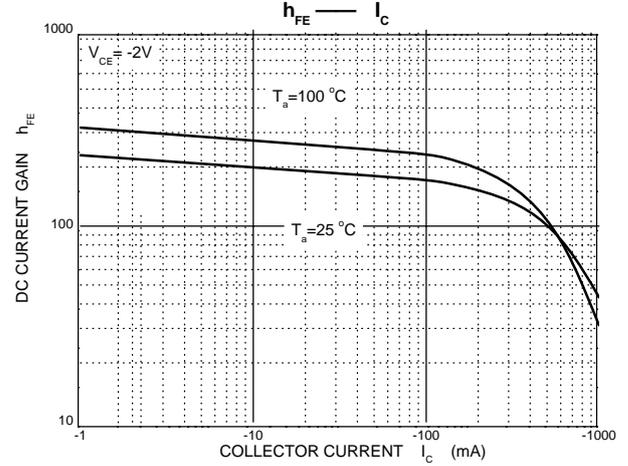
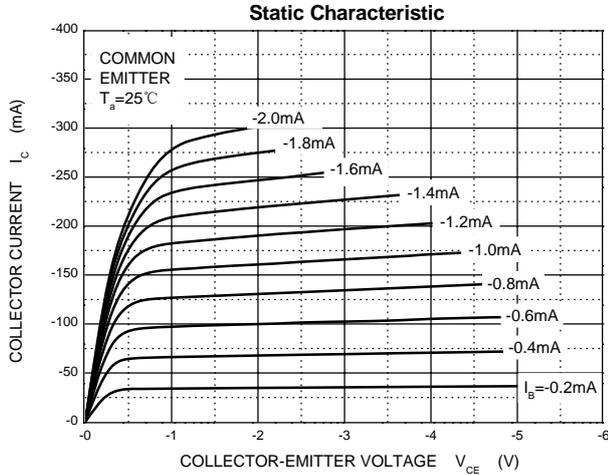
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-100\mu\text{A}, I_E=0$	BCX51	-45		V
			BCX52	-60		
			BCX53	-100		
Collector-emitter breakdown voltage	$V_{(BR)CEO^*}$	$I_C=-10\text{mA}, I_B=0$	BCX51	-45		V
			BCX52	-60		
			BCX53	-80		
Emitter-base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

\* Pulse Test

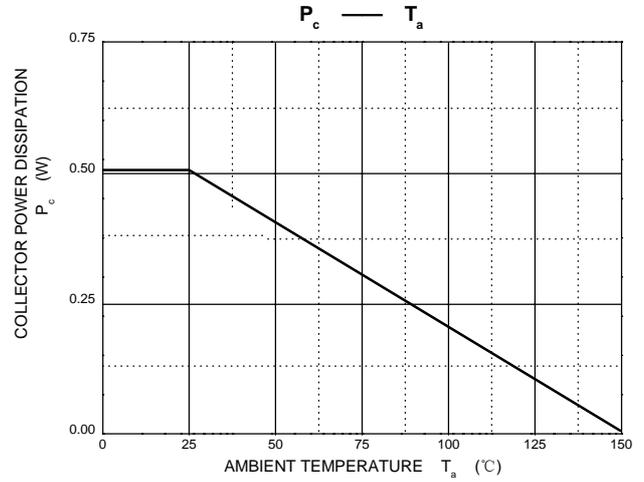
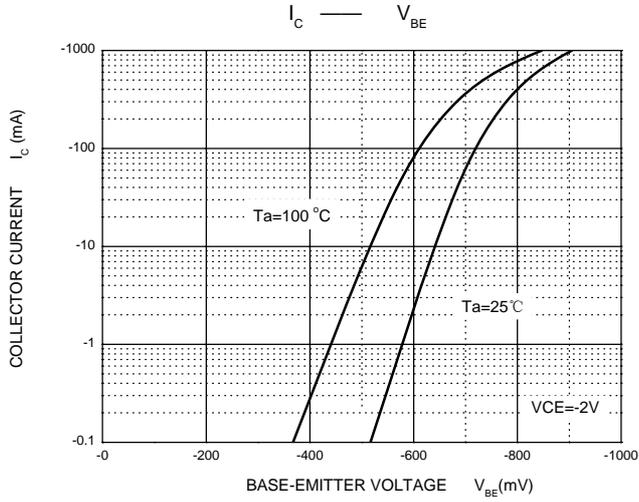
### CLASSIFICATION OF $h_{FE(2)}$

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

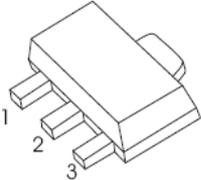
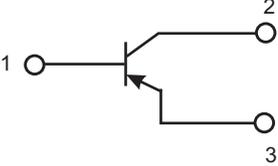
### Typical Characteristics



**Typical Characteristics**



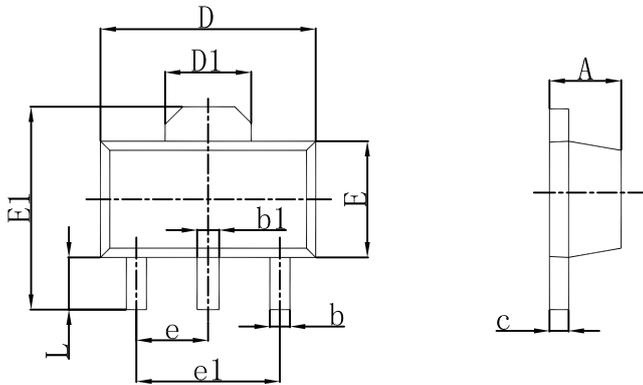
### Pinning information

Pin	Simplified outline	Symbol
Pin1 Base Pin2 Collector Pin3 Emitter		

### Marking

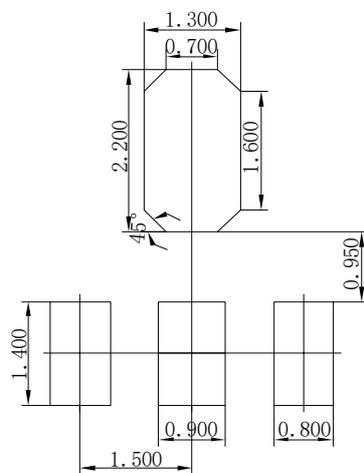
Type number	Marking code
BCX51	AA
BCX51-10	AC
BCX51-16	AD
BCX52	AE
BCX52-10	AG
BCX52-16	AM
BCX53	AH
BCX53-10	AK
BCX53-16	AL

### 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

### 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.