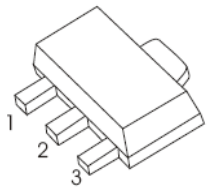
BCX51,BCX52,BCX53

SOT-89-3L Plastic-Encapsulate PNP Transistors

RoHS COMPLIANT

SOT-89-3L



1. BASE
2. COLLECTOR
3. EMITTER

FEATURES

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

APPLICATIONS

- Medium Power General Purposes
- Driver Stages of Audio Amplifiers

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℃ unless otherwise noted)

Symbol	Parameter		Value	Unit
V_{CBO}	Collector-Base Voltage	BCX51	-45	V
		BCX52	-60	
		BCX53	-100	
V_{CEO}	Collector-Emitter Voltage	BCX51	-45	V
		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	℃/W
T_j	Junction Temperature		150	℃
T_{stg}	Storage Temperature		-55~+150	℃

BCX51,BCX52,BCX53

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ELECTRICAL CHARACTERISTICS (T_a=25℃ unless otherwise specified)

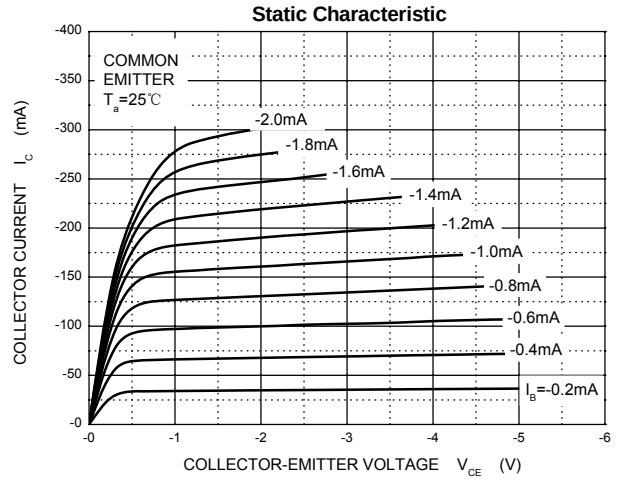
Parameter	Symbol	Test conditions		Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-100μA,I_E=0	BCX51	-45			V
			BCX52	-60			
			BCX53	-100			
Collector-emitter breakdown voltage	$V_{(BR)CEO}$*	I_C=-10mA,I_B=0	BCX51	-45			V
			BCX52	-60			
			BCX53	-80			
Emitter-base breakdown voltage	$V_{(BR)EBO}$	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

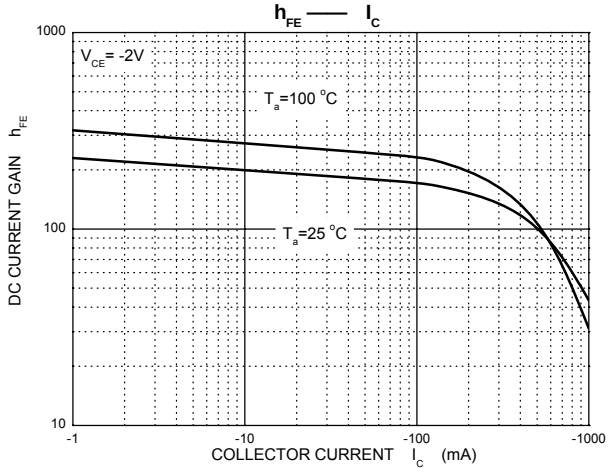
* Pulse Test

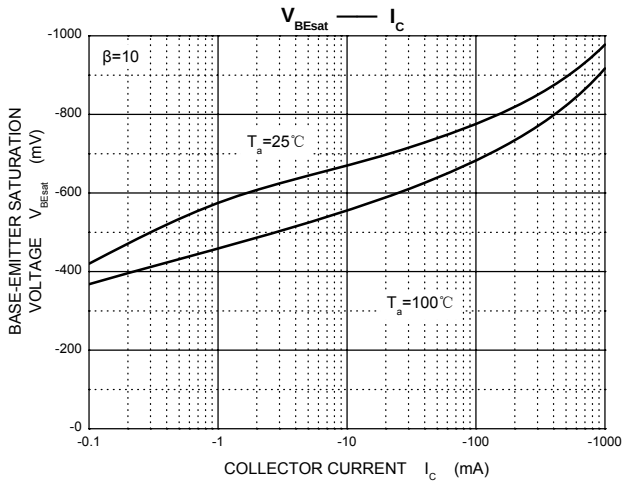
CLASSIFICATION OF $h_{FE(2)}$

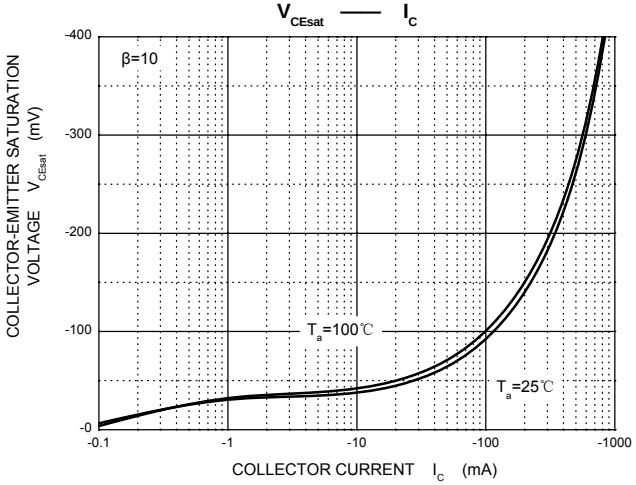
RANK	BCX51 BCX52 BCX53	BCX51-10 BCX52-10 BCX53-10	BCX51-16 BCX52-16 BCX53-16
RANGE	63–250	63–160	100–250

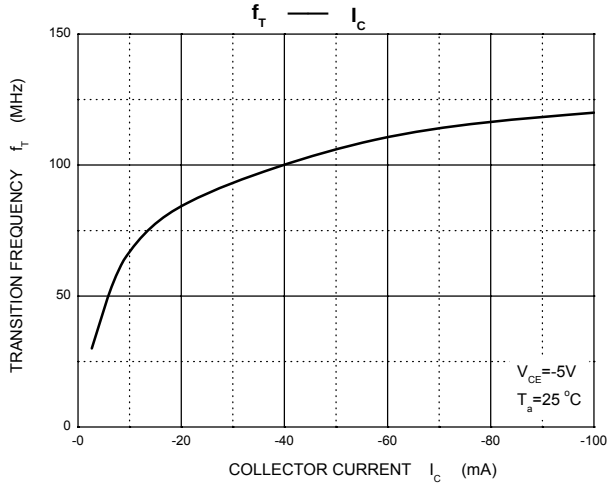
Typical Characteristics

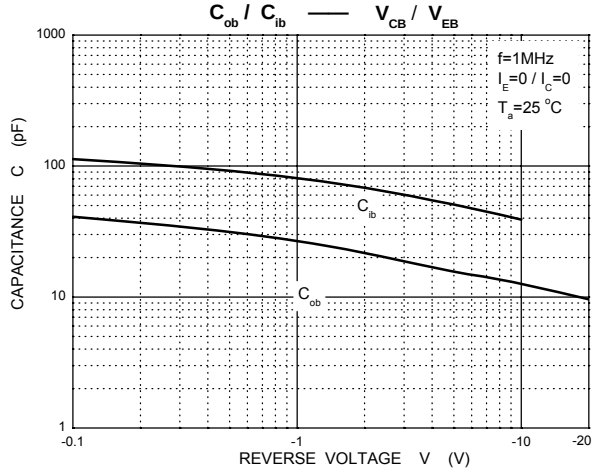


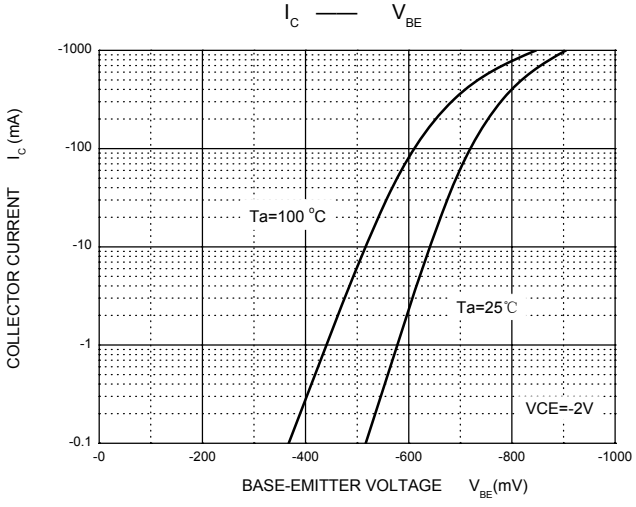


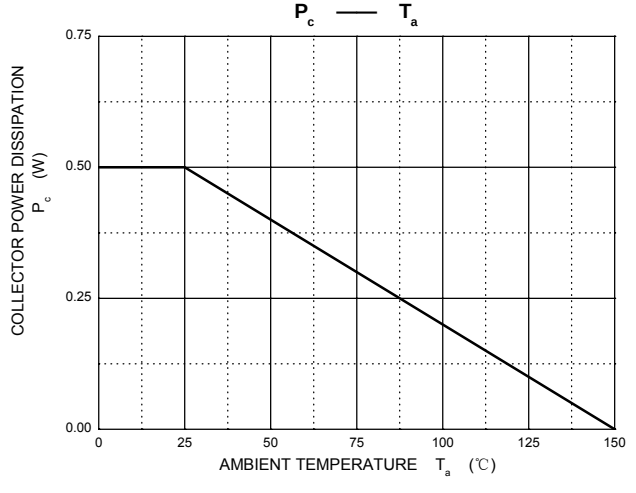












BCX51,BCX52,BCX53

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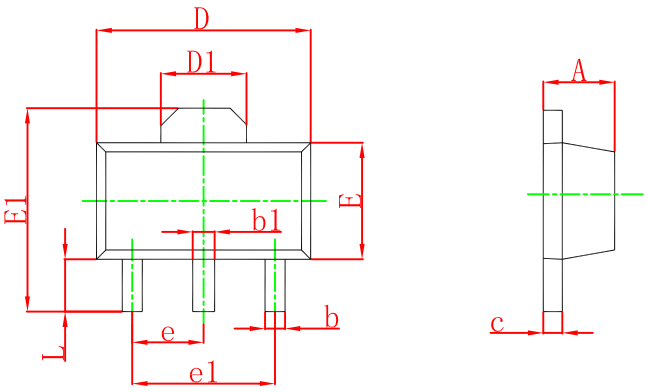
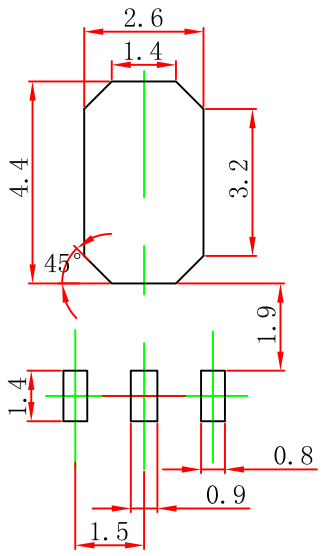
SOT-89-3L Package Outline Dimensions



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:±0.05mm.
3.The pad layout is for reference purposes only.

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