BCX51,BCX52,BCX53 TRANSISTOR (PNP)

1.BASE
2.COLLECTOR
3.EMITTER

SOT-89

FEATURES

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

APPLICATIONS

- Medium Power General Purposes
- Driver Stages of Audio Amplifiers

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,T_{stg}	Operation Junction and Storage Temperature Range		-55~+150	℃

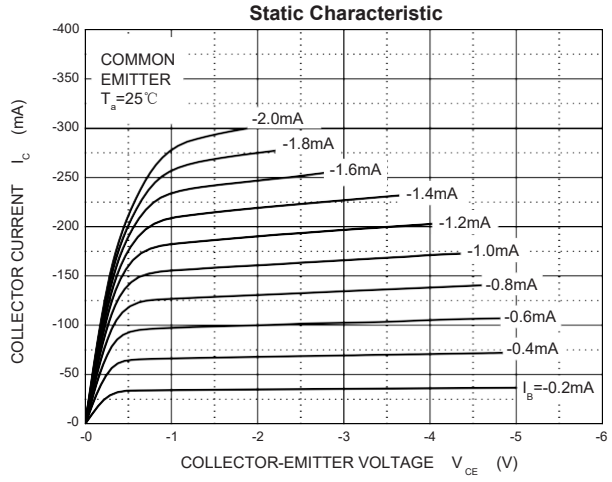
Parameter	Symbol	Test conditions		Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-100μA,I_E=0	BCX51	-45			V
			BCX52	-60			
			BCX53	-100			
Collector-emitter breakdown voltage	$V_{(BR)CEO}$*	I_C=-10mA,I_B=0	BCX51	-45			V
			BCX52	-60			
			BCX53	-80			
Emitter-base breakdown voltage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

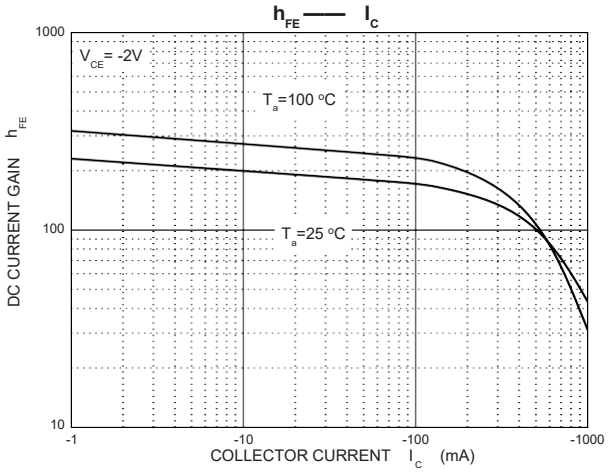
CLASSIFICATION OF $h_{FE(2)}$

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

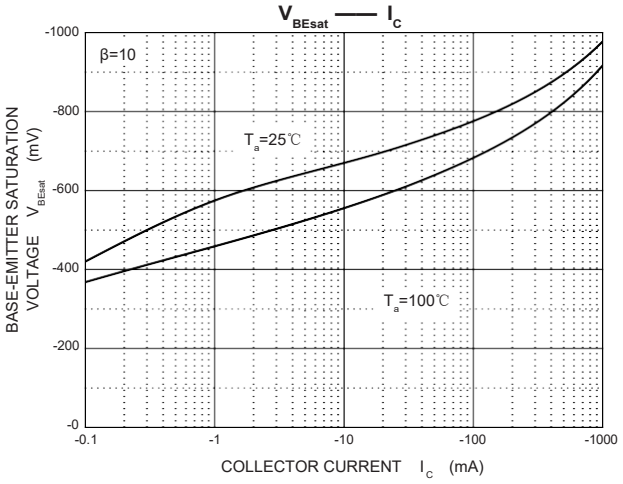
Static Characteristic



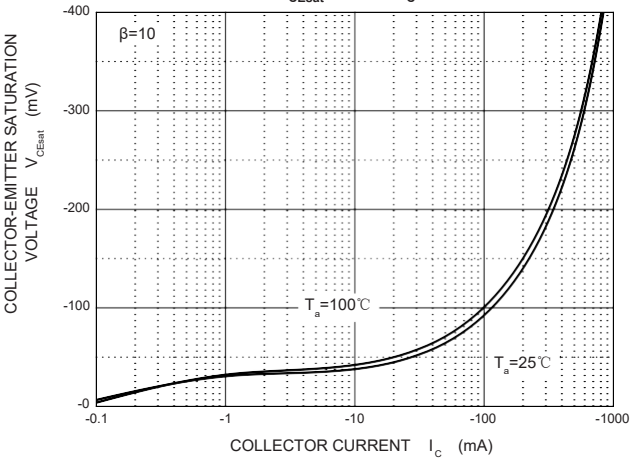
h_{FE} —— I_C



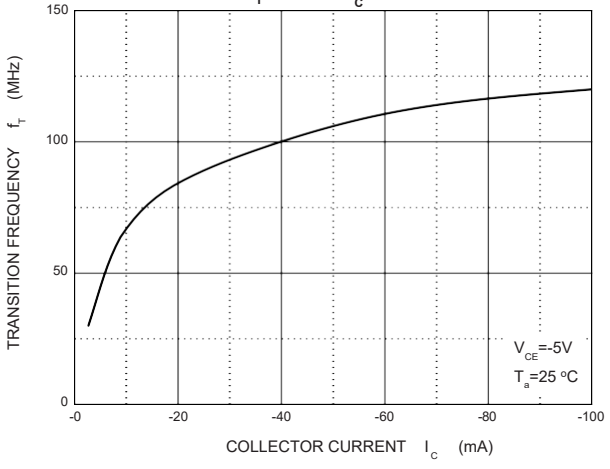
V_{BEsat} —— I_C



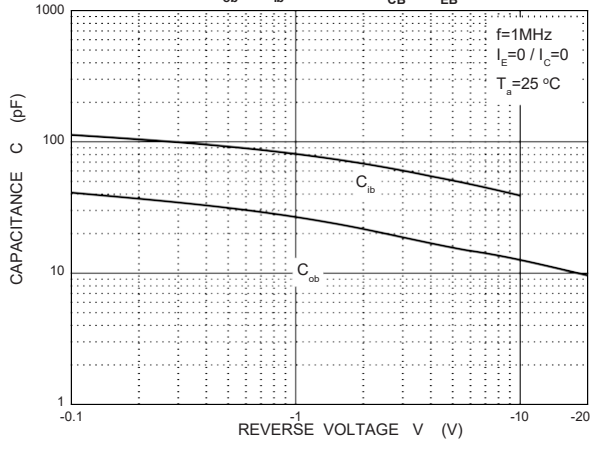
V_{CEsat} —— I_C



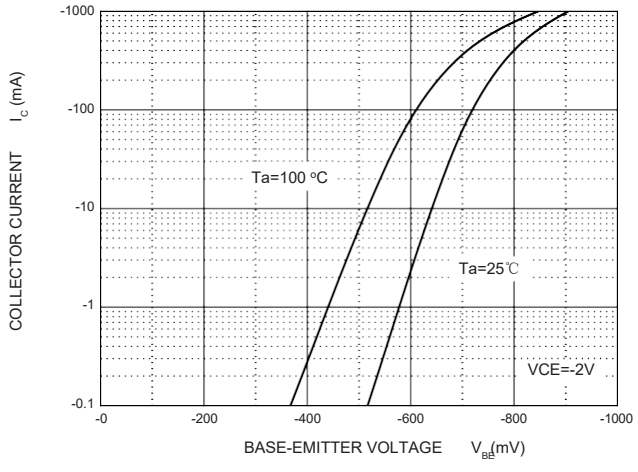
f_T —— I_C



C_{ob} / C_{ib} —— V_{CB} / V_{EB}



I_C —— V_{BE}



P_c —— T_a