Elektronische Bauelemente

BCX53

-1A, -100V

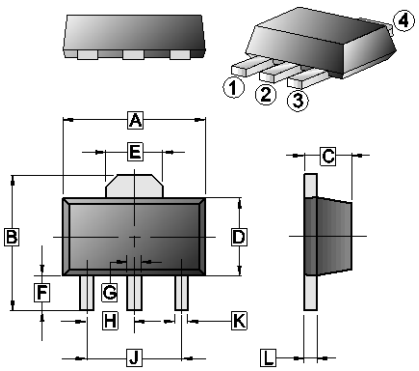
PNP Plastic Encapsulate Transistor

RoHS Compliant Product
A suffix of "-C" specifies halogen & lead-free

DESCRIPTION

BCX53 is designed for medium power amplifier applications.

SOT-89



REF.	Millimeter		REF.	Millimeter	
	Min.	Max.		Min.	Max.
A	4.40	4.60	G	0.40	0.58
B	3.94	4.25	H	1.50 TYP	
C	1.40	1.60	J	3.00 TYP	
D	2.25	2.60	K	0.32	0.52
E	1.55 TYP.		L	0.35	0.44
F	0.89	1.20			

FEATURES

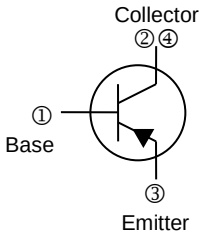
- Low voltage
- High current

CLASSIFICATION OF h_{FE}

Product-Rank	BCX53-10	BCX53-16
Range	63~160	100~250
Marking	AK	AL

PACKAGE INFORMATION

Package	MPQ	Leader Size
SOT-89	1K	7 inch



ORDER INFORMATION

Part Number	Type
BCX53	Lead (Pb)-free
BCX53-□-C	Lead (Pb)-free and Halogen-free

***□=h_{FE} Rank**

ABSOLUTE MAXIMUM RATINGS (T_A=25°C unless otherwise specified)

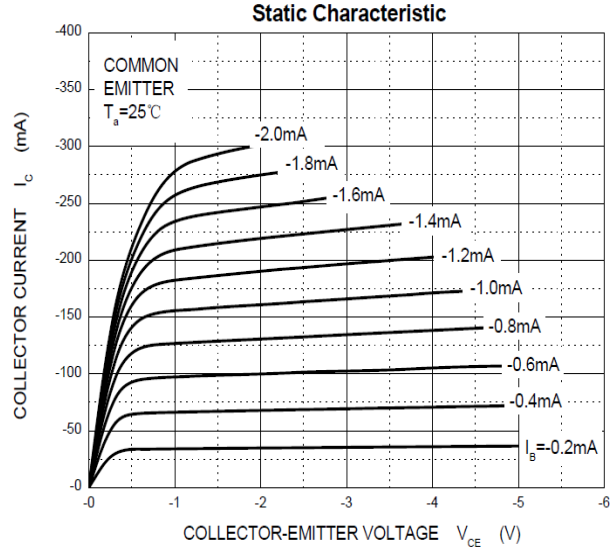
Parameter	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}	-100	V
Collector-Emitter Voltage	V_{CEO}	-80	
Emitter-Base Voltage	V_{EBO}	-5	
Collector Current	I_C	-1	A
Collector Power Dissipation	P_C	500	mW
Thermal Resistance from Junction-Ambient	$R_{\theta JA}$	250	°C/W
Junction & Storage Temperature Range	T_J, T_{STG}	150, -55~150	°C

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

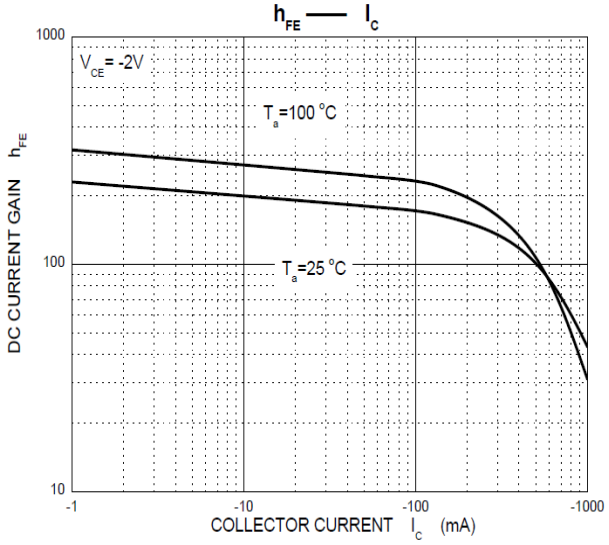
Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Collector-Base Breakdown Voltage	$V_{(BR)CBO}$	-100	-	-	V	I_C= -100μA , I_E=0
Collector-Emitter Breakdown Voltage	$V_{(BR)CEO}$	-80	-	-		I_C= -10mA, I_B=0
Emitter-Base Breakdown Voltage	$V_{(BR)EBO}$	-5	-	-		I_E= -100μA, I_C=0
Collector Cut-Off Current	I_{CBO}	-	-	-0.1	μA	V_{CB}= -30V, I_E=0
Emitter Cut-Off Current	I_{EBO}	-	-	-0.1		V_{EB}= -5V, I_C=0
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	-	-	-0.5	V	I_C= -0.5A, I_B= -50mA
Base-Emitter Voltage	$V_{BE(on)}$	-	-	-1	V	V_{CE}= -2V, I_C= -0.5A
DC Current Gain	h_{FE}	63	-	-		V_{CE}= -2V, I_C= -5mA
		100	-	250		V_{CE}= -2V, I_C= -150mA
		40	-	-		V_{CE}= -2V, I_C= -0.5A
Transition Frequency	f_T	-	50	-	MHz	V_{CE}= -5V, I_C= -10mA, f=100MHz

CHARACTERISTIC CURVES

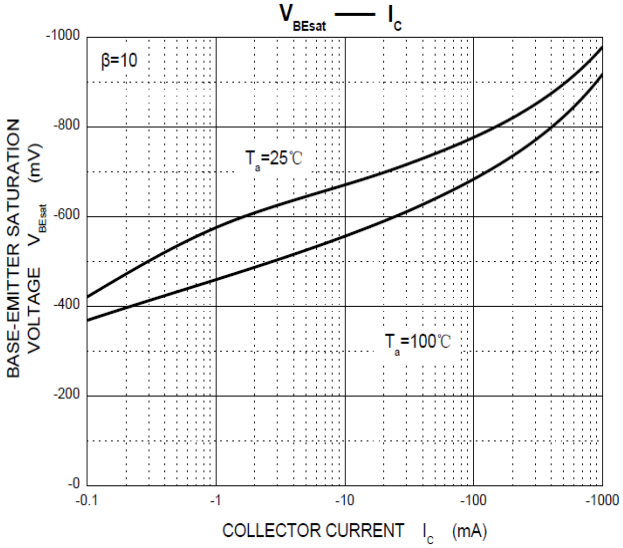
Static Characteristic



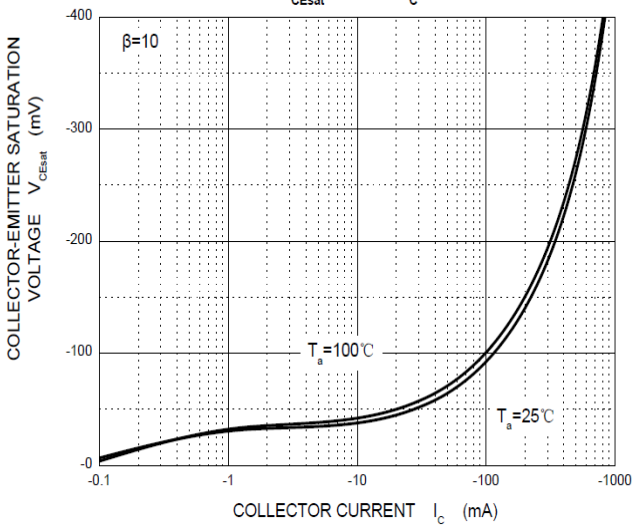
h_{FE} — I_C



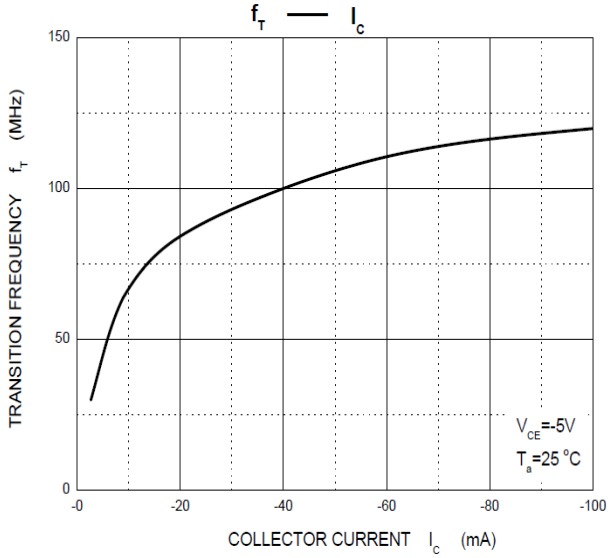
V_{BEsat} — I_C



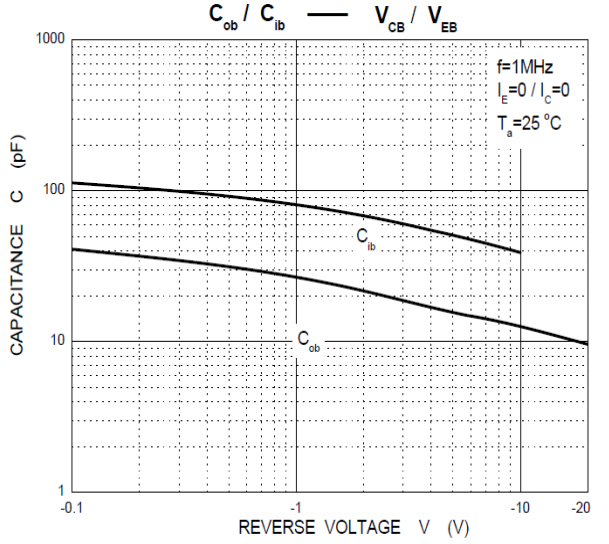
V_{CEsat} — I_C



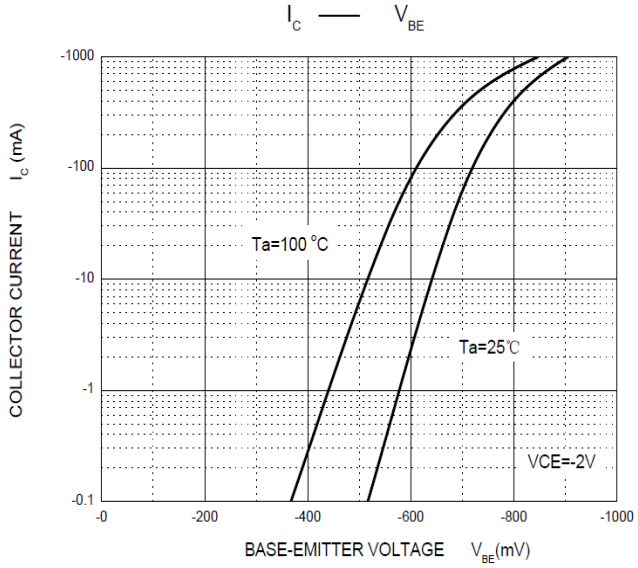
f_T — I_C

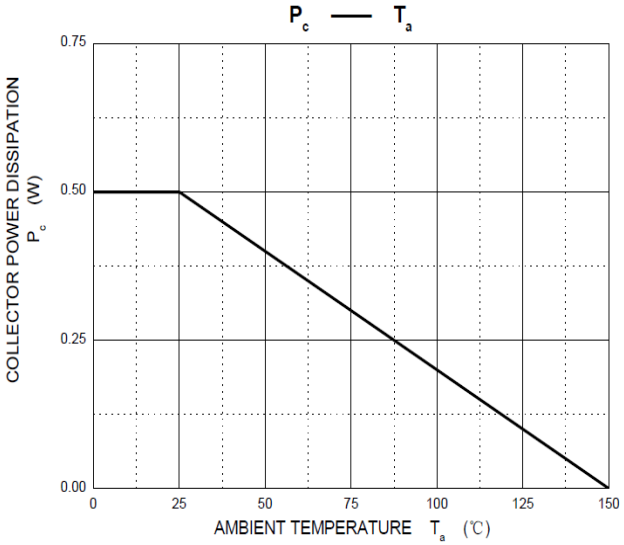


C_{ob} / C_{ib} — V_{CB} / V_{EB}

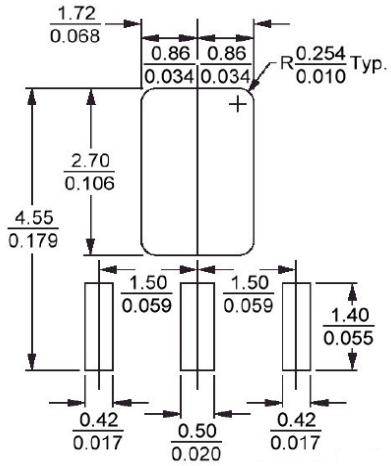


TYPICAL CHARACTERISTIC CURVES





Mounting Pad Layout



*Dimensions in millimeters