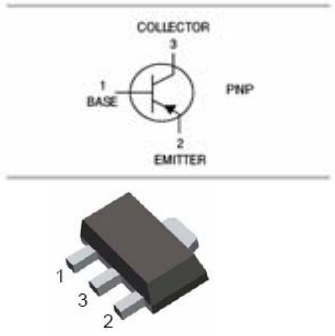
PNP Medium power transistors BCX51/BCX52/BCX53

FEATURES

- For AF driver and output stages.
- High collector current.
- Low collector-emitter saturation voltage.
- Complementary types: BCX54/BCX55/BCX56.

Lead-free



SOT-89

APPLICATIONS

- Medium power general purposes.
- Driver stages of audio amplifiers.

ORDERING INFORMATION

Type No.	Marking	Package Code
BCX51	AA	SOT-89
BCX51-10	AC	SOT-89
BCX51-16	AD	SOT-89
BCX52	AE	SOT-89
BCX52-10	AG	SOT-89
BCX52-16	AM	SOT-89
BCX53	AH	SOT-89
BCX53-10	AK	SOT-89
BCX53-16	AL	SOT-89

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

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 -Continuous		-1	A
I_{CM}	Collector Current -Peak		-1.5	A
P_D	Total Device Dissipation		500	mW
T_j,T_{stg}	Junction and Storage Temperature		-65 to +150	℃

ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

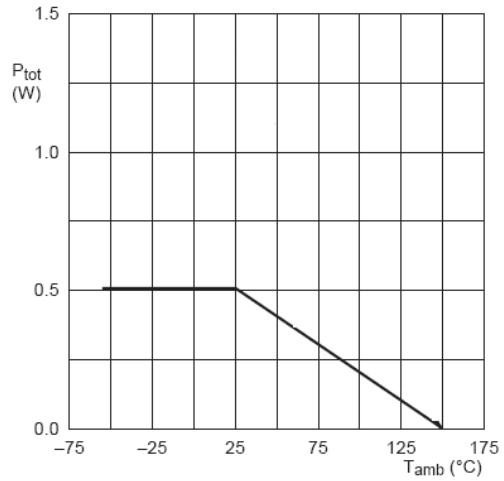
PNP Medium power transistors BCX51/BCX52/BCX53

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-100μA I_E=0 BCX51 BCX52 BCX53	-45 -60 -100			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=-10mA I_B=0 BCX51 BCX52 BCX53	-45 -60 -80			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-10μA I_C=0	-5			μV
Collector cut-off current	I_{CBO}	V_{CB}=-30V I_E=0			-0.1	μA
DC current gain	h_{FE}	V_{CE}=-2V I_C=-5mA	25			
		V_{CE}=-2V I_C=-150mA BCX51…53	40		250	
		V_{CE}=-2V I_C=-150mA -10 -16	63 100		160 250	
		V_{CE}=-2V I_C=-500mA	25			
Collector-emitter saturation voltage	$V_{CE(sat)}$	I_C=-500mA I_B=-50mA			-0.5	V
Base-emitter voltage	V_{BE}	I_C=-500mA ,V_{CE}=-2V			-1	V
Transition frequency	f_T	V_{CE}=-10 I_C=-50mA, f=20MH		125		MHz

PNP Medium power transistors BCX51/BCX52/BCX53

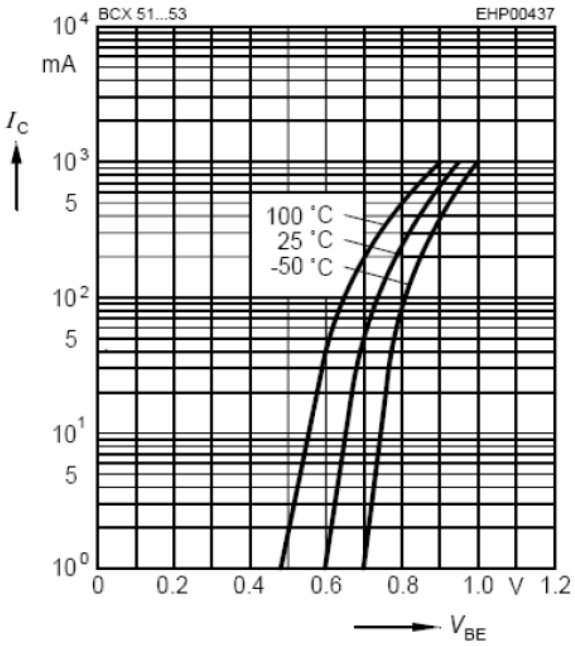
TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Total power dissipation $P_{tot} = f(T_S)$



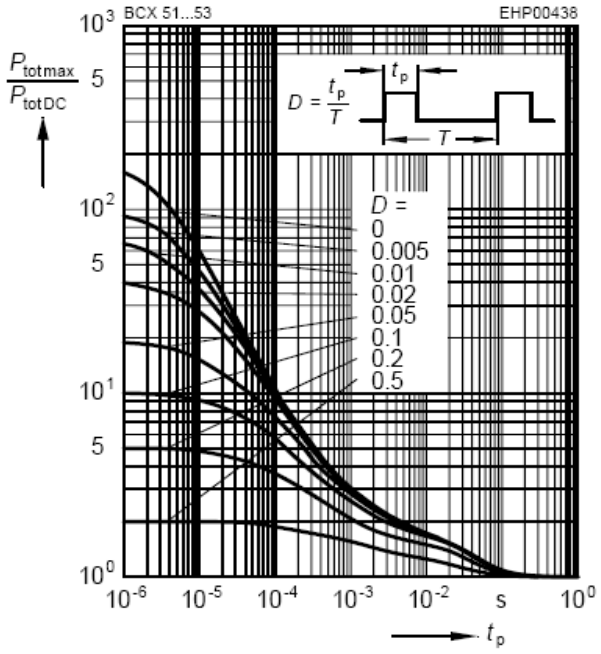
Collector current $I_C = f(V_{BE})$

V_{CE} = 2V



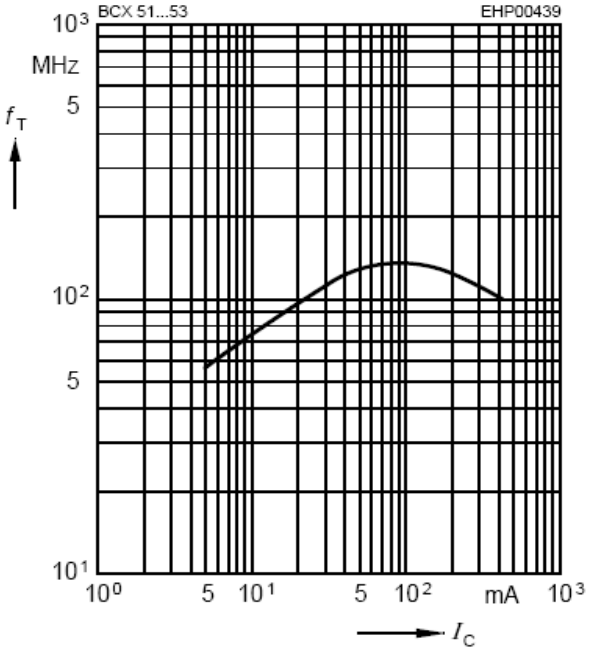
Permissible pulse load

$P_{totmax} / P_{totDC} = f(t_p)$



Transition frequency $f_T = f(I_C)$

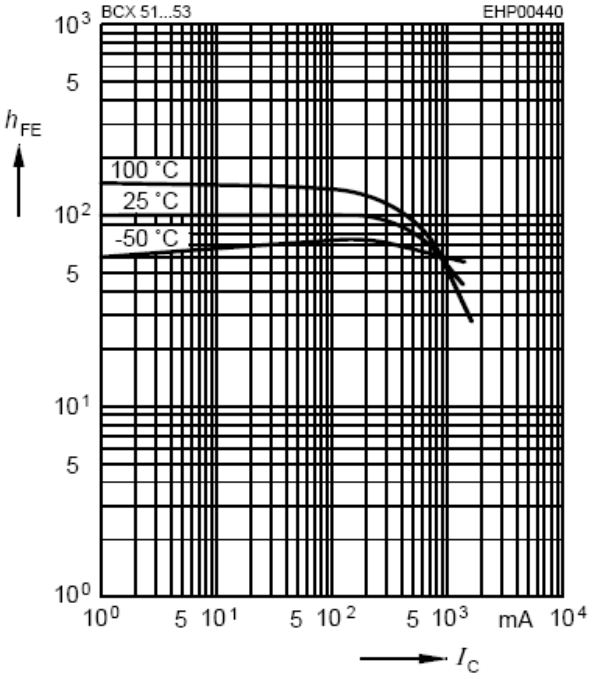
V_{CE} = 10V



PNP Medium power transistors BCX51/BCX52/BCX53

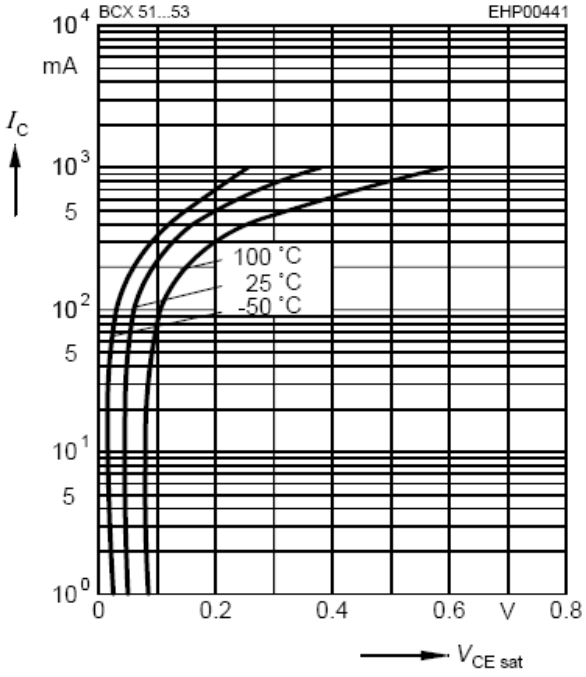
DC current gain $h_{FE} = f(I_C)$

V_{CE} = 2V



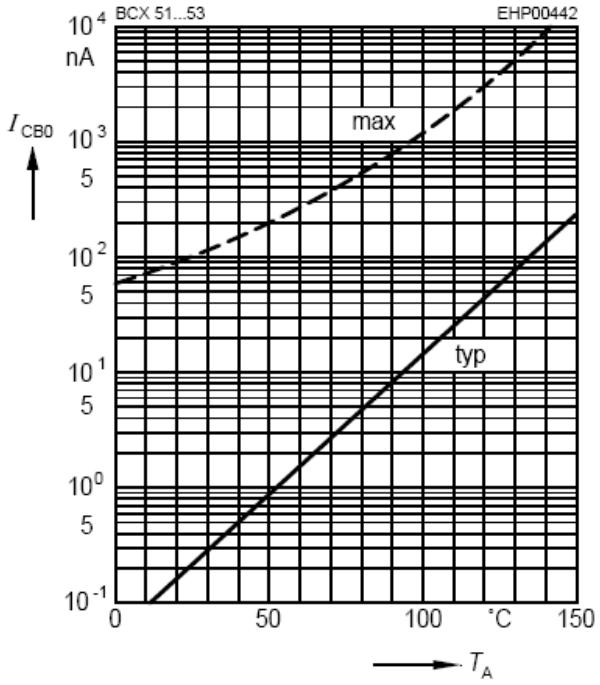
Collector-emitter saturation voltage

$I_C = f(V_{CEsat})$, h_{FE} = 10



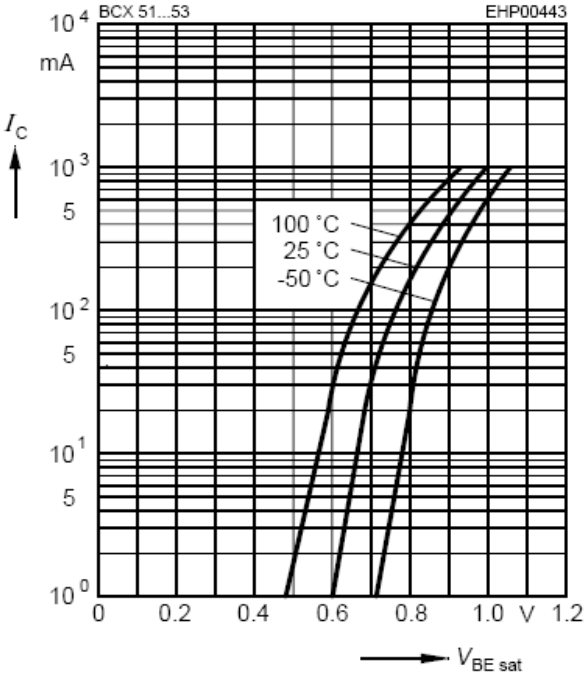
Collector cutoff current $I_{CBO} = f(T_A)$

V_{CB} = 30V



Base-emitter saturation voltage

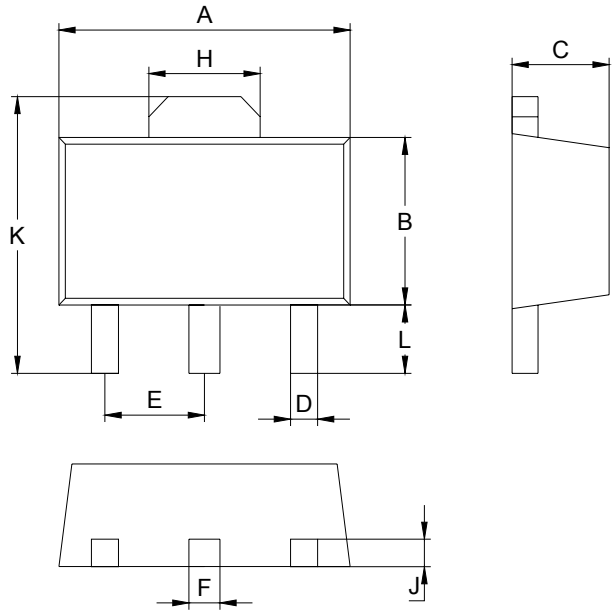
$I_C = f(V_{BEsat})$, h_{FE} = 10



PNP Medium power transistors BCX51/BCX52/BCX53

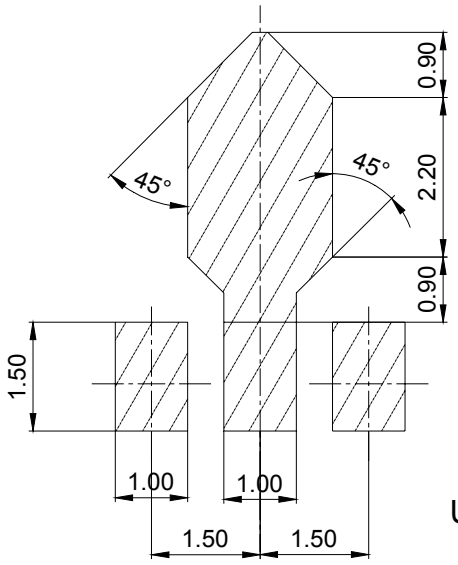
PACKAGE OUTLINE

Plastic surface mounted package SOT-89



SOT-89		
Dim	Min	Max
A	4.30	4.70
B	2.25	2.65
C	1.50 Typical	
D	0.40 Typical	
E	1.40	1.60
F	0.48 Typical	
H	1.60	1.80
J	0.40 Typical	
L	0.90	1.10
K	3.95	4.35
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit:mm

PACKAGE INFORMATION

Device	Package	Shipping
BCX51/BCX52/BCX53	SOT-89	1000/Tape&Reel