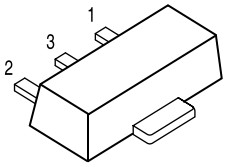
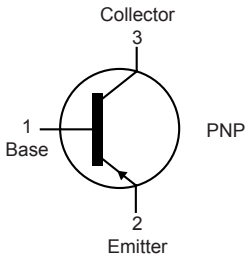
PNP Medium Power Transistor





Features:

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

Pin Configuration:

1. Base
2. Emitter
3. Collector

Applications:

- Medium power general purposes
- Driver stages of audio amplifiers

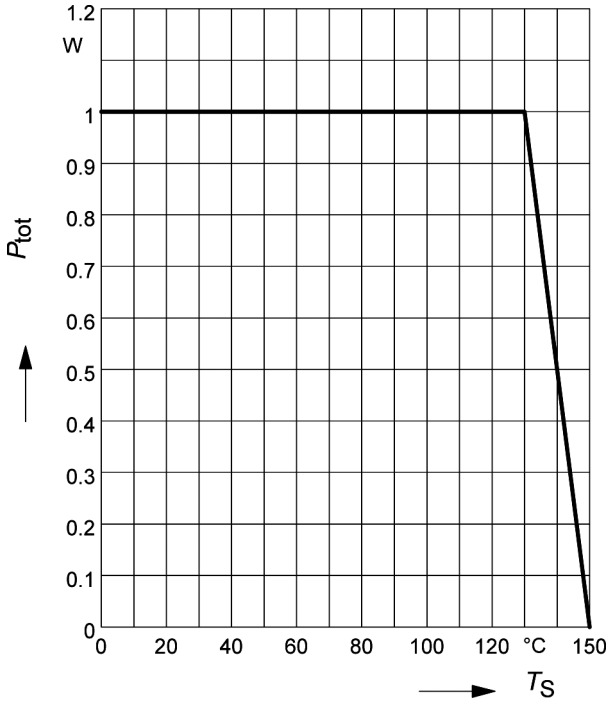
Maximum Ratings

Parameter	Symbol	Value	Unit
Collector - Base Voltage - BCX51 - BCX52 - BCX53	V_{CBO}	-45 -60 -100	V
Collector - Emitter Voltage - BCX51 - BCX52 - BCX53	V_{CEO}	-45 -60 -80	
Emitter - Base Voltage	V_{ebo}	-5	
Collector Current - Continuous	I_C	-1	A
Collector Current - Peak	I_{CM}	-1.5	
Total device Dissipation	P_D	500	mW
Junction and Storage Temperature	T_j, T_{stg}	-65 to +150	°C

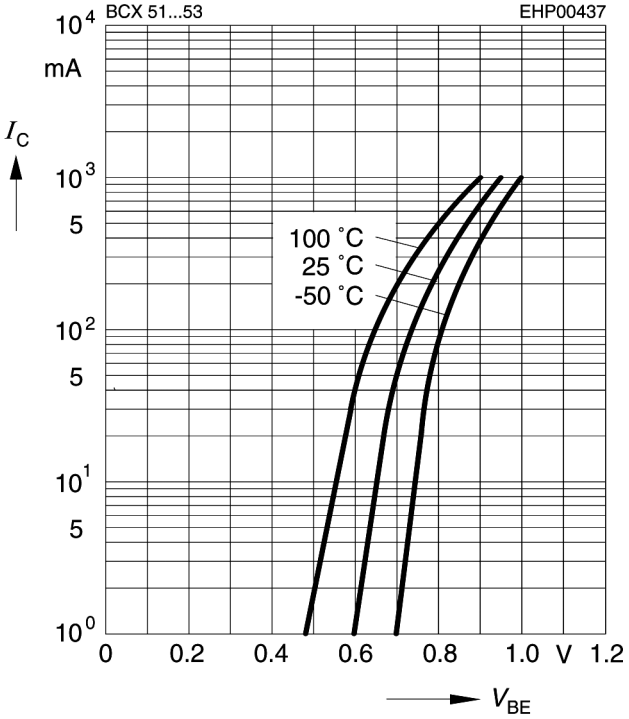
Electrical Characteristics (T_a = 25°C unless otherwise noted)

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			
Emmiter - Base Breakdown Voltage	$V_{(BR)EBO}$	I_E=-10µA, I_C=0	-5			
Collector Cut-Off Current	I_{CBO}	V_{CB}=-30V, I_E=0			-0.1	A
DC Current Gain	h_{FE}	V_{CE}=-2V, I_C=-5mA V_{CE}=-2V, I_C=-150mA V_{CE}=-2V, I_C=-150mA -10 -16 V_{CE}=-2V, I_C=-500mA	25 40 63 100 25		 250 160 250	
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	
Transition Frequency	f_T	V_{CE}=-10, I_C=-50, f=20MH		125		MHz

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

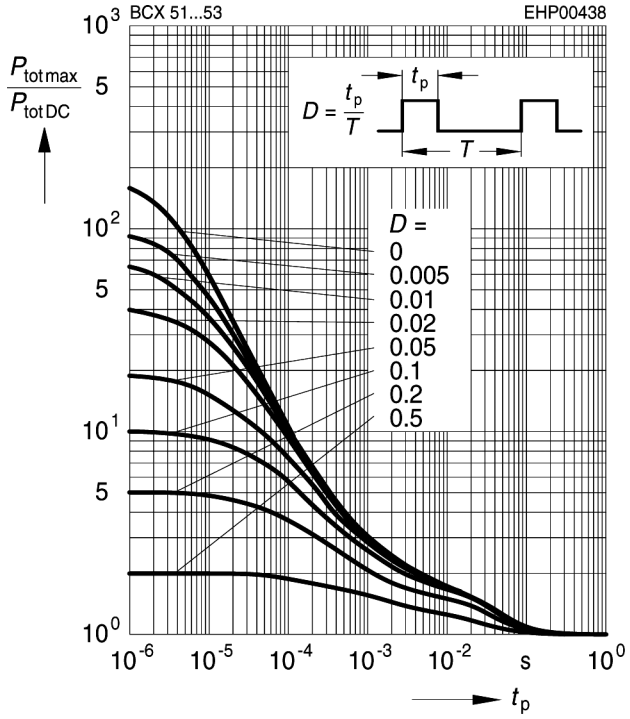


Collector current $I_C = f(V_{BE})$
V_{CE} = 2V



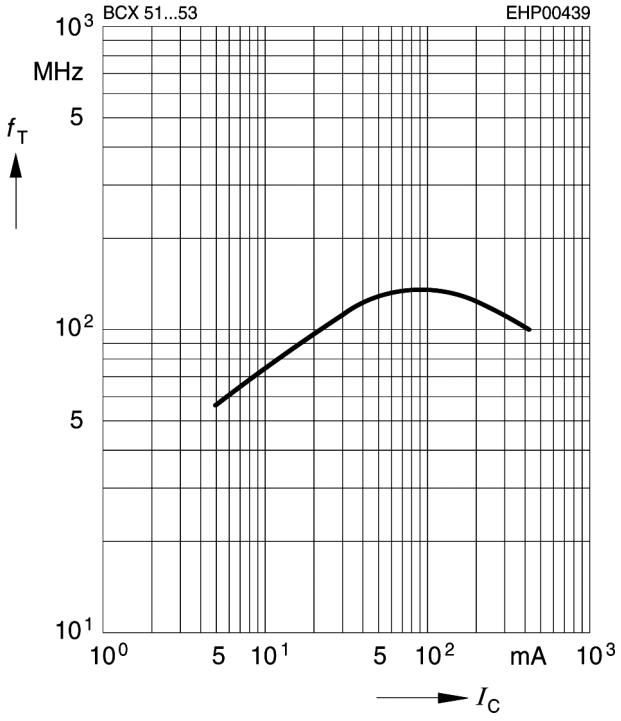
Permissible pulse load

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



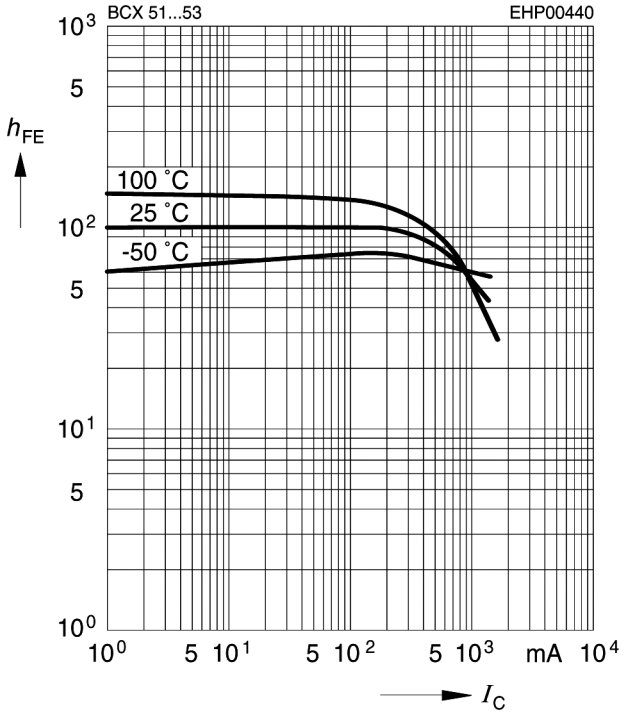
Transition frequency f_T = f (I_C)

V_{CE} = 10V



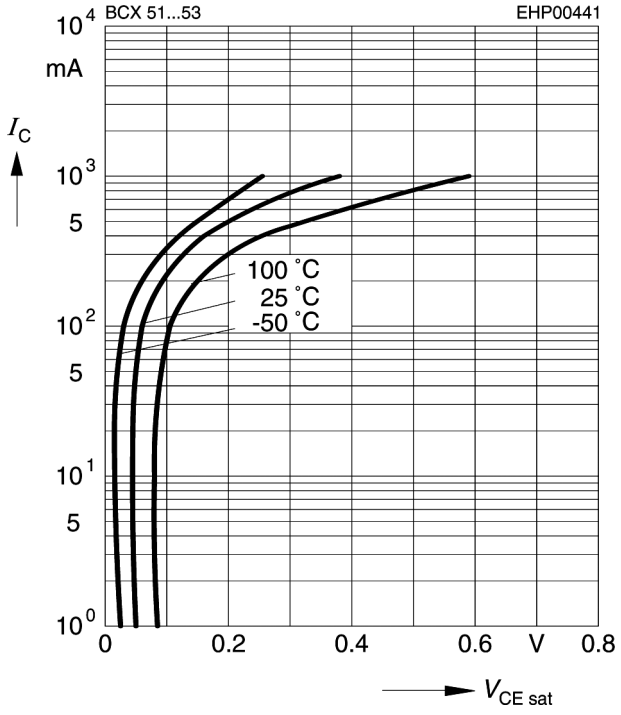
DC current gain hFE = f (I_C)

V_{CE} = 2V



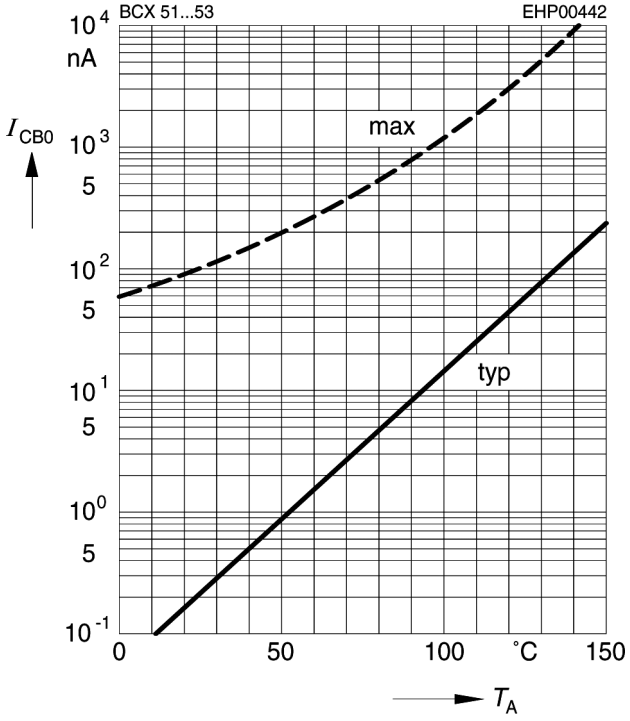
Collector-emitter saturation voltage

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



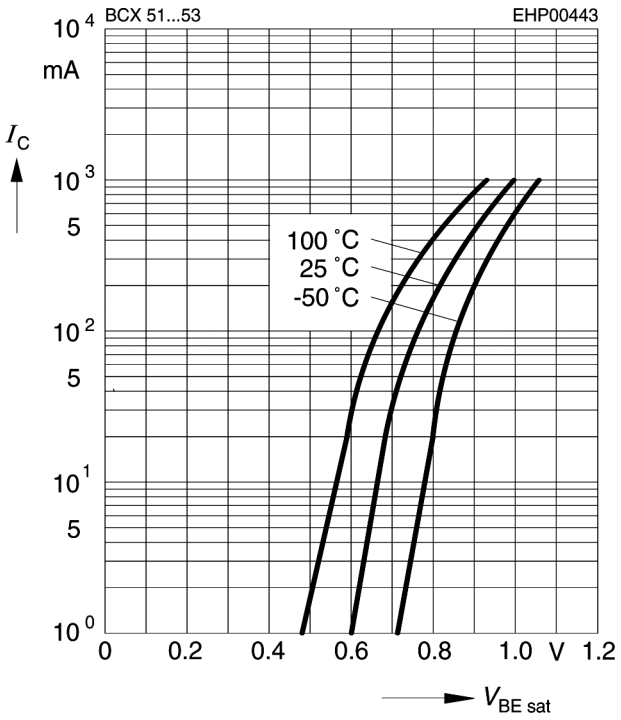
Collector cutoff current $I_{CBO} = f(T_A)$

V_{CB} = 30V



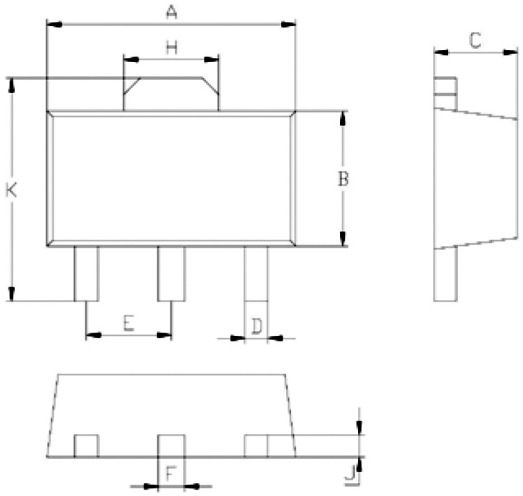
Base-emitter saturation voltage

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



Package Outline

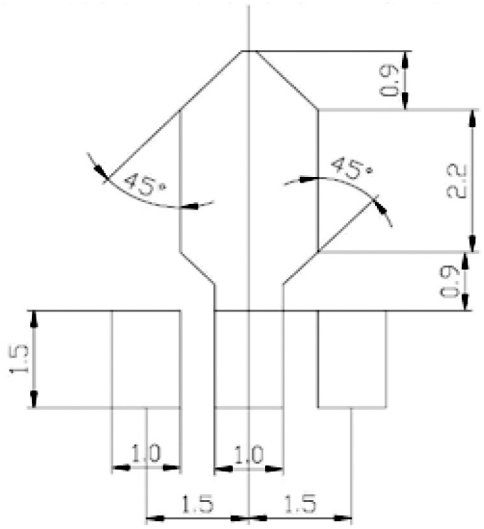
Plastic surface mounted package



Dimensions	Min.	Max.
A	4.5	4.7
B	2.3	2.7
C	1.5 Typical	
D	0.35	0.55
E	1.4	1.6
F	0.4	0.6
H	1.55	1.75
J	0.4 Typical	
K	4.15	4.25

Dimensions : Millimetres

Soldering Footprint



Dimensions : Millimetres

Part Number Table

Description	Part Number
Transistor, PNP, 1A, 45V, SOT-89	BCX51
Transistor, PNP, 1A, 45V, SOT-89	BCX51-16
Transistor, PNP, 1A, 60V, SOT-89	BCX52-16
Transistor, PNP, 1A, 80V, SOT-89	BCX53-10
Transistor, PNP, 1A, 80V, SOT-89	BCX53-16