

Features:

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

Applications:

- Medium power general purposes
- Driver stages of audio amplifiers

Pin Configuration:

1. Base
2. Emitter
3. Collector

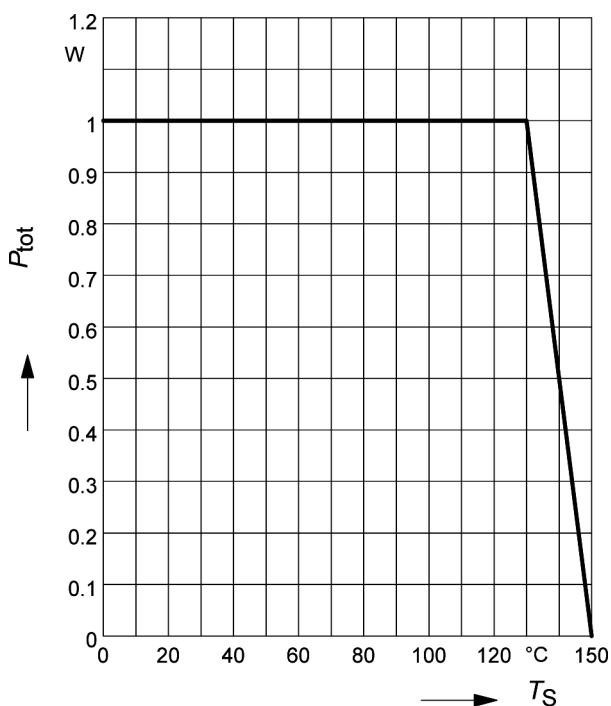
Maximum Ratings

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 ($T_a = 25^\circ\text{C}$ unless otherwise noted)

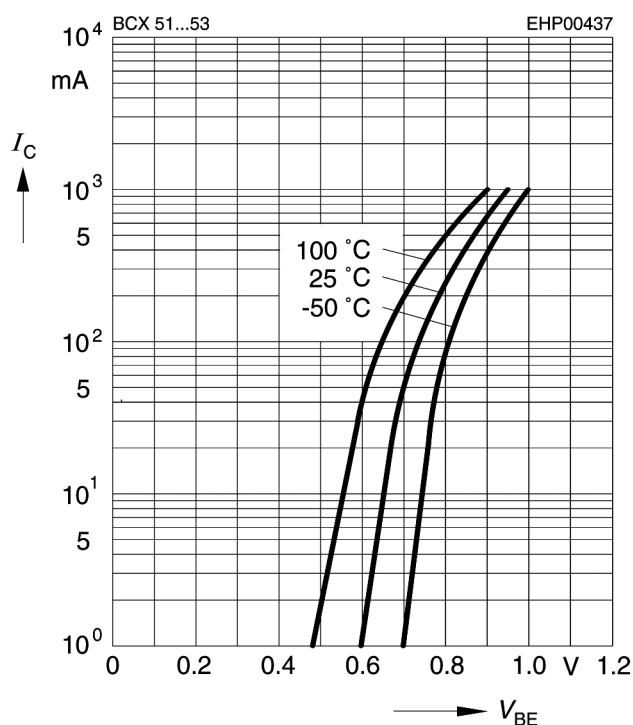
Parameter	Symbol	Test Conditions	Min.	Typ.	Max.	Unit
Collector - Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -100\mu\text{A}$, $I_E = 0$ BCX51 BCX52 BCX53	-45 -60 -100			V
Collector - Emitter Breakdown Voltage	$V_{(BR)CEO}$	$I_C = -10\text{mA}$, $I_B = 0$ BCX51 BCX52 BCX53	-45 -60 -80			
Emitter - Base Breakdown Voltage	$V_{(BR)EBO}$	$I_E = -10\mu\text{A}$, $I_C = 0$	-5			
Collector Cut-Off Current	I_{CBO}	$V_{CB} = -30\text{V}$, $I_E = 0$			-0.1	A
DC Current Gain	h_{FE}	$V_{CE} = -2\text{V}$, $I_C = -5\text{mA}$ $V_{CE} = -2\text{V}$, $I_C = -150\text{mA}$ $V_{CE} = -2\text{V}$, $I_C = -150\text{mA}$ -10 -16 $V_{CE} = -2\text{V}$, $I_C = -500\text{mA}$	25 40 63 100 25		250 160 250	
Collector - Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C = -500\text{mA}$, $I_B = -50\text{mA}$			-0.5	V
Base Emitter Voltage	V_{BE}	$I_C = -500\text{mA}$, $V_{CE} = -2\text{V}$			-1	
Transition Frequency	f_T	$V_{CE} = -10$, $I_C = -50$, $f = 20\text{MHz}$		125		MHz

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



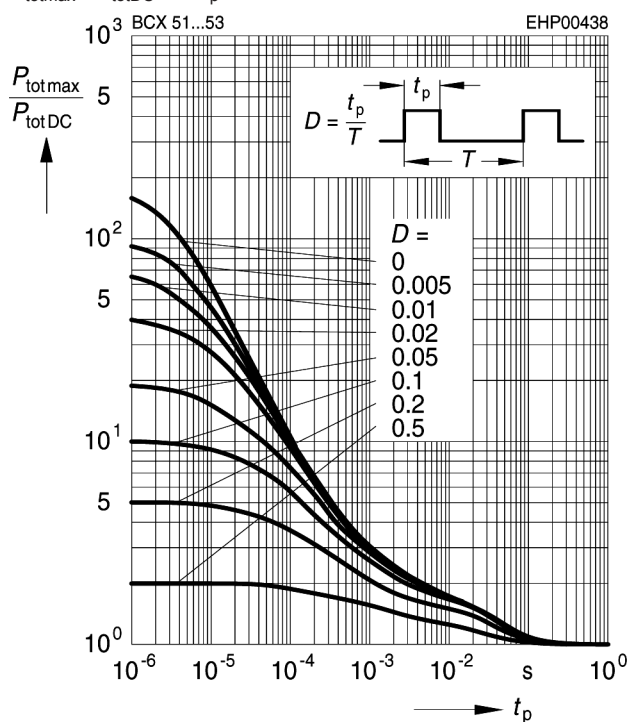
Collector current $I_C = f(V_{BE})$

$V_{CE} = 2\text{V}$



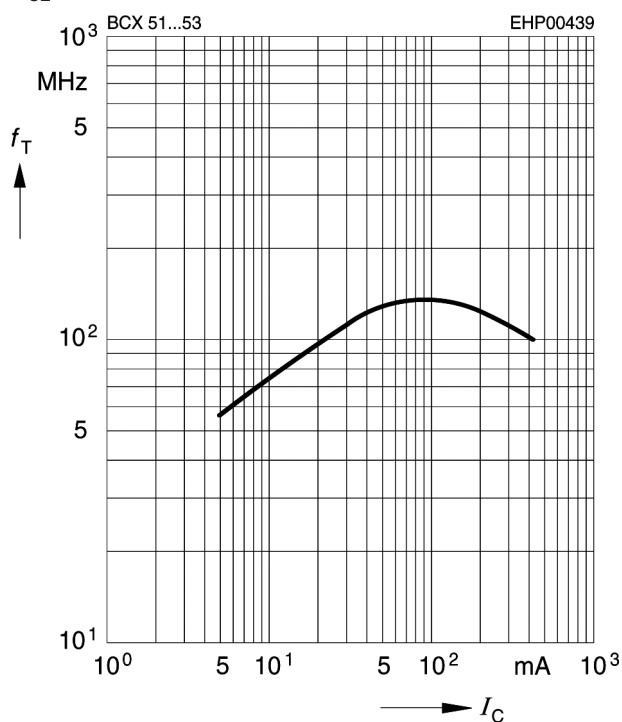
Permissible pulse load

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



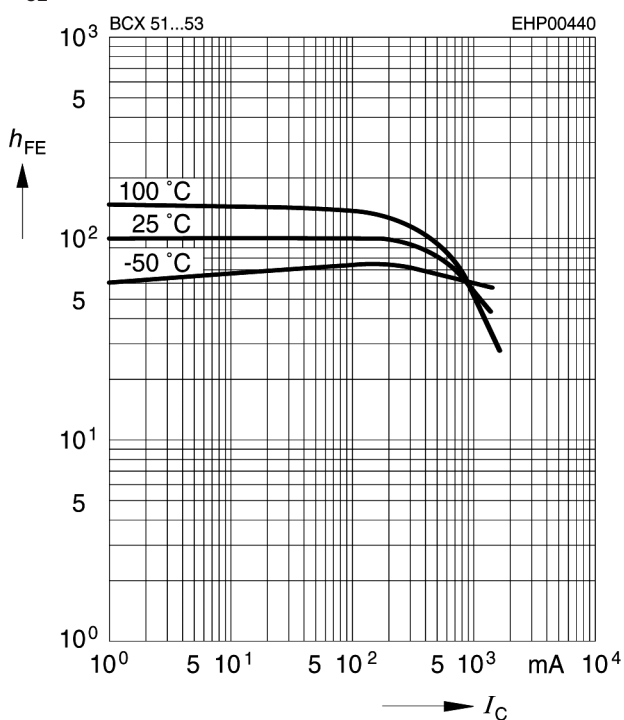
Transition frequency $f_T = f(I_C)$

$$V_{\text{CE}} = 10\text{V}$$



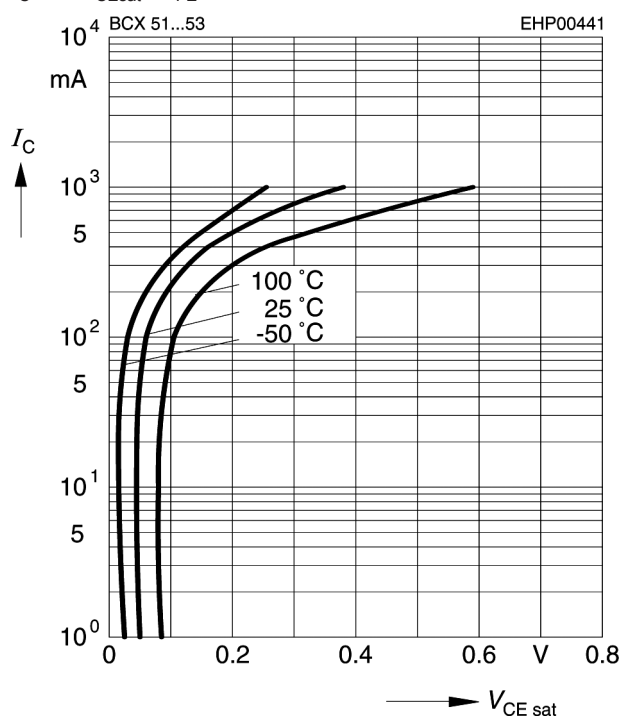
DC current gain $h_{\text{FE}} = f(I_C)$

$$V_{\text{CE}} = 2\text{V}$$



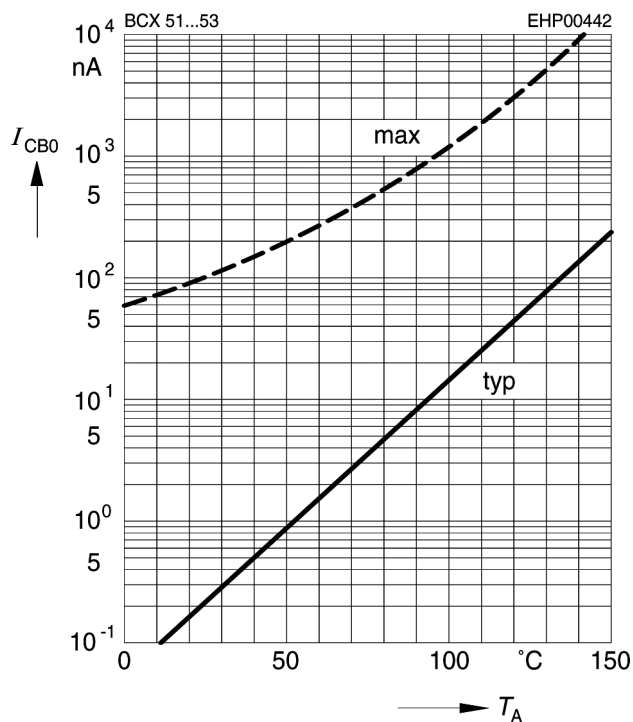
Collector-emitter saturation voltage

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



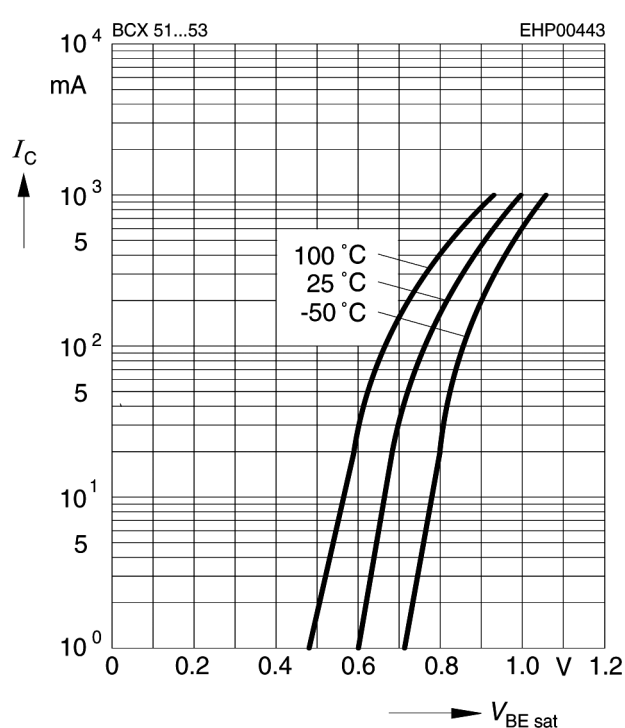
Collector cutoff current $I_{CBO} = f(T_A)$

$V_{CB} = 30V$



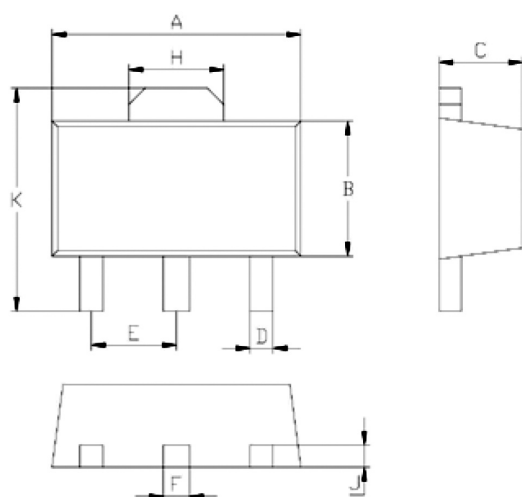
Base-emitter saturation voltage

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



Package Outline

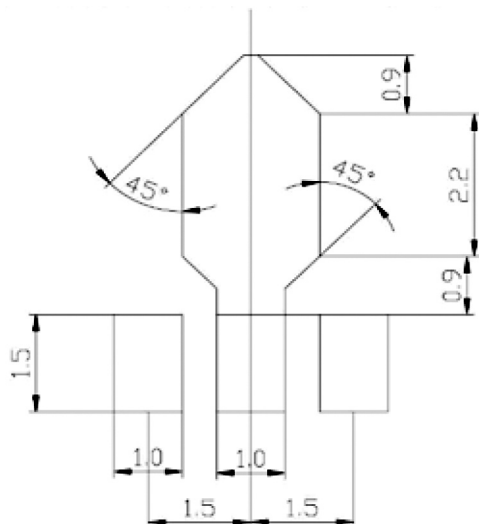
Plastic surface mounted package



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

Important Notice : This data sheet and its contents (the "Information") belong to the members of the AVNET group of companies (the "Group") or are licensed to it. No licence is granted for the use of it other than for information purposes in connection with the products to which it relates. No licence of any intellectual property rights is granted. The Information is subject to change without notice and replaces all data sheets previously supplied. The Information supplied is believed to be accurate but the Group assumes no responsibility for its accuracy or completeness, any error in or omission from it or for any use made of it. Users of this data sheet should check for themselves the Information and the suitability of the products for their purpose and not make any assumptions based on information included or omitted. Liability for loss or damage resulting from any reliance on the Information or use of it (including liability resulting from negligence or where the Group was aware of the possibility of such loss or damage arising) is excluded. This will not operate to limit or restrict the Group's liability for death or personal injury resulting from its negligence. Multicomp Pro is the registered trademark of Premier Farnell Limited 2019.