

Features

- For AF driver and output stages.
- High collector current.
- Low collector-emitter saturation voltage.
- Complementary types: TPBCX54/TPBCX55/TPBCX56.

Applications

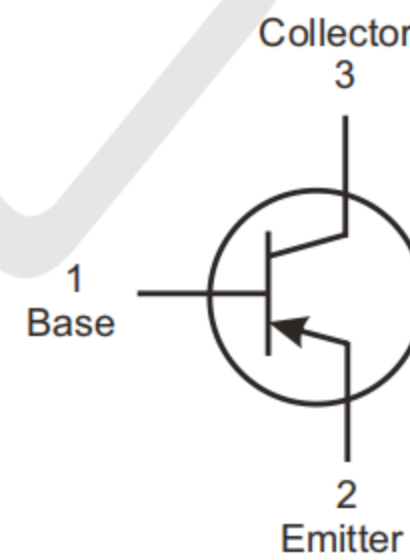
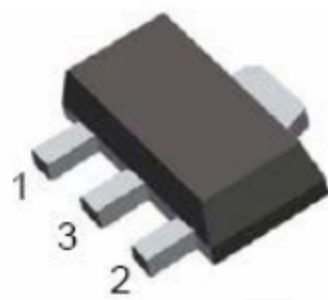
- Medium power general purposes.
- Driver stages of audio amplifiers.

Ordering Information

- Shipping Qty:1000 /7inch Tape& Reel

Circuit Diagram

SOT-89



Absolute Maximum Ratings (Tamb=25°C unless otherwise specified)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-100	V
V_{CEO}	Collector-Emitter Voltage	-80	V
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	°C

Electrical Characteristics (TA=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100\mu A$ $I_E = 0$	-100			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -10mA$ $I_B = 0$	-80			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10\mu A$ $I_C = 0$	-5			V
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			
		$V_{CE} = -2V$ $I_C = -150mA$	40		250	
		$V_{CE} = -2V$ $I_C = -150mA$ -10	63		160	
		-16	100		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	$V_{CE} = -10V$ $I_C = -50mA$, $f = 20MHz$		125		MHz



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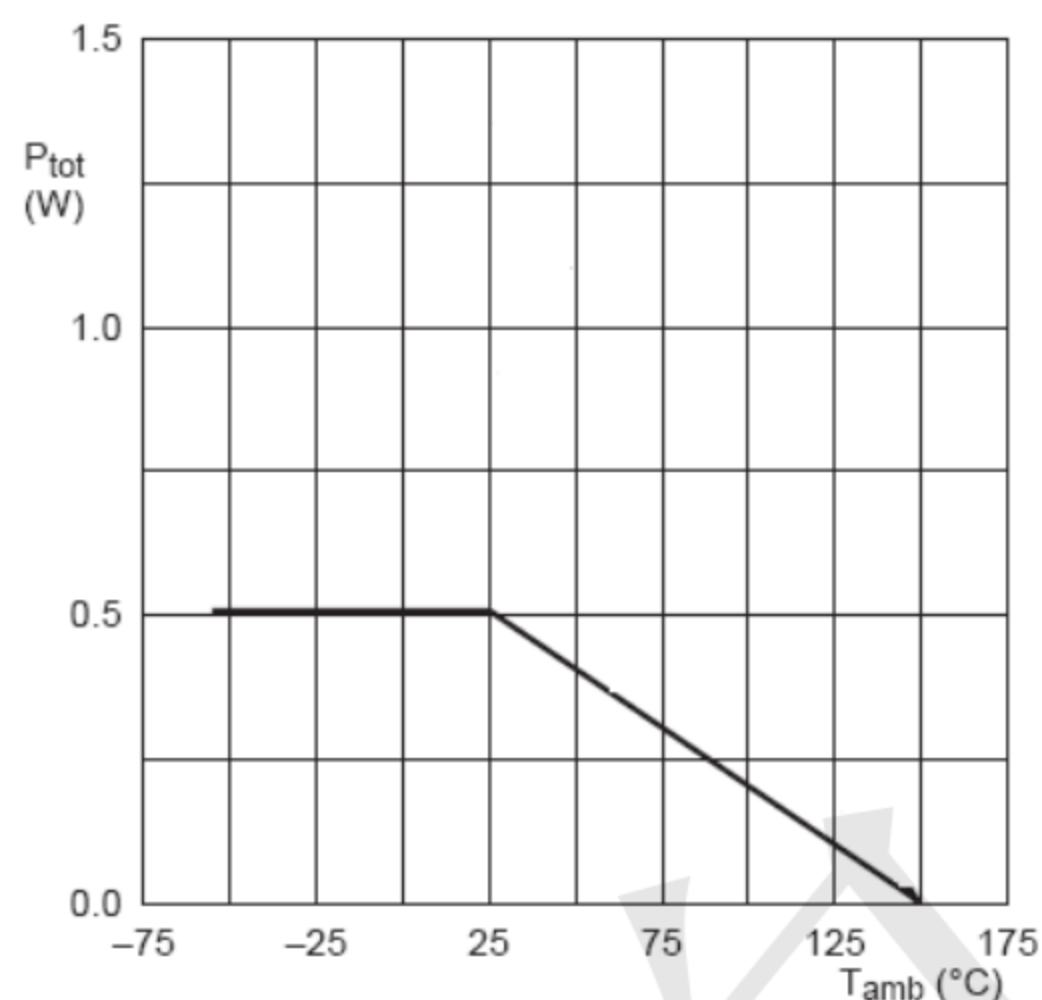
BCX53-16

PNP Switching Transistor

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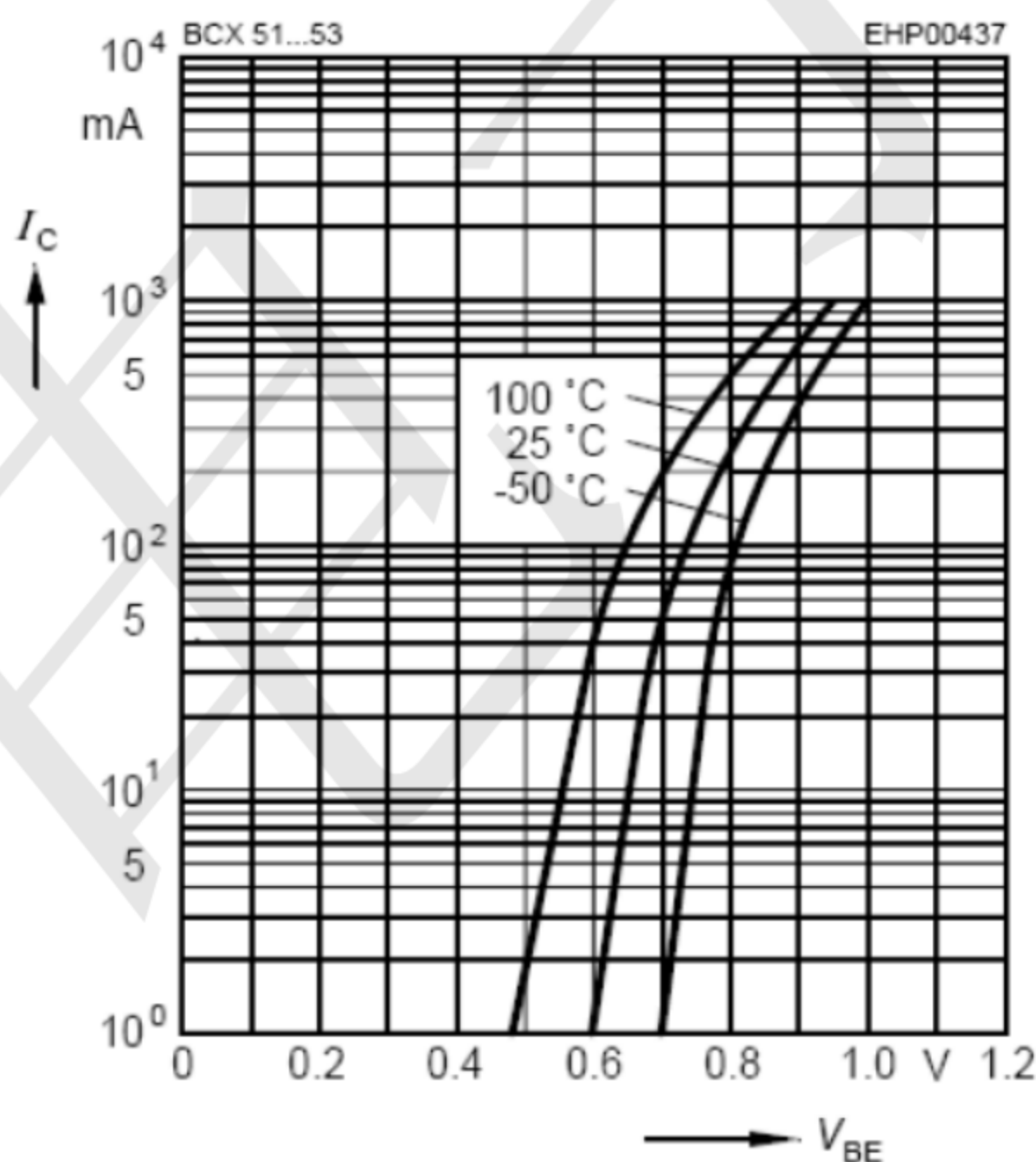
Typical Performance Characteristics ($T_A=25^\circ\text{C}$ unless otherwise Specified)

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



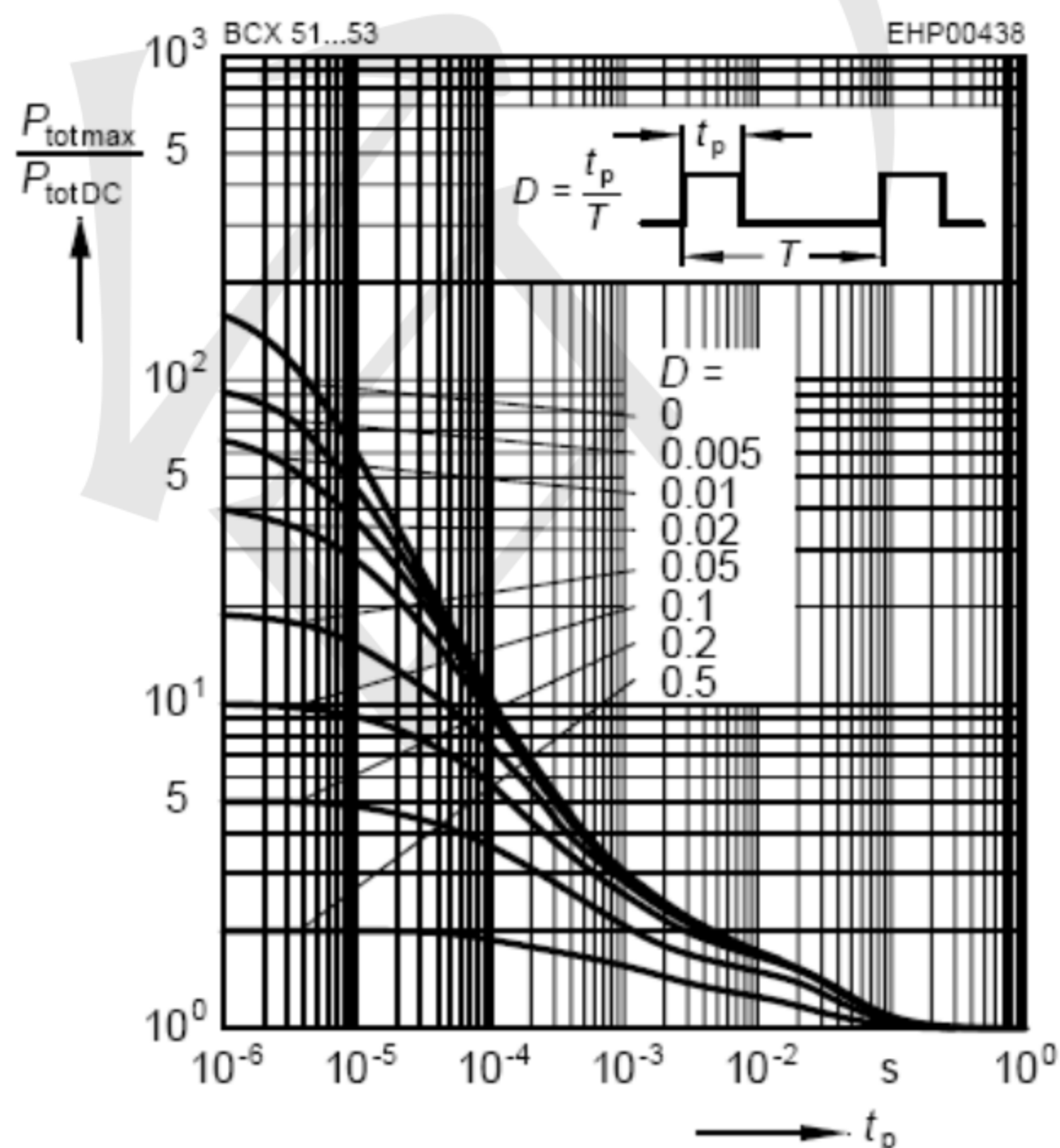
Collector current $I_C = f(V_{\text{BE}})$

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



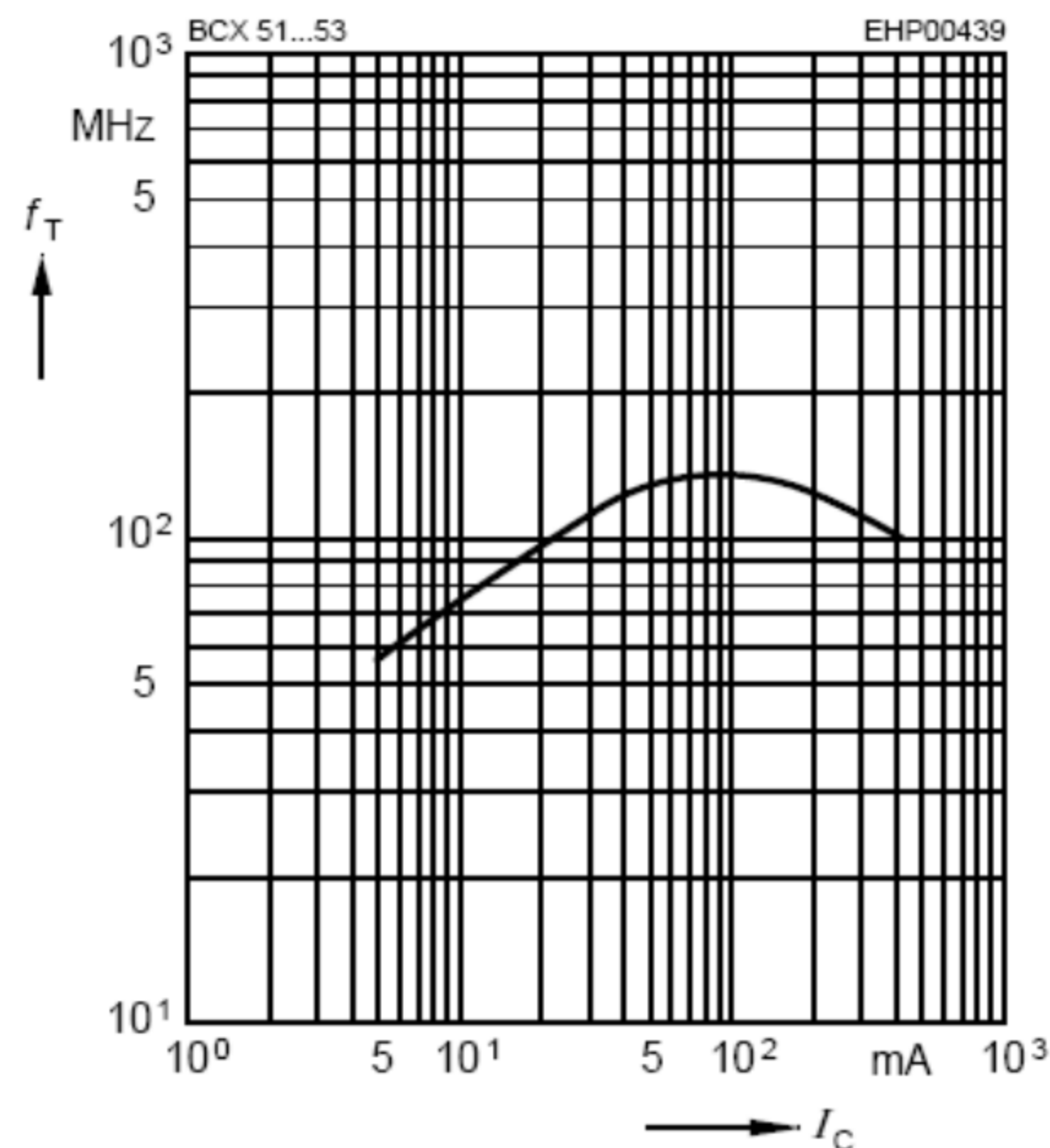
Permissible pulse load

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



Transition frequency $f_T = f(I_C)$

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





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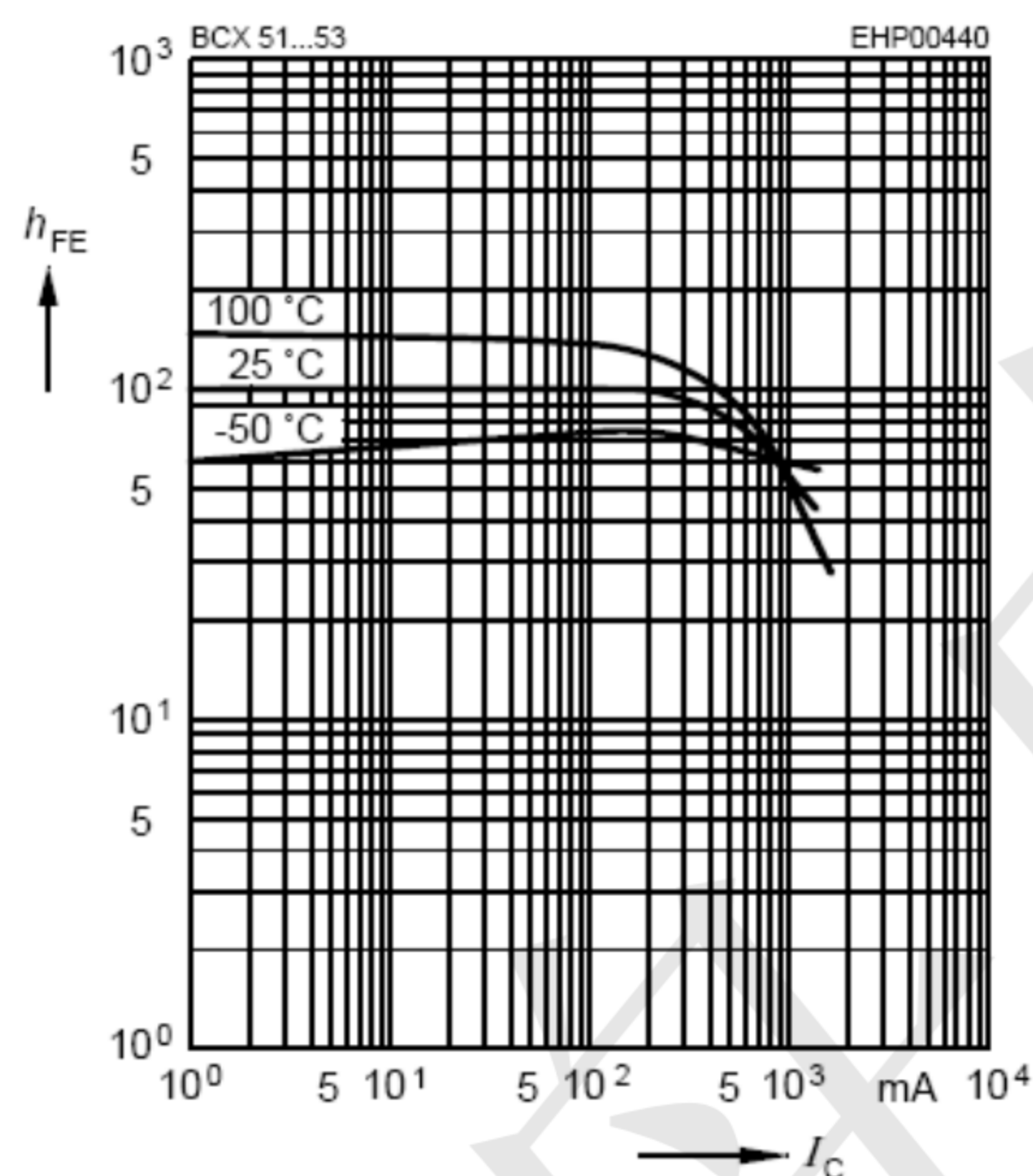
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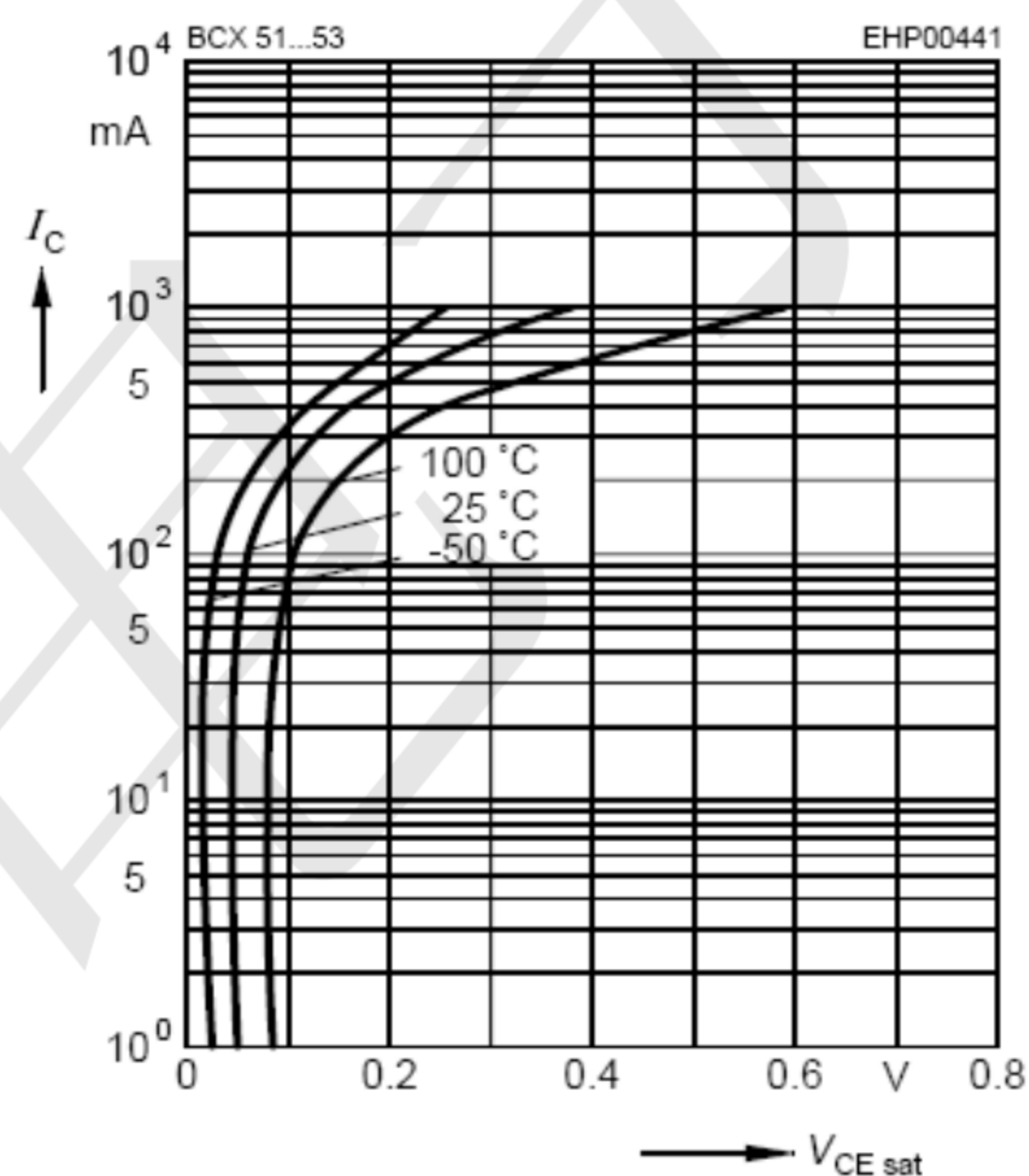
DC current gain $h_{FE} = f(I_C)$

$V_{CE} = 2V$



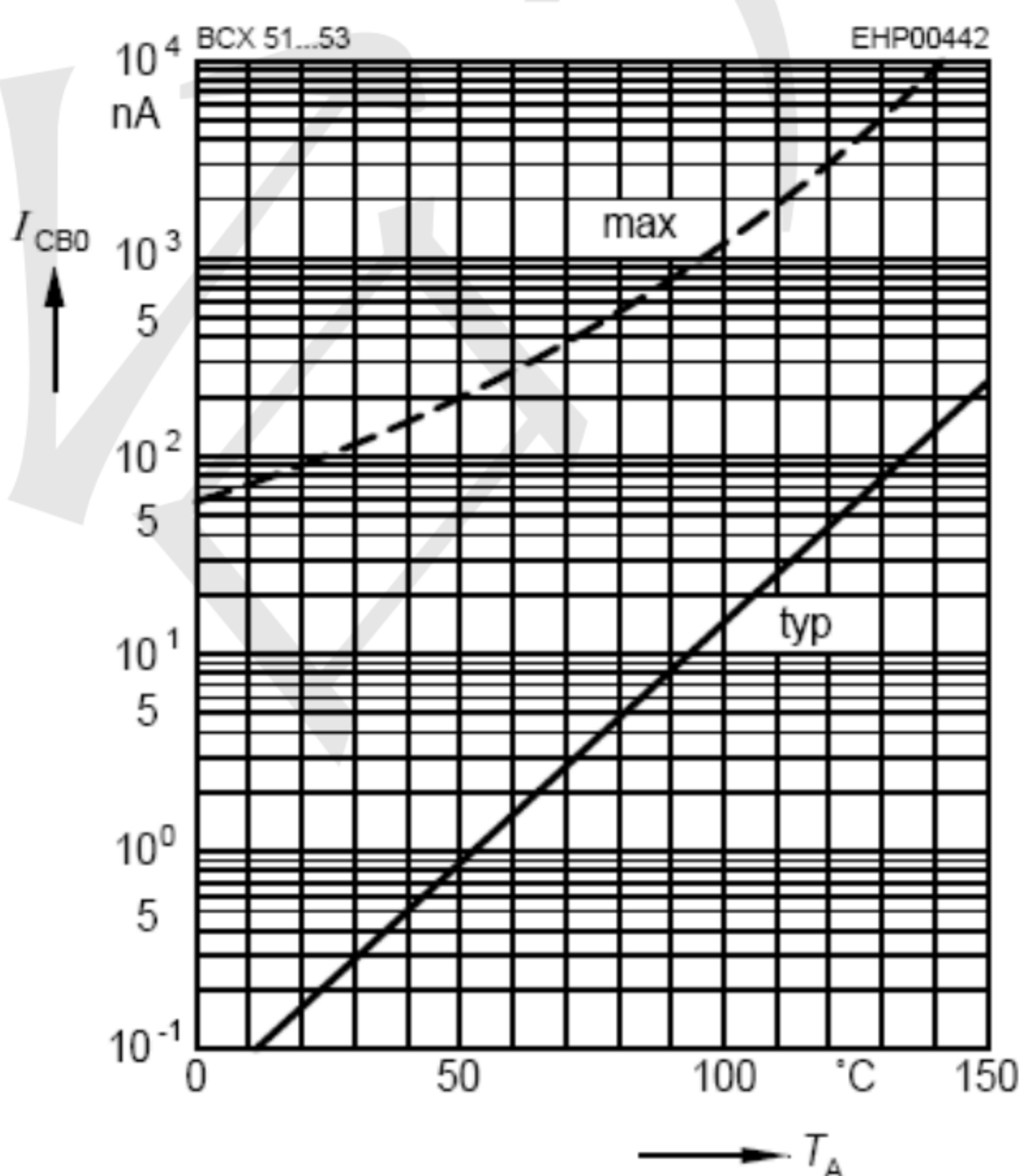
Collector-emitter saturation voltage

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



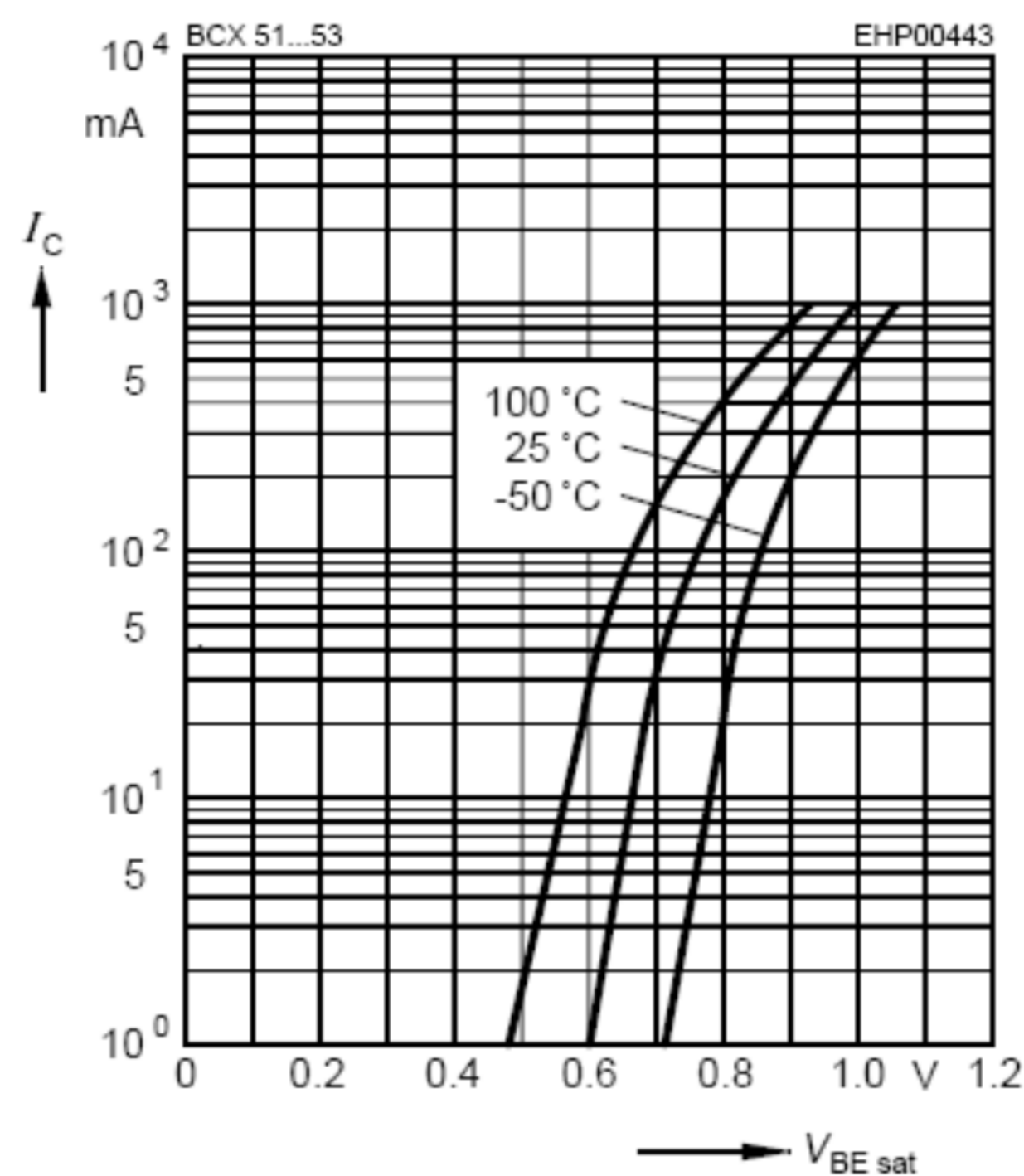
Collector cutoff current $I_{CBO} = f(T_A)$

$V_{CB} = 30V$

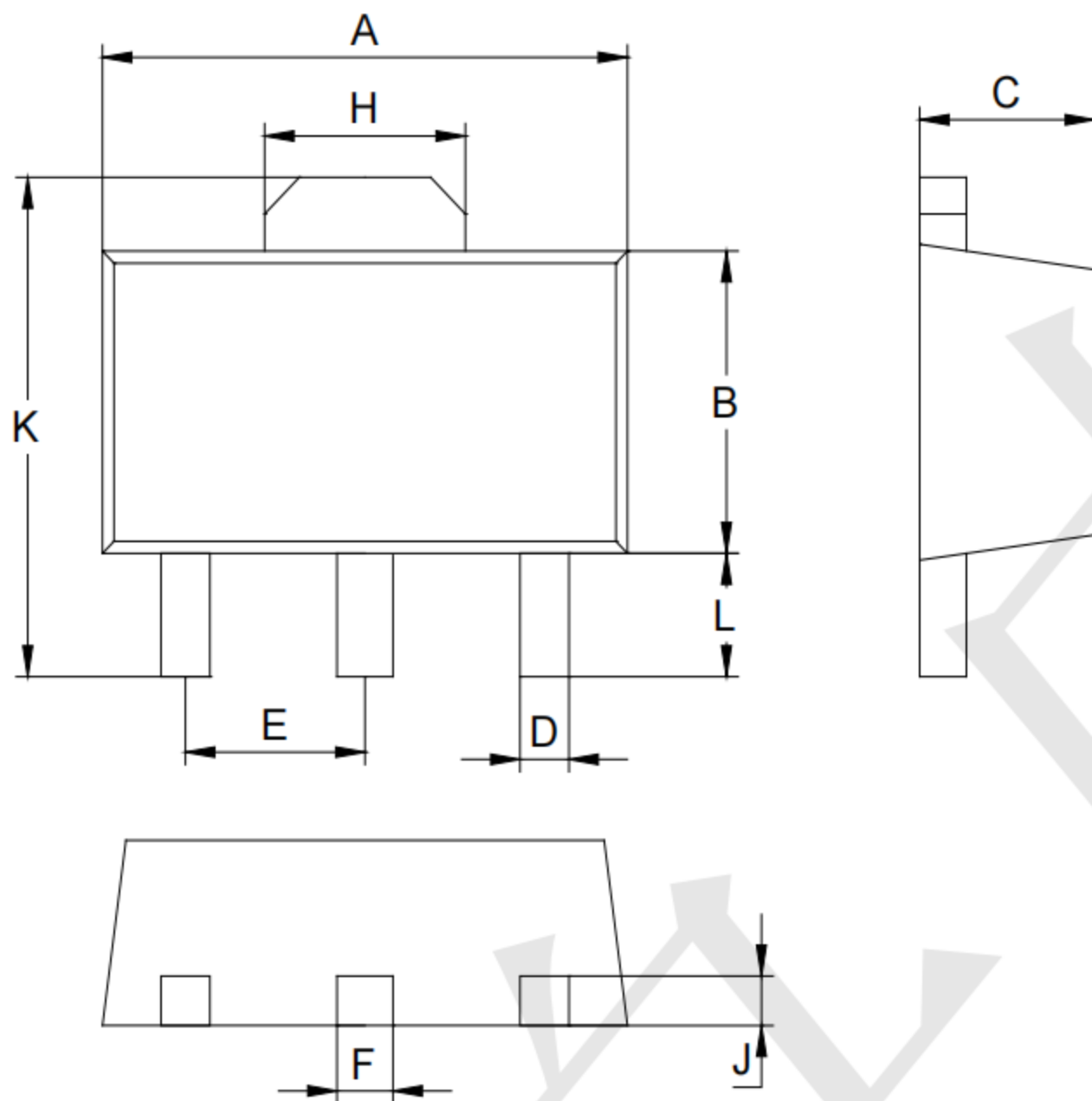


Base-emitter saturation voltage

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

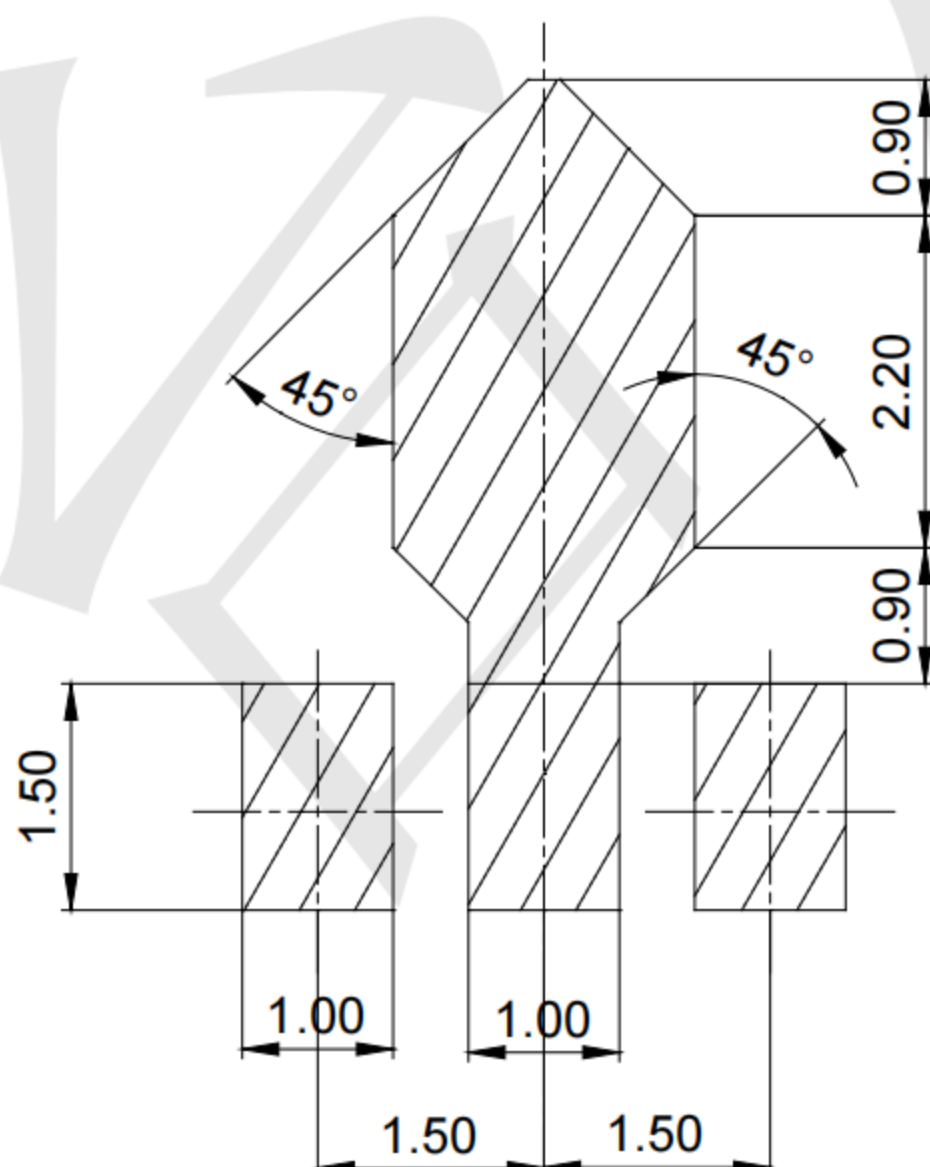


Outline Drawing - SOT-89



SOT-89		
Dim	Min	Max
A	4.30	4.70
B	2.25	2.65
C	1.30	1.70
D	0.30	0.50
E	1.40	1.60
F	0.38	0.58
H	1.60	1.80
J	0.30	0.50
L	0.90	1.10
K	3.95	4.35
All Dimensions in mm		

Land Pattern - SOT-89



Unit: mm