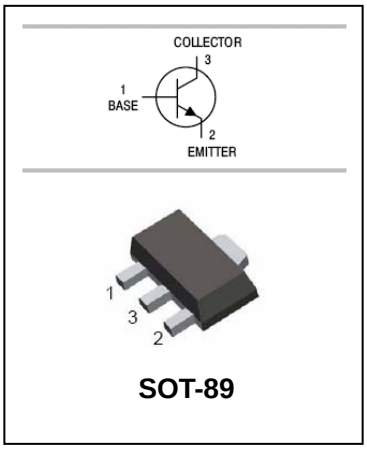
NPN Silicon AF Transistors BCX54/BCX55/BCX56

FEATURES

- For AF driver and output stages
- High collector current
- Low collector-emitter saturation voltage
- Complementary types:BCX51…BCX53(PNP)

Pb
Lead-free



SOT-89

ORDERING INFORMATION

Type No.	Marking	Package Code
BCX54	BA	SOT-89
BCX54-10	BC	SOT-89
BCX54-16	BD	SOT-89
BCX55	BE	SOT-89
BCX55-10	BG	SOT-89
BCX55-16	BM	SOT-89
BCX56	BH	SOT-89
BCX56-10	BK	SOT-89
BCX56-16	BL	SOT-89

MAXIMUM RATING @ Ta=25℃ unless otherwise specified

Symbol	Parameter		Value	Unit
V_{CBO}	Collector-Base Voltage	BCX54 BCX55 BCX56	45 60 100	V
V_{CEO}	Collector-Emitter Voltage	BCX54 BCX55 BCX56	45 60 80	V
V_{EBO}	Emitter-Base Voltage		5	V
I_C	DC Collector Current		1	A
I_{CM}	Peak Collector Current		1.5	A
I_B	Base current		100	mA
I_{BM}	Peak base current		200	mA
P_{tot}	Total power dissipation,T_S=130℃		1	W
T_j, T_{stg}	Junction and Storage Temperature		-65 to+150	℃

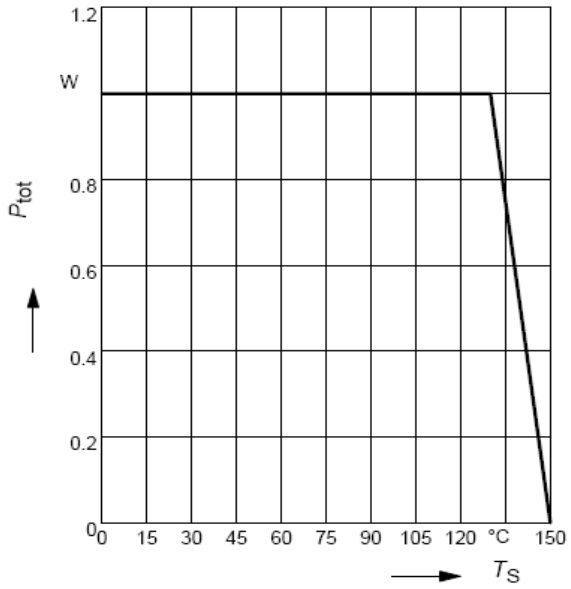
NPN Silicon AF Transistors BCX54/BCX55/BCX56

ELECTRICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=100μA I_B=0 BCX54 BCX55 BCX56	45 60 100		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=10mA I_B=0 BCX54 BCX55 BCX56	45 60 80		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=10μA I_C=0	5		V
Collector cut-off current	I_{CBO}	V_{CB}=30V I_E=0		100	nA
		V_{CB}=30V I_E=0,T_A=150℃		20	μA
DC current gain	h_{FE}	V_{CE}=2V I_C=5mA V_{CE}=2V I_C=150mA V_{CE}=2V I_C=500mA	25 40 25	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	V
Transition frequency	f_T	V_{CE}=10V, I_C=50mA, f=20MHz	100		MHz

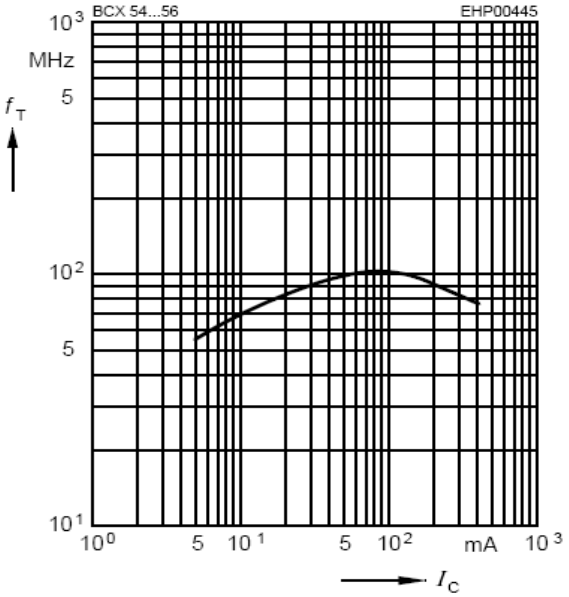
TYPICAL CHARACTERISTICS @ Ta=25℃ unless otherwise specified

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



Transition frequency $f_T = f(I_C)$

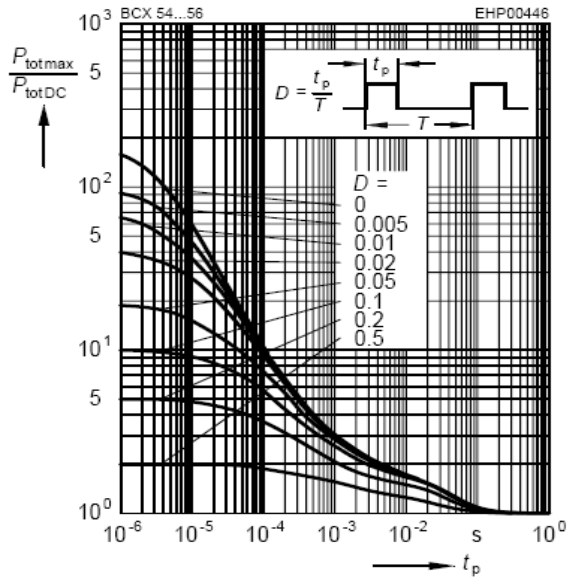
V_{CE} = 10V



NPN Silicon AF Transistors BCX54/BCX55/BCX56

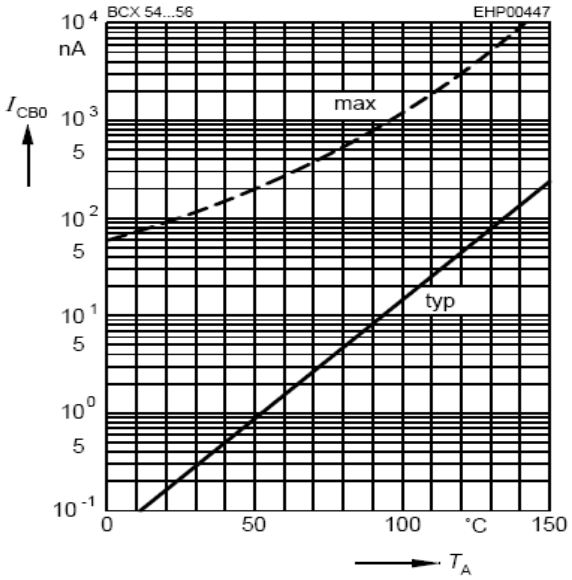
Permissible pulse load

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



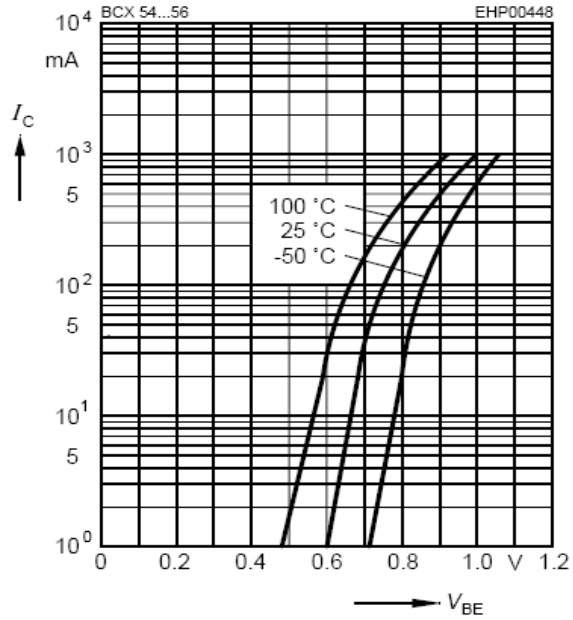
Collector cutoff current $I_{CBO} = f(T_A)$

V_{CB} = 30V



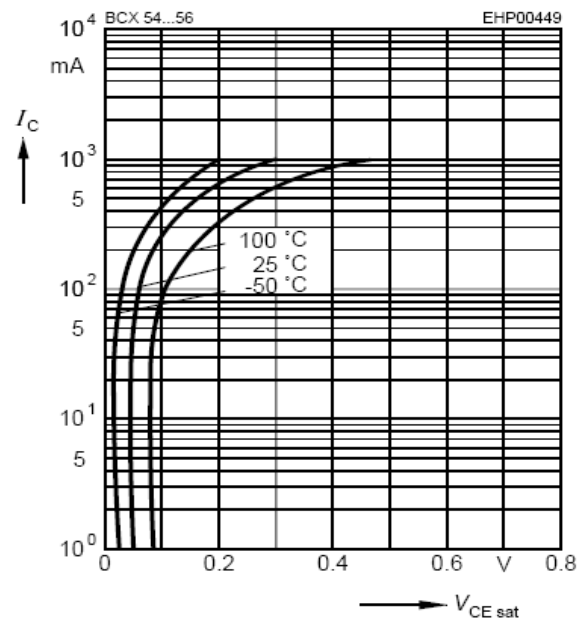
Collector current $I_C = f(V_{BE})$

V_{CE} = 2V



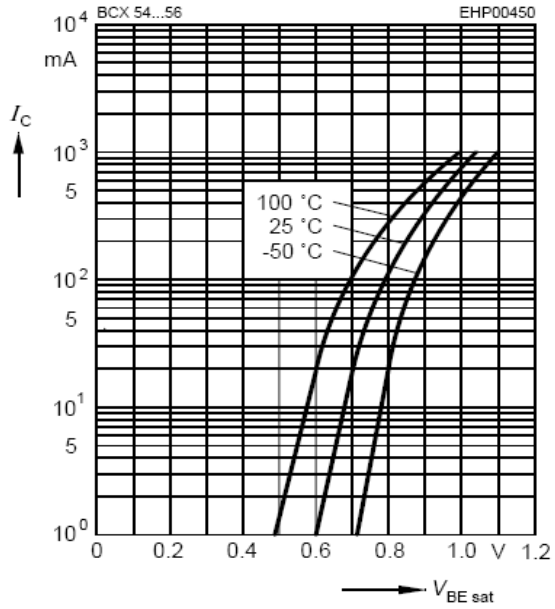
Collector-emitter saturation voltage

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

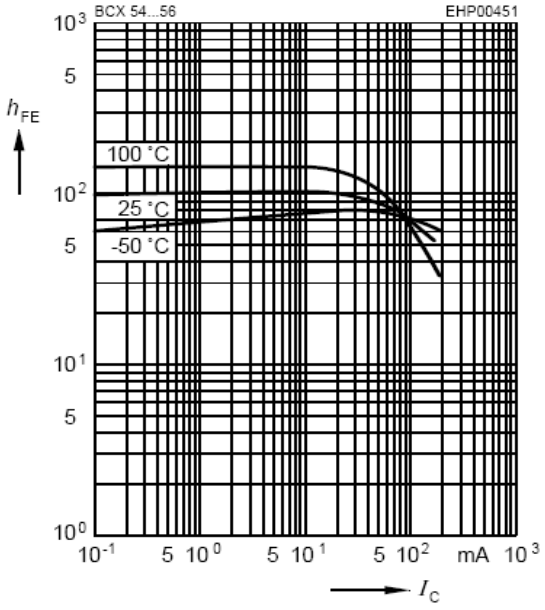


NPN Silicon AF Transistors BCX54/BCX55/BCX56

Base-emitter saturation voltage
$I_C = f(V_{BEsat})$, $h_{FE} = 10$

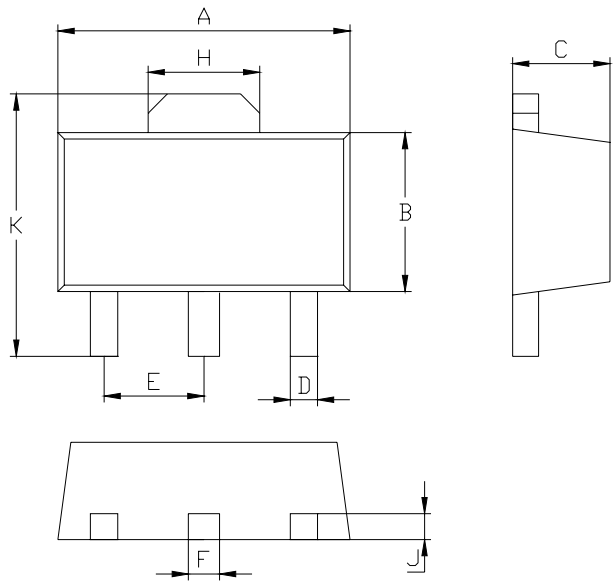


DC current gain $h_{FE} = f(I_C)$
V_{CE} = 2V



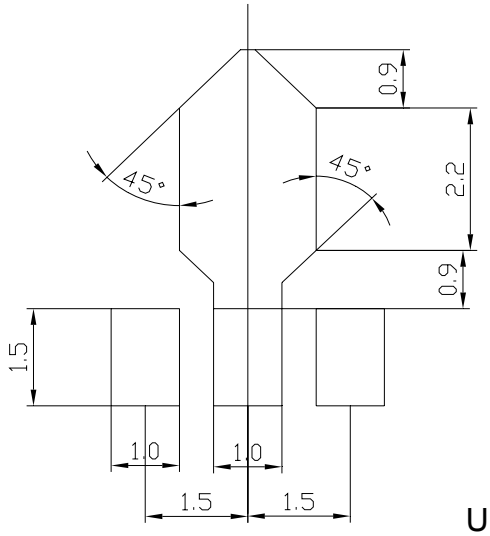
PACKAGE OUTLINE

Plastic surface mounted package SOT-89



SOT-89		
Dim	Min	Max
A	4.5	4.7
B	2.3	2.7
C	1.5Typical	
D	0.35	0.55
E	1.4	1.6
F	0.4	0.6
H	1.55	1.75
J	0.4Typical	
K	4.15	4.25
All Dimensions in mm		

SOLDERING FOOTPRINT



Unit:mm

PACKAGE INFORMATION

Device	Package	Shipping
BCX54/BCX55/BCX56	SOT-89	1000/Tape&Reel