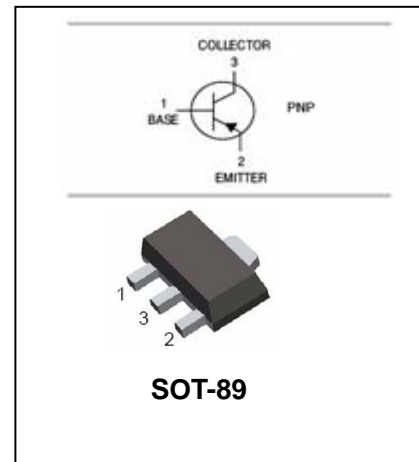


## PNP Medium power transistors

## BCX51/BCX52/BCX53

### FEATURES

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



### 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°C unless otherwise specified

Symbol	Parameter	Value	Unit
V <sub>CBO</sub>	Collector-Base Voltage	BCX51	-45
		BCX52	-60
		BCX53	-100
V <sub>CEO</sub>	Collector-Emitter Voltage	BCX51	-45
		BCX52	-60
		BCX53	-80
V <sub>EBO</sub>	Emitter-Base Voltage	-5	V
I <sub>C</sub>	Collector Current -Continuous	-1	A
I <sub>CM</sub>	Collector Current -Peak	-1.5	A
P <sub>D</sub>	Total Device Dissipation	500	mW
T <sub>j</sub> , T <sub>stg</sub>	Junction and Storage Temperature	-65 to +150	°C

### ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified



**PNP Medium power transistors**

**BCX51/BCX52/BCX53**

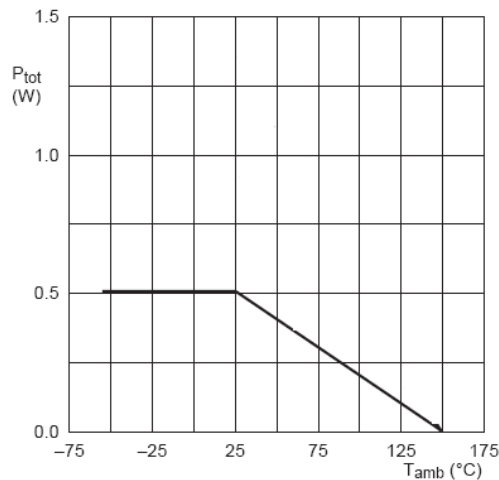
Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100\mu A$ $I_E = 0$ BCX51 BCX52 BCX53	-45 -60 -100			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -10mA$ $I_B = 0$ BCX51 BCX52 BCX53	-45 -60 -80			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -10\mu A$ $I_C = 0$	-5			$\mu V$
Collector cut-off current	$I_{CBO}$	$V_{CB} = -30V$ $I_E = 0$			-0.1	$\mu A$
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**

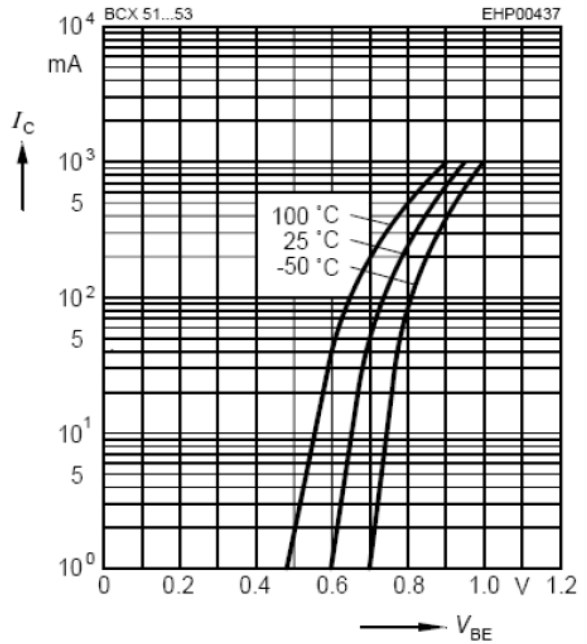
TYPICAL CHARACTERISTICS @  $T_a=25^\circ\text{C}$  unless otherwise specified

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



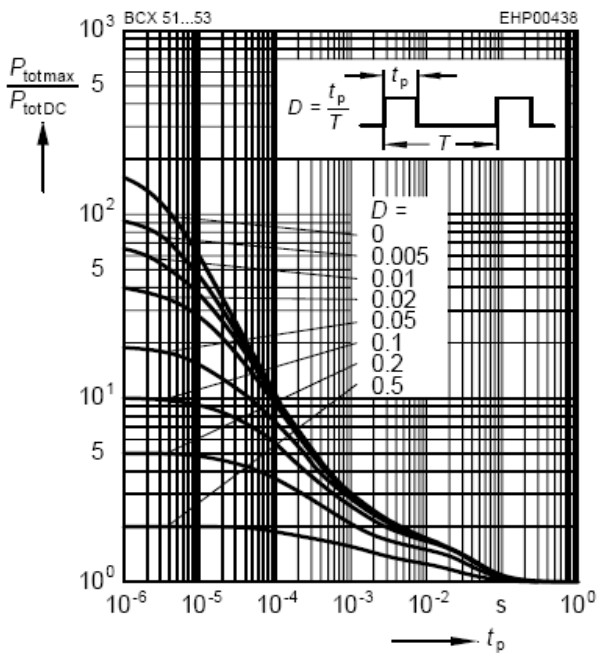
**Collector current  $I_C = f(V_{\text{BE}})$**

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



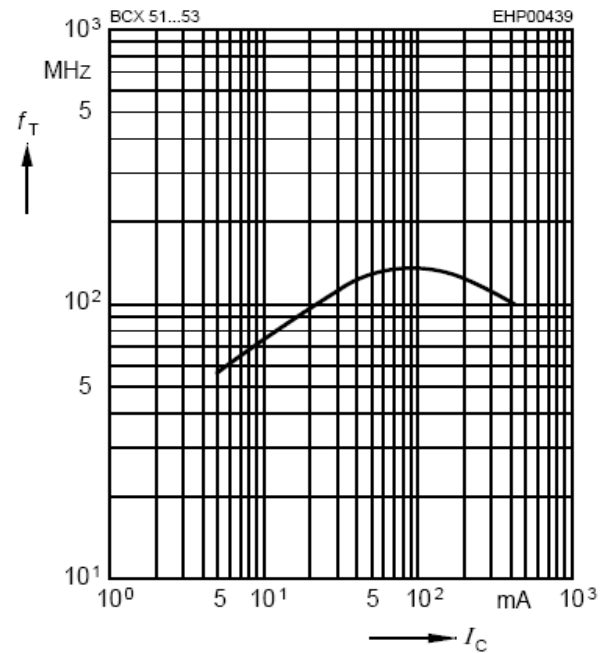
**Permissible pulse load**

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



**Transition frequency  $f_T = f(I_C)$**

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

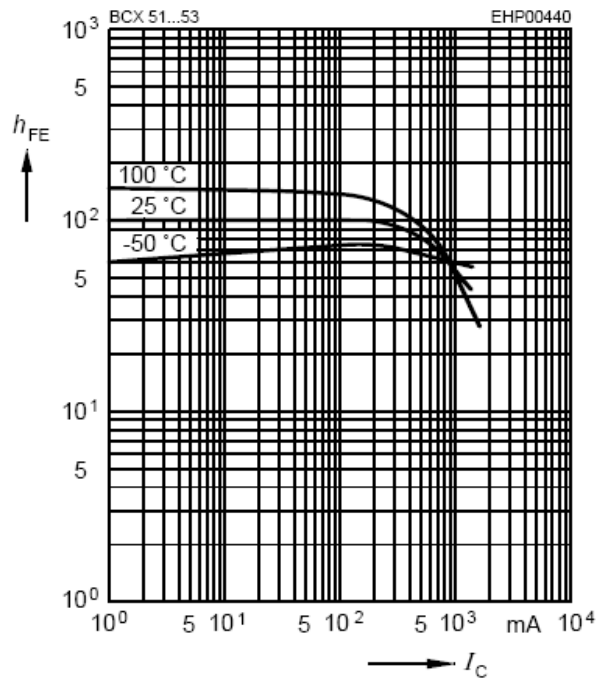


**PNP Medium power transistors**

**BCX51/BCX52/BCX53**

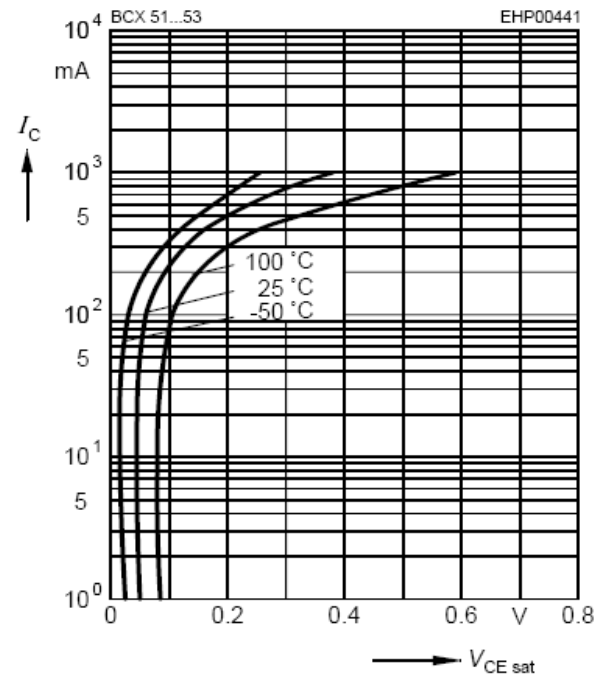
**DC current gain  $h_{FE} = f(I_C)$**

$V_{CE} = 2V$



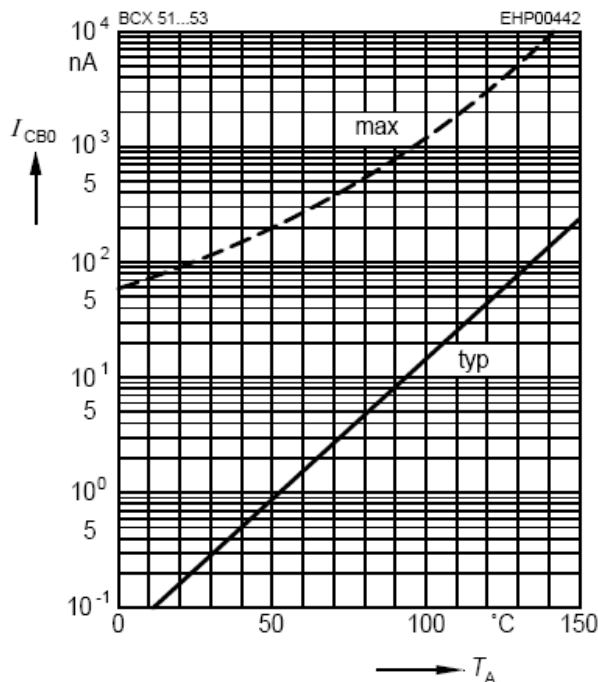
**Collector-emitter saturation voltage**

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



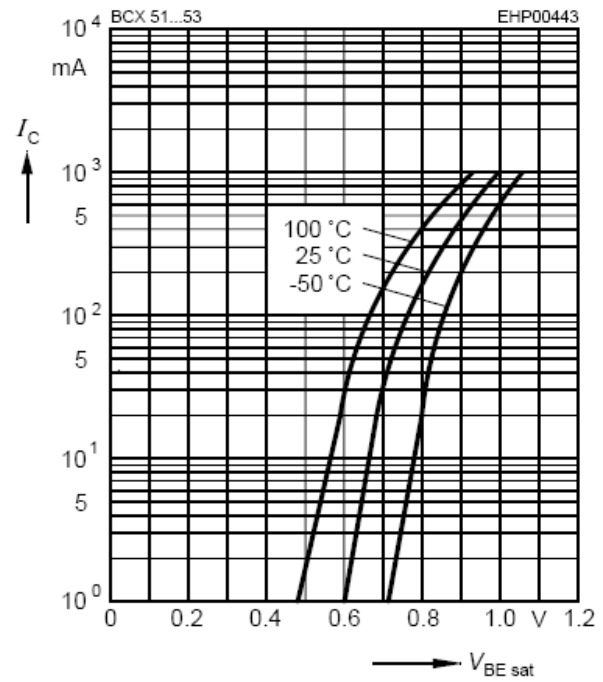
**Collector cutoff current  $I_{CBO} = f(T_A)$**

$V_{CB} = 30V$



**Base-emitter saturation voltage**

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



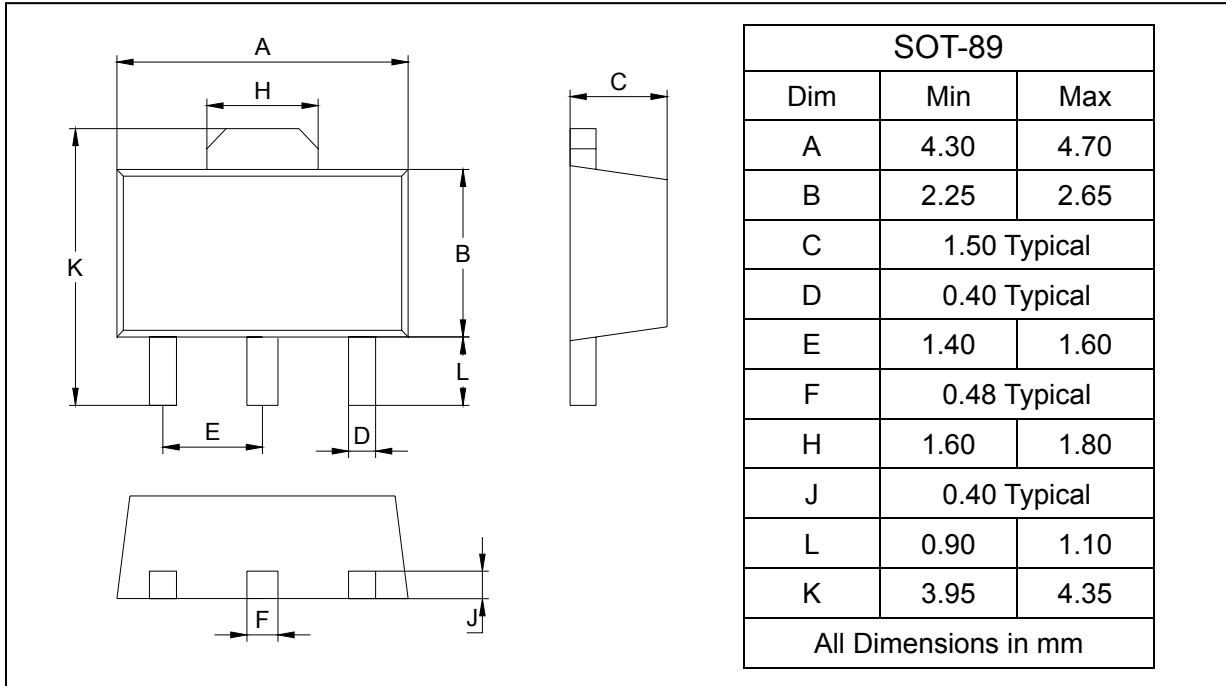
**PNP Medium power transistors**

**BCX51/BCX52/BCX53**

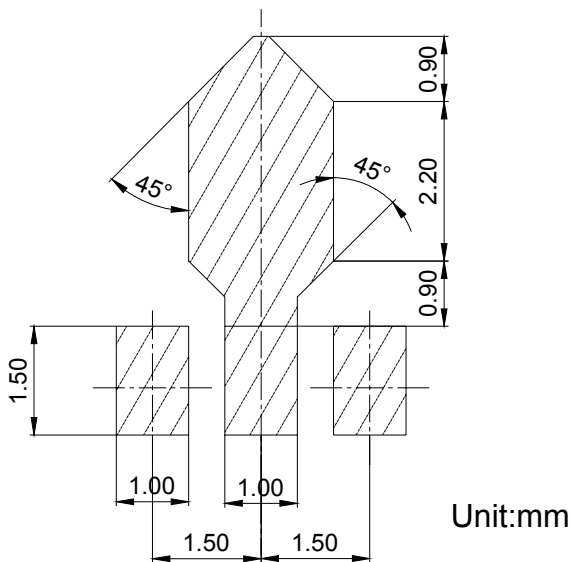
**PACKAGE OUTLINE**

Plastic surface mounted package

SOT-89



**SOLDERING FOOTPRINT**



**PACKAGE INFORMATION**

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