

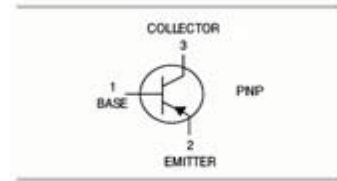
## PNP Medium Power Transistor: BCX51/BCX52/BCX53

### 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



SOT-89

### 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 Ratings & Characteristics: Tamb=25°C unless otherwise specified

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	V
Emitter - Base Voltage	$V_{ebo}$	-5	V
Collector Current - Continuous	$I_C$	-1	A
Collector Current - Peak	$I_{CM}$	-1.5	A
Total device Dissipation	$P_D$	500	mW
Junction and Storage Temperature	$T_j, T_{stg}$	-65 to +150	°C

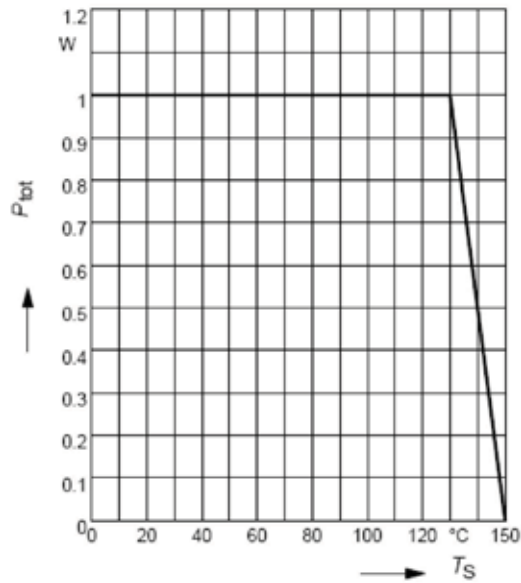
Maximum Ratings & Characteristics: Tamb=25°C unless otherwise specified

Parameter:	Symbol:	Test Conditions:	Min:	Typ:	Max:	Unit:
Collector - Base Breakdown Voltage	$V_{(BR)CBO}$	$I_C = -100\mu A$ $I_E = 0$ 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			V
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	V
Transition Frequency	$f_T$	$V_{CE} = -10$ $I_C = -50$ , $f = 20MH$		125		MHz

# Typical Characteristics: $T_{amb}=25^{\circ}C$ unless otherwise specified

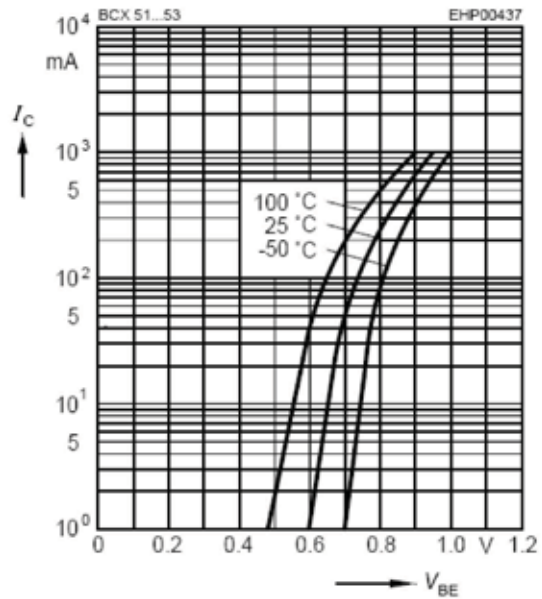
## Ratings & Characteristic Curves

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



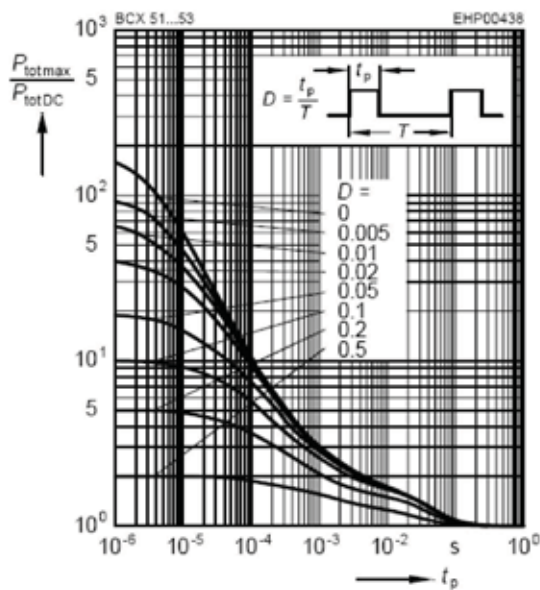
**Collector current  $I_C = f(V_{BE})$**

$V_{CE} = 2V$



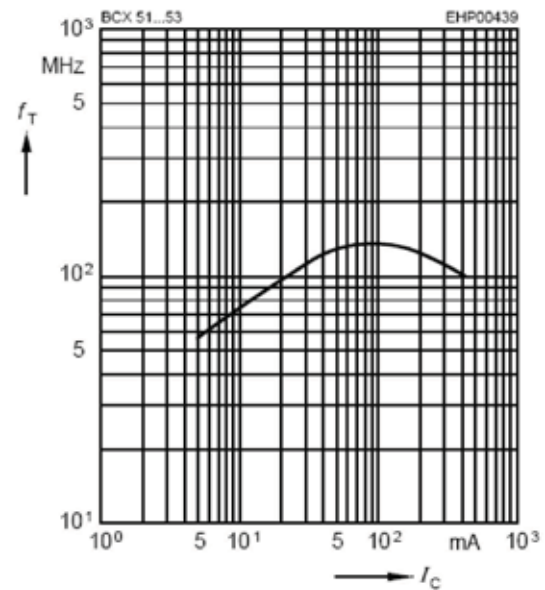
**Permissible pulse load**

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



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

$V_{CE} = 10V$

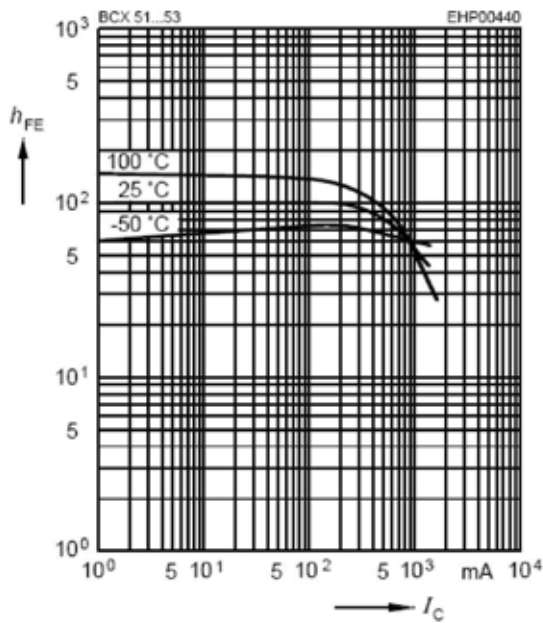


# Typical Characteristics: Tamb=25°C unless otherwise specified

## Ratings & Characteristic Curves

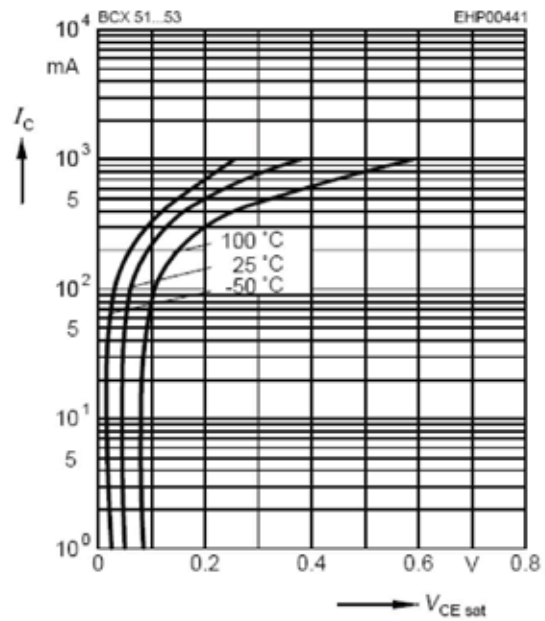
**DC current gain  $h_{FE} = f(I_C)$**

$V_{CE} = 2V$



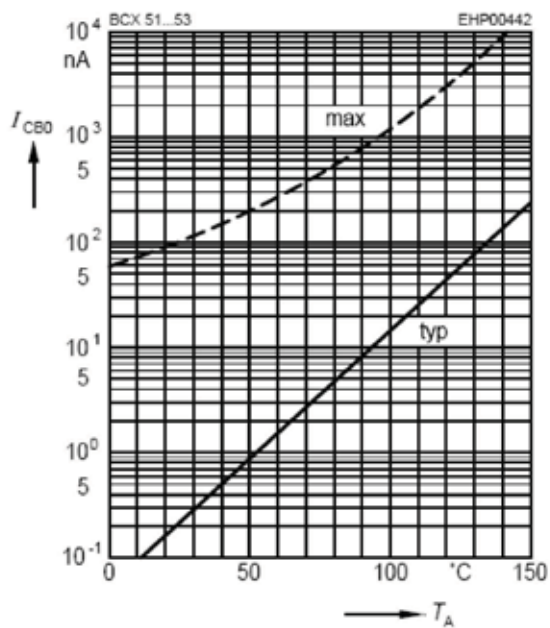
**Collector-emitter saturation voltage**

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



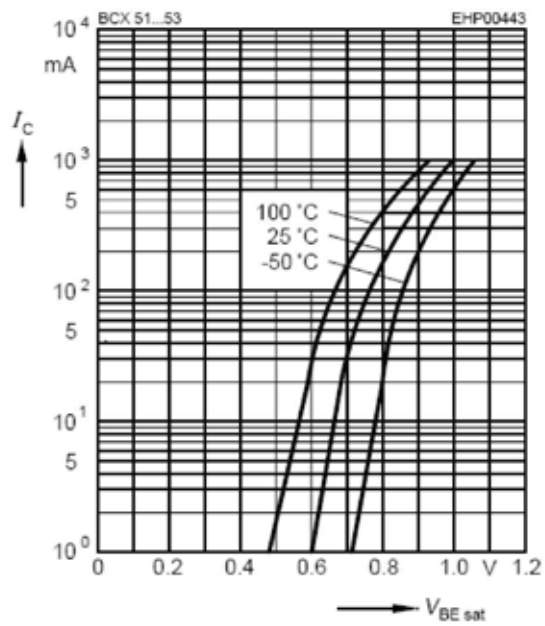
**Collector cutoff current  $I_{CBO} = f(T_A)$**

$V_{CB} = 30V$



**Base-emitter saturation voltage**

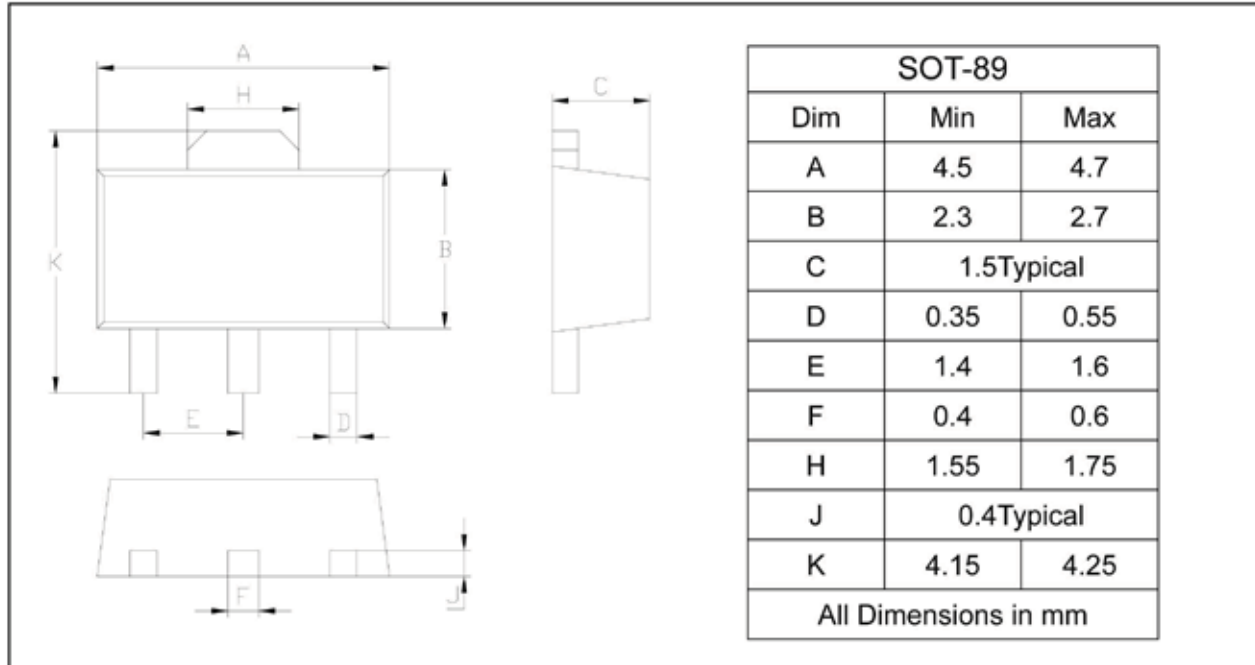
$I_C = f(V_{BEsat}), h_{FE} = 10$



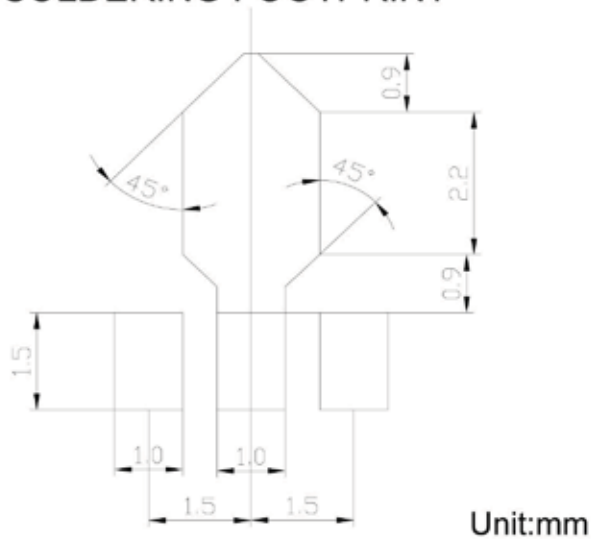
## Package Outline

Plastic surface mounted package

SOT-89



## SOLDERING FOOTPRINT



## PACKAGE INFORMATION

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