

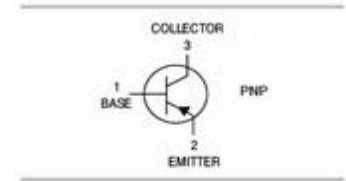
PNP Medium Power Transistor: BCX51/BCX52/BCX53

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

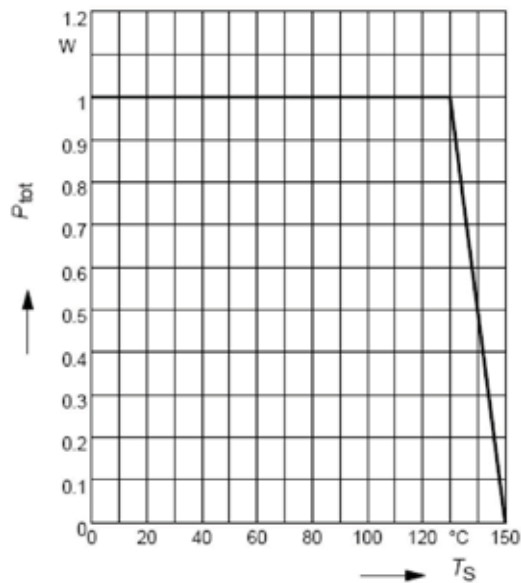
Maximum Ratings & Characteristics: Tamb=25°C unless otherwise specified

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
Emmitter - 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	$V_{CE} = -10V$ $I_C = -50mA$, $f = 20MHz$		125		MHz

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

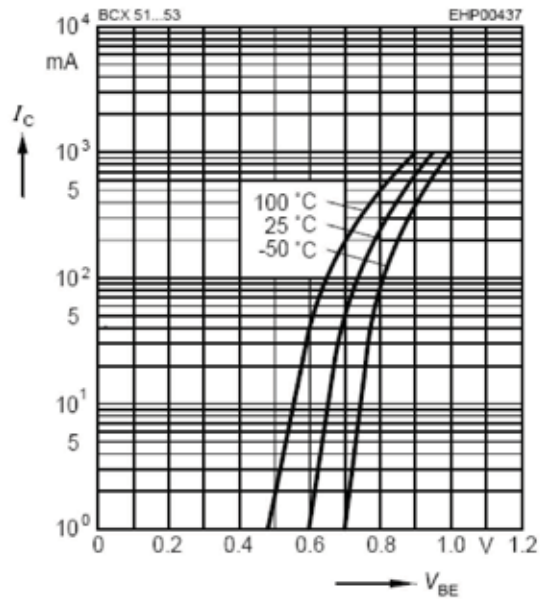
Ratings & Characteristic Curves

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



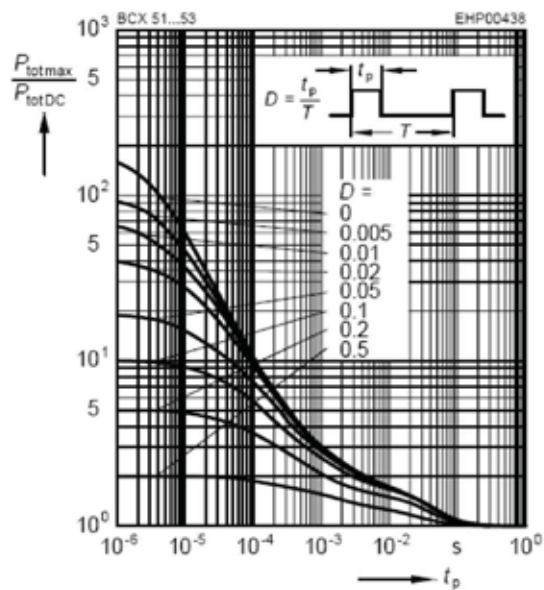
Collector current $I_C = f(V_{BE})$

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



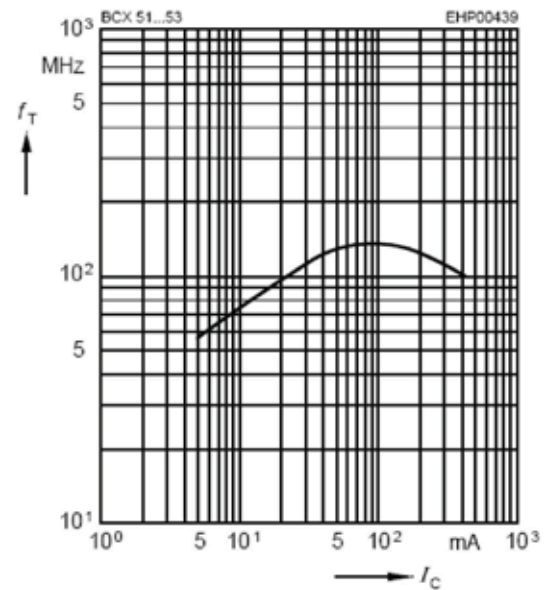
Permissible pulse load

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



Transition frequency $f_T = f(I_C)$

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

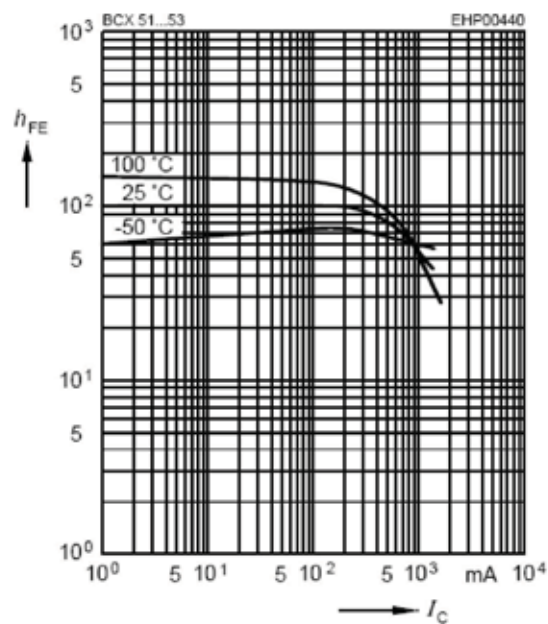


Typical Characteristics: Tamb=25°C unless otherwise specified

Ratings & Characteristic Curves

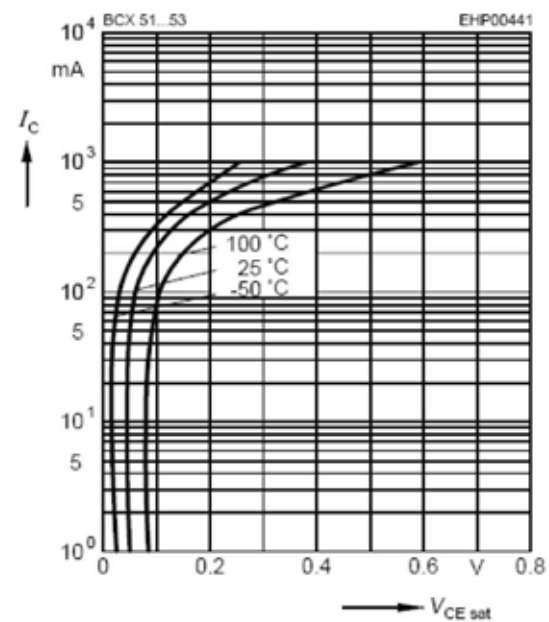
DC current gain $h_{FE} = f(I_C)$

$V_{CE} = 2V$



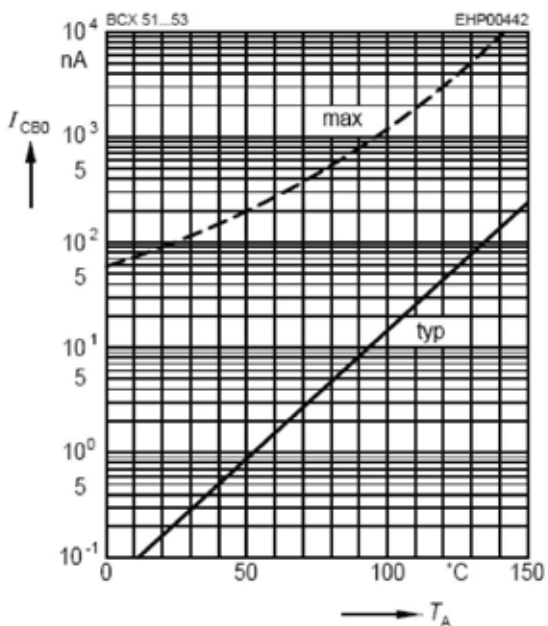
Collector-emitter saturation voltage

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



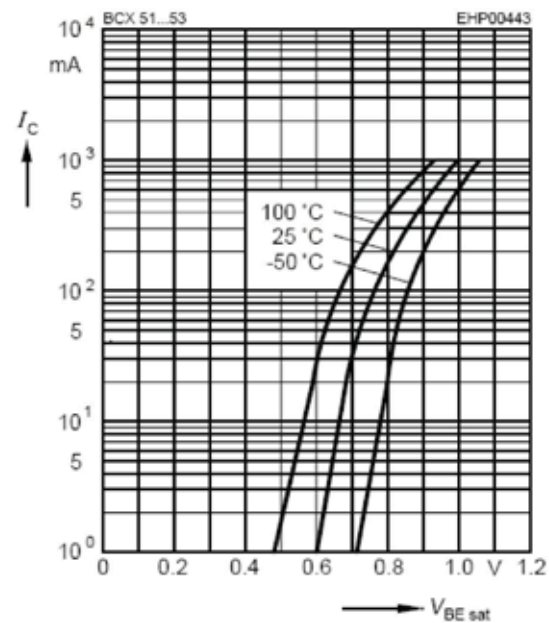
Collector cutoff current $I_{CBO} = f(T_A)$

$V_{CB} = 30V$



Base-emitter saturation voltage

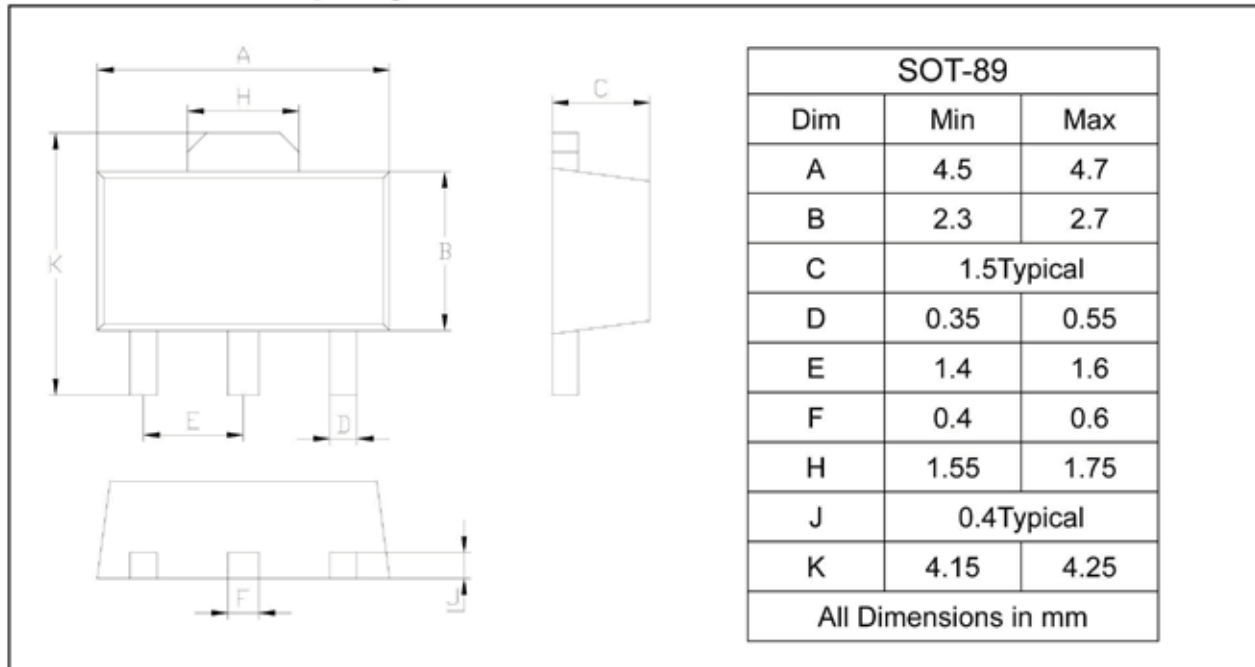
$I_C = f(V_{BEsat}), h_{FE} = 10$



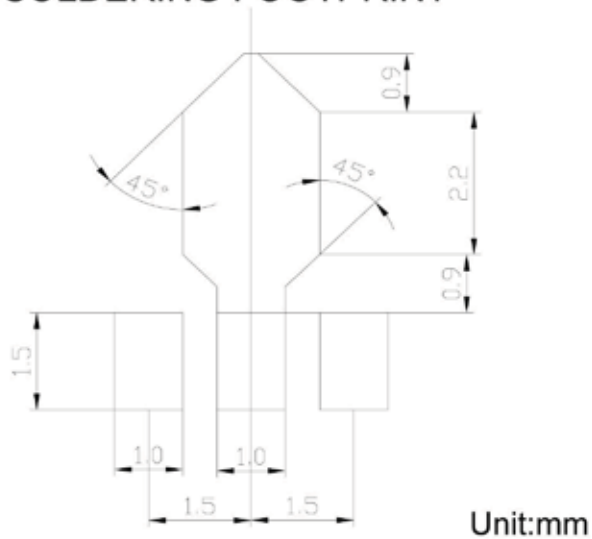
Package Outline

Plastic surface mounted package

SOT-89



SOLDERING FOOTPRINT



PACKAGE INFORMATION

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