

SOT-89 Plastic-Encapsulate Transistors

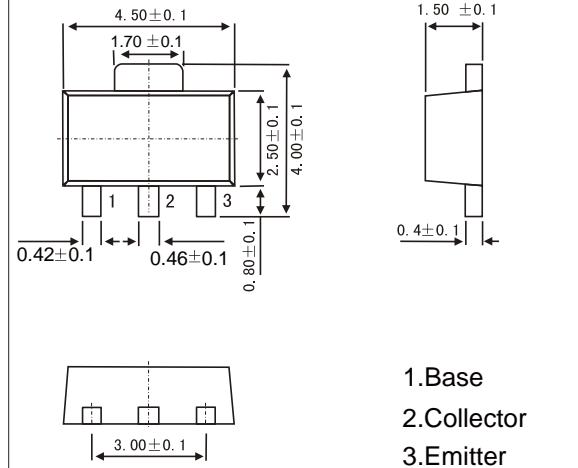
Features

- NPN Complements to BCX54,BCX55,BCX56
- Low Voltage
- High Current
- PNP Transistors

MECHANICAL DATA

- Case style:SOT-89molded plastic
- Mounting position:any

SOT-89



MAXIMUM RATINGS AND CHARACTERISTICS

@ 25°C Ambient Temperature (unless otherwise noted)

Parameter	Symbol	Rating	Unit
Collector-base voltage	BCX51 BCX52 BCX53	V <sub>CB0</sub> -45 -60 -100	V V V
Collector-emitter voltage	BCX51 BCX52 BCX53	V <sub>CEO</sub> -45 -60 -80	V V V
Emitter-base voltage	V <sub>EB0</sub>	-5	V
Collector current	I <sub>C</sub>	-1	A
Peak collector current	I <sub>CM</sub>	-1.5	A
Peak base current	I <sub>BM</sub>	-200	mA
Total power dissipation	P <sub>tot</sub>	1.3	W
Storage temperature	T <sub>stg</sub>	-65 to +150	°C
Junction temperature	T <sub>j</sub>	150	°C
Operating ambient temperature	T <sub>amb</sub>	-65 to +150	°C
Thermal resistance from junction to ambient	R <sub>th(j-a)</sub>	94	K/W
Thermal resistance from junction to solder point	R <sub>th(j-s)</sub>	14	K/W

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	I <sub>CBO</sub>	V <sub>CB</sub> = -30 V, I <sub>E</sub> = 0			-100	nA
		V <sub>CB</sub> = -30 V, I <sub>E</sub> = 0; T <sub>j</sub> = 125°C			-10	uA
Emitter cutoff current	I <sub>EB0</sub>	V <sub>EB</sub> = -5 V, I <sub>C</sub> = 0			-100	nA
DC current gain	h <sub>FE</sub>	I <sub>C</sub> = -5 mA; V <sub>CE</sub> = -2 V	63			
		I <sub>C</sub> = -150 mA; V <sub>CE</sub> = -2 V	63		250	
		I <sub>C</sub> = -500 mA; V <sub>CE</sub> = -2 V	40			
DC current gain BCX51-10,BCX52-10,BCX53-10 BCX51-16,BCX52-16,BCX53-16	h <sub>FE</sub>	I <sub>C</sub> = -150 mA; V <sub>CE</sub> = -2 V	63		160	
		I <sub>C</sub> = -150 mA; V <sub>CE</sub> = -2 V	100		250	
Collector-emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> = -500 mA; I <sub>B</sub> = -50 mA			-500	mV
Base to emitter voltage	V <sub>BE</sub>	I <sub>C</sub> = -500 mA; V <sub>CE</sub> = -2 V			-1	V
Transition frequency	f <sub>T</sub>	I <sub>C</sub> = -10 mA; V <sub>CE</sub> = -5 V; f = 100 MHz		50		MHz

# RATINGS AND CHARACTERISTIC CURVES

## ■ hFE Classification

TYPE	BCX51	BCX51-10	BCX51-16
Marking	AA	AC	AD

TYPE	BCX52	BCX52-10	BCX52-16
Marking	AE	AG	AM

TYPE	BCX53	BCX53-10	BCX53-16
Marking	AH	AK	AL

## ■ Typical Characteristics

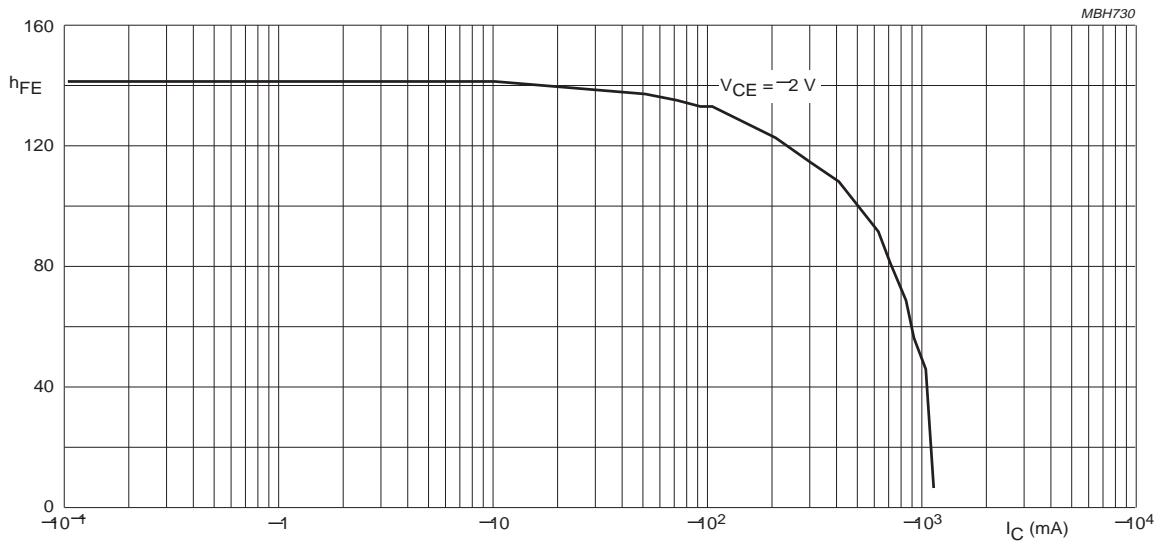


Fig.1 DC current gain; typical values.