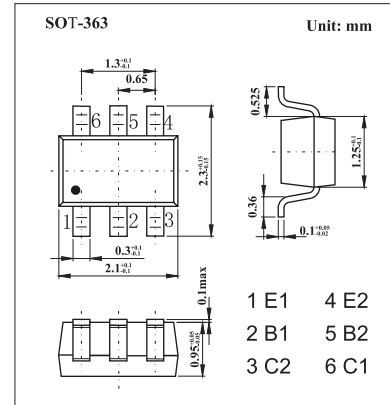


# PNP Transistors

## BC857BS

### ■ Features

- High current gain
- Low collector-emitter saturation voltage
- For AF input stages and driver applications



### ■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	V <sub>CB0</sub>	-50	V
Collector - Emitter Voltage	V <sub>CEO</sub>	-45	
	V <sub>CES</sub>	-50	
Emitter - Base Voltage	V <sub>EBO</sub>	-5	
Collector Current - Continuous	I <sub>c</sub>	-200	mA
Collector Power Dissipation -Derate above 25°C	P <sub>c</sub>	300	mW
		2.4	mW/°C
Thermal Resistance.Junction- to-Ambient	R <sub>thJA</sub>	415	°C/W
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature Range	T <sub>stg</sub>	-55 to 150	

### ■ Electrical Characteristics Ta = 25°C

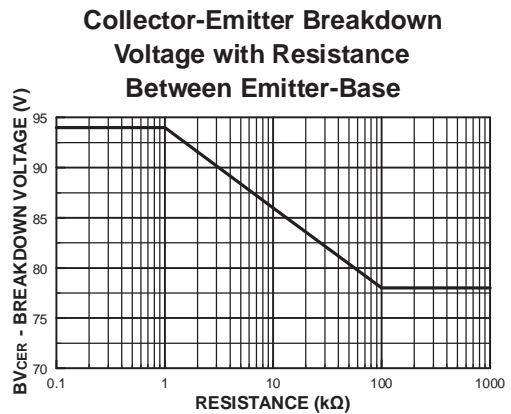
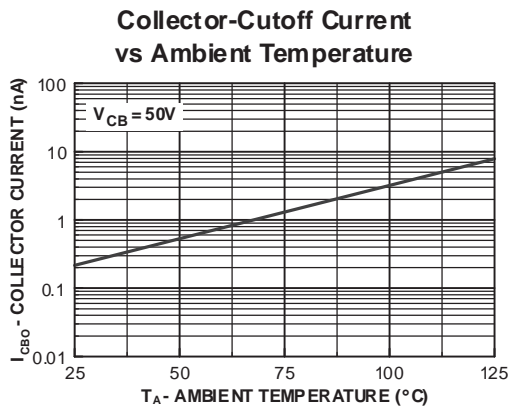
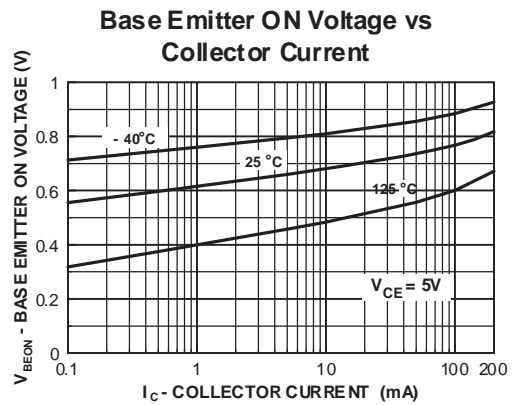
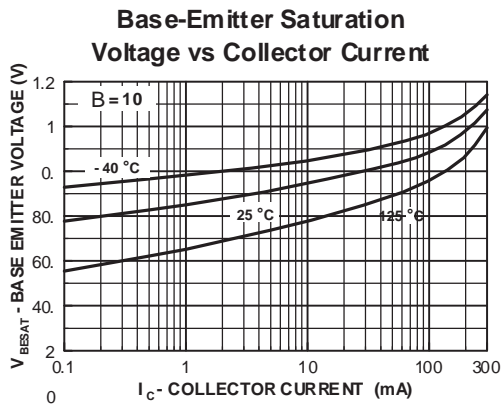
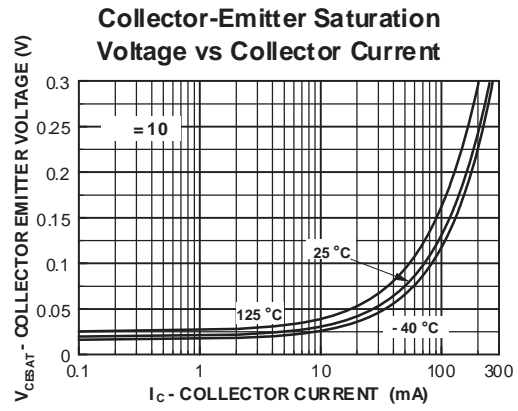
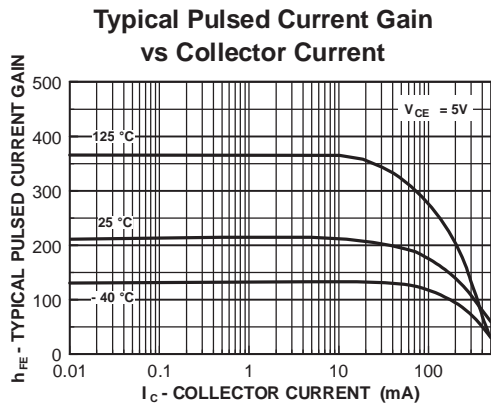
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V <sub>CB0</sub>	I <sub>c</sub> = -100 μA, I <sub>E</sub> = 0	-50			V
Collector- emitter breakdown voltage	V <sub>CEO</sub>	I <sub>c</sub> = -10 mA, I <sub>B</sub> = 0	-45			
	V <sub>CES</sub>	I <sub>c</sub> = -100 μA, V <sub>BE</sub> = 0	-50			
Emitter - base breakdown voltage	V <sub>EBO</sub>	I <sub>E</sub> = -100 μA, I <sub>c</sub> = 0	-5			
Collector-base cut-off current	I <sub>CB0</sub>	V <sub>CB</sub> = -30 V, I <sub>E</sub> = 0			-15	nA
		V <sub>CB</sub> = -30 V, I <sub>E</sub> = 0, Ta = 150°C			-4	uA
Emitter cut-off current	I <sub>EBO</sub>	V <sub>EB</sub> = -5V, I <sub>c</sub> =0			-100	nA
Collector-emitter saturation voltage	V <sub>CES(sat)</sub>	I <sub>c</sub> =-10 mA, I <sub>B</sub> =-0.5mA			-0.3	V
		I <sub>c</sub> =-100mA, I <sub>B</sub> =-5mA			-0.65	
Base - emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>c</sub> =-100 mA, I <sub>B</sub> =-5mA			-1.2	
Base-emitter on voltage	V <sub>BE(on)</sub>	V <sub>CE</sub> = -5V, I <sub>c</sub> =- 2mA	-0.6		-0.75	
		V <sub>CE</sub> = -5V, I <sub>c</sub> = -10mA			-0.82	
DC current gain	h <sub>FE</sub>	V <sub>CE</sub> = -5V, I <sub>c</sub> = -2mA	125		630	
Noise Figure	NF	I <sub>c</sub> = -0.2 mA, V <sub>CE</sub> = -5V R <sub>s</sub> = 2 kΩ, f = 1 kHz, BW = 200 Hz		2.5		dB
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> = -10V, I <sub>E</sub> =0,f=1MHz		3.5		pF
Transition frequency	f <sub>T</sub>	V <sub>CE</sub> = -5V, I <sub>c</sub> = -10mA,f=100MHz		200		MHz

### ■ Marking

Marking	3F
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■ Typical Characteristics



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■ Typical Characteristics

