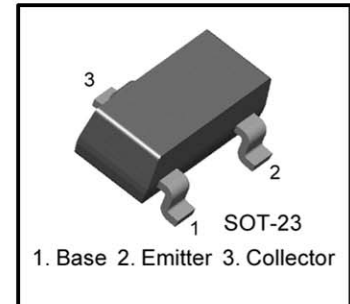


● Switching and Amplifier Applications

- Suitable for automatic insertion in thick and thin-film circuits
- Low Noise: BC859, BC860
- Complement to BC846 ... BC850



PNP Epitaxial Silicon Transistor

● Absolute Maximum Ratings $T_a=25^{\circ}\text{C}$ unless otherwise noted

Symbol	Parameter	Value	Units	
V_{CBO}	Collector-Base Voltage	: BC856	-80	V
		: BC857/860	-50	V
		: BC858/859	-30	V
V_{CEO}	Collector-Emitter Voltage	: BC856	-65	V
		: BC857/860	-45	V
		: BC858/859	-30	V
V_{EBO}	Emitter-Base Voltage	-5	V	
I_C	Collector Current (DC)	-100	mA	
P_C	Collector Power Dissipation	310	mW	
T_J	Junction Temperature	150	$^{\circ}\text{C}$	
T_{STG}	Storage Temperature	-65 ~ 150	$^{\circ}\text{C}$	

● Electrical Characteristics $T_a=25^{\circ}\text{C}$ unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Typ.	Max.	Units
I_{CBO}	Collector Cut-off Current	$V_{CB} = -30\text{V}, I_E = 0$			-15	nA
h_{FE}	DC Current Gain	$V_{CE} = -5\text{V}, I_C = -2\text{mA}$	110		800	
$V_{CE}(\text{sat})$	Collector-Emitter Saturation Voltage	$I_C = -10\text{mA}, I_B = -0.5\text{mA}$		-90	-300	mV
		$I_C = -100\text{mA}, I_B = -5\text{mA}$		-250	-650	mV
$V_{BE}(\text{sat})$	Base-Emitter Saturation Voltage	$I_C = -10\text{mA}, I_B = -0.5\text{mA}$		-700		mV
		$I_C = -100\text{mA}, I_B = -5\text{mA}$		-900		mV
$V_{BE}(\text{on})$	Base-Emitter On Voltage	$V_{CE} = -5\text{V}, I_C = -2\text{mA}$	-600	-660	-750	mV
		$V_{CE} = -5\text{V}, I_C = -10\text{mA}$			-800	mV
f_T	Current Gain Bandwidth Product	$V_{CE} = -5\text{V}, I_C = -10\text{mA}$ $f = 100\text{MHz}$		150		MHz
C_{ob}	Output Capacitance	$V_{CB} = -10\text{V}, I_E = 0, f = 1\text{MHz}$			6	pF
NF	Noise Figure	: BC856/857/858		2	10	dB
		: BC859/860		1	4	dB
		: BC859	$V_{CE} = -5\text{V}, I_C = -200\mu\text{A}$	1.2	4	dB
		: BC860	$R_G = 2\text{K}\Omega, f = 30 \sim 15000\text{Hz}$	1.2	2	dB

● h_{FE} Classification

Classification	A	B	C
h_{FE}	110 ~ 220	200 ~ 450	420 ~ 800

Typical Characteristics

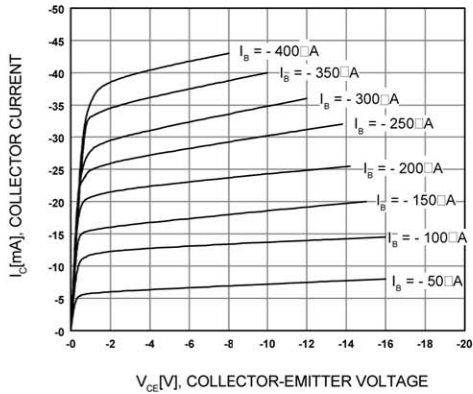


Figure 1. Static Characteristic

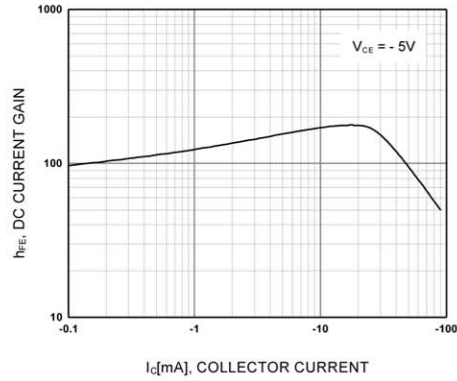


Figure 2. DC current Gain

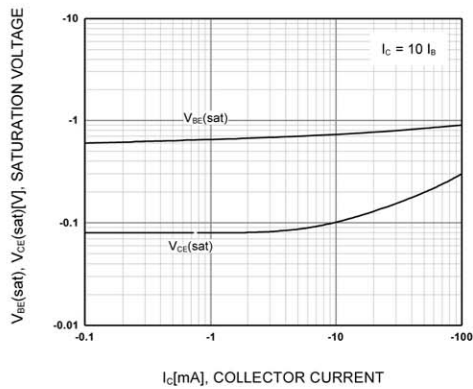


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

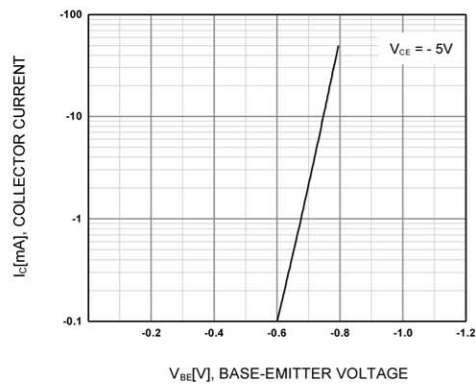


Figure 4. Base-Emitter On Voltage

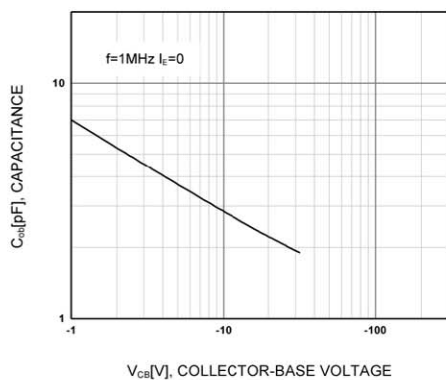


Figure 5. Collector Output Capacitance

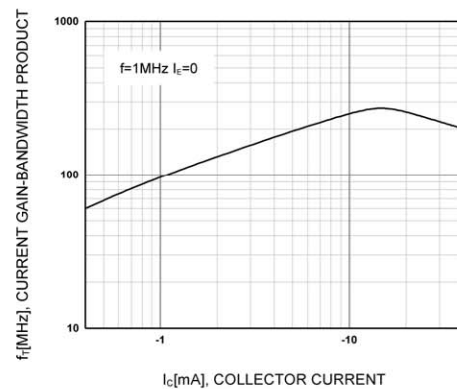


Figure 6. Current Gain Bandwidth Product

Package Dimensions

SOT-23

