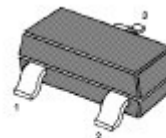




BC856C...BC860C PNP Silicon Epitaxial Transistor

for switching and amplifier applications



1. BASE 2. EMITTER 3. COLLECTOR
SOT-23 Plastic Package

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Collector Base Voltage	BC856C	$-V_{CBO}$	80 V
	BC857C, BC860C	$-V_{CBO}$	50 V
	BC858C, BC859C	$-V_{CBO}$	30 V
Collector Emitter Voltage	BC856C	$-V_{CEO}$	65 V
	BC857C, BC860C	$-V_{CEO}$	45 V
	BC858C, BC859C	$-V_{CEO}$	30 V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	100	mA
Peak Collector Current	$-I_{CM}$	200	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_{stg}	- 65 to + 150	$^\circ\text{C}$

Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Max.	Unit
DC Current Gain at $-V_{CE} = 5\text{ V}$, $-I_C = 2\text{ mA}$	Current Gain Group			
A	h_{FE}	110	220	-
B	h_{FE}	200	450	-
C	h_{FE}	420	800	-
Collector Base Cutoff Current at $-V_{CB} = 30\text{ V}$	$-I_{CBO}$	-	15	nA
Collector Base Breakdown Voltage at $-I_C = 10\text{ }\mu\text{A}$	BC856 $-V_{(BR)CBO}$	80	-	V
	BC857, BC860 $-V_{(BR)CBO}$	50	-	V
	BC858, BC859 $-V_{(BR)CBO}$	30	-	V
Collector Emitter Breakdown Voltage at $-I_C = 10\text{ }\mu\text{A}$	BC856 $-V_{(BR)CES}$	80	-	V
	BC857, BC860 $-V_{(BR)CES}$	50	-	V
	BC858, BC859 $-V_{(BR)CES}$	30	-	V
Collector Emitter Breakdown Voltage at $-I_C = 10\text{ mA}$	BC856 $-V_{(BR)CEO}$	65	-	V
	BC857, BC860 $-V_{(BR)CEO}$	45	-	V
	BC858, BC859 $-V_{(BR)CEO}$	30	-	V
Emitter Base Breakdown Voltage at $-I_E = 1\text{ }\mu\text{A}$	$-V_{(BR)EBO}$	5	-	V
Collector Emitter Saturation Voltage at $-I_C = 10\text{ mA}$, $-I_B = 0.5\text{ mA}$	$-V_{CE(sat)}$	-	0.3	V
at $-I_C = 100\text{ mA}$, $-I_B = 5\text{ mA}$	$-V_{CE(sat)}$	-	0.65	V
Base Emitter On Voltage at $-I_C = 2\text{ mA}$, $-V_{CE} = 5\text{ V}$	$-V_{BE(on)}$	0.6	0.75	V
at $-I_C = 10\text{ mA}$, $-V_{CE} = 5\text{ V}$	$-V_{BE(on)}$	-	0.82	V
Current Gain Bandwidth Product at $-V_{CE} = 5\text{ V}$, $-I_C = 10\text{ mA}$, $f = 100\text{ MHz}$	f_T	100	-	MHz
Output Capacitance at $-V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{ob}	-	6	pF
Noise Figure at $-I_C = 200\text{ }\mu\text{A}$, $-V_{CE} = 5\text{ V}$, $R_G = 2\text{ K}\Omega$, $f = 1\text{ KHz}$	BC856, BC857, BC858 BC859, BC860	-	10	dB
at $-I_C = 200\text{ }\mu\text{A}$, $-V_{CE} = 5\text{ V}$, $R_G = 2\text{ K}\Omega$, $f = 30 \sim 15\text{ KHz}$	BC859	-	4	
	BC858	-	4	
	BC860	-	2	

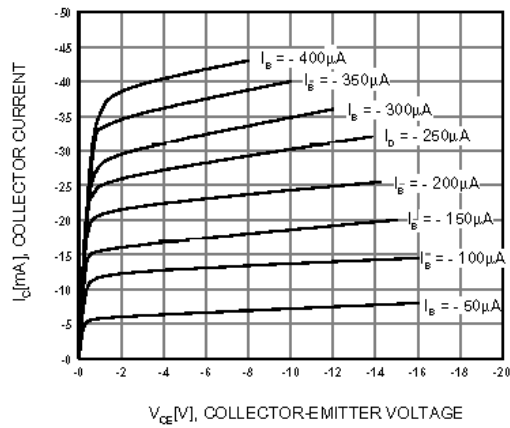


Figure 1. Static Characteristic

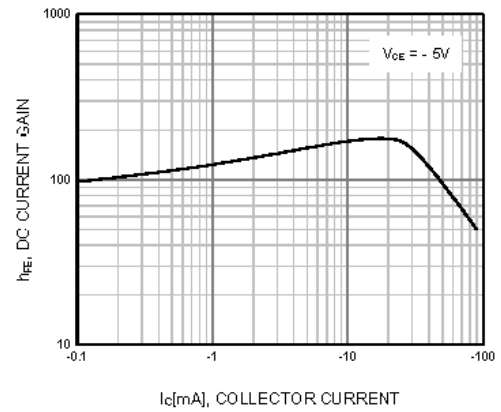


Figure 2. DC current Gain

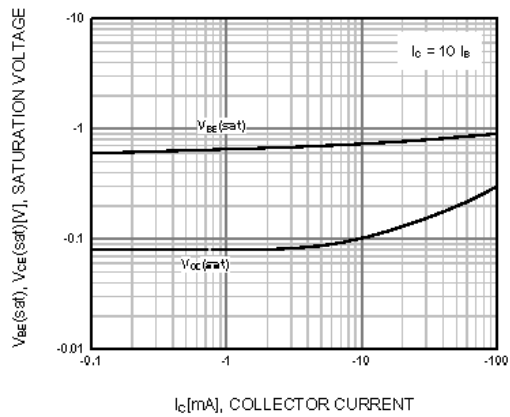


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

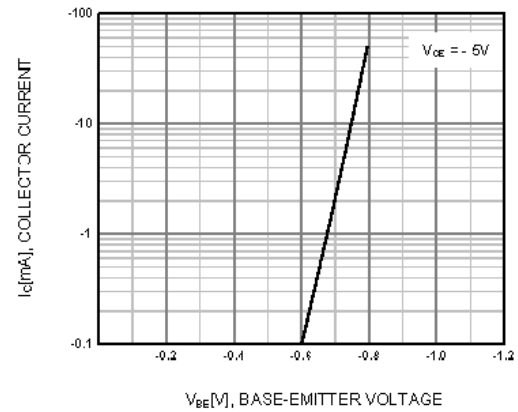


Figure 4. Base-Emitter On Voltage

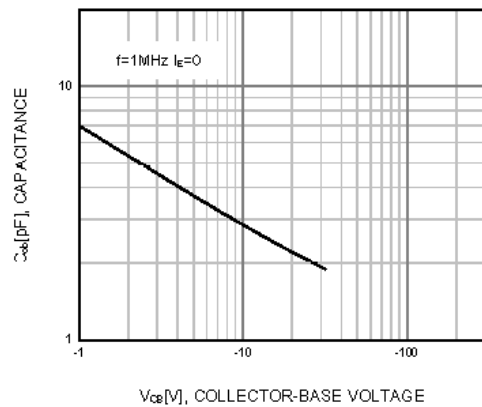


Figure 5. Collector Output Capacitance

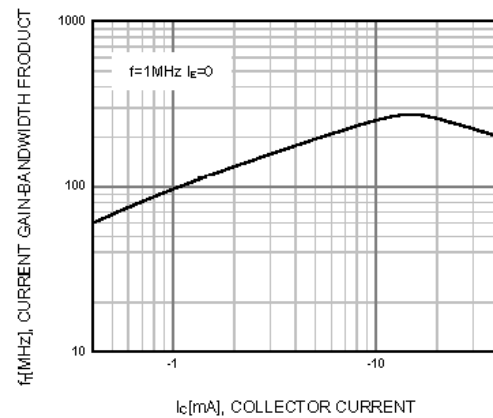


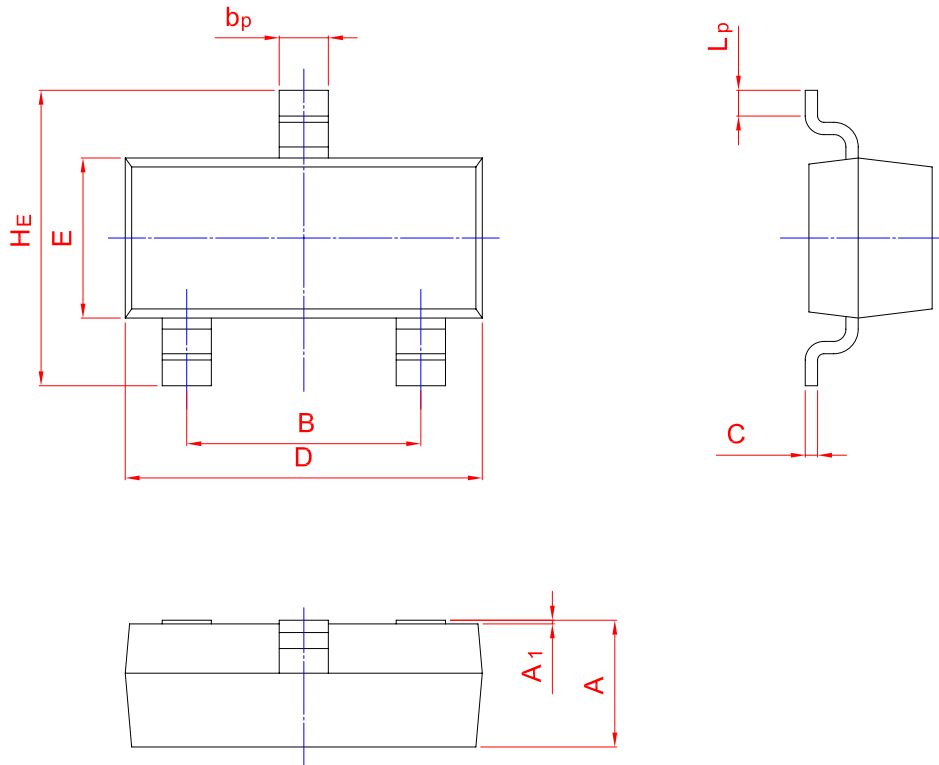
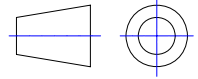
Figure 6. Current Gain Bandwidth Product



PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

SOT-23



UNIT	A	B	b_p	C	D	E	HE	A_1	L_p
mm	1.40 0.95	2.04 1.78	0.50 0.35	0.19 0.08	3.10 2.70	1.65 1.20	3.00 2.20	0.100 0.013	0.50 0.20