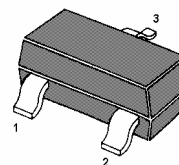


BC846...BC850

NPN Silicon Epitaxial Transistor

for switching and amplifier applications

As complementary types the PNP transistors
BC856...BC860 is recommended.



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

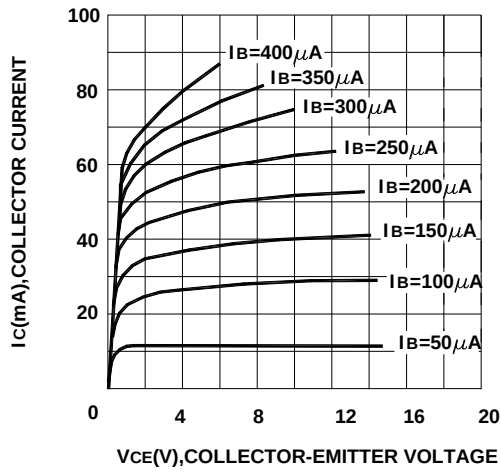
Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Collector Base Voltage	BC846	V_{CBO}	80
	BC847, BC850	V_{CBO}	50
	BC848, BC849	V_{CBO}	30
Collector Emitter Voltage	BC846	V_{CEO}	65
	BC847, BC850	V_{CEO}	45
	BC848, BC849	V_{CEO}	30
Emitter Base Voltage	BC846, BC847	V_{EBO}	6
	BC848, BC849, BC850	V_{EBO}	5
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	$^\circ\text{C}$

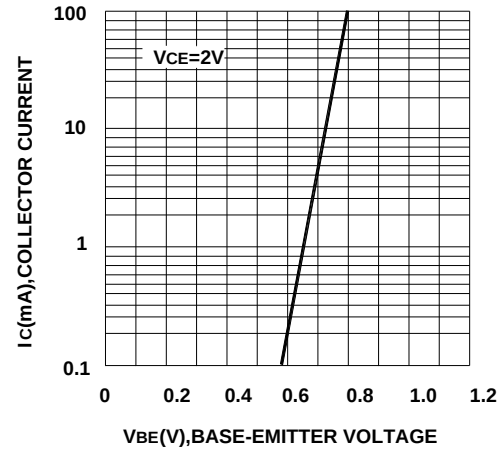
Characteristics at $T_a = 25^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	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 Emitter Saturation Voltage at $I_C = 10\text{ mA}$, $I_B = 0.5\text{ mA}$ at $I_C = 100\text{ mA}$, $I_B = 5\text{ mA}$	V_{CEsat}	-	-	250	mV
	V_{CEsat}	-	-	600	mV
Base Emitter On Voltage at $V_{CE} = 5\text{ V}$, $I_C = 2\text{ mA}$ at $V_{CE} = 5\text{ V}$, $I_C = 10\text{ mA}$	$V_{BE(on)}$	580	-	700	mV
	$V_{BE(on)}$	-	-	720	mV
Transition Frequency at $V_{CE} = 5\text{ V}$, $I_C = 10\text{ mA}$, $f = 100\text{ MHz}$	f_T	-	300	-	MHz
Output Capacitance at $V_{CB} = 10\text{ V}$, $f = 1\text{ MHz}$	C_{ob}	-	-	6	pF
Input Capacitance at $V_{EB} = 0.5\text{ V}$, $f = 1\text{ MHz}$	C_{ib}	-	9	-	pF

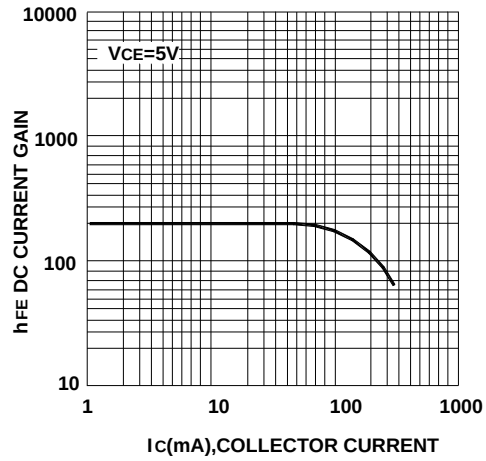
STATIC CHARACTERISTIC



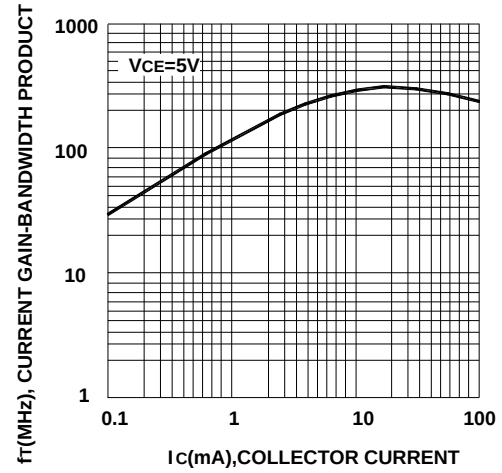
BASE-EMITTER ON VOLTAGE



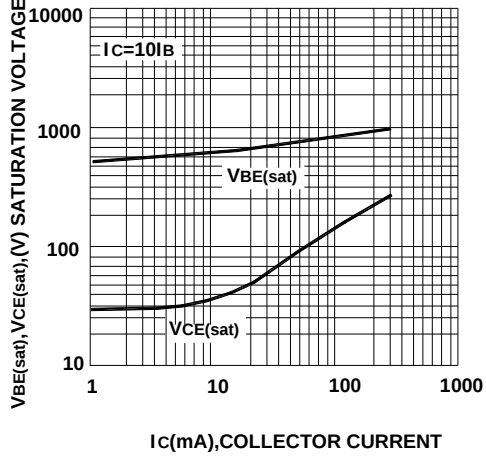
DC CURRENT GAIN



CURRENT GAIN BANDWIDTH PRODUCT



BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE



COLLECTOR OUTPUT CAPACITANCE

