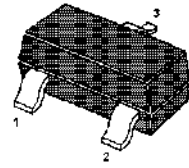


BC846...BC850

NPN Silicon Epitaxial Transistor

for switching and amplifier applications

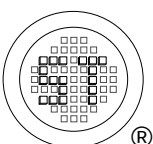
As complementary types the PNP transistors
BC856...BC860 is recommended.



1.BASE 2.EMITTER 3.COLLECTOR
TO-236 Plastic Package

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

Parameter		Symbol	Value	Unit
Collector Base Voltage	BC846	V_{CBO}	80	V
	BC847, BC850	V_{CBO}	50	V
	BC848, BC849	V_{CBO}	30	V
Collector Emitter Voltage	BC846	V_{CEO}	65	V
	BC847, BC850	V_{CEO}	45	V
	BC848, BC849	V_{CEO}	30	V
Emitter Base Voltage	BC846, BC847	V_{EBO}	6	V
	BC848, BC849, BC850	V_{EBO}	5	V
Collector Current		I_C	100	mA
Peak Collector Current		I_{CM}	200	mA
Power Dissipation		P_{tot}	300	mW
Junction Temperature		T_j	150	°C
Storage Temperature Range		T_{stg}	- 65 to + 150	°C



SEMTECH ELECTRONICS LTD.

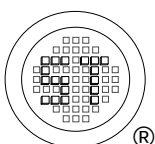


Dated: 27/04/2016 Rev: 03

BC846...BC850

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 B C	h_{FE}	110	-	220	-
	h_{FE}	200	-	450	-
	h_{FE}	420	-	800	-
Collector Base Cutoff Current at $V_{CB} = 30\text{ V}$	I_{CBO}	-	-	15	nA
Collector Base Breakdown Voltage at $I_C = 100\text{ }\mu\text{A}$ BC846 BC847, BC850 BC848, BC849	$V_{(BR)CBO}$	80	-	-	V
	$V_{(BR)CBO}$	50	-	-	V
	$V_{(BR)CBO}$	30	-	-	V
Collector Emitter Breakdown Voltage at $I_C = 2\text{ mA}$ BC846 BC847, BC850 BC848, BC849	$V_{(BR)CEO}$	65	-	-	V
	$V_{(BR)CEO}$	45	-	-	V
	$V_{(BR)CEO}$	30	-	-	V
Collector Emitter Breakdown Voltage at $I_C = 100\text{ }\mu\text{A}$ BC846, BC847 BC848, BC849, BC850	$V_{(BR)EBO}$	6	-	-	V
	$V_{(BR)EBO}$	5	-	-	V
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

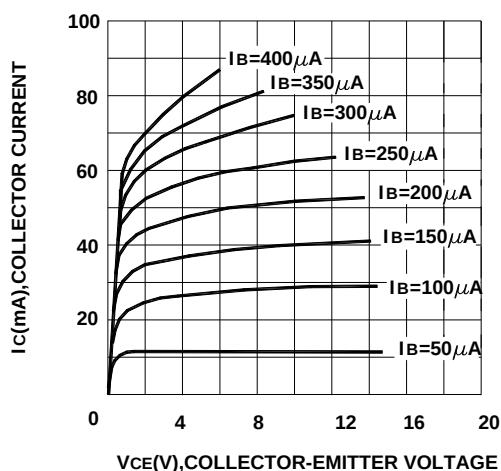


SEMTECH ELECTRONICS LTD.

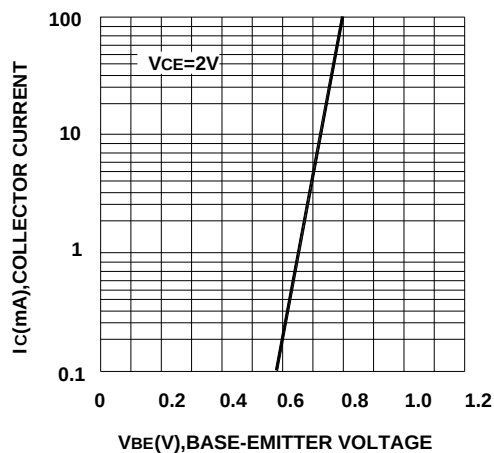


Dated: 27/04/2016 Rev: 03

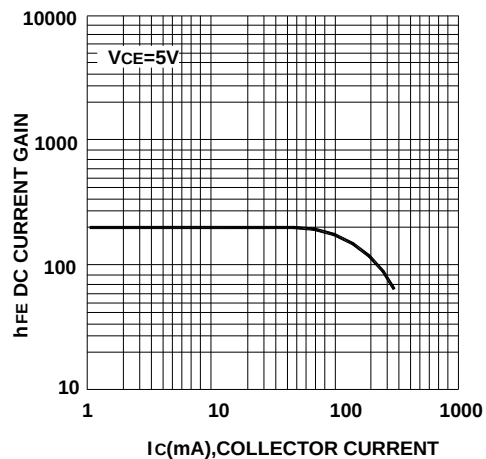
STATIC CHARACTERISTIC



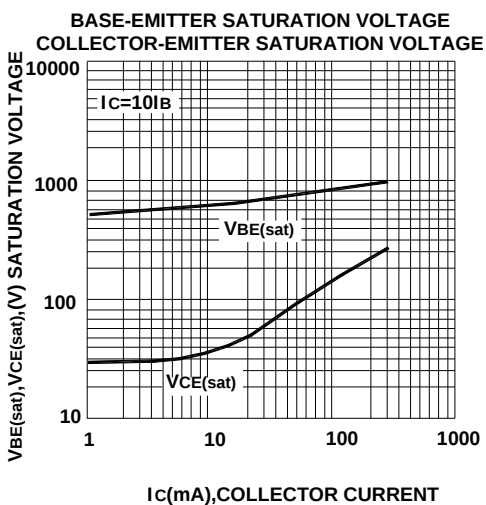
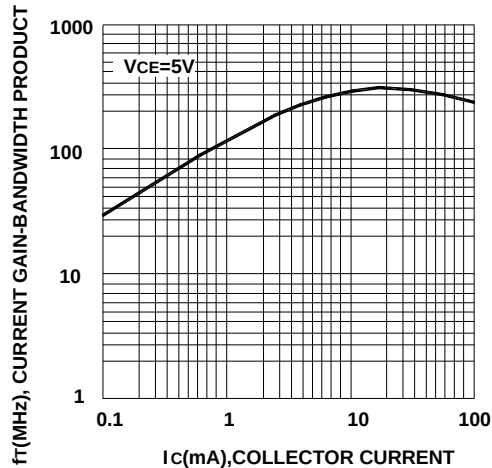
BASE-EMITTER ON VOLTAGE



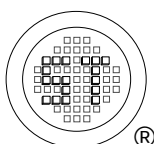
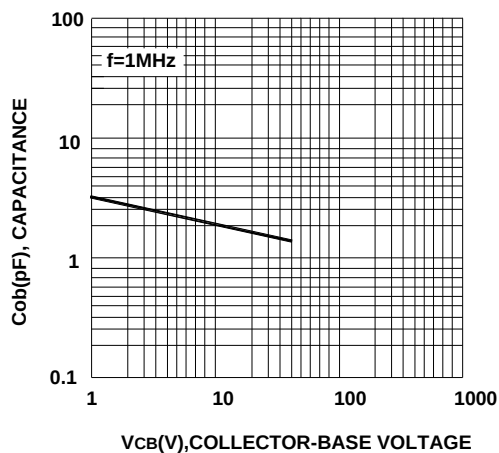
DC CURRENT GAIN



CURRENT GAIN BANDWIDTH PRODUCT



COLLECTOR OUTPUT CAPACITANCE



SEMTECH ELECTRONICS LTD.



ISO/TS 16949:2009
Certificate No. 180713009



ISO 14001:2004
Certificate No. 7116



ISO 9001:2008
Certificate No. 50713410



BS OHSAS 18001:2007
Certificate No. 7116



IEC QC 080000
Certificate No. PRC-HSPM-1483-1