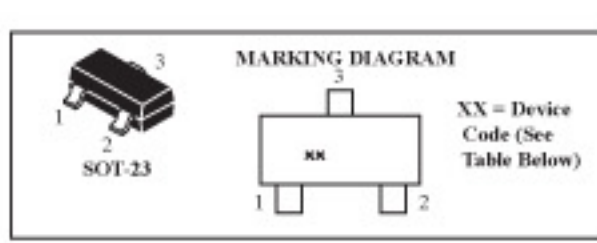
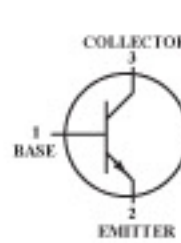


General Purpose Transistor PNP Silicon

*Moisture Sensitivity Level: 1
*ESD Rating - Human Body Model: >4000V
-Machine Model: >400V



Maximum Ratings (T_A=25°C unless otherwise noted)

Rating	Symbol	Value	Unit
Collector-Emitter Voltage BC846 BC847, BC850 BC848, BC849	V _{CEO}	65 45 30	Vdc
Collector-Base Voltage BC846 BC847, BC850 BC848, BC849	V _{CBO}	80 50 30	Vdc
Emitter-Base Voltage BC846 BC847, BC850 BC848, BC849	V _{EBO}	6.0 6.0 5.0	Vdc
Collector Current-Continuous	I _C	100	mAdc

Thermal Characteristics

Characteristics	Symbol	Max	Unit
Total Device Dissipation FR-5 Board (Note 1.) T _A =25°C Derate above 25°C	PD	225 1.8	mW mW/°C
Thermal Resistance, Junction to Ambient (Note 1.)	R _{θJA}	556	°C/W
Total Device Dissipation Alumina Substrate, (Note 2.) T _A =25°C Derate above 25°C	PD	300 2.4	mW mW/°C
Thermal Resistance, Junction to Ambient (Note 2.)	R _{θJA}	417	°C/W
Junction and Storage, Temperature Range	T _J , T _{stg}	-55 to +150	°C

Device Marking

BC846A=1A; BC846B=1B; BC847A=1E; BC847B=1F; BC847C=1G; BC848A=1J;
BC848B=1K; BC848C=1L; BC849B=2B; BC849C=2C; BC850B=2F; BC850C=2G

1. FR-5=1.0 x 0.75 x 0.062 in.
2. Alumina=0.4 x 0.3 x 0.024 in. 99.5% alumina

BC846A/B-BC847A/B/C
BC848A/B/C-BC849B/C
BC850B/C



Electrical Characteristics (T_A=25°C Unless Otherwise noted)

Characteristics	Symbol	Min	Typ	Max	Unit
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Off Characteristics

Collector-Emitter Breakdown Voltage (I _C = 10mA)	BC846A,B BC847A,B,C BC850B,C BC848A,B,C BC849B,C	V(BR)CEO	65 45 30	-	-	V
Collector-Emitter Breakdown Voltage (I _C =10 μA, V _{EB} =0)	BC846A,B BC847A,B,C BC850B,C BC848A,B,C BC849B,C	V(BR)CES	80 50 30	-	-	V
Collector-Base Breakdown Voltage (I _C =10 μA)	BC846A,B BC847A,B,C BC850B,C BC848A,B,C BC849B,C	V(BR)CBO	80 50 30	-	-	V
Emitter-Base Breakdown Voltage (I _E =1.0 μA)	BC846A,B BC847A,B,C BC850B,C BC848A,B,C BC849B,C	V(BR)EBO	6.0 6.0 5.0	-	-	V
Collector Cutoff Current (V _{CB} =30V) (V _{CB} =30V, T _A =150°C)		I _{CBO}	-	-	15 5.0	nA mA

On Characteristics

DC Current Gain (I _C = 10μA, V _{CE} =5.0V)	BC846A, BC847A, BC848A BC846B, BC847B, BC848B BC847C, BC848C	h _{FE}	-	90 150 270	-	-
(I _C = 2.0mA, V _{CE} =5.0V)	BC846A, BC847A, BC848A BC846B, BC847B, BC848B BC849B, BC850B, BC847C, BC848C, BC849C, BC850C		110 200 420	180 290 520	220 450 800	
Collector-Emitter Saturation Voltage (I _C = 10mA, I _B =0.5mA)		V _{CE(sat)}	-	-	0.25 0.6	V
(I _C = 100mA, I _B =5.0mA)						
Base-Emitter Saturation Voltage (I _C = 10mA, I _B =0.5mA)		V _{BE(sat)}	-	-0.7 -0.9	-	V
(I _C = 100mA, I _B =5.0mA)						
Base-Emitter On Voltage (I _C = 2.0mA, V _{CE} =5.0V)		V _{BE(on)}	580	660	700 770	V
(I _C = 10mA, V _{CE} =5.0V)						

Small-signal Characteristics

Current-Gain-Bandwidth Product (I _C = 10mA, V _{CE} = 5.0Vdc, f=100MHz)		f _T	100	-	-	MHz
Output Capacitance (V _{CB} = 10V, f=1.0MHz)		C _{obo}	-	-	4.5	pF
Noise Figure (I _C = 0.2mA, V _{CE} = 5.0Vdc, R _s =2.0 kW, f=1.0 kHz, BW=200Hz)	BC846A,B, BC847A,B,C, BC848A,B,C, BC849B,C, BC850B,C	NF	-	-	10 4.0	dB

BC846A/B-BC847A/B/C
BC848A/B/C-BC849B/C
BC850B/C

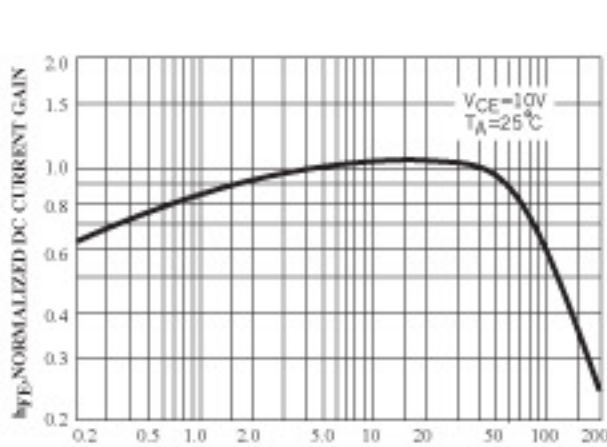


Figure 1. Normalized DC Current Gain

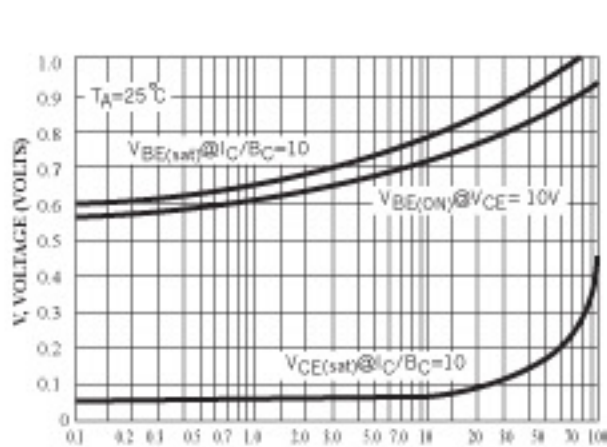


Figure 2. "Saturation" And "On" Voltage

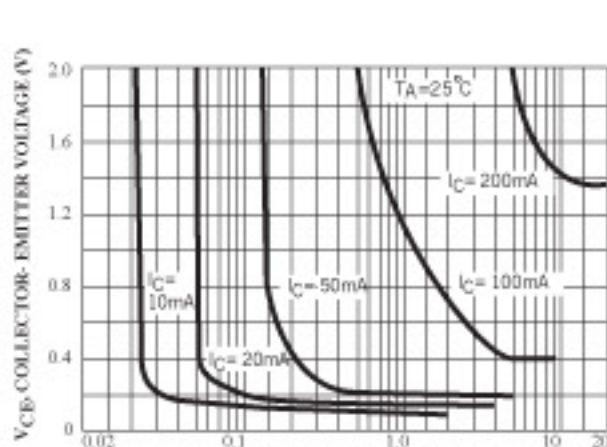


Figure 3. Collector Saturation Region

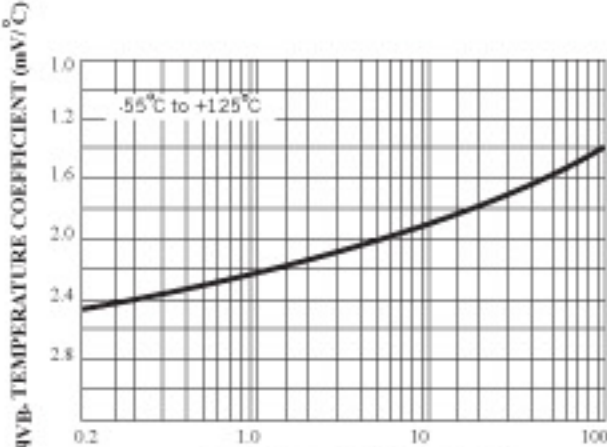


Figure 4. Base-Emitter Temperature Coefficient

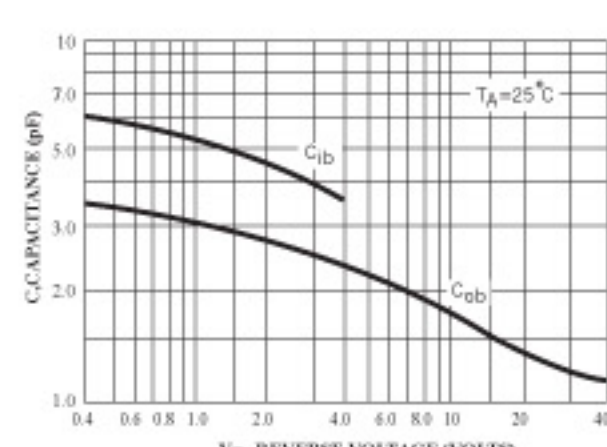


Figure 5. Capacitances

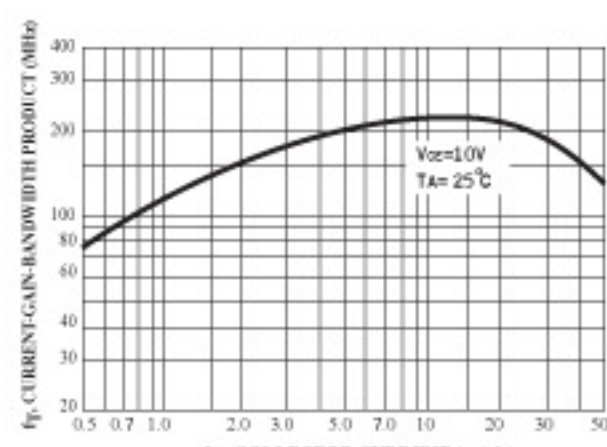


Figure 6. Current-Gain- Bandwidth Product

BC846A/B-BC847A/B/C
BC848A/B/C-BC849B/C
BC850B/C

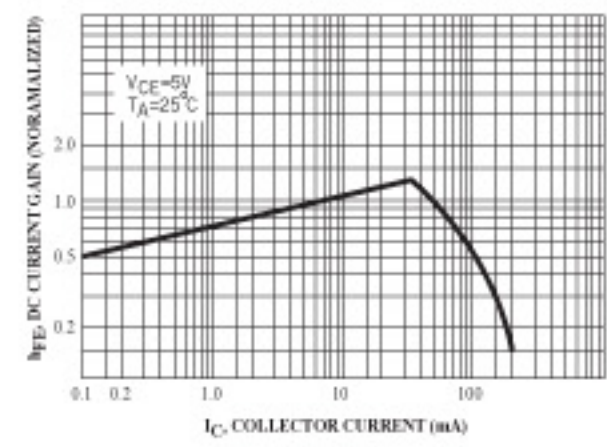


Figure 7. DC Current Gain

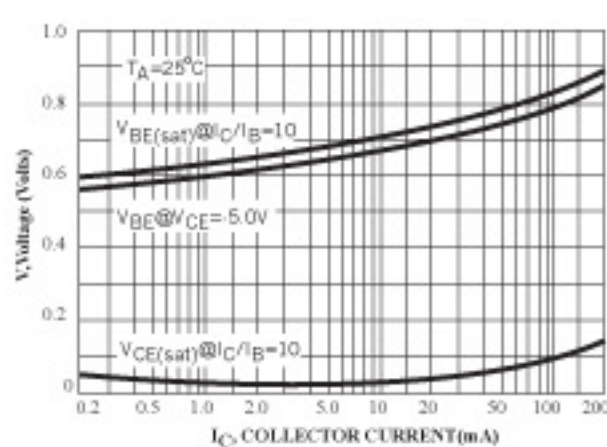


Figure 8. "ON" Voltage

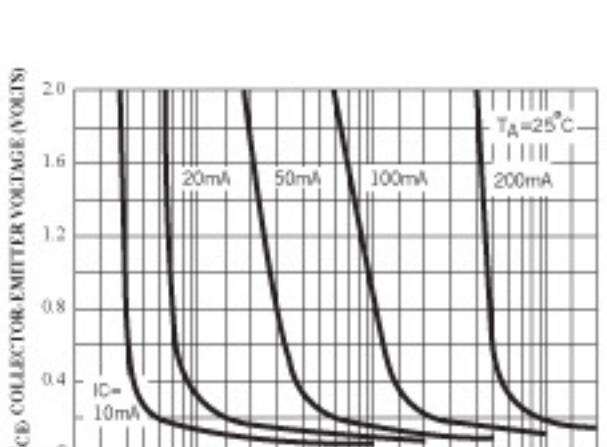


Figure 9. Collector Saturation Region

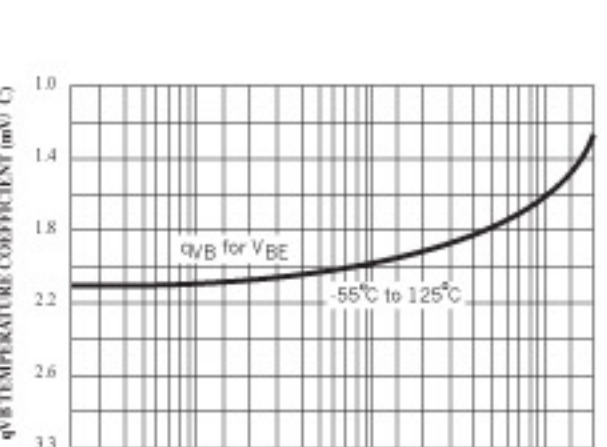


Figure 10. Base-Emitter Temperature Coefficient

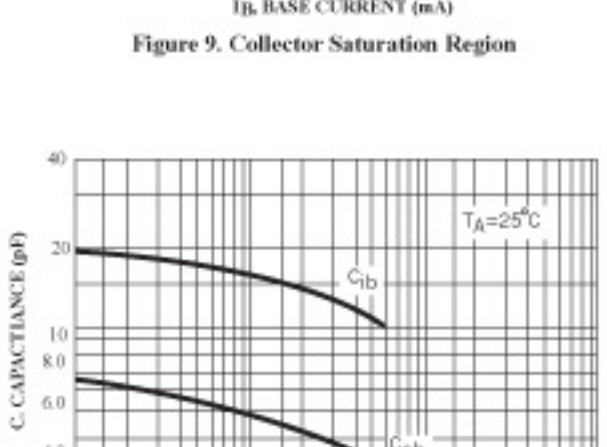


Figure 11. Capacitance

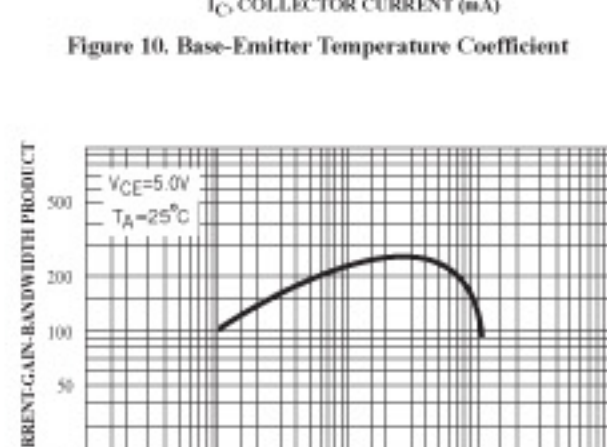


Figure 12. Current-Gain-Bandwidth Product