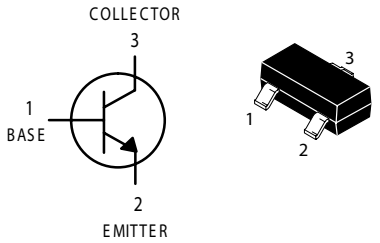
Elektronische Bauelemente

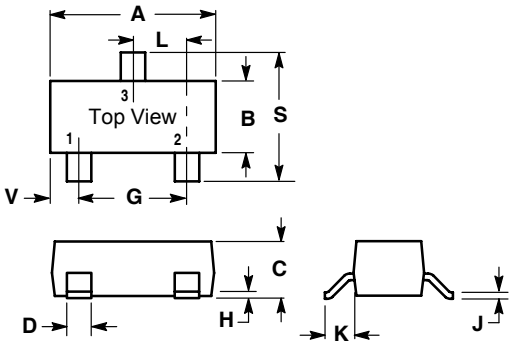
BC846A, B
BC847A, B, C
BC848A, B, C

A suffix of "-C" specifies halogen & lead-free

FEATURES

- General Purpose Transistor NPN Type
- Collect current : 0.1A
- Operating Temp. : -55℃ ~ +150℃
- RoHS compliant product





SOT-23		
Dim	**Min**	**Max**
A	2.800	3.040
B	1.200	1.400
C	0.890	1.110
D	0.370	0.500
G	1.780	2.040
H	0.013	0.100
J	0.085	0.177
K	0.450	0.600
L	0.890	1.020
S	2.100	2.500
V	0.450	0.600
All Dimension in mm		

ELECTRICAL CHARACTERISTICS（Tamb=25℃ unless otherwise specified）

Parameter		Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	**BC846**	V_{CBO}	Ic= 10 μA, I_E=0	80		V
	BC847			50		
	BC848			30		
Collector-emitter breakdown voltage	**BC846**	V_{CEO}	Ic= 10 mA, I_B=0	65		V
	BC847			45		
	BC848			30		
Emitter-base breakdown voltage		V_{EBO}	I_E= 10 μA, I_C=0	6		V
Collector cut-off current	**BC846**	I_{CBO}	V_{CB}= 70 V, I_E=0		0.1	μA
	BC847		V_{CB}= 50 V, I_E=0			
	BC848		V_{CB}= 30 V, I_E=0			
Collector cut-off current	**BC846**	I_{CEO}	V_{CE}= 60 V, I_B=0		0.1	μA
	BC847		V_{CE}= 45 V, I_B=0			
	BC848		V_{CE}= 30 V, I_B=0			
Emitter cut-off current		I_{EBO}	V_{EB}= 5 V, I_C=0		0.1	μA
DC current gain	**BC846A,847A,848A**	$H_{FE(1)}$	V_{CE}= 5V, I_C= 2mA	110	220	
	BC846B,847B,848B			200	450	
	BC847C,BC848C			420	800	
Collector-emitter saturation voltage		V_{CE}(sat)	I_C=100mA, I_B= 5 mA		0.5	V
Base-emitter saturation voltage		V_{BE}(sat)	I_C= 100 mA, I_B= 5mA		1.1	V
Transition frequency		f_T	V_{CE}= 5 V, I_C= 10mA f=100MHz	100		MHz

DEVICE MARKING

BC846A=1A; BC846B=1B; BC847A=1E; BC847B=1F; BC847C=1G; BC848A=1J; BC848B=1K; BC848C=1L

Typical Characteristics

BC846A/B, BC847A/B, BC848A/B

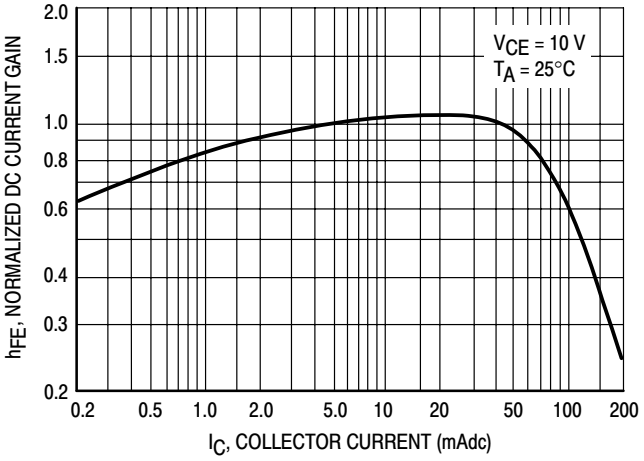


Figure 1. Normalized DC Current Gain

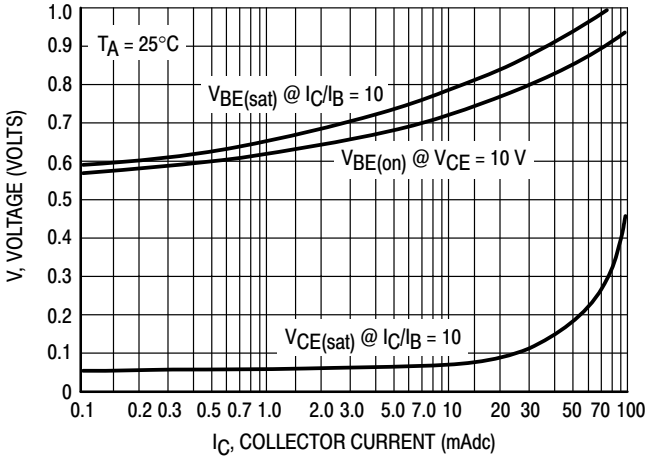


Figure 2. "Saturation" and "On" Voltages

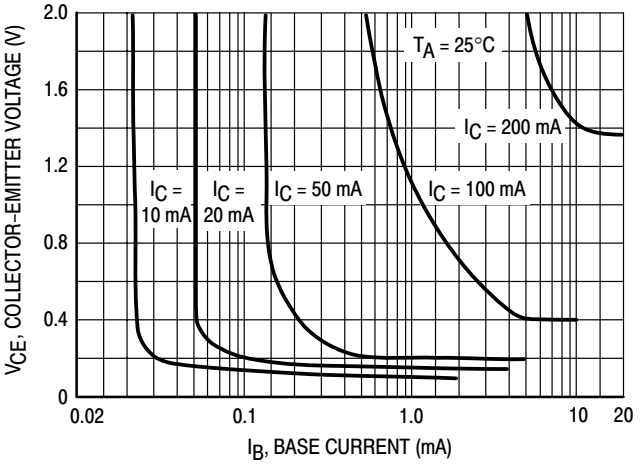


Figure 3. Collector Saturation Region

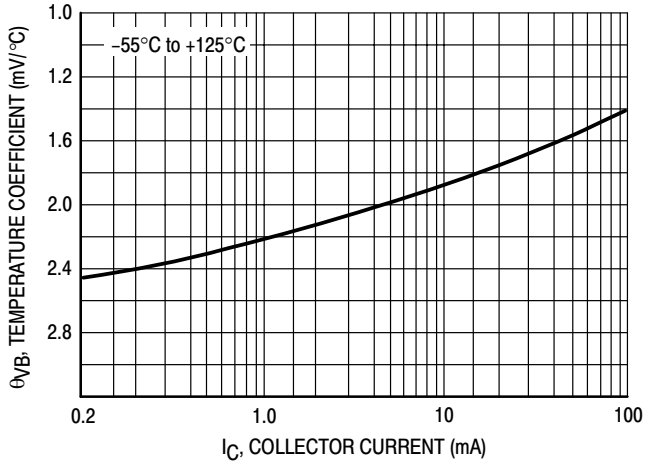


Figure 4. Base–Emitter Temperature Coefficient

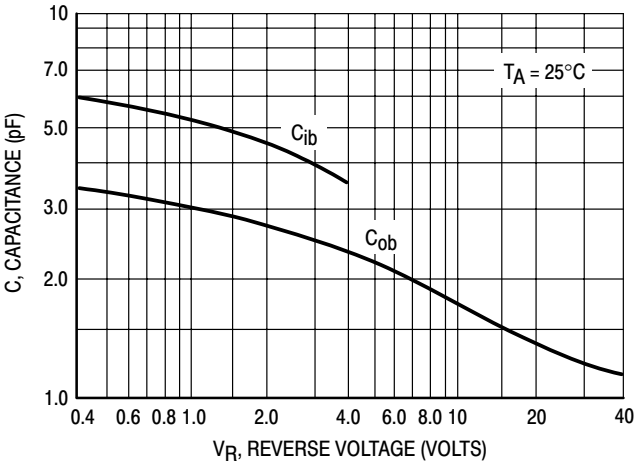


Figure 5. Capacitances

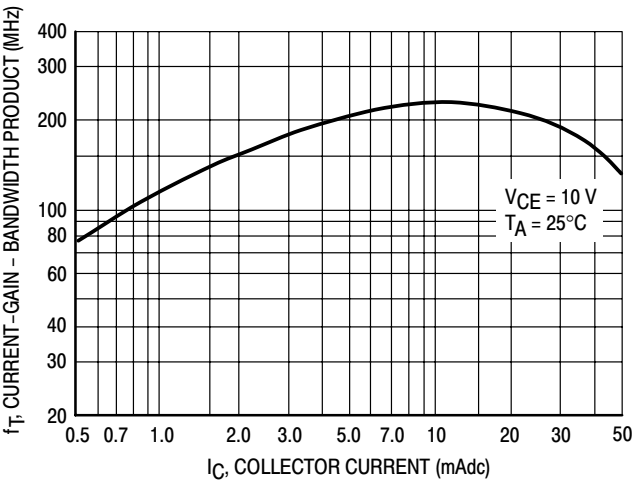


Figure 6. Current–Gain – Bandwidth Product

BC846A/B, BC847A/B, BC848A/B

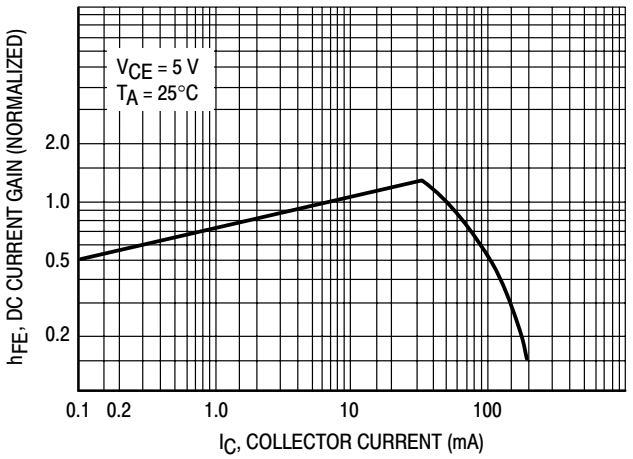


Figure 7. DC Current Gain

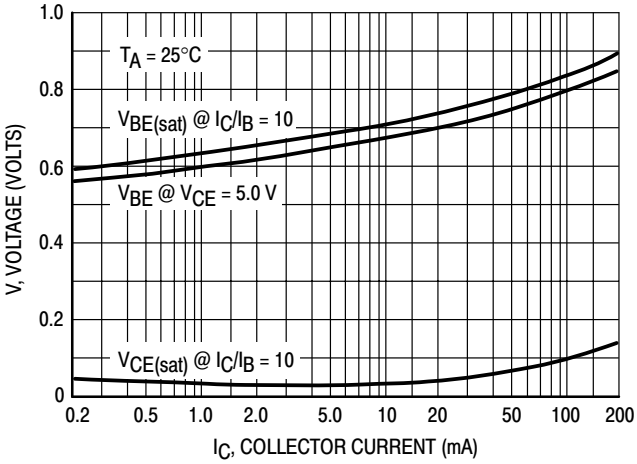


Figure 8. "On" Voltage

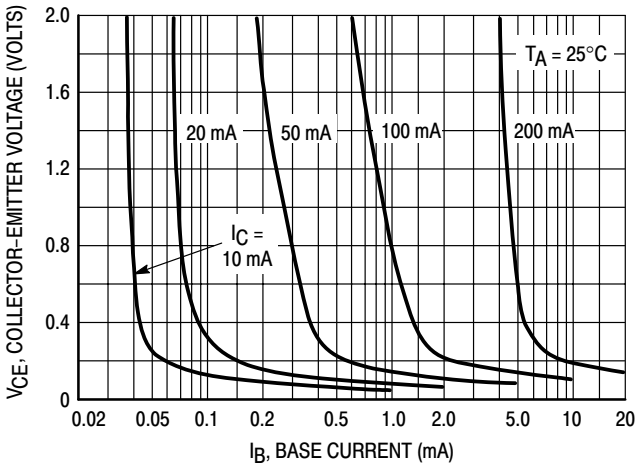


Figure 9. Collector Saturation Region

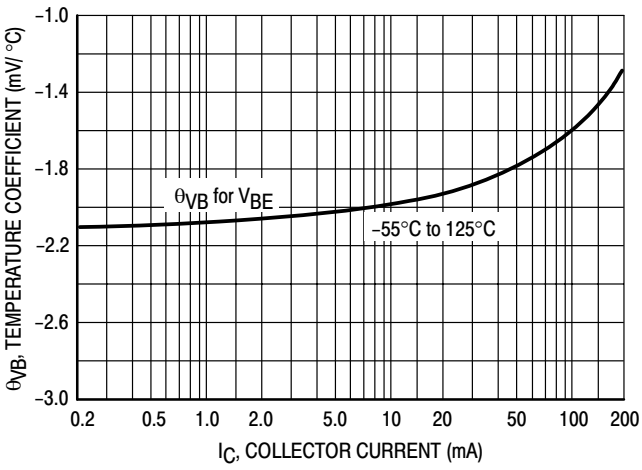


Figure 10. Base–Emitter Temperature Coefficient

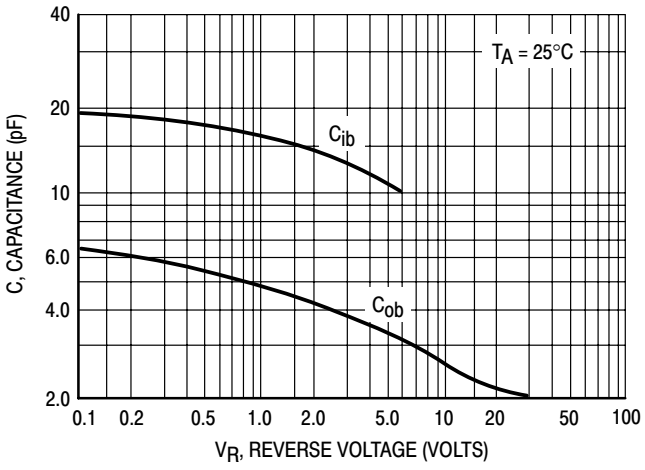


Figure 11. Capacitance

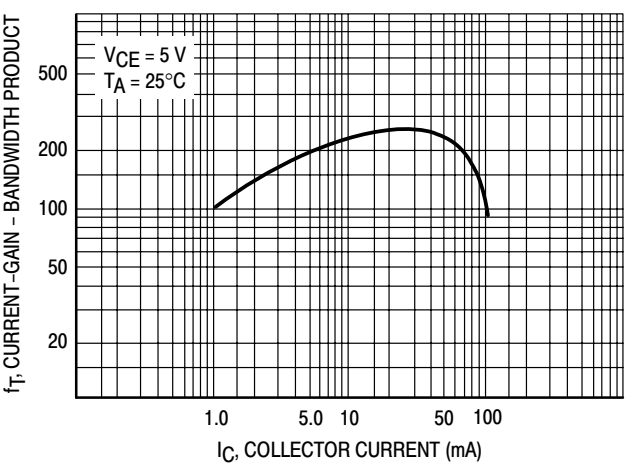


Figure 12. Current–Gain – Bandwidth Product