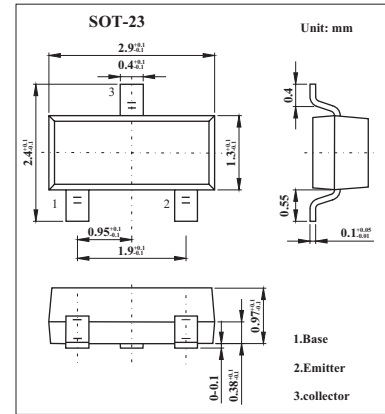


NPN Transistor BC846C

■ Features

- Ideally suited for automatic insertion
- For Switching and AF Amplifier Applications



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

Parameter	Symbol	Rating	Unit
Collector-Base Voltage	BC846	80	V
	BC847	50	
	BC848	30	
Collector-Emitter Voltage	BC846	65	V
	BC847	45	
	BC848	30	
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current -Continuous	I_C	0.1	A
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature	T_{stg}	-65 to +150	$^\circ\text{C}$

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit	
Collector-base breakdown voltage	BC84680	$I_C = 10 \mu A, I_E = 0$				V	
	BC847		50				
	BC848		30				
Collector-emitter breakdown voltage	BC846	$I_C = 10 mA, I_B = 0$	65			V	
	BC847		45				
	BC848		30				
Emitter-base Breakdown voltage	V_{EBO}	$I_E = 10 \mu A, I_C = 0$	6			V	
Collector-base cutoff 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-emitter cutoff current	BC846	I_{CEO}	$V_{CE} = 70 V, I_B = 0$			0.1	μA
	BC847		$V_{CE} = 50 V, I_B = 0$				
	BC848		$V_{CE} = 30 V, I_B = 0$				
Emitter-base cutoff current	I_{EBO}	$V_{EB} = 5 V, I_C = 0$			0.1	μA	
DC current gain	BC846A,847A,848A	h_{FE}	$V_{CE} = 5 V, I_C = 2 mA$	110		220	
	BC846B,847B,848B			200		450	
	BC847C,848C			420		800	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100 mA, I_B = 5 mA$			0.5	V	
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 100 mA, I_B = 5 mA$			1.1	V	
Collector output capacitance	C_{ob}	$V_{CB} = 10 V, f = 1 MHz$			4.5	pF	
Transition frequency	f_T	$V_{CE} = 5 V, I_C = 10 mA, f = 100 MHz$	100			MHz	

■ Marking

NO.	BC846A	BC846B
Marking	1A	1B

NO.	BC847A	BC847B	BC847C
Marking	1E	1F	1G

NO.	BC848A	BC848B	BC848C
Marking	1J	1K	1L

■ Typical Characteristics

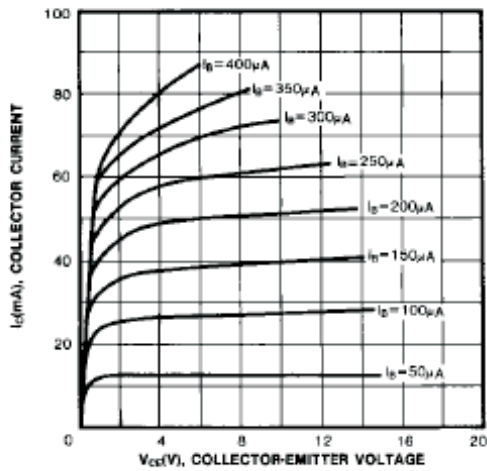


Fig.1 Static Characteristic

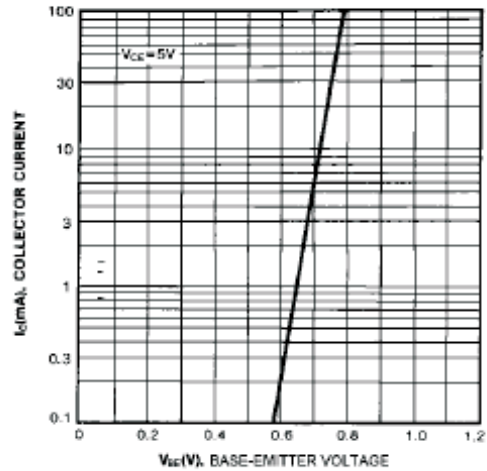


Fig.2 Transfer Characteristic

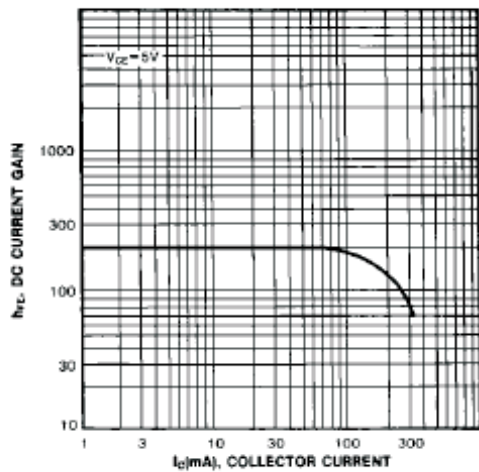


Fig.3 DC Current Gain

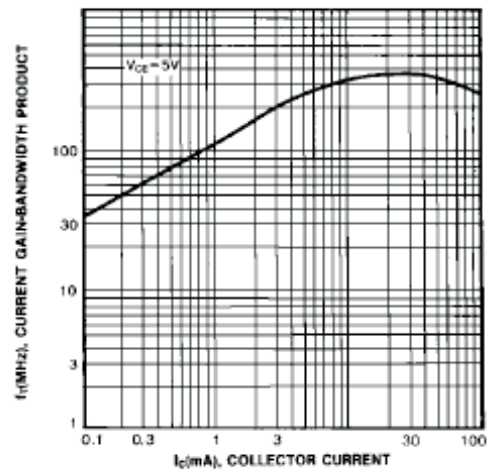


Fig.4 Current Gain Bandwidth Product

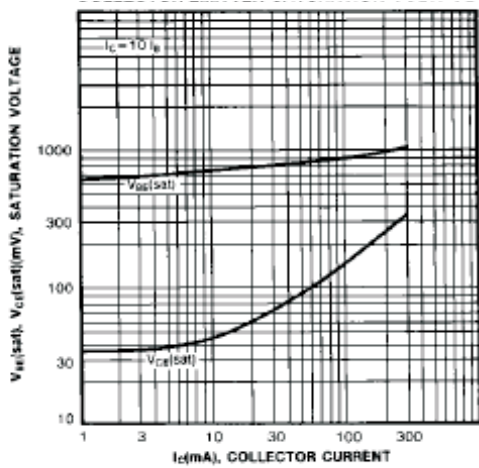


Fig.5 Base Emitter Saturation Voltage
Collector Emitter Saturation Voltage

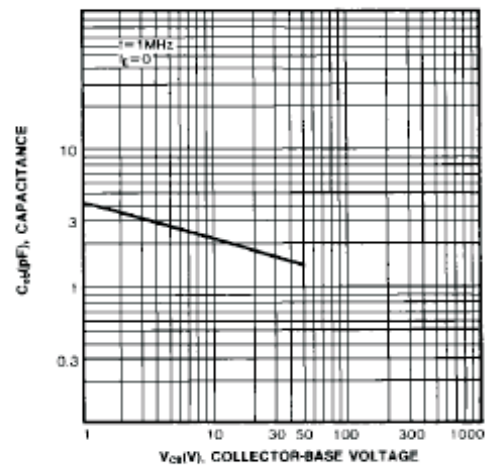


Fig.6 Output Capacitance