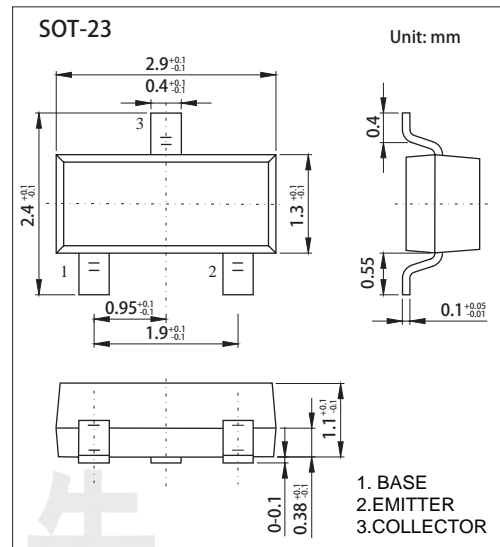


# Transistor

## NPN Transistors BC846 ~ BC847

### ■ Features

- Ideally suited for automatic insertion
- For switching and AF amplifier applications
- Complementary to BC856~BC858



### ■ 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	VEBO	6	
Collector Current - Continuous	Ic	100	mA
Collector Power Dissipation	Pc	200	mW
Thermal Resistance, junction to Ambient	R <sub>θJA</sub>	625	°C/W
Junction Temperature	T <sub>J</sub>	150	°C
Storage Temperature	T <sub>stg</sub>	-55 to 150	

# Transistor

## NPN Transistors BC846 ~ BC847

### ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditons	Min	Typ	Max	Unit	
Collector- base breakdown voltage	BC846	$I_c = 10 \mu A, I_E = 0$	80			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	VEBO	$I_E = 10 \mu A, I_C = 0$	6				
Collector cut-off current	BC846	ICBO	$V_{CB} = 70 V, I_E = 0$			0.1	
	BC847		$V_{CB} = 50 V, I_E = 0$				
	BC848		$V_{CB} = 30 V, I_E = 0$				
Collector cut-off current	BC846	ICEO	$V_{CE} = 60 V, I_B = 0$			0.1	
	BC847		$V_{CE} = 45 V, I_B = 0$				
	BC848		$V_{CE} = 30 V, I_B = 0$				
Emitter cut-off current	IEBO	$V_{EB} = 5 V, I_C = 0$			0.1		
Collector-emitter saturation voltage	VCE(sat)	$I_C = 100 mA, I_B = 5 mA$			0.5	V	
Base - emitter saturation voltage	VBE(sat)	$I_C = 100 mA, I_B = 5 mA$			1.1		
DC current gain	BC846A,847A,848A	hFE	$V_{CE} = 5 V, I_C = 2 mA$	110		220	
	BC846B,847B,848B			200		450	
	BC847C,848C			420		800	
Collector capacitance	Cob	$V_{CB} = 10 V, f = 1 MHz$			4.5	pF	
Transition frequency	fr	$V_{CE} = 5 V, I_C = 10 mA, f = 100 MHz$	100			MHz	

### ■ Classification of hFE

Rank	BC846A	BC846B
Range	110-220	200-450
Marking	1A	1B

Rank	BC847A	BC847B	BC847C
Range	110-220	200-450	420-800
Marking	1E	1F	1G

Rank	BC848A	BC848B	BC848C
Range	110-220	200-450	420-800
Marking	1J	1K	1L

# Transistor

## NPN Transistors BC846 ~ BC847

### Typical Characteristics

