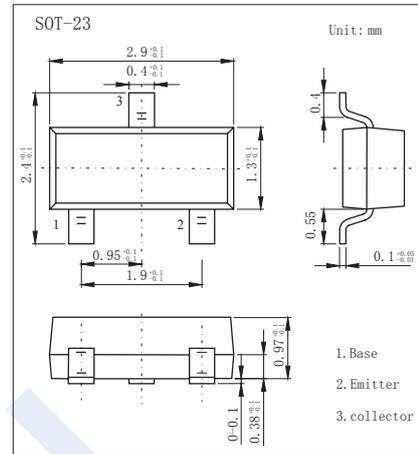


## NPN Transistors

### BC846~BC848 (KC846~KC848)

#### ■ Features

- Ideally suited for automatic insertion
- For switching and AF amplifier applications



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

Parameter	Symbol	BC846	BC847	BC848	Unit
Collector - Base Voltage	$V_{CB0}$	80	50	30	V
Collector - Emitter Voltage	$V_{CEO}$	65	45	30	
Emitter - Base Voltage	$V_{EB0}$	6	6	6	
Collector Current - Continuous	$I_C$	100			mA
Collector Power Dissipation	$P_C$	200			mW
Junction Temperature	$T_J$	150			$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to 150			

## NPN Transistors

## BC846~BC848 (KC846~KC848)

## ■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit	
Collector- base breakdown voltage	BC846	$I_C = 100 \mu A, I_E = 0$	80			V	
	BC847		50				
	BC848		30				
Collector- emitter breakdown voltage	BC846	$I_C = 1 \text{ mA}, I_B = 0$	65			V	
	BC847		45				
	BC848		30				
Emitter - base breakdown voltage	VEBO	$I_E = 100 \mu A, I_C = 0$	6				
Collector-base cut-off current	BC846	ICBO	$V_{CB} = 70 \text{ V}, I_E = 0$		100	nA	
	BC847		$V_{CB} = 50 \text{ V}, I_E = 0$				
	BC848		$V_{CB} = 30 \text{ V}, I_E = 0$				
Collector- emitter cut-off current	BC846	ICEO	$V_{CE} = 60 \text{ V}, I_E = 0$		1	uA	
	BC847		$V_{CE} = 45 \text{ V}, I_E = 0$				
	BC848		$V_{CE} = 30 \text{ V}, I_E = 0$				
Emitter cut-off current	IEBO	$V_{EB} = 5 \text{ V}, I_C = 0$			100	nA	
Collector-emitter saturation voltage	VCE(sat)	$I_C = 100 \text{ mA}, I_B = 5 \text{ mA}$			0.4	V	
Base - emitter saturation voltage	VBE(sat)	$I_C = 100 \text{ mA}, I_B = 5 \text{ mA}$			1.1		
DC current gain	BC846A,847A,848A	hFE	$V_{CE} = 5 \text{ V}, I_C = 2 \text{ mA}$	110		220	
	BC846B,847B,848B			200		450	
	BC847C,848C			420		800	
Collector output capacitance	Cob	$V_{CB} = 10 \text{ V}, f = 1 \text{ MHz}$			4.5	pF	
Transition frequency	fr	$V_{CE} = 5 \text{ V}, I_C = 10 \text{ mA}, f = 100 \text{ MHz}$	100			MHz	

## ■ Classification of hfe

Type	BC846A	BC846B	BC847A	BC847B	BC847C	BC848A	BC848B	BC848C
Range	110-220	220-450	110-220	220-450	420-800	110-220	220-450	420-800
Marking	1A	1B	1E	1F	1G	1J	1K	1L

# NPN Transistors

## BC846~BC848 (KC846~KC848)

### ■ Typical Characteristics

