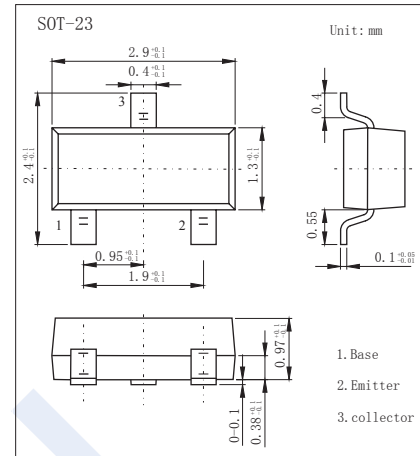


NPN Transistors

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_{CE0}	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	BC847 BC848	V _{CB0} I _c = 100 μA, I _E = 0	80			V	
			50				
			30				
Collector- emitter breakdown voltage	BC846 BC847 BC848	V _{CE0} I _c = 1 mA, I _B = 0	65			V	
			45				
			30				
Emitter - base breakdown voltage	V _{EB0}	I _E = 100 μA, I _C = 0	6				
Collector-base cut-off current	BC846 BC847 BC848	I _{CB0} V _{CB} = 70 V, I _E = 0			100	nA	
			V _{CB} = 50 V, I _E = 0				
			V _{CB} = 30 V, I _E = 0				
Collector- emitter cut-off current	BC846 BC847 BC848	I _{CE0} V _{CE} = 60 V, I _E = 0			1	uA	
			V _{CE} = 45 V, I _E = 0				
			V _{CE} = 30 V, I _E = 0				
Emitter cut-off current	I _{EB0}	V _{EB} = 5V, I _C =0			100	nA	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =100 mA, I _B =5mA			0.4	V	
Base - emitter saturation voltage	V _{BE(sat)}	I _C =100 mA, I _B =5mA			1.1		
DC current gain	BC846A,847A,848A BC846B,847B,848B BC847C,848C	h _{FE} V _{CE} = 5V, I _C = 2mA	110		220		
			200		450		
			420		800		
Collector output capacitance	C _{ob}	V _{CB} = 10V, f= 1 MHz			4.5	pF	
Transition frequency	f _T	V _{CE} = 5V, I _C = 10mA, f=100MHz	100			MHz	

■ Classification of h_{FE}

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

