



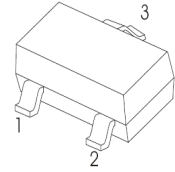
SOT-23 Plastic-Encapsulate Transistors

BC846 TRANSISTOR (NPN)
BC847
BC848

FEATURES

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

SOT-23



1. BASE
2. EMITTER
3. COLLECTOR

MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	BC846	80
		BC847	50
		BC848	30
V_{CEO}	Collector-Emitter Voltage	BC846	65
		BC847	45
		BC848	30
V_{EBO}	Emitter-Base Voltage	6	V
I_{c}	Collector Current –Continuous	0.1	A
P_{c}	Collector Power Dissipation	200	mW
T_{J}	Junction Temperature	150	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-55~+150	$^{\circ}\text{C}$

DEVICE MARKING

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

BC846/BC847/BC848

SOT-23 NPN Plastic-Encapsulate Transistors

ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	BC846	I _C = 10μA, I _E =0	80			V
	BC847		50			
	BC848		30			
Collector-emitter breakdown voltage	BC846	I _C = 10mA, I _B =0	65			V
	BC847		45			
	BC848		30			
Emitter-base breakdown voltage	V _{EBO}	I _E = 10μA, I _C =0	6			V
Collector cut-off current	BC846	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	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	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 = 5mA			0.5	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C =100mA, I _B = 5mA			1.1	V
Transition frequency	f _T	V _{CE} = 5 V, I _C = 10mA f=100MHz	100			MHz
Collector output capacitance	C _{ob}	V _{CB} =10V,f=1MHz			4.5	pF

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