BC846A/B (NPN)
BC847A/B/C (NPN)
BC848A/B/C (NPN)

FEATURES

For general AF applications

High collector current

High current gain

Low collector-emitter saturation voltage



1. BASE
2. EMITTER
3. COLLECTO

SOT-23

Marking

BC846A	BC846B	BC847A	BC847B
1A	1B	1E	1F

BC847C	BC848A	BC848B	BC848C
1G	1J	1K	1L

MAXIMUM RATINGS (TA=25℃ unless otherwise noted)

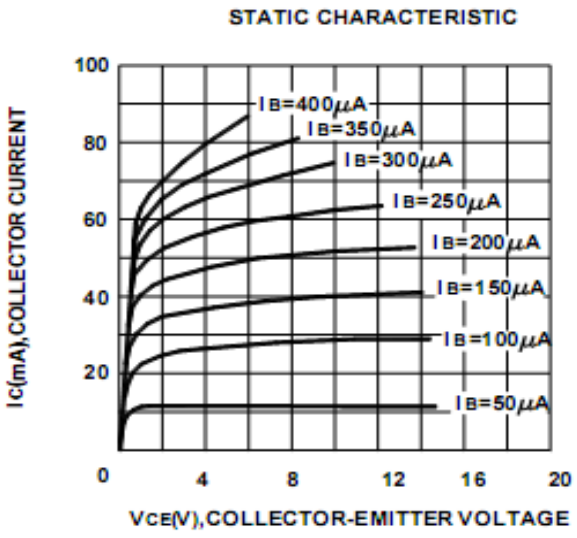
Parameter		Symbol	Value	Unit
Collector-Base Voltage	BC846	V_{CBO}	80	V
	BC847	V_{CBO}	50	
	BC848	V_{CBO}	30	
Collector-Emitter Voltage	BC846	V_{CEO}	65	V
	BC847	V_{CEO}	45	
	BC848	V_{CEO}	30	
Emitter-Base Voltage		V_{EBO}	6	V
Collector Current -Continuous		I_C	0.1	A
Collector Power Dissipation		P_C	0.2	W
Junction Temperature		T_J	150	℃
Storage Temperature		Tstg	-55 to +150	℃

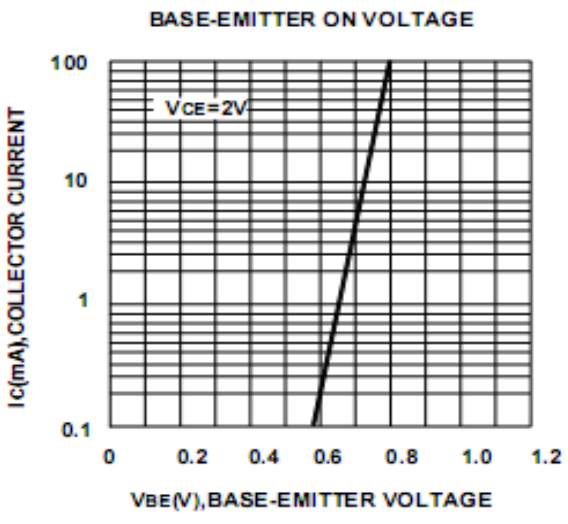
ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter		Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	BC846	V_{CBO}	I_C= 10μA, I_E=0	80			
	BC847			50			
	BC848			30			V
Collector-emitter breakdown voltage	BC846	V_{CEO}	I_C= 10mA, I_B=0	65			
	BC847			45			
	BC848			30			V
Emitter-base breakdown voltage		V_{EBO}	I_E= 10μA, I_C=0	6			V
Collector cut-off current	BC846	I_{CBO}	V_{CB}=70 V , I_E=0				
	BC847		V_{CB}=50 V , I_E=0				
	BC848		V_{CB}=30 V , I_E=0			0.1	μA
Collector cut-off current	BC846	I_{CEO}	V_{CE}=60 V , I_B=0				
	BC847		V_{CE}=45 V , I_B=0				
	BC848		V_{CE}=30 V , I_B=0			0.1	μA
Emitter cut-off current		I_{EBO}	V_{EB}=5 V , I_C=0			0.1	μA
DC current gain	BC846A,847A,848A	h_{FE}	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

BC846A/B
BC847A/B/C
BC848A/B/C

Typical Characteristics





BC846A/B
BC847A/B/C Typical Characteristics
BC848A/B/C

