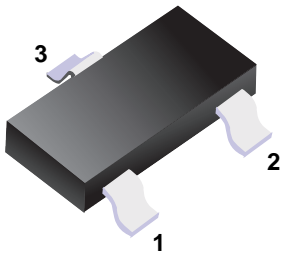


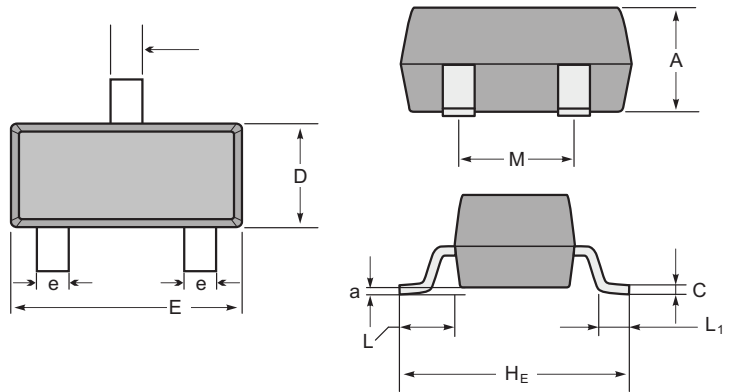
■ Features

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



1.Base
2.Emitter
3.Collector

■ Simplified outline(SOT-23)



SOT-23 mechanical data

UNIT		A	C	D	E	H _E	e	M	L	L ₁	a
mm	max	1.1	0.15	1.4	3.0	2.6	0.5	1.95	0.55 (ref)	0.36 (ref)	0.0
	min	0.9	0.08	1.2	2.8	2.2	0.3	1.7			0.15
mil	max	43	6	55	118	102	20	77	22 (ref)	14 (ref)	0.0
	min	35	3	47	110	87	12	67			6

■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	BC846	BC847	BC848	Unit
Collector - Base Voltage	V _{CBO}	80	50	30	V
Collector - Emitter Voltage	V _{CEO}	65	45	30	
Emitter - Base Voltage	V _{EBO}	6	6	6	
Collector Current - Continuous	I _C	100			mA
Collector Power Dissipation	P _C	200			mW
Junction Temperature	T _J	150			°C
Storage Temperature Range	T _{stg}	-55 to 150			

BC846-BC848

■ 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	$I_C = 1 mA, I_B = 0$	65			V	
	BC847		45				
	BC848		30				
Emitter - base breakdown voltage	V_{EBO}	$I_E = 100 \mu A, I_C = 0$	6				
Collector-base cut-off current	BC846	I_{CBO}	$V_{CB} = 70 V, I_E = 0$		100	nA	
	BC847		$V_{CB} = 50 V, I_E = 0$				
	BC848		$V_{CB} = 30 V, I_E = 0$				
Collector- emitter cut-off current	BC846	I_{CEO}	$V_{CE} = 60 V, I_E = 0$		1	uA	
	BC847		$V_{CE} = 45 V, I_E = 0$				
	BC848		$V_{CE} = 30 V, I_E = 0$				
Emitter cut-off current	I_{EBO}	$V_{EB} = 5 V, I_C = 0$			100	nA	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100 mA, I_B = 5 mA$			0.4	V	
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 100 mA, I_B = 5 mA$			1.1		
DC current gain	BC846A,847A,848A	h_{FE}	$V_{CE} = 5 V, I_C = 2 mA$	110		220	
	BC846B,847B,848B			200		450	
	BC846C,847C,848C			420		800	
Collector output capacitance	C_{ob}	$V_{CB} = 10 V, f = 1 MHz$			4.5	pF	
Transition frequency	f_T	$V_{CE} = 5 V, I_C = 10 mA, f = 100 MHz$	100			MHz	

■ Classification of h_{FE}

Type	BC846A	BC846B	BC846C	BC847A	BC847B	BC847C	BC848A	BC848B	BC848C
Range	110-220	220-450	420-800	110-220	220-450	420-800	110-220	220-450	420-800
Marking	1A	1B	1C	1E	1F	1G	1J	1K	1L

RATING AND CHARACTERISTIC CURVES (BC846-BC848)

