

EVVOSEMI[®]

THINK CHANGE DO



ESD



TVS



MOS



LDO



Diode



Sensor



DC-DC

Product Specification

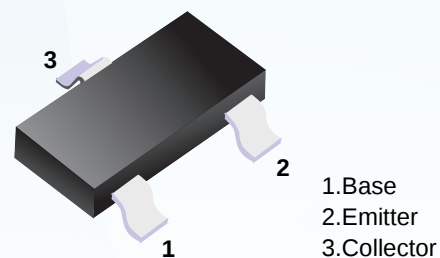
▶ Domestic	Part Number	EVBC846-EVBC848
▶ Overseas	Part Number	BC846-BC848
▶ Equivalent	Part Number	BC846-BC848

EV is the abbreviation of name EVVO

■ NPN Transistors

■ Features

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



■ Simplified outline(SOT-23)

■ 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			°C
Storage Temperature Range	T _{stg}	-55 to 150			

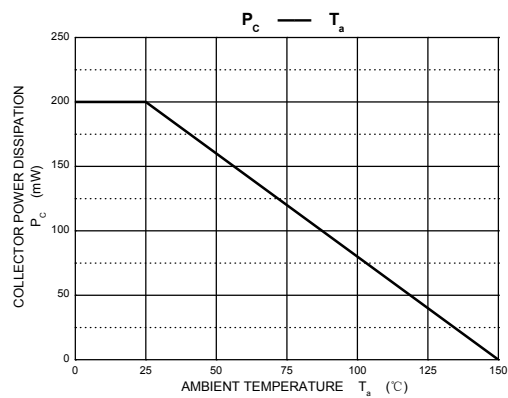
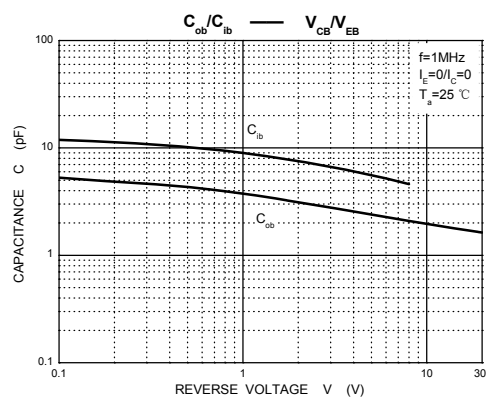
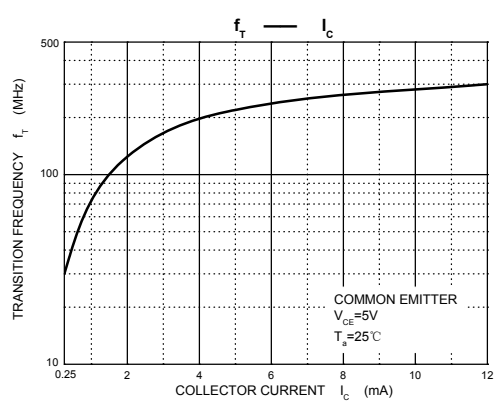
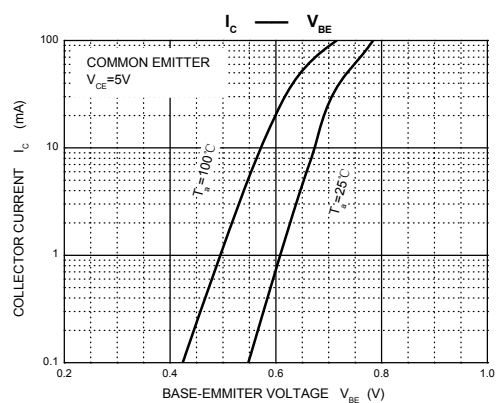
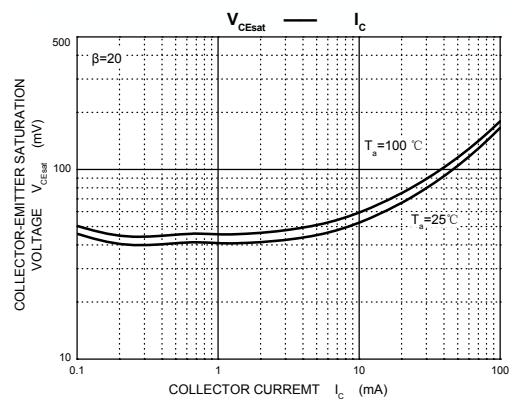
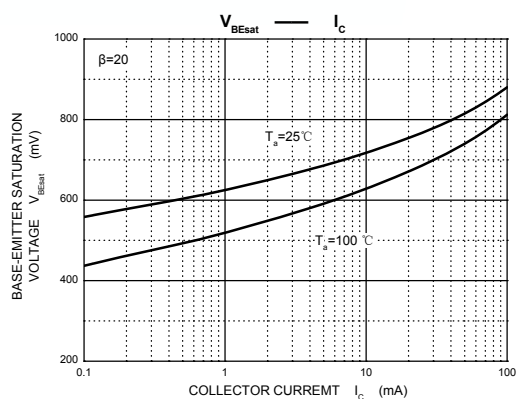
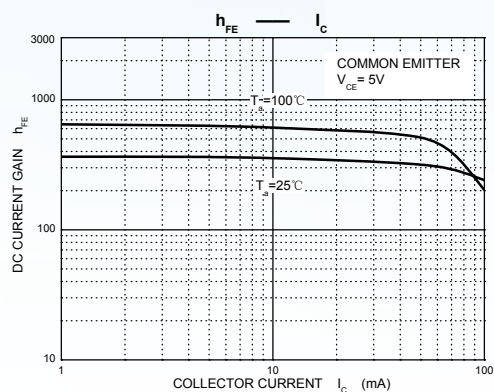
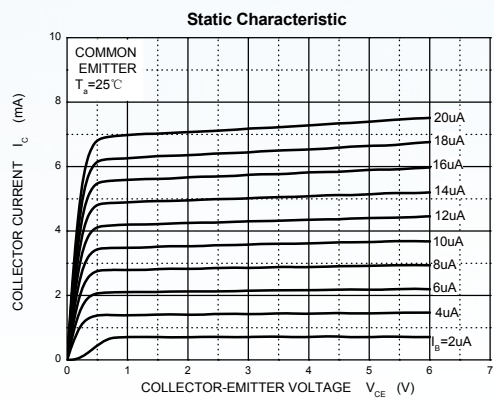
■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	BC846 BC847 BC848	V_{CBO} $I_C = 100 \mu A, I_E = 0$	80			V
			50			
			30			
Collector- emitter breakdown voltage	BC846 BC847 BC848	V_{CEO} $I_C = 1 mA, I_B = 0$	65			
			45			
			30			
Emitter - base breakdown voltage	V_{EBO}	$I_E = 100 \mu A, I_C = 0$	6			
Collector-base cut-off current	BC846 BC847 BC848	$V_{CB} = 70 V, I_E = 0$			100	nA
		$V_{CB} = 50 V, I_E = 0$				
		$V_{CB} = 30 V, I_E = 0$				
Collector- emitter cut-off current	BC846 BC847 BC848	$V_{CE} = 60 V, I_E = 0$			1	μA
		$V_{CE} = 45 V, I_E = 0$				
		$V_{CE} = 30 V, I_E = 0$				
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 BC846B,847B,848B BC846C,847C,848C	$V_{CE} = 5 V, I_C = 2 mA$	110		220	
			200		450	
			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

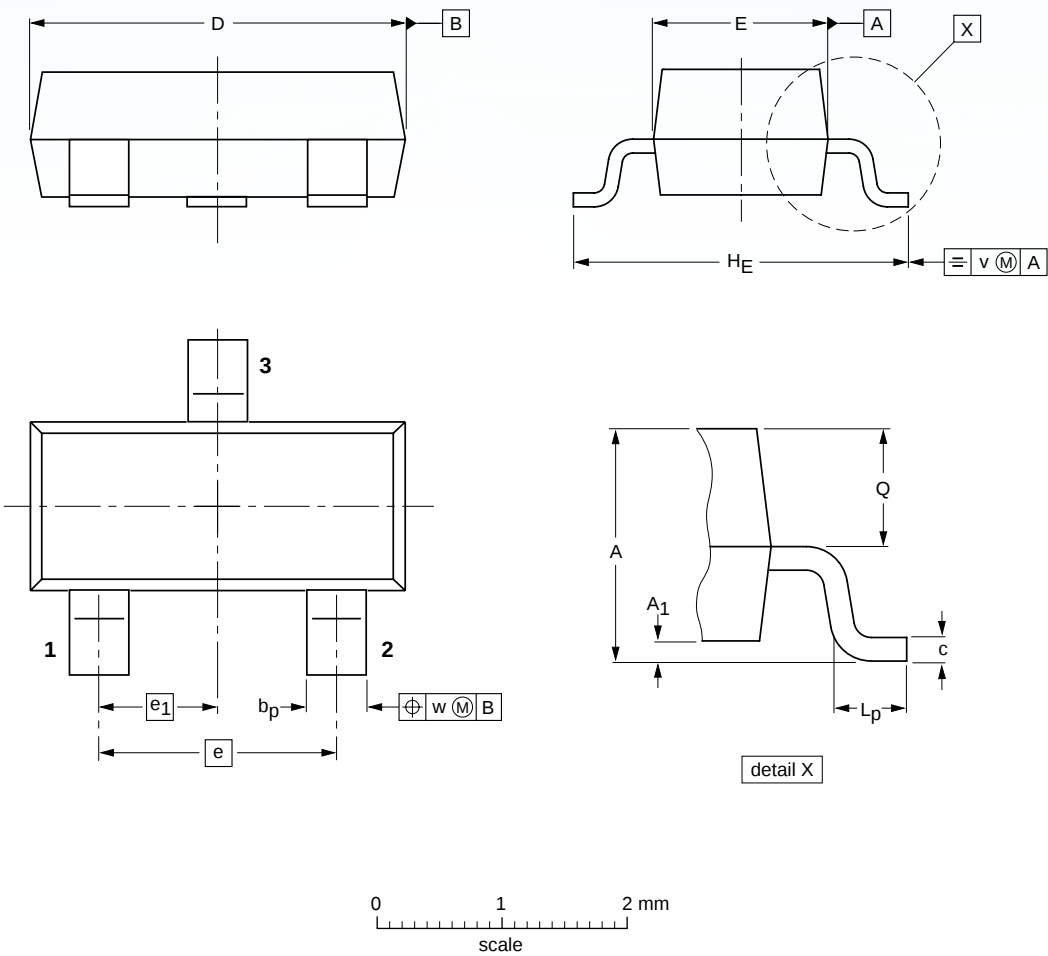
■ Classification of h_{FE}

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

■ Typical Characteristics



■ SOT-23



DIMENSIONS (mm are the original dimensions)

UNIT	A	A ₁ max.	b _p	c	D	E	e	e ₁	H _E	L _p	Q	v	w
mm	1.1 0.9	0.1	0.48 0.38	0.15 0.09	3.0 2.8	1.4 1.2	1.9	0.95	2.5 2.1	0.45 0.15	0.55 0.45	0.2	0.1

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