

EVVOSEMI[®]

THINK CHANGE DO



ESD



TVS



MOS



LDO



Diode



Sensor



DC-DC

Product Specification

▶ Domestic	Part Number	EVBC859-EVBC860
▶ Overseas	Part Number	BC859-BC860
▶ Equivalent	Part Number	BC859-BC860

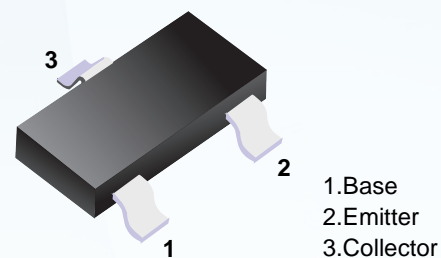
"S1" means SOT-23

EV is the abbreviation of name EVVO

■ PNP Transistors

■ Features

- Low current (max. 100 mA)
- Low voltage (max. 45 V).
- NPN complements: BC849 and BC850.



■ Simplified outline(SOT-23)

■ Absolute Maximum Ratings Ta = 25°C

Parameter		Symbol	Rating	Unit
Collector - Base Voltage	EVBC859	V _{CB0}	-30	V
	EVBC860		-50	
Collector - Emitter Voltage	EVBC859	V _{CEO}	-30	
	EVBC860		-45	
Emitter - Base Voltage		V _{EBO}	-5	
Collector Current - Continuous		I _C	-100	mA
Peak Collector Current		I _{CM}	-200	
Peak Base Current		I _{BM}	-200	
Collector Power Dissipation (Note.1)		P _C	250	W
Thermal Resistance From Junction to Ambient (Note.1)		R _{thja}	500	K/W
Junction Temperature		T _J	150	°C
Storage Temperature range		T _{stg}	-55 to 150	

Note.1: Transistor mounted on an FR4 printed-circuit board.

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage EVBC859 EVBC860	V _{CBO}	I _c = -100 μ A, I _E =0	-30			V
			-50			
Collector- emitter breakdown voltage EVBC859 EVBC860	V _{CEO}	I _c = -1 mA, I _B =0	-30			
			-45			
Emitter - base breakdown voltage	V _{EBO}	I _E = -100 μ A, I _c =0	-5			
Collector-base cut-off current	I _{CBO}	V _{CB} = -30 V, I _E =0		-1	-15	nA
		V _{CB} = -30 V, I _E =0, T _J = 150°C			-4	μ A
Emitter cut-off current	I _{EBO}	V _{EB} = -5V, I _c =0			-100	nA
Collector-emitter saturation voltage	V _{CE(sat)}	I _c =-10 mA, I _B =-0.5mA		-75	-300	mV
		I _c =-100 mA, I _B =-5mA		-250	-600	
Base - emitter saturation voltage	V _{BE(sat)}	I _c =-10 mA, I _B =-0.5mA (Note.1)		-700		
		I _c =-100 mA, I _B =-5mA (Note.1)		-850		
Base - emitter voltage	V _{BE}	V _{CE} = -5V, I _c = -2mA (Note.2)	-600	-650	-750	
		V _{CE} = -5 V, I _c = -10mA (Note.2)			-820	
DC current gain EVBC859B:EVBC860B EVBC859C:EVBC860C	h _{FE}	V _{CE} = -5V, I _c = -2mA	220		475	
			420		800	
Collector capacitance	C _c	V _{CB} = -10V, I _E =I _c = 0, f=1MHz		4.5		pF
Emitter capacitance	C _e	V _{EB} = -0.5 V, I _c =I _c = 0, f=1MHz		10		
Noise Figure	NF	V _{CE} = -5V, I _c = -200 μ A, R _S =2K Ω f=30HZ to 15KHz			4	dB
		V _{CE} = -5V, I _c = -200 μ A, R _S =2K Ω f=1 KHz, B=200HZ			4	
Transition frequency	f _T	V _{CE} = -5V, I _c = -10mA, f=100MHz	100			MHz

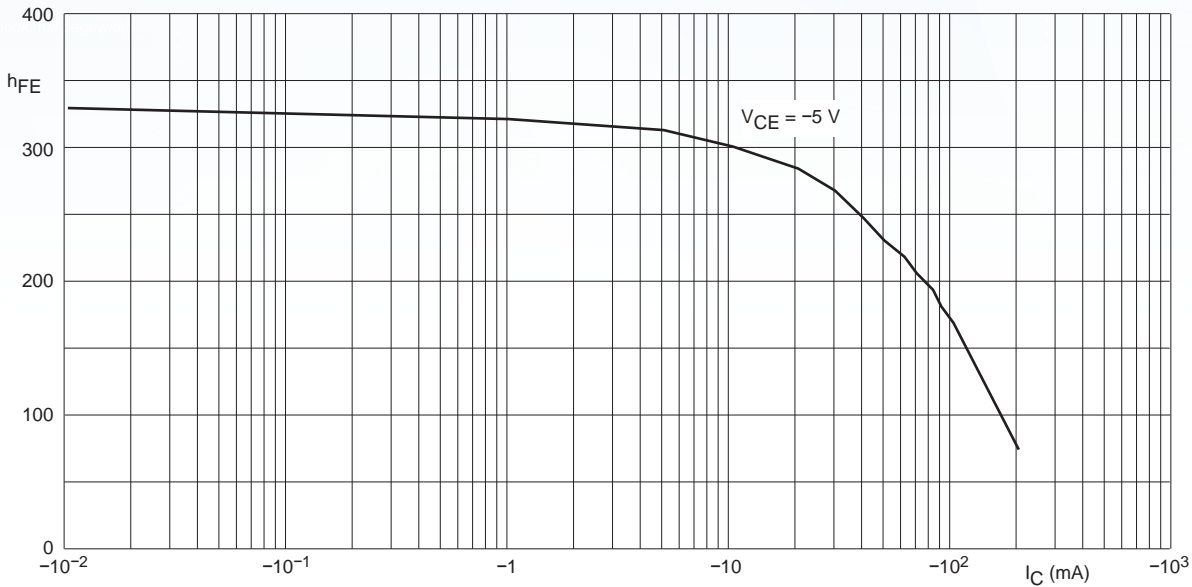
Note.1: V_{BE(sat)} decreases by about -1.7 mV/K with increasing temperature.

Note.2: V_{BE} decreases by about -2 mV/K with increasing temperature.

■ Classification of h_{FE}

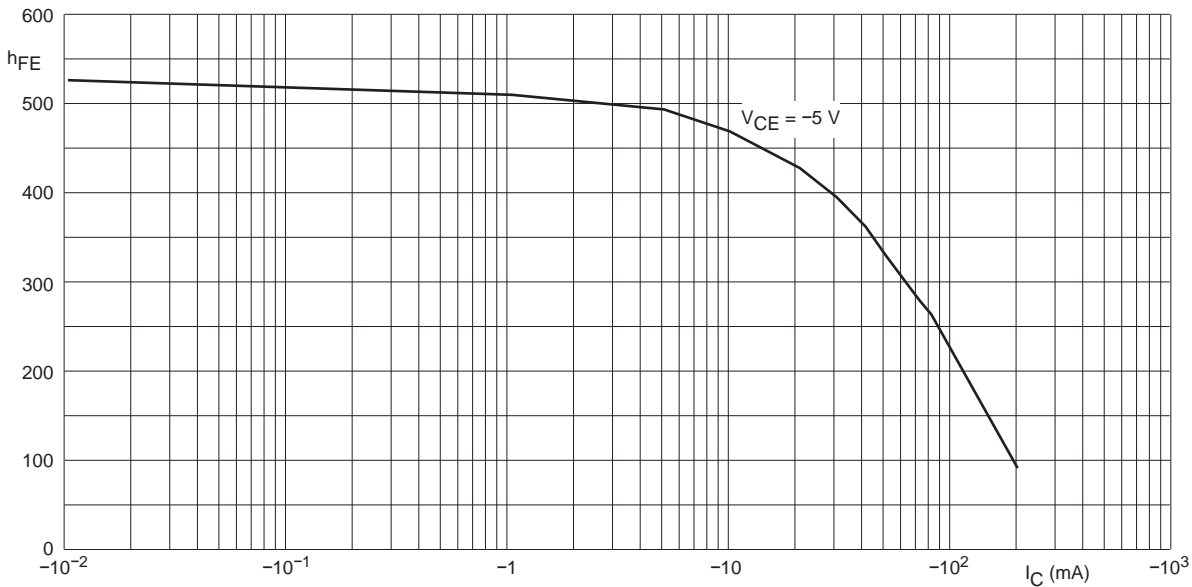
Type	EVBC859B-S1	EVBC859C-S1	EVBC860B-S1	EVBC860C-S1
Range	220-475	420-800	220-475	420-800
Marking	4B*	4C*	4F*	4G*

■ Typical Characteristics



BC859B; BC860B.

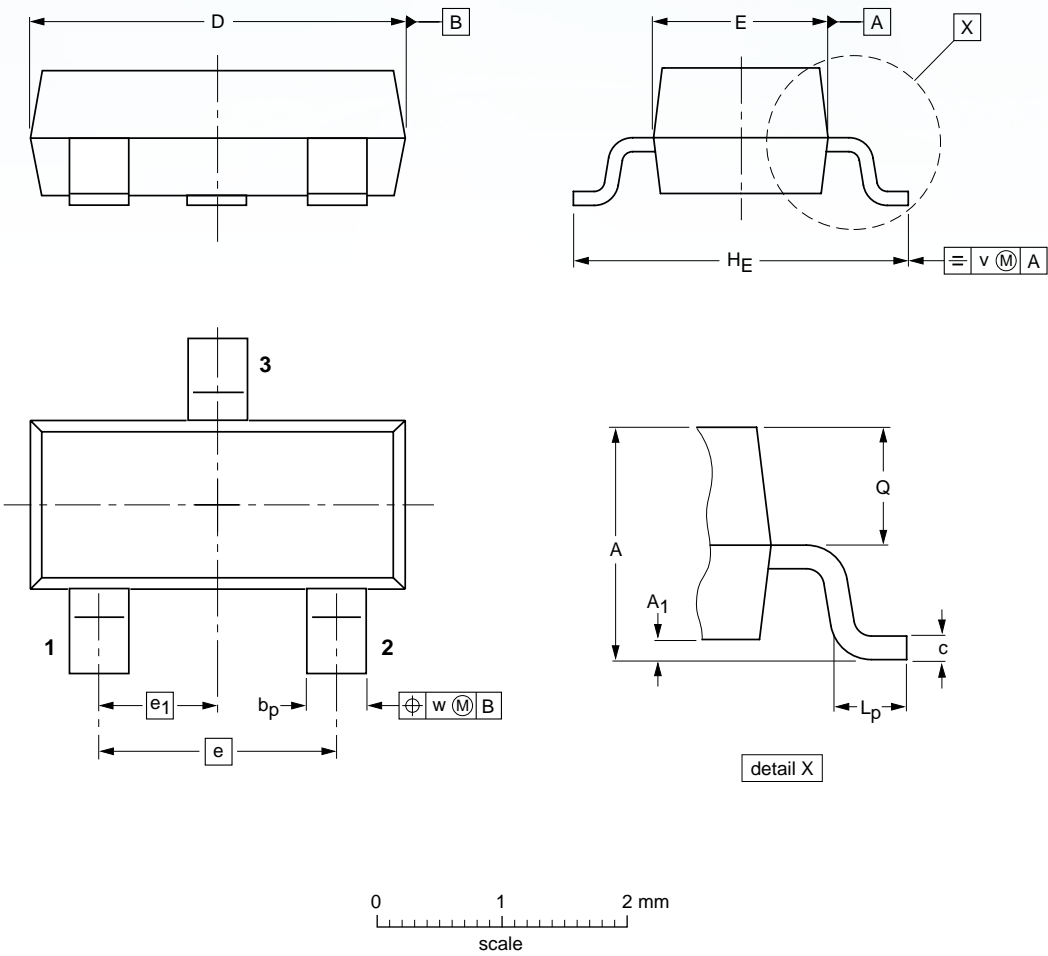
Fig.2 DC current gain; typical values.



BC859C; BC860C.

Fig.3 DC current gain; typical values.

■ 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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