



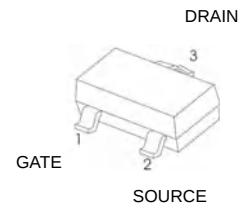
BC859-BC860 PNP Transistors

Features

Low current (max. 100 mA)

Low voltage (max. 45 V).

NPN complements: BC849 and BC850.



Classification of hfe

Type	BC859B	BC859C	BC860B	BC860C
Range	220-475	420-800	220-475	420-800
Marking	4B*	4C*	4F*	4G*

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Absolute Maximum Ratings Ta = 25°C

Parameter		Symbol	Rating	Unit
Collector - Base Voltage	BC859	V _{CBO}	-30	V
	BC860		-50	
Collector - Emitter Voltage	BC859	V _{CEO}	-30	
	BC860		-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

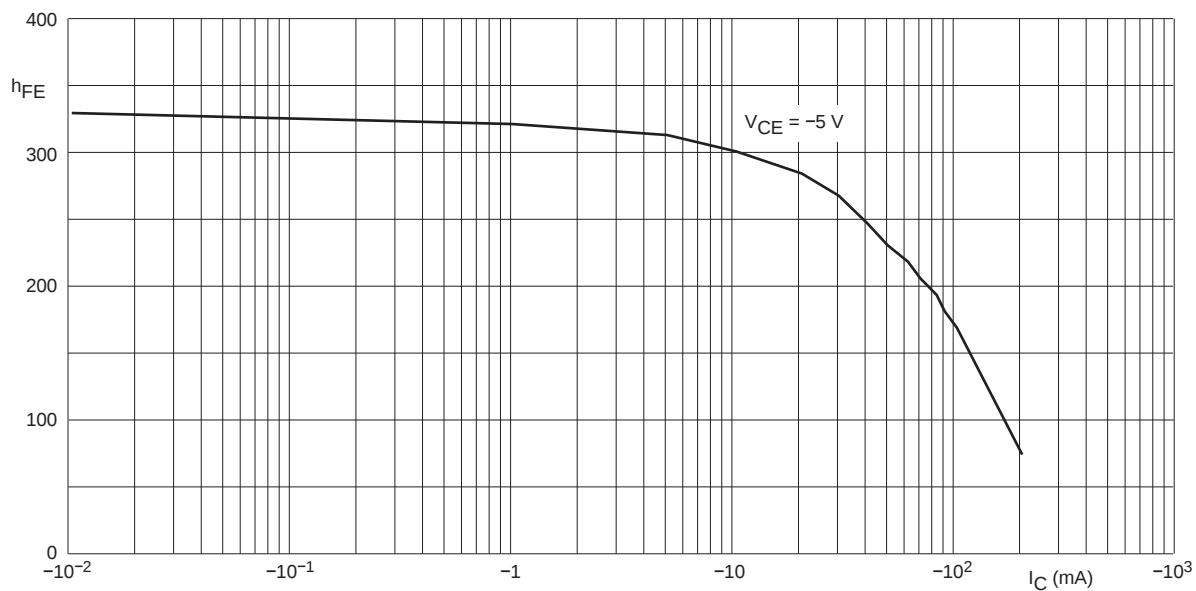
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage BC859 BC860	V _{CB0}	I _c = -100 μA, I _E =0	-30			V
			-50			
Collector- emitter breakdown voltage BC859 BC860	V _{CEO}	I _c = -1 mA, I _B =0	-30			
			-45			
Emitter - base breakdown voltage	V _{EB0}	I _E = -100 μA, I _C =0	-5			
Collector-base cut-off current	I _{CB0}	V _{CB} = -30 V, I _E =0		-1	-15	nA
		V _{CB} = -30 V, I _E =0, T _J = 150°C			-4	uA
Emitter cut-off current	I _{EB0}	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 BC859B:BC860B BC859C:BC860C	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 = -200uA, RS=2KΩ f=30HZ to 15KHz			4	dB
		V _{CE} = -5V, I _c = -200uA, RS=2KΩ 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.

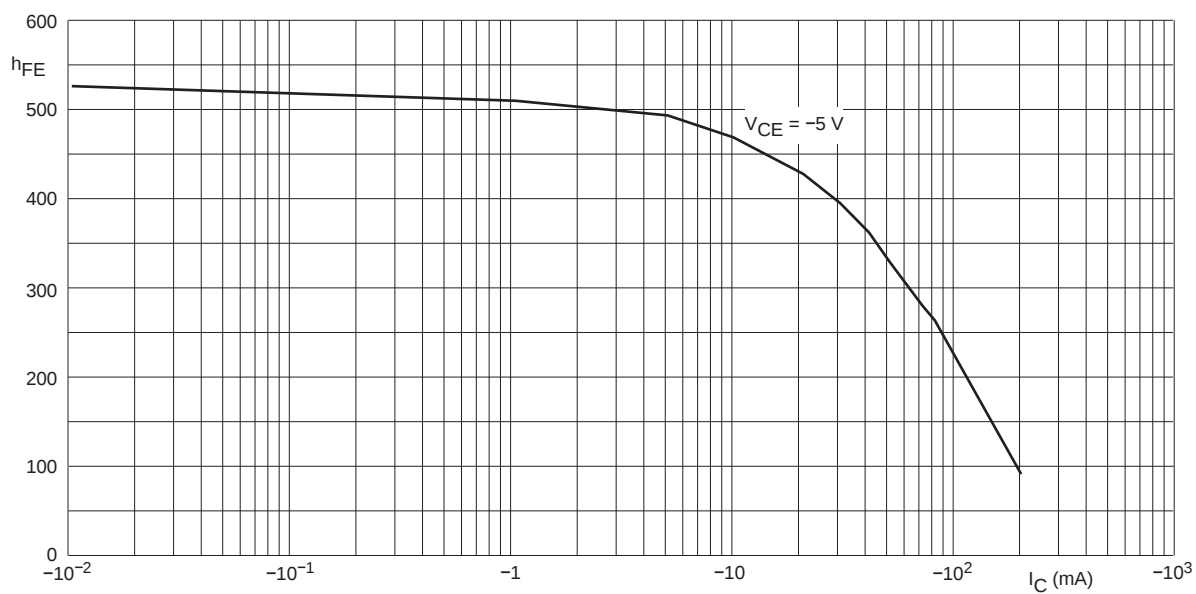


Typical Characteristics



BC859B; BC860B.

Fig.2 DC current gain; typical values.



BC859C; BC860C.

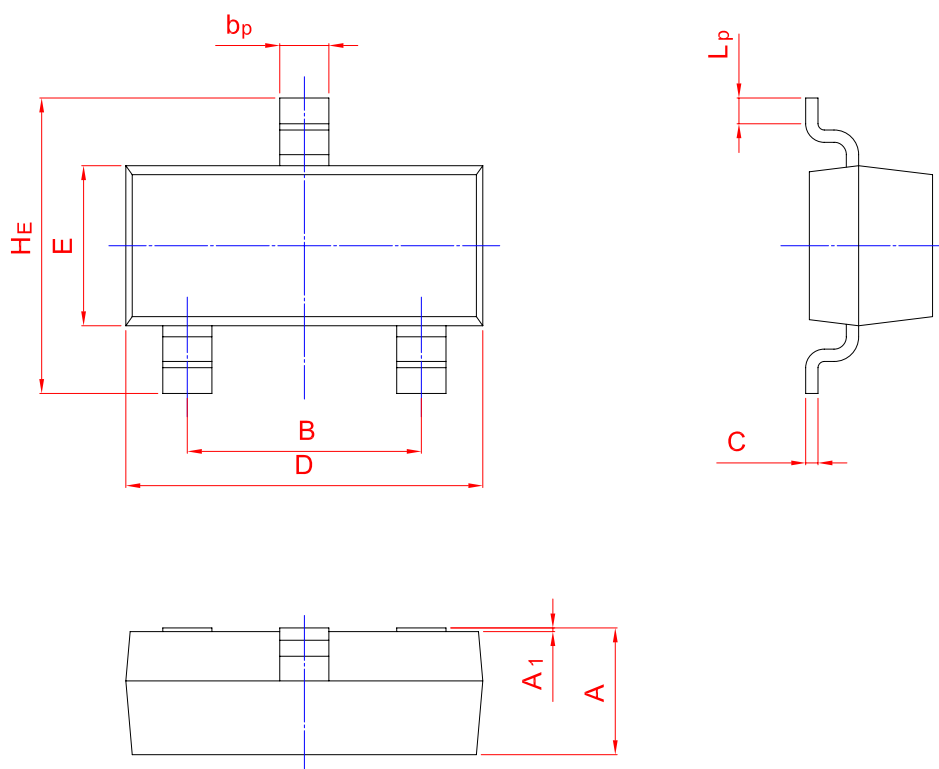
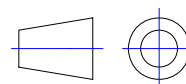
Fig.3 DC current gain; typical values.



PACKAGE OUTLINE

Plastic surface mounted package; 3 leads

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UNIT	A	B	bp	C	D	E	HE	A1	Lp
mm	1.40 0.95	2.04 1.78	0.50 0.35	0.19 0.08	3.10 2.70	1.65 1.20	3.00 2.20	0.100 0.013	0.50 0.20