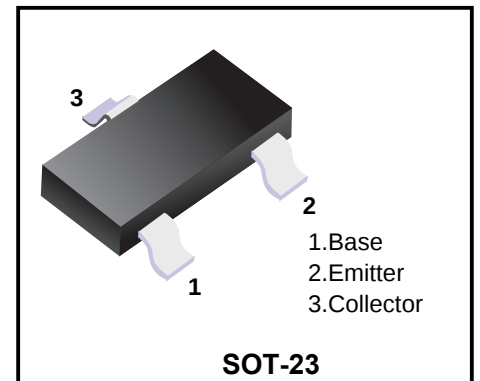


PNP Transistors

Features

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



Absolute Maximum Ratings (Ta=25°C)

Parameter		Symbol	Rating	Unit
Collector - Base Voltage	BC859	V _{CB0}	-30	V
	BC860		-50	
Collector - Emitter Voltage	BC859	V _{CEO}	-30	
	BC860		-45	
Emitter - Base Voltage		V _{EB0}	-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℃ unless otherwise specified.)

Parameter		Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	BC859	V _{CBO}	I _C = -100 μA, I _E =0	-30			V
	BC860			-50			
Collector- emitter breakdown voltage	BC859	V _{CEO}	I _C = -1 mA, I _B =0	-30			
	BC860			-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℃			-4	uA
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	BC859B:BC860B	h _{FE}	V _{CE} = -5V, I _C = -2mA	220		475	
	BC859C:BC860C			420		800	
Collector capacitance		C _c	V _{CB} = -10V, I _E =I _E = 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: VBEsat decreases by about -1.7 mV/K with increasing temperature.

Note.2: VBE decreases by about -2 mV/K with increasing temperature.

hFE Classification

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

Typical Characteristics

Fig. 1 Output Characteristics Curve

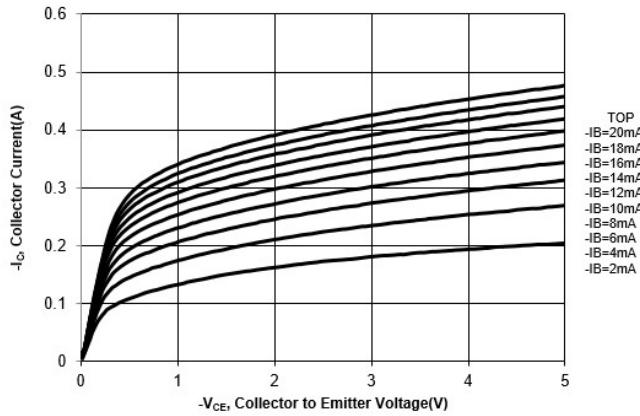


Fig. 2 Collector Current vs. Base to Emitter Voltage

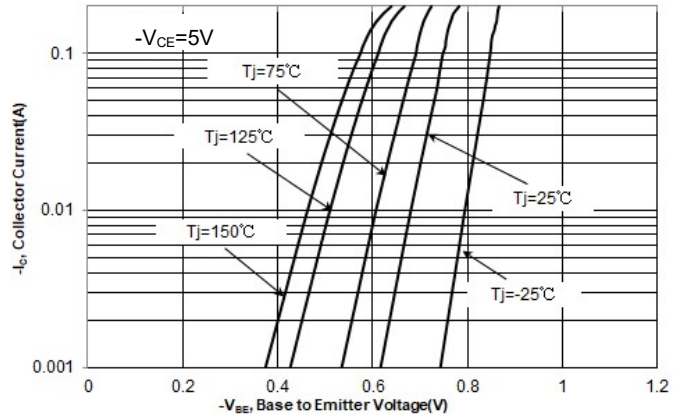


Fig. 3 DC Current Gain vs. Collector Current

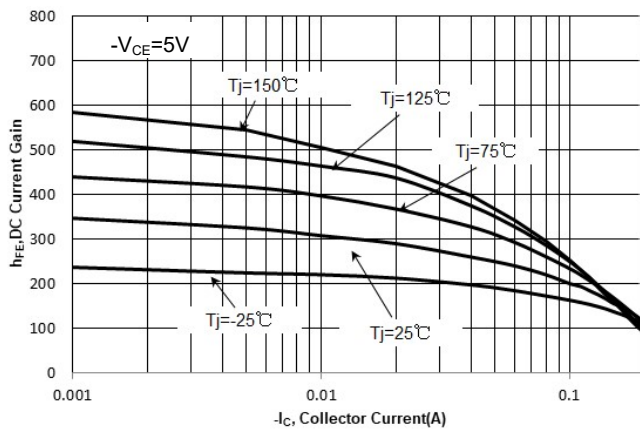
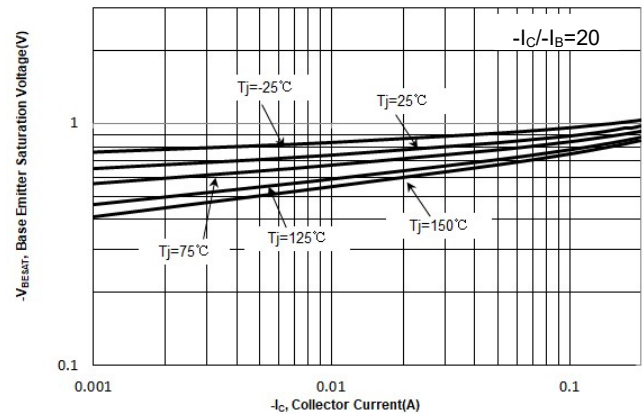


Fig. 4 V_{BESAT} vs. Collector Current



Ordering information

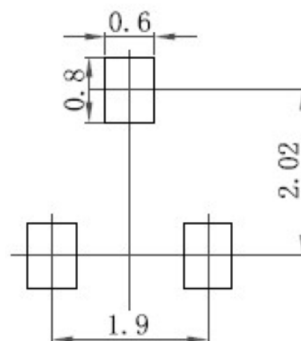
Package	Packing Description	Base Quantity	Packing Quantity
SOT-23	Tape/Reel, 7" reel	3000pcs/Reel	24000PCS/Box 120000PCS/Carton

Package Dimensions

SOT-23

Dim.	Millimeter (mm)		mil	
	Min.	Max.	Min.	Max.
A	0.9	1.15	35	45
A1	0.1		3.9	
bp	0.38	0.48	15	19
C	0.09	0.15	3.54	5.9
D	2.8	3.0	110	118
E	1.2	1.4	47	55
E	1.9		75	
E1	0.95		37	
HE	2.1	2.55	83	100
Lp	0.15	0.45	5.9	18
Q	0.45	0.55	18	22
v	0.2		7.9	
W	0.1		4	

The recommended mounting pad size



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