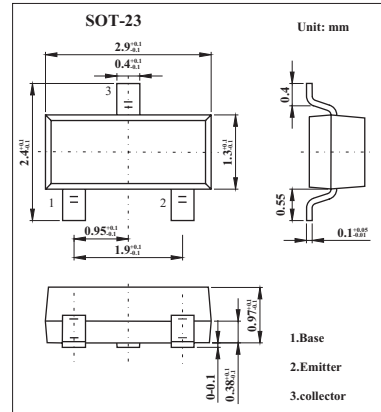


BC859,BC860

■ Features

- Low current (max. 100 mA).
- Low voltage (max. 45 V).



■ Absolute Maximum Ratings Ta = 25°C

Parameter	Symbol	BC859	BC860	Unit
Collector-base voltage	V _{CB0}	-30	-50	V
Collector-emitter voltage	V _{CE0}	-30	-45	V
Emitter-base voltage	V _{EB0}	-5		V
Collector current	I _c	-100		mA
Peak collector current	I _{CM}	-200		mA
Peak base current	I _{BM}	-200		mA
Total power dissipation *	P _{tot}	250		mW
Junction temperature	T _j	150		°C
Storage temperature	T _{stg}	-65 to +150		°C
Operating ambient temperature	R _{amb}	-65 to +150		°C
Thermal resistance from junction to ambient *	R _{th j-a}	500		K/W

* Transistor mounted on an FR4 printed-circuit board.

BC859,BC860

■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector cutoff current	ICBO	V _{CB} = -30 V, I _E = 0		-1	-15	nA
	ICBO	V _{CB} = -30 V, I _E = 0, T _j = 150°C			-4	μA
Emitter cutoff current	IEBO	V _{EB} = -5 V, I _C = 0			-100	nA
DC current gain	BC859B,BC860B	hFE I _C = -2 mA; V _{CE} = -5 V	220		475	
	BC859C,BC860C		420		800	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C = -10 mA; I _B = -0.5 mA		-75	-300	mV
		I _C = -100 mA; I _B = -5 mA;		-250	-650	mV
Base-emitter saturation voltage *1	V _{BE(sat)}	I _C = -10 mA; I _B = -0.5 mA		-700		mV
		I _C = -100 mA; I _B = -5 mA;		-850		mV
Base-emitter voltage *2	V _{BE}	I _C = -2 mA; V _{CE} = -5 V	-600	-650	-750	mV
		I _C = -10 mA; V _{CE} = -5 V			-820	mV
Collector capacitance	C _c	V _{CB} = -10 V; I _E = I _e = 0; f = 1 MHz		4.5		pF
Emitter capacitance	C _e	I _C = I _c = 0; V _{EB} = -500 mV; f = 1 MHz		10		
Transition frequency	f _T	V _{CE} = -5 V; I _C = -10 mA; f = 100 MHz	100			MHz
Noise figure	NF	I _C = -200 μA; V _{CE} = -5 V; R _s = 2 kΩ; f = 1 kHz; B = 200 Hz			4	dB

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

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

■ hFE Classification

TYPE	BC859B	BC859C
Marking	4B	4C

TYPE	BC860B	BC860C
Marking	4F	4G