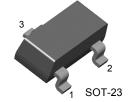


BC856/857/858/859/860

Switching and Amplifier Applications - Suitable for automatic insertion in thick and thin-film circuits

- Low Noise: BC859, BC860
- Complement to BC846 ... BC850



1. Base 2. Emitter 3. Collector

PNP Epitaxial Silicon Transistor

Absolute Maximum Ratings Ta=25°C unless otherwise noted

Symbol	Parameter	Value	Units	
V _{CBO}	Collector-Base Voltage			
	: BC856	-80	V	
	: BC857/860	-50	V	
	: BC858/859	-30	V	
V _{CEO}	Collector-Emitter Voltage			
	: BC856	-65	V	
	: BC857/860	-45	V	
	: BC858/859	-30	V	
V _{EBO}	Emitter-Base Voltage	-5	V	
I _C	Collector Current (DC)	-100	mA	
I _C P _C	Collector Power Dissipation	310	mW	
TJ	Junction Temperature	150	°C	
T _{STG}	Storage Temperature	-65 ~ 150	°C	

Electrical Characteristics T_a=25°C unless otherwise noted

Symbol	Parameter	Test Condition	Min.	Тур.	Max.	Units
I _{CBO}	Collector Cut-off Current	V _{CB} = -30V, I _E =0			-15	nA
h _{FE}	DC Current Gain	V_{CE} = -5V, I_{C} = -2mA	110		800	
V _{CE} (sat)	Collector-Emitter Saturation Voltage	I _C = -10mA, I _B = -0.5mA I _C = -100mA, I _B = -5mA		-90 -250	-300 -650	mV mV
V _{BE} (sat)	Base-Emitter Saturation Voltage	I _C = -10mA, I _B = -0.5mA I _C = -100mA, I _B = -5mA		-700 -900		mV mV
V _{BE} (on)	Base-Emitter On Voltage	V_{CE} = -5V, I_{C} = -2mA V_{CE} = -5V, I_{C} = -10mA	-600	-660	-750 -800	mV mV
f _T	Current Gain Bandwidth Product	V _{CE} = -5V, I _C = -10mA f=100MHz		150		MHz
C _{ob}	Output Capacitance	V _{CB} = -10V, I _E =0, f=1MHz			6	pF
NF	Noise Figure : BC856/857/858 : BC859/860 : BC859 : BC860	V_{CE} = -5V, I_{C} = -200 μ A f=1KHz, R_{G} =2K Ω V_{CE} = -5V, I_{C} = -200 μ A R_{G} =2K Ω , f=30~15000Hz		2 1 1.2 1.2	10 4 4 2	dB dB dB dB

h_{FE} Classification

Classification	А	В	С
h _{FE}	110 ~ 220	200 ~ 450	420 ~ 800

Marking Code

Туре	856A	856B	856C	857A	857B	857C	858A	858B	858C
Mark	9AA	9AB	9AC	9BA	9BB	9BC	9CA	9CB	9CC
Туре	859A	859B	859C	860A	860B	860C	•		
Mark	9DA	9DB	9DC	9EA	9EB	9EC	•		

Typical Characteristics

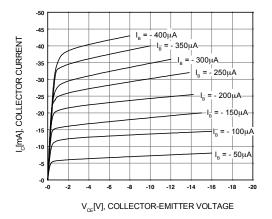


Figure 1. Static Characteristic

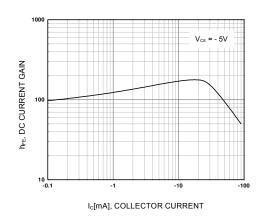


Figure 2. DC current Gain

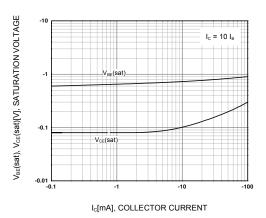


Figure 3. Base-Emitter Saturation Voltage Collector-Emitter Saturation Voltage

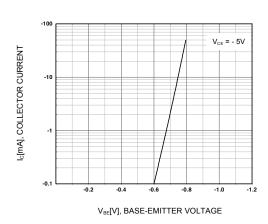


Figure 4. Base-Emitter On Voltage

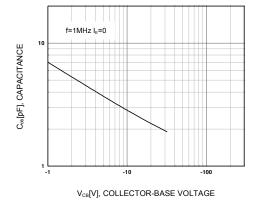


Figure 5. Collector Output Capacitance

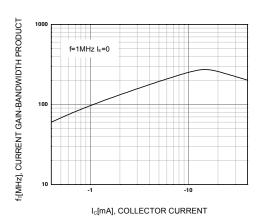
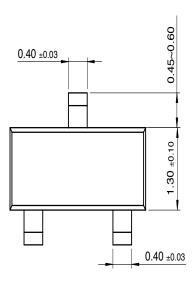


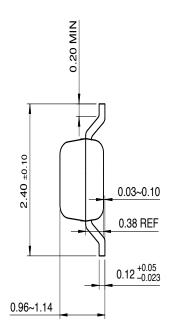
Figure 6. Current Gain Bandwidth Product

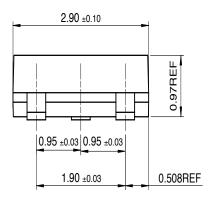
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Package Dimensions

SOT-23







Dimensions in Millimeters

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Bottomless™	FAST [®]	LittleFET™	Power247™	SuperSOT™-3
CoolFET™	FASTr™	MicroFET™	PowerTrench®	SuperSOT™-6
CROSSVOLT™	FRFET™	MicroPak™	QFET™	SuperSOT™-8
DOME™	GlobalOptoisolator™	MICROWIRE™	QS™	SyncFET™
EcoSPARK™	GTO™	MSX™	QT Optoelectronics™	TinyLogic™
E ² CMOS™	HiSeC™	MSXPro™	Quiet Series™	TruTranslation™
EnSigna™	I ² C™	OCX™	RapidConfigure™	UHC™
Across the board.	Around the world.™	OCXPro™	RapidConnect™	UltraFET [®]
The Power Franchise™		OPTOLOGIC [®]	SILENT SWITCHER®	VCX™
Programmable Ad	ctive Droop™	OPTOPLANAR™	SMART START™	

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No Identification Needed	Full Production	This datasheet contains final specifications. Fairchild Semiconductor reserves the right to make changes at any time without notice in order to improve design.
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