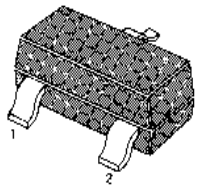
BC856/857/858/859/860

PNP EPITAXIAL SILICON TRANSISTOR

SWITCHING AND AMPLIFIER APPLICATIONS

- Suitable for automatic insertion in thick and thin-film circuits
- LOW NOISE: BC859, BC860
- Complement to BC846 ... BC850

SOT-23



1. Base 2. Emitter 3. Collector

ABSOLUTE MAXIMUM RATINGS (T_A=25°C)

Characteristic	Symbol	Rating	Unit
Collector-Base Voltage	V_{CBO}		
: BC856		-80	V
: BC857/860		-50	V
: BC858/859		-30	V
Collector-Emitter Voltage	V_{CEO}		
: BC856		-65	V
: BC857/860		-45	V
: BC858/859		-30	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current (DC)	I_C	-100	mA
Collector Dissipation	P_C	310	mW
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-65 ~ 150	°C

ELECTRICAL CHARACTERISTICS (T_A=25°C)

Characteristic		Symbol	Test Conditions	Min	Typ	Max	Unit
Collector Cut-off Current		I_{CBO}	V_{CB}= -30V, I_E=0			-15	nA
DC Current Gain		h_{FE}	V_{CE}= -5V, I_C= -2mA	110		800	
Collector-Emitter Saturation Voltage		V_{CE} (sat)	I_C= -10mA, I_B= -0.5mA		-90	-300	mV
			I_C= -100mA, I_B= -5mA		-250	-650	mV
Collector-Base Saturation Voltage		V_{BE} (sat)	I_C= -10mA, I_B= -0.5mA		-700		mV
			I_C= -100mA, I_B= -5mA		-900		mV
Base-Emitter On Voltage		V_{BE} (on)	V_{CE}= -5V, I_C= -2mA	-600	-660	-750	mV
			V_{CE}= -5V, I_C= -10mA			-800	mV
Current Gain Bandwidth Product		f_T	V_{CE}= -5V, I_C= -10mA f=100MHz		150		MHz
Collector-Base Capacitance		C_{CBO}	V_{CB}= -10V, f=1MHz			6	pF
Noise Figure	: BC856/857/858	NF	V_{CE}= -5V, I_C= -200μA		2	10	dB
	: BC859/860		f=1KHz, R_G=2KΩ		1	4	dB
	: BC859	NF	V_{CE}= -5V, I_C= -200μA		1.2	4	dB
	: BC860		R_G=2KΩ f=30~15000Hz		1.2	2	dB

h_{FE} CLASSIFICATION

Classification	A	B	C
h_{FE}	110-220	200-450	420-800

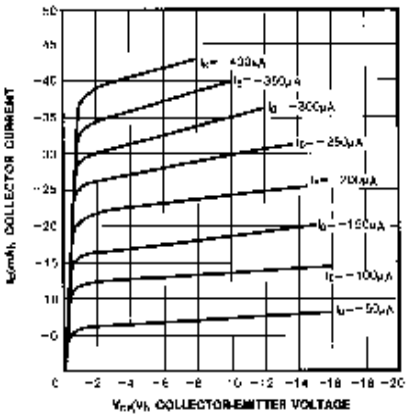
MARKING CODE

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

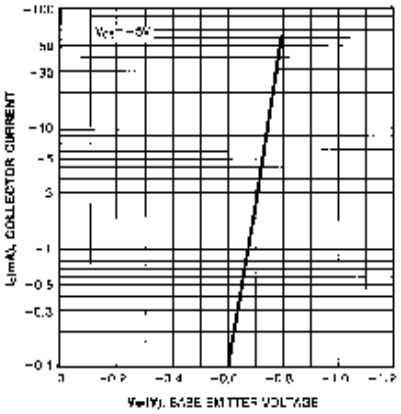
Rev. B

FAIRCHILD SEMICONDUCTOR

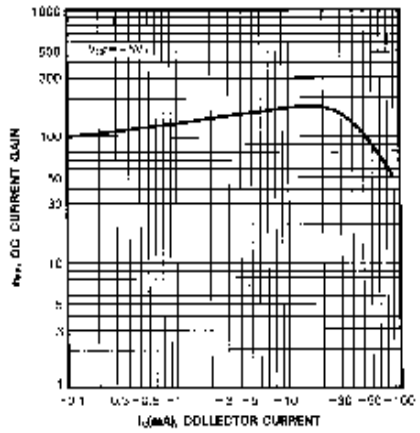
STATIC CHARACTERISTIC



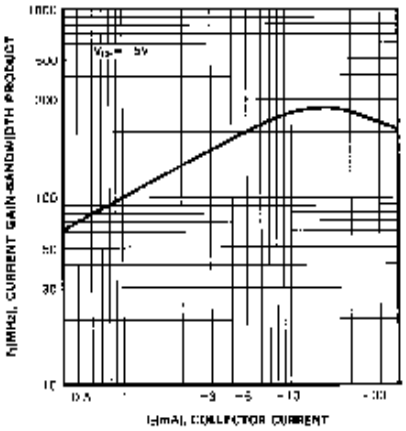
BASE-EMITTER VOLTAGE



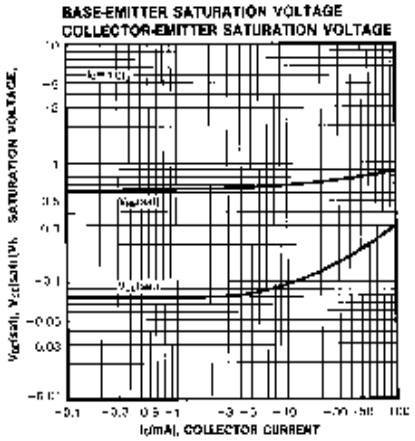
DC CURRENT GAIN



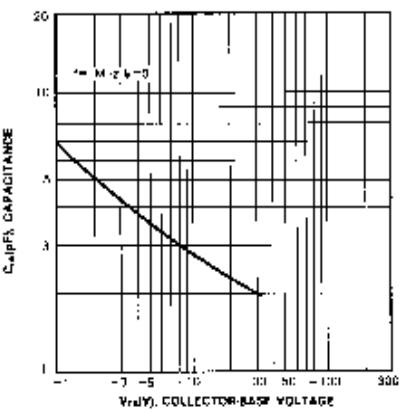
CURRENT GAIN-BANDWIDTH PRODUCT



BASE-EMITTER SATURATION VOLTAGE
COLLECTOR-EMITTER SATURATION VOLTAGE



COLLECTOR OUTPUT CAPACITANCE



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