

BC856/857/858/859/860

PNP EPITAXIAL SILICON TRANSISTOR

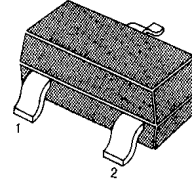
SWITCHING AND AMPLIFIER APPLICATIONS

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

ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$)

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	$^\circ\text{C}$
Storage Temperature	T_{STG}	-65 ~ 150	$^\circ\text{C}$

SOT-23



1. Base 2. Emitter 3. Collector

ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$)

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

h_{FE} CLASSIFICATION

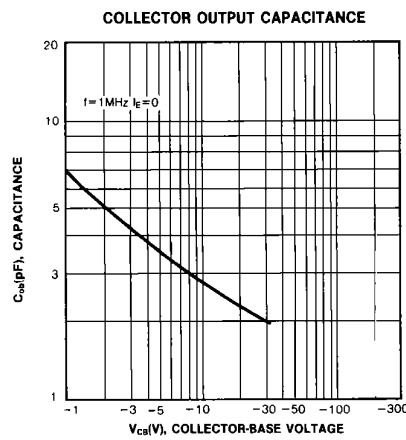
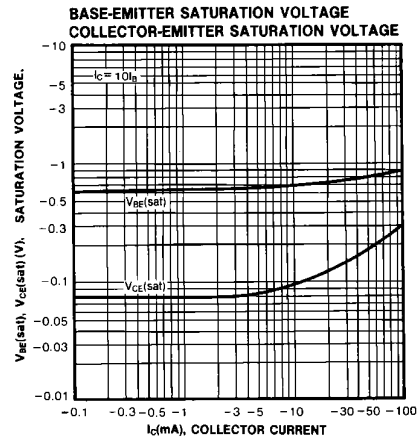
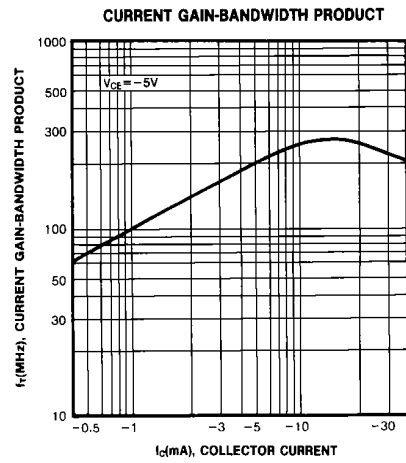
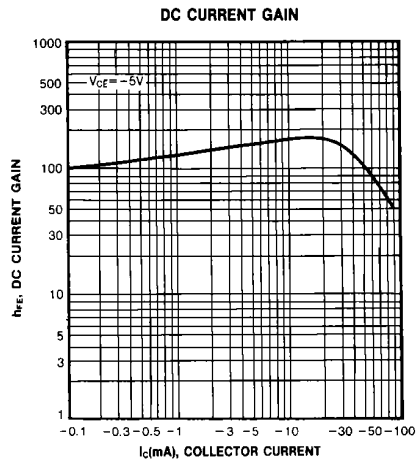
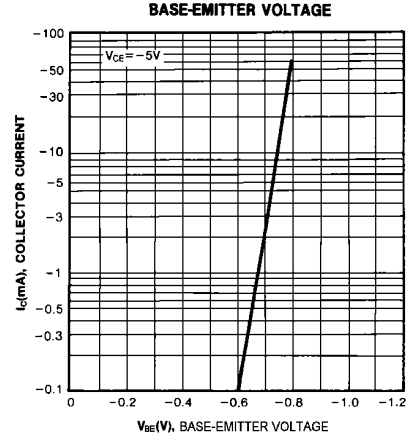
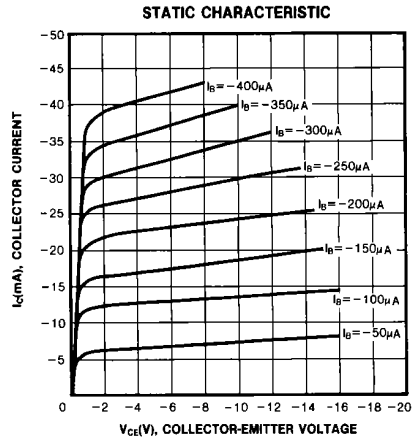
Classification	A	B	C
h_{FE}	110-220	200-450	420-800

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

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