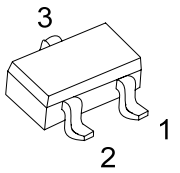
BC856/BC857/BC858

PNP SILICON TRANSISTOR

SWITCHING AND AMPLIFIER APPLICATIONS



SOT-23

*Pb-free plating product number:
BC856L/BC857L/BC858L

■ FEATURES

*Suitable for automatic insertion in thick and thin-film circuits
*Complement to BC846/BC847/BC848

■ ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Normal	Lead Free Plating		1	2	3	
BC856-x-AE3-R	BC856L-x-AE3-R	SOT-23	E	B	C	Tape Reel
BC857-x-AE3-R	BC857L-x-AE3-R	SOT-23	E	B	C	Tape Reel
BC858-x-AE3-R	BC858L-x-AE3-R	SOT-23	E	B	C	Tape Reel

Note: x: Rank

BC856L-x-AE3-R

(1)Packing Type
(2)Package Type
(3)Rank
(4)Lead Plating

(1) R: Tape Reel
(2) AE3: SOT-23
(3) x: refer to Classification of h_{FE}
(4) L: Lead Free Plating, Blank: Pb/Sn

■ MARKING

BC856	BC857	BC858
9A□	9B□	9C□

□: Rank Code,refer to Classification of h_{FE}

ABSOLUTE MAXIMUM RATINGS (Ta=25°C, unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage	BC856	V_{CBO}	-80	V
	BC857		-50	V
	BC858		-30	V
Collector-Emitter Voltage	BC856	V_{CEO}	-65	V
	BC857		-45	V
	BC858		-30	V
Emitter-Base Voltage		V_{EBO}	-5	V
Collector Dissipation		P_D	310	mW
Collector Current (DC)		I_C	-100	mA
Junction Temperature		T_J	+150	°C
Storage Temperature		T_{STG}	-40 ~ +150	°C

Note Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

■ ELECTRICAL CHARACTERISTICS (Ta=25°C, unless otherwise specified)

PARAMETER	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
Base-Emitter 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
Output Capacitance	Cob	V_{CB}=-10V,I_E=0,f=1MHz			6	pF
Noise Figure	NF	V_{CE}=-5V, I_C=-200μA, f=1KHz, R_G=2KΩ		2	10	dB

■ CLASSIFICATION OF h_{FE}

RANK	A	B	C
RANGE	110-220	200-450	420-800

■ TYPICAL CHARACTERISTICS

Figure 1. Static Characteristic

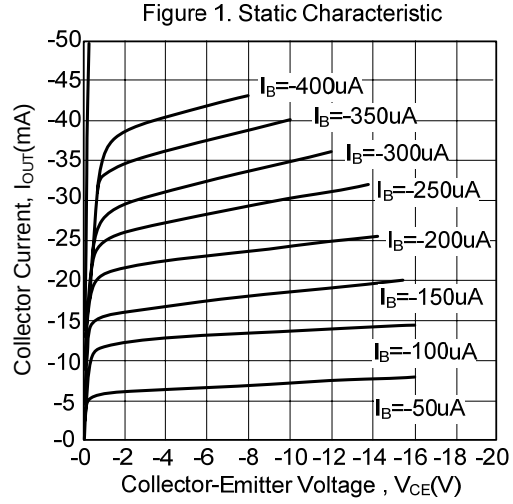


Figure 2. DC Current Gain

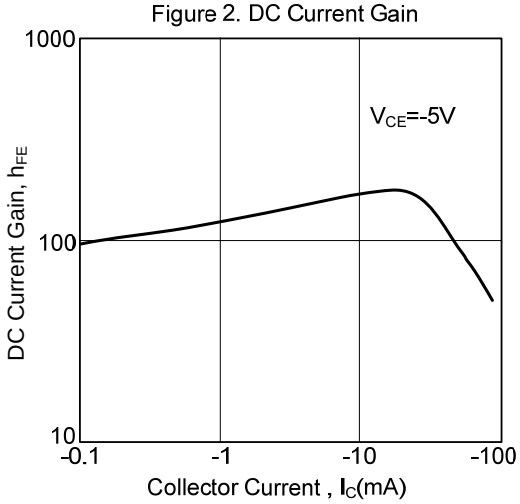


Figure 3. Base-Emitter Saturation Voltage
Collector-Emitter Saturation Voltage

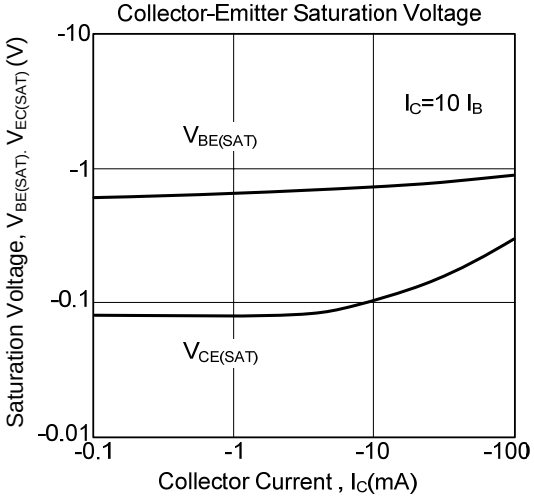


Figure 4. Base-Emitter on Voltage

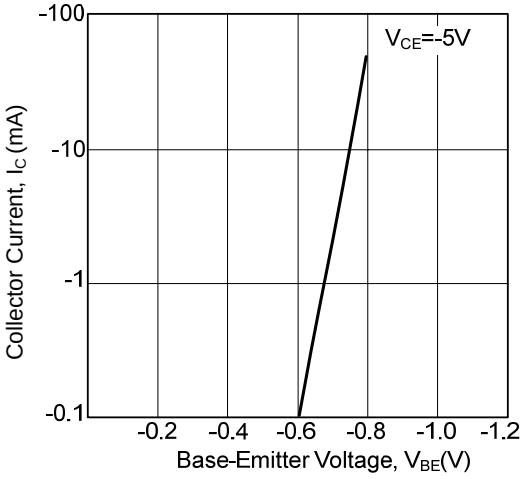


Figure 5. Collector Output Capacitance

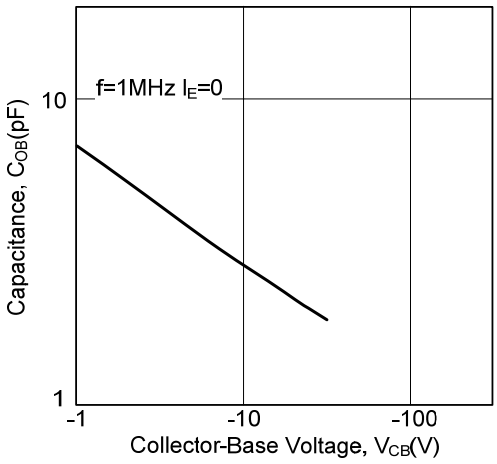


Figure 6. Current Gain Bandwidth Product