



BC856/BC857/BC858

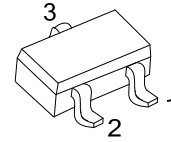
PNP SILICON TRANSISTOR

SWITCHING AND AMPLIFIER APPLICATIONS

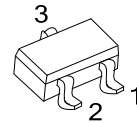
■ **FEATURES**

*Suitable for automatic insertion in thick and thin-film circuits

*Complement to BC846/BC847/BC848



SOT-23
(JEDEC TO-236)



SOT-323

■ **ORDERING INFORMATION**

Ordering Number	Package	Pin Assignment			Packing
		1	2	3	
BC856G-x-AE3-R	SOT-23	E	B	C	Tape Reel
BC857G-x-AE3-R	SOT-23	E	B	C	Tape Reel
BC858G-x-AE3-R	SOT-23	E	B	C	Tape Reel
BC856G-x-AL3-R	SOT-323	E	B	C	Tape Reel
BC857G-x-AL3-R	SOT-323	E	B	C	Tape Reel
BC858G-x-AL3-R	SOT-323	E	B	C	Tape Reel

Note: Pin Assignment: C: Collector B: Base E: Emitter

	<p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Rank</p> <p>(4) Green Package</p>	<p>(1) R: Tape Reel</p> <p>(2) AE3: SOT-23, AL3: SOT-323</p> <p>(3) x: refer to Classification of hFE</p> <p>(4) G: Halogen Free and Lead Free</p>
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■ **MARKING**

BC856	BC857	BC858

BC856/BC857/BC858

PNP SILICON TRANSISTOR

■ ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$, 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	$^\circ\text{C}$
Storage Temperature		T_{STG}	-40 ~ +150	$^\circ\text{C}$

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.

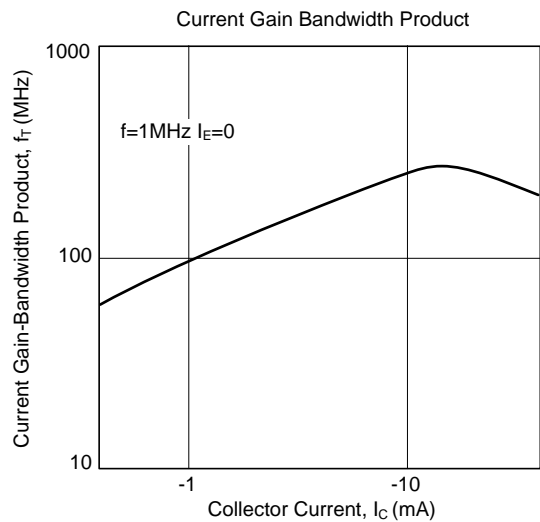
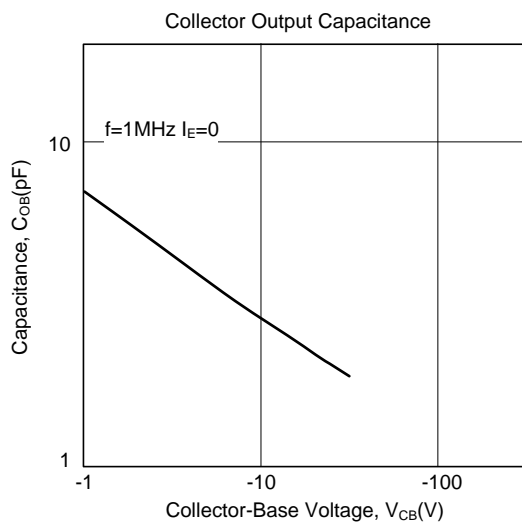
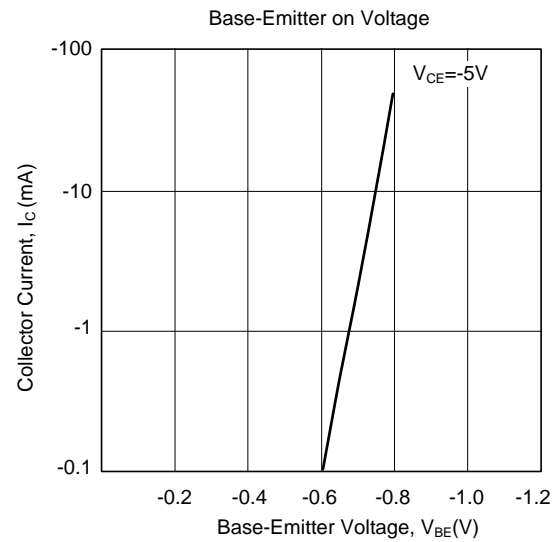
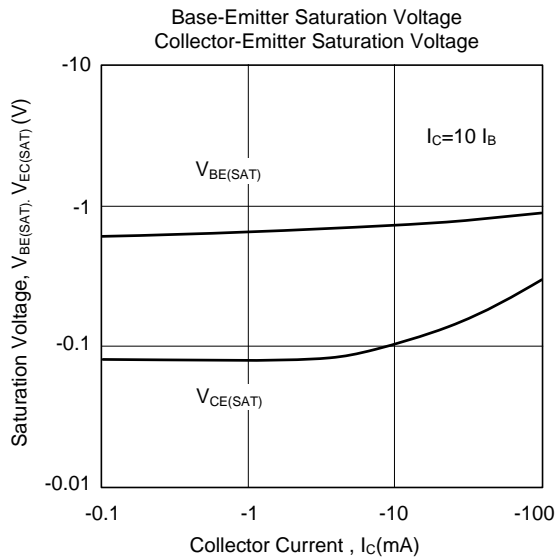
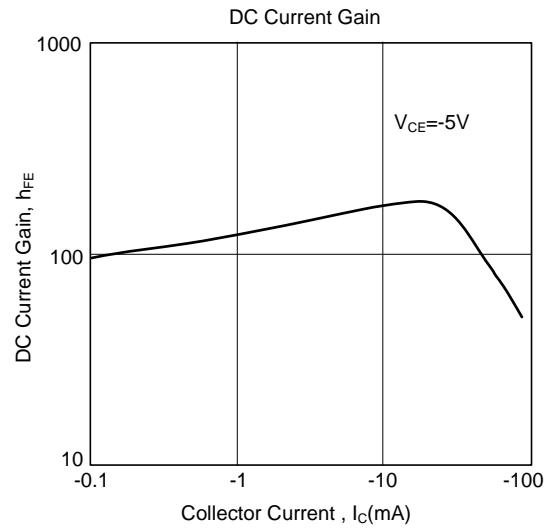
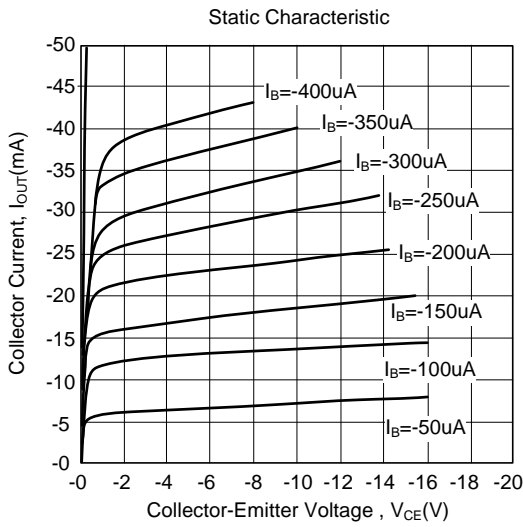
■ ELECTRICAL CHARACTERISTICS ($T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	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	$V_{CE(SAT)}$	$I_C=-10\text{mA}, I_B=-0.5\text{mA}$		-90	-300	mV
		$I_C=-100\text{mA}, I_B=-5\text{mA}$		-250	-650	mV
Base-Emitter Saturation Voltage	$V_{BE(SAT)}$	$I_C=-10\text{mA}, I_B=-0.5\text{mA}$		-700		mV
		$I_C=-100\text{mA}, I_B=-5\text{mA}$		-900		mV
Base-Emitter On Voltage	$V_{BE(ON)}$	$V_{CE}=-5\text{V}, I_C=-2\text{mA}$	-600	-660	-750	mV
		$V_{CE}=-5\text{V}, I_C=-10\text{mA}$			-800	mV
Current Gain Bandwidth Product	f_T	$V_{CE}=-5\text{V}, I_C=-10\text{mA}, f=100\text{MHz}$		150		MHz
Output Capacitance	C_{ob}	$V_{CB}=-10\text{V}, I_E=0, f=1\text{MHz}$			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

■ CLASSIFICATION OF h_{FE}

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

TYPICAL CHARACTERISTICS



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