



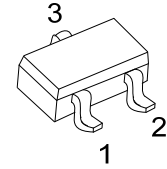
BC856B/BC857B/BC858B

PNP SILICON TRANSISTOR

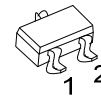
SWITCHING AND AMPLIFIER APPLICATIONS

FEATURES

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



SOT-23
(JEDEC TO-236)



SOT-523

ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
BC856BL-x-AE3-R	BC856BG-x-AE3-R	SOT-23	B	E	C	Tape Reel
BC857BL-x-AE3-R	BC857BG-x-AE3-R	SOT-23	B	E	C	Tape Reel
BC858BL-x-AE3-R	BC858BG-x-AE3-R	SOT-23	B	E	C	Tape Reel
BC856BL-x-AN3-R	BC856BG-x-AN3-R	SOT-523	B	E	C	Tape Reel
BC857BL-x-AN3-R	BC857BG-x-AN3-R	SOT-523	B	E	C	Tape Reel
BC858BL-x-AN3-R	BC858BG-x-AN3-R	SOT-523	B	E	C	Tape Reel

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

BC856BG-x-AE3-R (1) Packing Type (2) Package Type (3) Rank (4) Green Package	(1) R: Tape Reel (2) AE3: SOT-23, AN3: SOT-523 (3) x: refer to Classification of h_{FE} (4) G: Halogen Free and Lead Free, L: Lead Free
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MARKING

BC856B	BC857B	BC858B

Notes: 1. x: Rank Code, refer to Classification of h_{FE} .
2. □: L: Lead Free, G: Halogen Free.

BC856B/BC857B/BC858B

PNP SILICON TRANSISTOR

■ ABSOLUTE MAXIMUM RATINGS ($T_A=25^{\circ}\text{C}$, unless otherwise specified)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage	BC856B	V_{CBO}	-80	V
	BC857B		-50	V
	BC858B		-30	V
Collector-Emitter Voltage	BC856B	V_{CEO}	-65	V
	BC857B		-45	V
	BC858B		-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	$^{\circ}\text{C}$
Operating Temperature Range		T_{OPR}	-40 ~ +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.

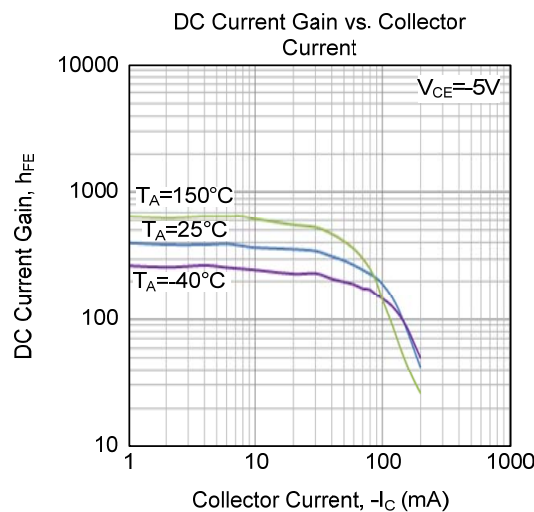
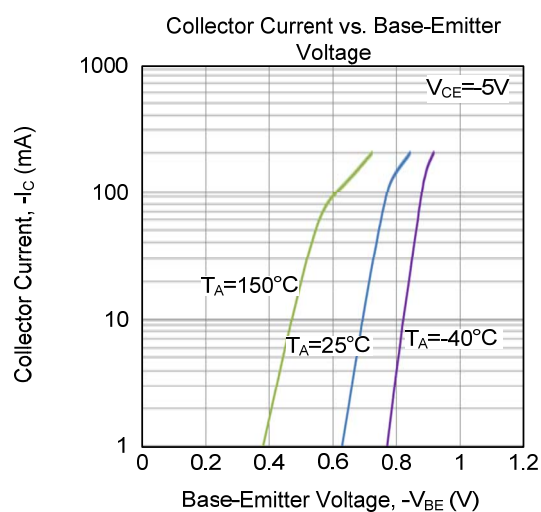
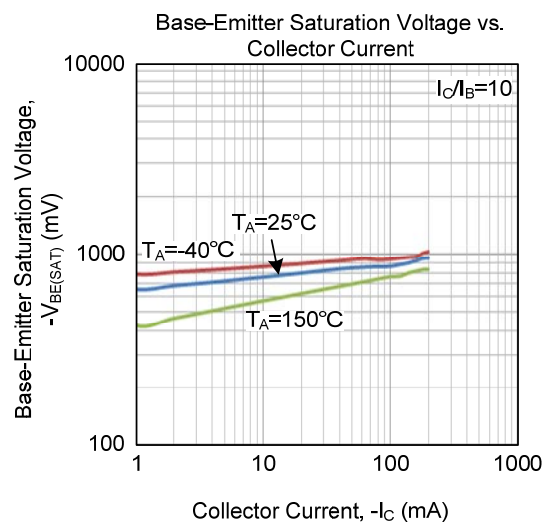
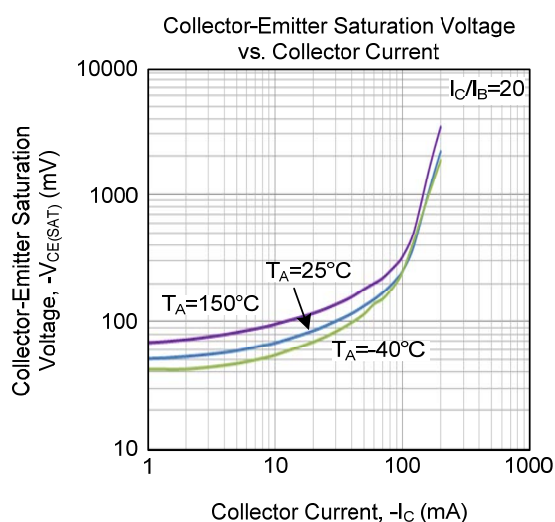
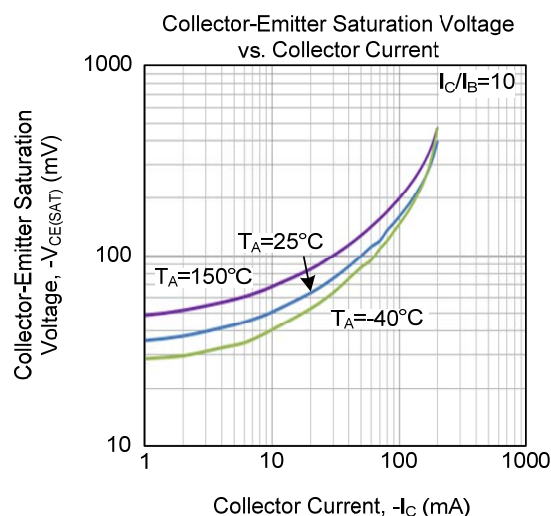
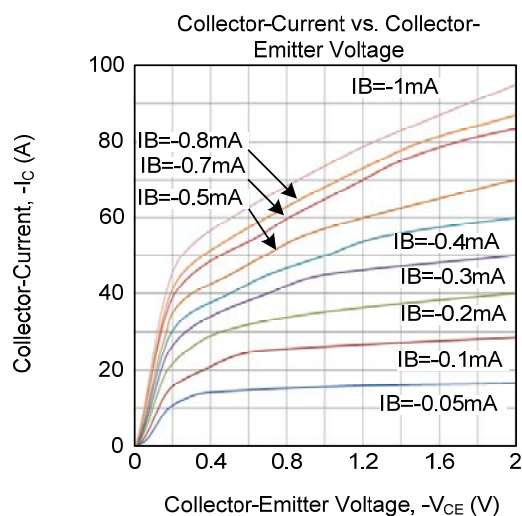
■ ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut-Off Current	I_{CBO}	$V_{\text{CB}}=-30\text{V}$, $I_{\text{E}}=0$			-15	nA
DC Current Gain	h_{FE}	$V_{\text{CE}}=-5\text{V}$, $I_{\text{C}}=-2\text{mA}$	110		800	
Collector-Emitter Saturation Voltage	$V_{\text{CE(SAT)}}$	$I_{\text{C}}=-10\text{mA}$, $I_{\text{B}}=-0.5\text{mA}$		-70	-300	mV
		$I_{\text{C}}=-100\text{mA}$, $I_{\text{B}}=-5\text{mA}$		-250	-650	mV
Base-Emitter Saturation Voltage	$V_{\text{BE(SAT)}}$	$I_{\text{C}}=-10\text{mA}$, $I_{\text{B}}=-0.5\text{mA}$		-700		mV
		$I_{\text{C}}=-100\text{mA}$, $I_{\text{B}}=-5\text{mA}$		-900		mV
Base-Emitter On Voltage	$V_{\text{BE(ON)}}$	$V_{\text{CE}}=-5\text{V}$, $I_{\text{C}}=-2\text{mA}$	-600	-660	-750	mV
		$V_{\text{CE}}=-5\text{V}$, $I_{\text{C}}=-10\text{mA}$			-800	mV
Current Gain Bandwidth Product	f_{T}	$V_{\text{CE}}=-5\text{V}$, $I_{\text{C}}=-10\text{mA}$, $f=100\text{MHz}$		150		MHz
Output Capacitance	C_{ob}	$V_{\text{CB}}=-10\text{V}$, $I_{\text{E}}=0$, $f=1\text{MHz}$		1.2		pF
Noise Figure	NF	$V_{\text{CE}}=-5\text{V}$, $I_{\text{C}}=-200\mu\text{A}$, $f=1\text{KHz}$, $R_{\text{G}}=2\text{K}\Omega$			10	dB

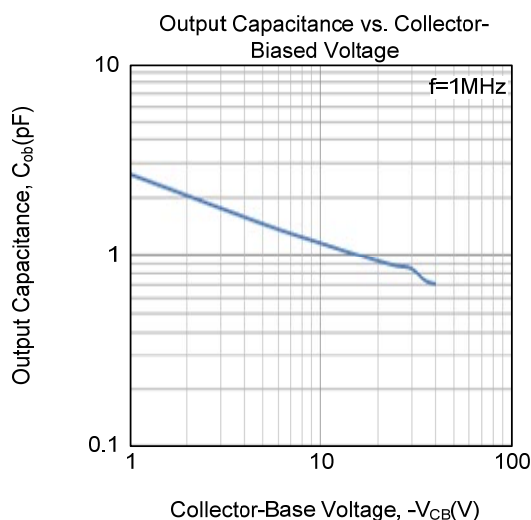
■ CLASSIFICATION OF h_{FE}

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

■ TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS (Cont.)



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