



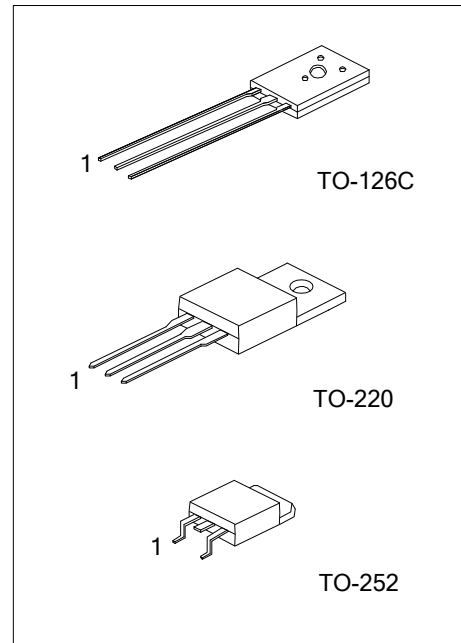
## 2SB857

## PNP SILICON TRANSISTOR

### SILICON PNP TRANSISTOR

#### DESCRIPTION

Low frequency power amplifier.



#### ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SB857L-x-T6C-K	2SB857G-x-T6C-K	TO-126C	E	C	B	Bulk
2SB857L-x-TA3-T	2SB857G-x-TA3-T	TO-220	B	C	E	Tube
2SB857L-x-TN3-R	2SB857G-x-TN3-R	TO-252	B	C	E	Tape Reel

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

<p>2SB857G-x-T6C-K</p>	<p>(1) K: Bulk, T: Tube, R: Tape Reel          (2) T6C: TO-126C, TA3: TO-220, TN3: TO-252          (3) x: refer to Classification of <math>h_{FE2}</math>          (4) G: Halogen Free and Lead Free, L: Lead Free</p>
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#### MARKING

TO-126C	TO-220 / TO-252

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

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltages	$V_{CBO}$	-130	V
Collector-Emitter Voltage	$V_{CEO}$	-100	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Collector Current	$I_C$	-4	A
Collector Current ( $I_C$ Peak)	$I_{C(PEAK)}$	-8	A
Total Power Dissipation ( $T_C=25^\circ\text{C}$ )	TO-126C	10	W
	TO-220	40	W
	TO-252	20	W
Junction Temperature	$T_J$	+150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	-50 ~ +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)

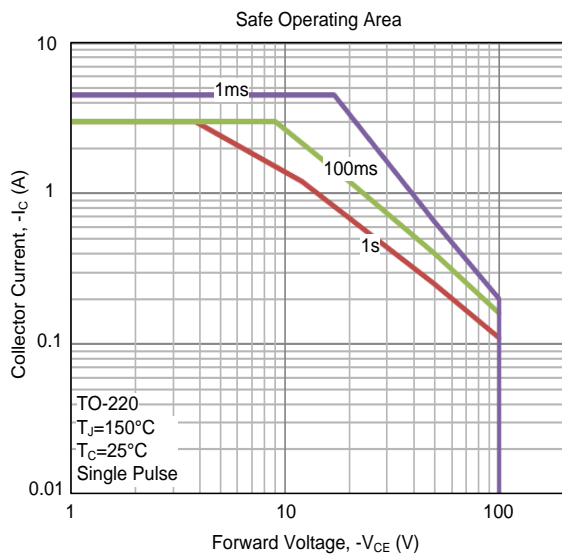
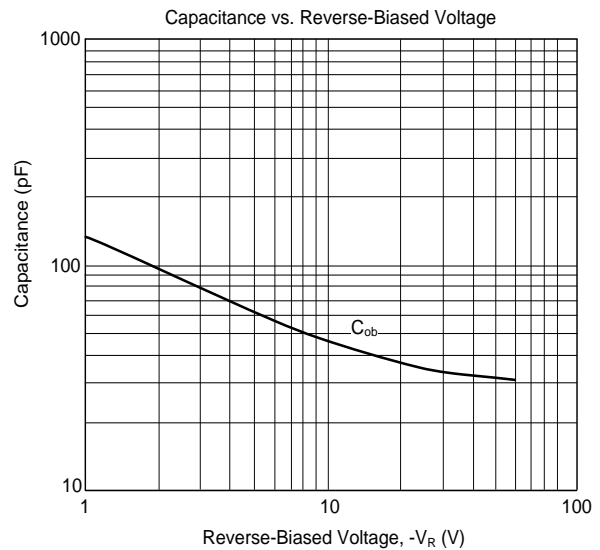
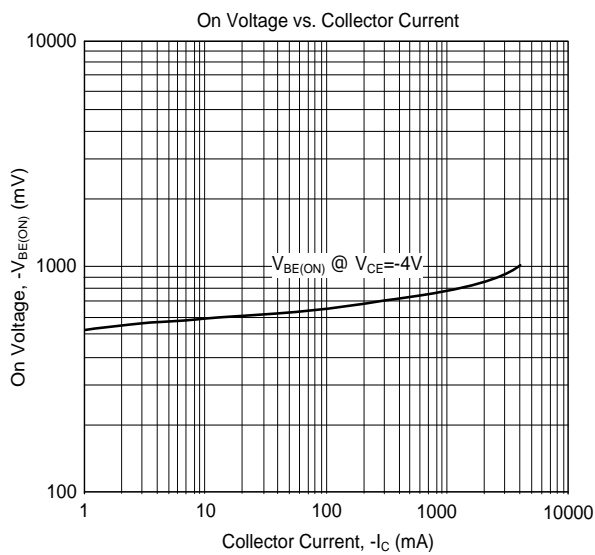
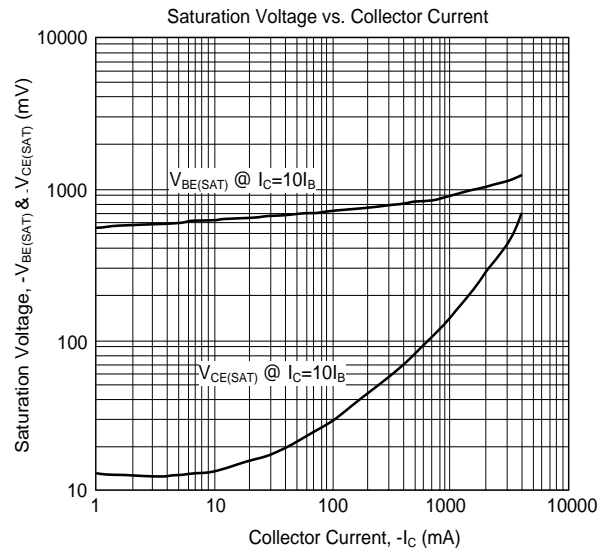
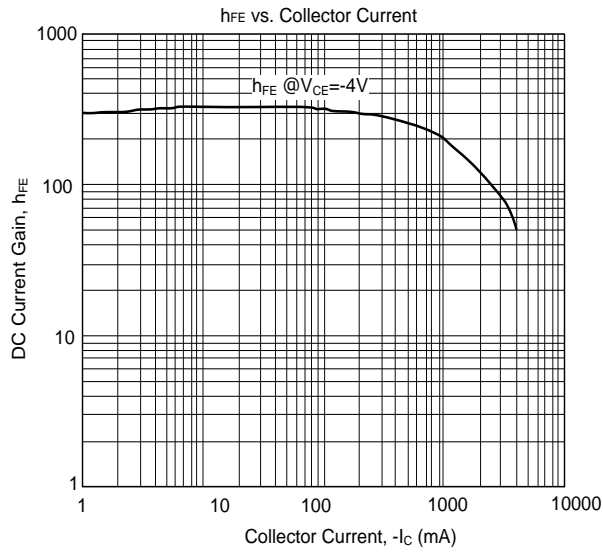
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	$BV_{CBO}$	$I_C=-10\mu\text{A}$ , $I_E=0$	-130			V
Collector-Emitter Breakdown Voltage	$BV_{CEO}$	$I_C=-50\text{mA}$ , $I_B=0$	-100			V
Emitter-Base Breakdown Voltage	$BV_{EBO}$	$I_E=-10\mu\text{A}$ , $I_C=0$	-5			V
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=-2\text{A}$ , $I_B=-0.2\text{A}$ (Note)			-1	V
Base-Emitter Saturation Voltage	$V_{BE(ON)}$	$V_{CE}=-4\text{V}$ , $I_C=-1\text{A}$ (Note)			-1	V
Collector Cut-off Current	$I_{CBO}$	$V_{CB}=-130\text{V}$ , $I_C=0$			-1	$\mu\text{A}$
DC Current Gain	$h_{FE1}$	$V_{CE}=-4\text{V}$ , $I_C=-0.1\text{A}$ (Note)	35			
	$h_{FE2}$	$V_{CE}=-4\text{V}$ , $I_C=-1\text{A}$ (Note)	60		320	
Transition Frequency	$f_T$	$V_{CE}=-4\text{V}$ , $I_C=-500\text{mA}$ , $f=100\text{MHz}$		15		MHz

Note: Pulse Test: Pulse Width  $\leq 380\mu\text{s}$ , Duty Cycle  $\leq 2\%$ .

■ **CLASSIFICATION OF  $h_{FE2}$**

CLASSIFICATION	B	C	D
RANGE	60 ~ 120	100 ~ 200	160 ~ 320

## TYPICAL CHARACTERISTICS



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