2SB857

PNP SILICON TRANSISTOR

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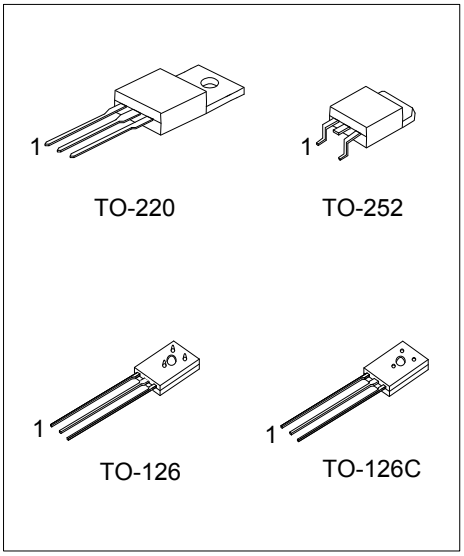


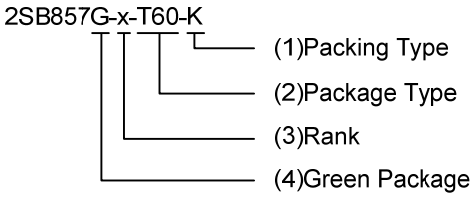
■ DESCRIPTION

Low frequency power amplifier.

■ ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
2SB857L-x-T60-K	2SB857G-x-T60-K	TO-126	E	C	B	Bulk
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



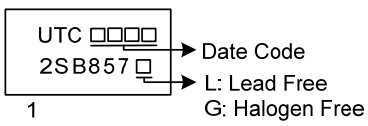
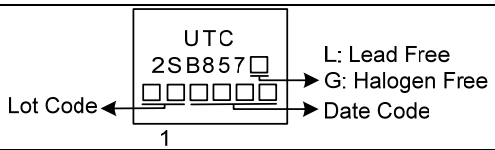
(1) K: Bulk, T: Tube, R: Tape Reel

(2) T60: TO-126, T6C: TO-126C, TA3: TO-220, TN3: TO-252

(3) x: refer to Classification of h_{FE2}

(4) G: Halogen Free and Lead Free, L: Lead Free

■ MARKING

TO-126 / TO-126C	TO-220 / TO-252
	

■ ABSOLUTE MAXIMUM RATING (T_A=25°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°C)	TO-126 TO-126C	P_D	10	W
	TO-220		40	W
	TO-252		20	W
Junction Temperature		T_J	+150	°C
Storage Temperature		T_{STG}	-50 ~ +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 (T_A=25°C, unless otherwise specified)

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

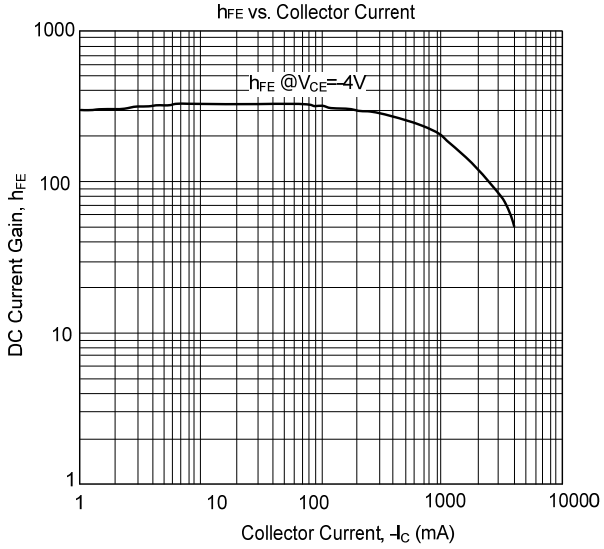
Note: Pulse Test: Pulse Width≤380μS, Duty Cycle≤2%.

■ CLASSIFICATION OF h_{FE2}

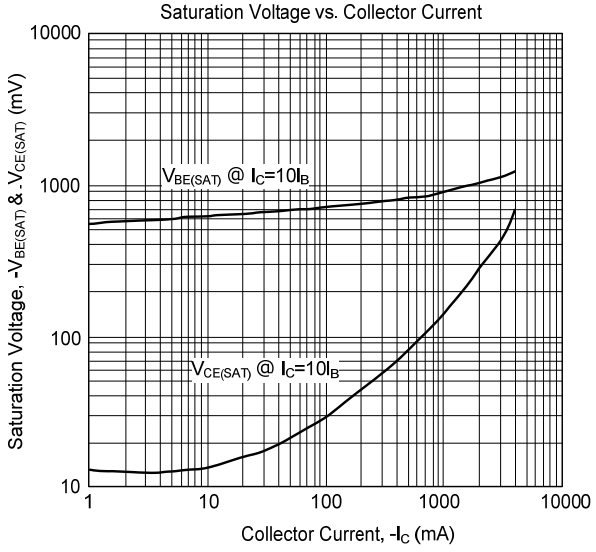
CLASSIFICATION	B	C	D
RANGE	60 ~ 120	100 ~ 200	160 ~ 320

■ TYPICAL CHARACTERISTICS

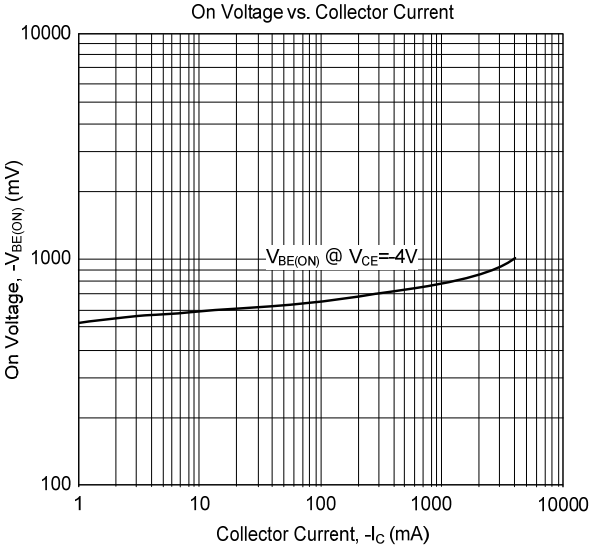
h_{FE} vs. Collector Current



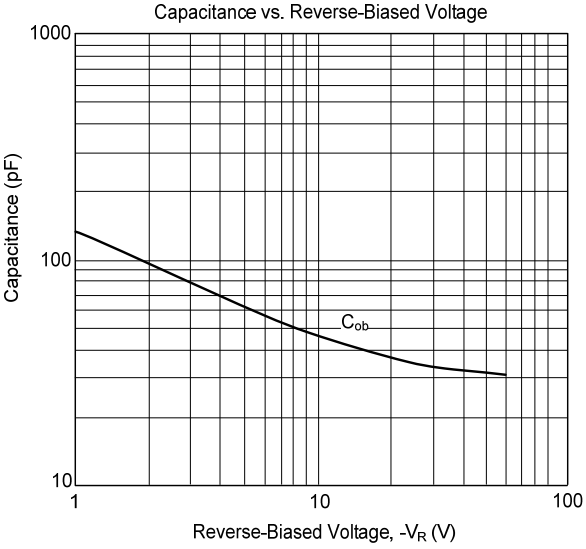
Saturation Voltage vs. Collector Current



On Voltage vs. Collector Current



Capacitance vs. Reverse-Biased Voltage



Safe Operating Area