



# 2SB772

## PNP SILICON TRANSISTOR

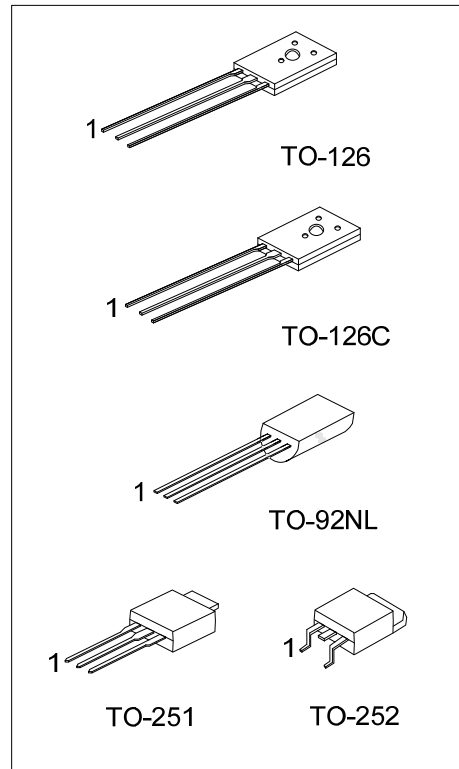
### MEDIUM POWER LOW VOLTAGE TRANSISTOR

■ DESCRIPTION

The UTC **2SB772** is a medium power low voltage transistor, designed for audio power amplifier, DC-DC converter and voltage regulator.

■ FEATURES

- \* High current output up to 3A
- \* Low saturation voltage
- \* Complement to 2SD882



Lead Free: 2SB772L  
Halogen Free: 2SB772G

■ ORDERING INFORMATION

Ordering Number			Package	Pin Assignment			Packing
Normal	Lead Free	Halogen Free		1	2	3	
2SB772-x-T60-K	2SB772L-x-T60-K	2SB772G-x-T60-K	TO-126	E	C	B	Bulk
2SB772-x-T6C-K	2SB772L-x-T6C-K	2SB772G-x-T6C-K	TO-126C	E	C	B	Bulk
2SB772-x-TM3-T	2SB772L-x-TM3-T	2SB772G-x-TM3-T	TO-251	B	C	E	Tube
2SB772-x-TN3-R	2SB772L-x-TN3-R	2SB772G-x-TN3-R	TO-252	B	C	E	Tape Reel
2SB772-x-T9N-B	2SB772L-x-T9N-B	2SB772G-x-T9N-B	TO-92NL	E	C	B	Tape Box
2SB772-x-T9N-K	2SB772L-x-T9N-K	2SB772G-x-T9N-K	TO-92NL	E	C	B	Bulk

<p>2SB772L-x-T60-K</p>	<p>(1) Packing Type (2) Package Type (3) Rank (4) Lead Plating</p> <p>(1) K: Bulk, T: Tube, R: Tape Reel (2) T60: TO-126, T6C: TO-126C, TM3: TO-251, TN3: TO-252, T9N: TO-92NL (3) x: refer to Classification of <math>h_{FE2}</math> (4) G: Halogen Free, L: Lead Free, Blank: Pb/Sn</p>
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■ ABSOLUTE MAXIMUM RATINGS (Ta = 25°C)

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V <sub>CBO</sub>	-40	V
Collector-Emitter Voltage		V <sub>CEO</sub>	-30	V
Emitter-Base Voltage		V <sub>EBO</sub>	-5	V
Collector Current	DC	I <sub>C</sub>	-3	A
	Pulse	I <sub>CP</sub>	-7	A
Base Current		I <sub>B</sub>	-0.6	A
Collector Dissipation (Ta=25°C)	TO-92NL	P <sub>C</sub>	0.5	W
	TO-251/TO-252/ TO-126/TO-126C		1	W
Junction Temperature		T <sub>J</sub>	+150	°C
Storage Temperature		T <sub>STG</sub>	-55 ~ +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-Base Breakdown Voltage	BV <sub>CBO</sub>	I <sub>C</sub> =-100μA, I <sub>E</sub> =0	-40			V
Collector-Emitter Breakdown Voltage	BV <sub>CEO</sub>	I <sub>C</sub> =-1mA, I <sub>B</sub> =0	-30			V
Emitter-Base Breakdown Voltage	BV <sub>EBO</sub>	I <sub>E</sub> =-100μA, I <sub>C</sub> =0	-5			V
Collector Cut-Off Current	I <sub>CBO</sub>	V <sub>CB</sub> =-30V, I <sub>E</sub> =0			-1000	nA
Collector Cut-Off Current	I <sub>CEO</sub>	V <sub>CE</sub> =-30V, I <sub>B</sub> =0			-1000	nA
Emitter Cut-Off Current	I <sub>EBO</sub>	V <sub>EB</sub> =-3V, I <sub>C</sub> =0			-1000	nA
DC Current Gain(Note 1)	h <sub>FE1</sub>	V <sub>CE</sub> =-2V, I <sub>C</sub> =-20mA	30	200		
	h <sub>FE2</sub>	V <sub>CE</sub> =-2V, I <sub>C</sub> =-1A	100	150	400	
Collector-Emitter Saturation Voltage	V <sub>CE(SAT)</sub>	I <sub>C</sub> =-2A, I <sub>B</sub> =-0.2A		-0.3	-0.5	V
Base-Emitter Saturation Voltage	V <sub>BE(SAT)</sub>	I <sub>C</sub> =-2A, I <sub>B</sub> =-0.2A		-1.0	-2.0	V
Current Gain Bandwidth Product	f <sub>T</sub>	V <sub>CE</sub> =-5V, I <sub>C</sub> =-0.1A		80		MHz
Output Capacitance	C <sub>ob</sub>	V <sub>CB</sub> =-10V, I <sub>E</sub> =0, f=1MHz		45		pF

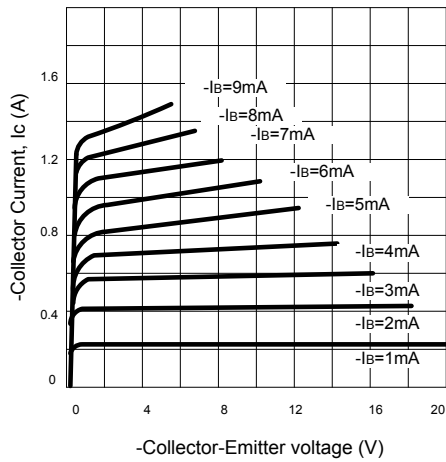
Note 1: Pulse test: P<sub>w</sub><300μs, Duty Cycle<2%

■ CLASSIFICATION OF h<sub>FE2</sub>

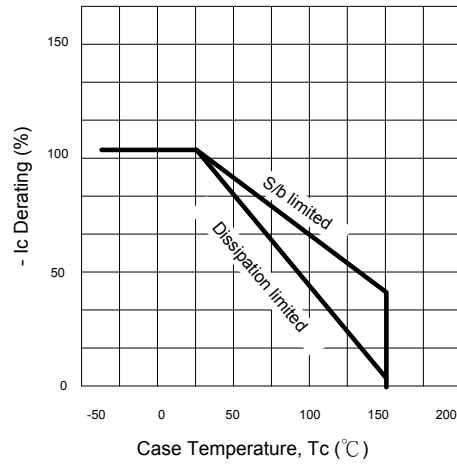
RANK	Q	P	E
RANGE	100 ~ 200	160 ~ 320	200 ~ 400

## TYPICAL CHARACTERISTICS

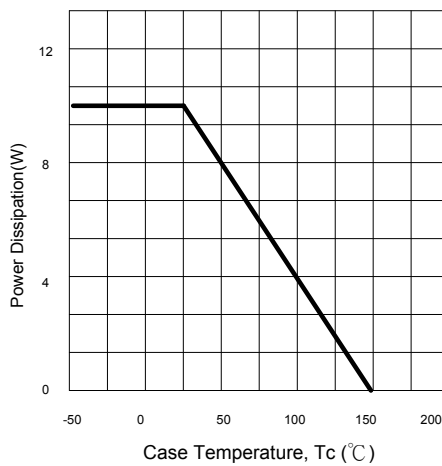
Static Characteristics



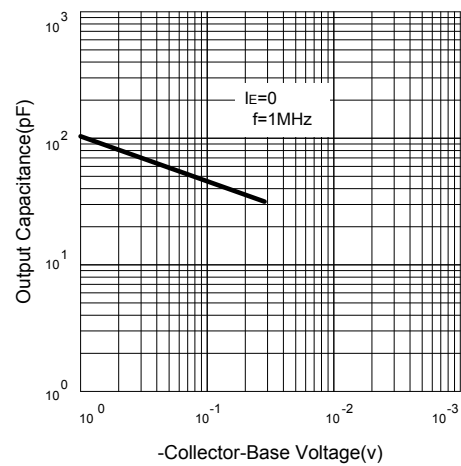
Derating Curve of Safe Operating Areas



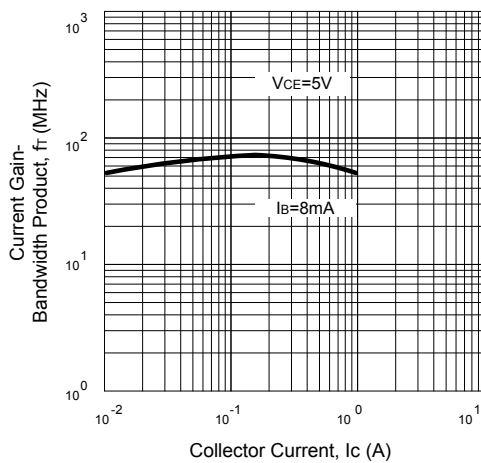
Power Derating



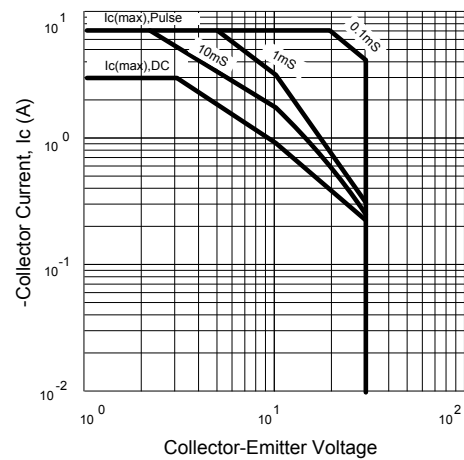
Collector Output Capacitance



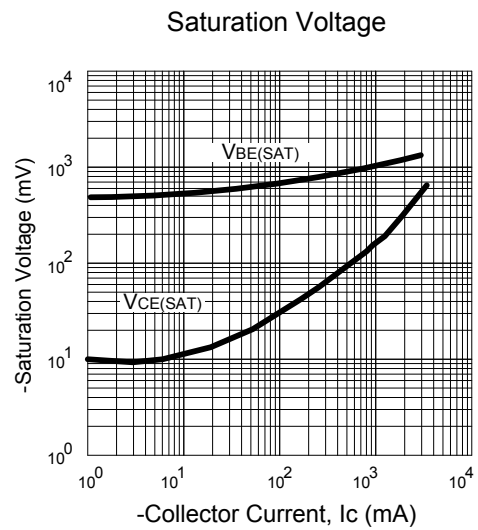
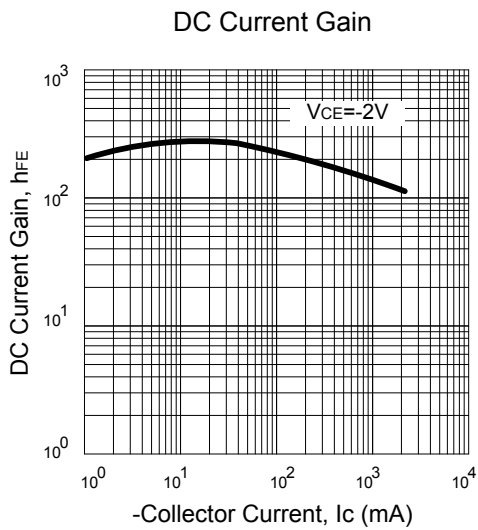
Current Gain-Bandwidth Product



Safe Operating Area



■ TYPICAL CHARACTERISTICS(Cont.)



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