



# UNISONIC TECHNOLOGIES CO., LTD

## 2SB772S

### PNP EPITAXIAL SILICON TRANSISTOR

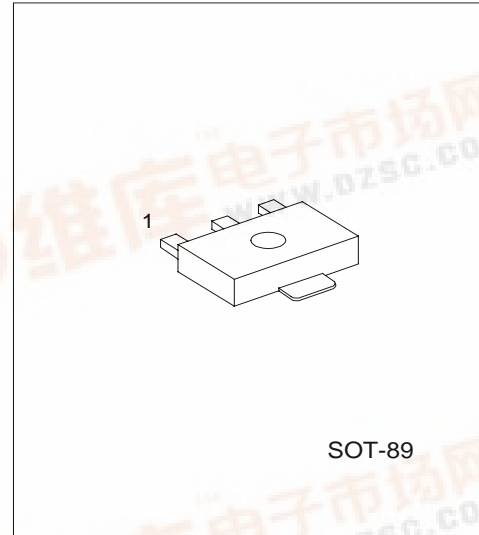
## MEDIUM POWER LOW VOLTAGE TRANSISTOR

#### DESCRIPTION

The UTC 2SB772S 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 2SD882S



\*Pb-free plating product number: 2SB772SL

#### PIN CONFIGURATION

PIN NO.	PIN NAME
1	Emitter
2	Collector
3	Base

#### ORDERING INFORMATION

Order Number		Package	Packing
Normal	Lead free		
2SB772S-AB3-R	2SB772SL-AB3-R	SOT-89	Tape Reel

# 2SB772S

## PNP EPITAXIAL SILICON TRANSISTOR

### ■ ABSOLUTE MAXIMUM RATINGS (Ta = 25 °C)

PARAMETER	SYMBOL	RATINGS	UNIT
Collector -Base Voltage	V <sub>CB0</sub>	-40	V
Collector -Emitter Voltage	V <sub>CEO</sub>	-30	V
Emitter -Base Voltage	V <sub>EBO</sub>	-5	V
Peak Collector Current	I <sub>CM</sub>	-7	A
DC Collector Current	I <sub>C</sub>	-3	A
Base Current	I <sub>B</sub>	-0.6	A
Power Dissipation	P <sub>D</sub>	1.0	W
Junction Temperature	T <sub>J</sub>	+150	
Storage Temperature	T <sub>STG</sub>	-40 ~ +150	

### ■ ELECTRICAL CHARACTERISTICS (Ta= 25 °C, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut-Off Current	I <sub>CB0</sub>	V <sub>CB</sub> =-30V, I <sub>E</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

Fig.1 Static characteristics

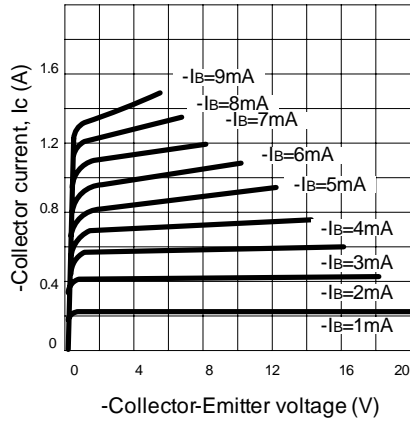


Fig.2 Derating curve of safe operating areas

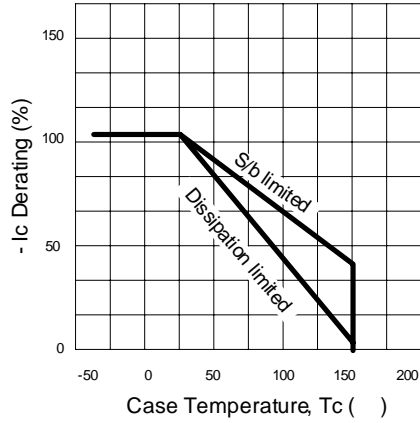


Fig.3 Power Derating

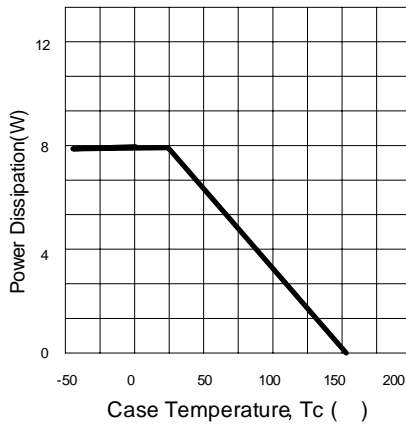


Fig.4 Collector Output capacitance

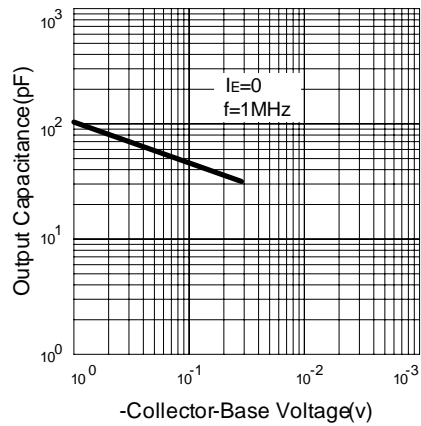


Fig.5 Current gain - bandwidth product

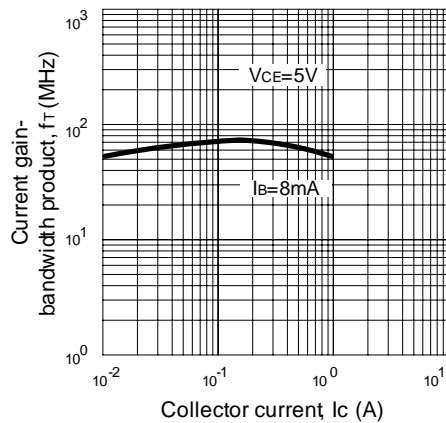
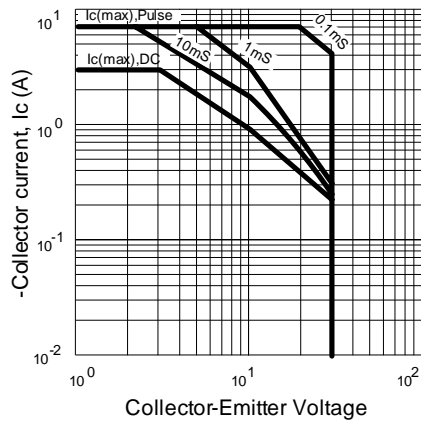


Fig.6 Safe Operating Area



■ TYPICAL CHARACTERISTICS(cont.)

Fig.7 DC current gain

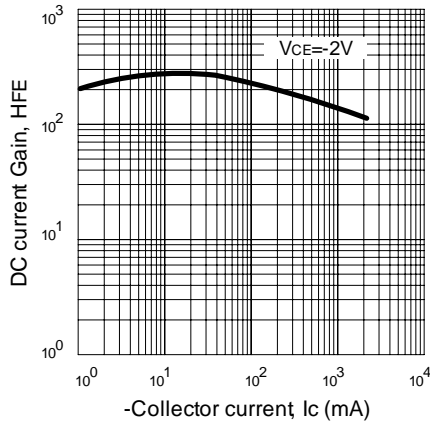
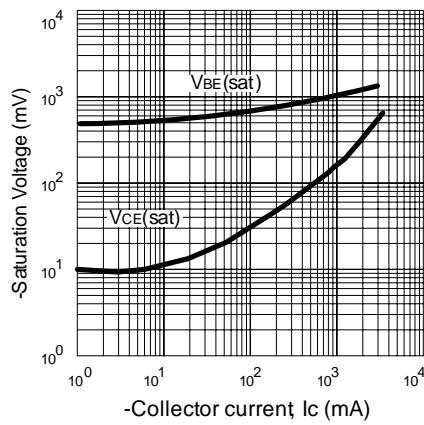


Fig.8 Saturation Voltage



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