

# UTC2SB772NL PNP EPITAXIAL SILICON TRANSISTOR

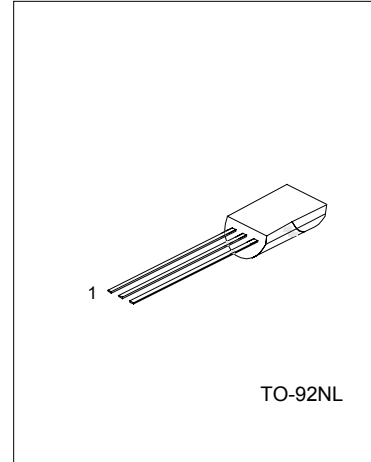
## MEDIUM POWER LOW VOLTAGE TRANSISTOR

### DESCRIPTION

The UTC 2SB772NL 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 2SD882NL



1:EMITTER 2:COLLECTOR 3:BASE

### ABSOLUTE MAXIMUM RATINGS (Ta=25°C, unless otherwise specified)

PARAMETER	SYMBOL	VALUE	UNIT
Collector-Base Voltage	V <sub>CB0</sub>	-40	V
Collector-Emitter Voltage	V <sub>CEO</sub>	-30	V
Emitter-Base Voltage	V <sub>EB0</sub>	-5	V
Collector Dissipation (Ta=25°C)	P <sub>c</sub>	0.5	W
Collector Current (DC)	I <sub>c</sub>	-3	A
Collector Current (PULSE)	I <sub>c</sub>	-7	A
Base Current	I <sub>B</sub>	-0.6	A
Junction Temperature	T <sub>j</sub>	150	°C
Storage Temperature	T <sub>STG</sub>	-55 ~ +150	°C

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

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut-Off Current	I <sub>CBO</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: PW<300μs, Duty Cycle<2%

### CLASSIFICATION OF h<sub>FE2</sub>

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

**UTC** UNISONIC TECHNOLOGIES CO. LTD

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QW-R211-001,A

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## TYPICAL PERFORMANCE CHARACTERISTICS

Fig.1 Static characteristics

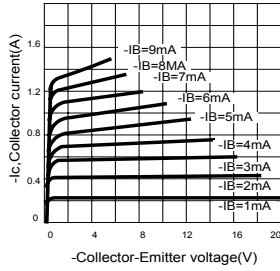


Fig.2 Derating curve of safe operating areas

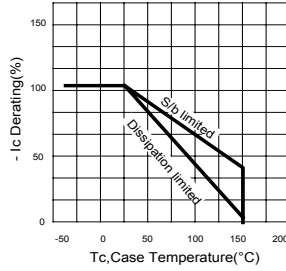


Fig.3 Power Derating

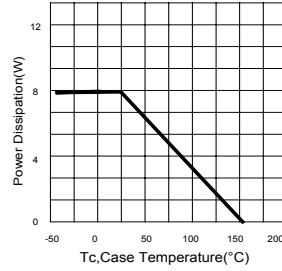


Fig.4 Collector Output capacitance

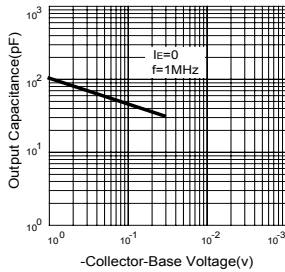


Fig.5 Current gain-bandwidth product

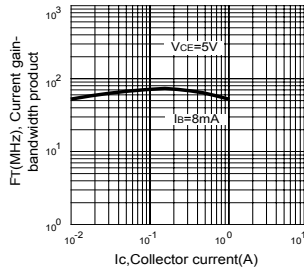


Fig.6 Safe operating area

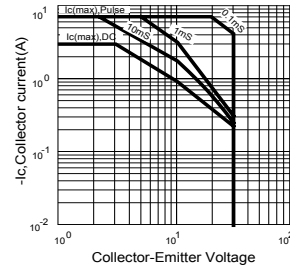


Fig.7 DC current gain

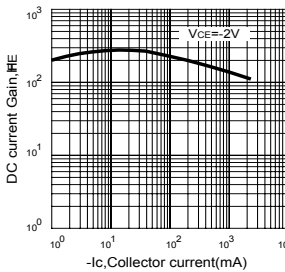
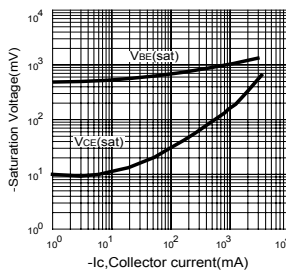


Fig.8 Saturation Voltage



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