

**Inchange Semiconductor**

**Product Specification**

**Silicon PNP Power Transistors**

**2SB1101**

**DESCRIPTION**

- With TO-220 package
- Complement to type 2SD1601
- DARLINGTON
- High DC current gain

**APPLICATIONS**

- For low frequency power amplifier applications

**PINNING**

PIN	DESCRIPTION
1	Emitter
2	Collector;connected to mounting base
3	Base

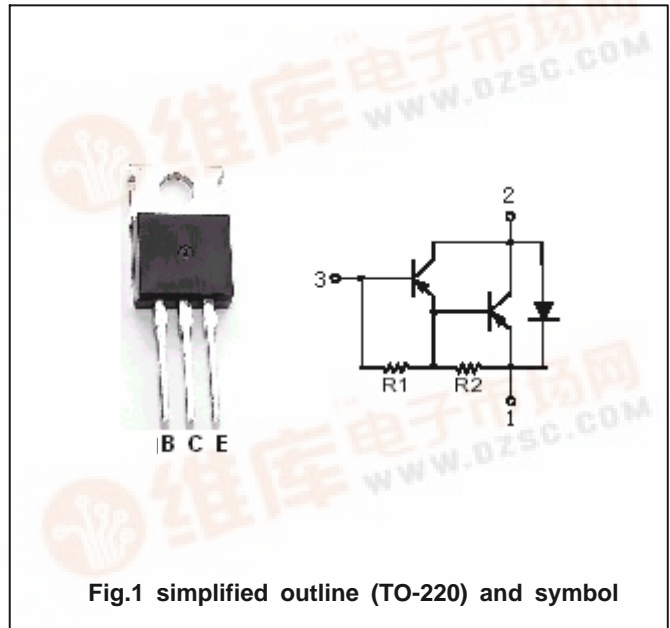


Fig.1 simplified outline (TO-220) and symbol

**Absolute maximum ratings(Ta=25 )**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	-60	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	-60	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	-7	V
I <sub>C</sub>	Collector current		-4	A
I <sub>CM</sub>	Collector current-peak		-8	A
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25	40	W
T <sub>j</sub>	Junction temperature		150	
T <sub>stg</sub>	Storage temperature		-55~150	

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## CHARACTERISTICS

T<sub>j</sub>=25 unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =-25mA, I <sub>B</sub> =0	-60			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =-50mA, I <sub>C</sub> =0	-7			V
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-2A; I <sub>B</sub> =-4mA			-1.5	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =-4A; I <sub>B</sub> =-40mA			-3.0	V
V <sub>BEsat-1</sub>	Base-emitter saturation voltage	I <sub>C</sub> =-2A; I <sub>B</sub> =-4mA			-2.0	V
V <sub>BEsat-2</sub>	Base-emitter saturation voltage	I <sub>C</sub> =-4A; I <sub>B</sub> =-40mA			-3.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =-60V; I <sub>E</sub> =0			-100	μA
I <sub>CEO</sub>	Collector cut-off current	V <sub>CE</sub> =-50V; R <sub>BE</sub> =			-10	μA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =-2A; V <sub>CE</sub> =-3V	1000		20000	
V <sub>D</sub>	Diode forward voltage	I <sub>D</sub> =4A;			3.0	V

## Switching times

t <sub>on</sub>	Turn-on time	I <sub>C</sub> =-2A I <sub>B1</sub> =-I <sub>B2</sub> =-4mA		0.8		μs
t <sub>s</sub>	Storage time			4.0		μs
t <sub>f</sub>	Fall time			1.0		μs

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PACKAGE OUTLINE

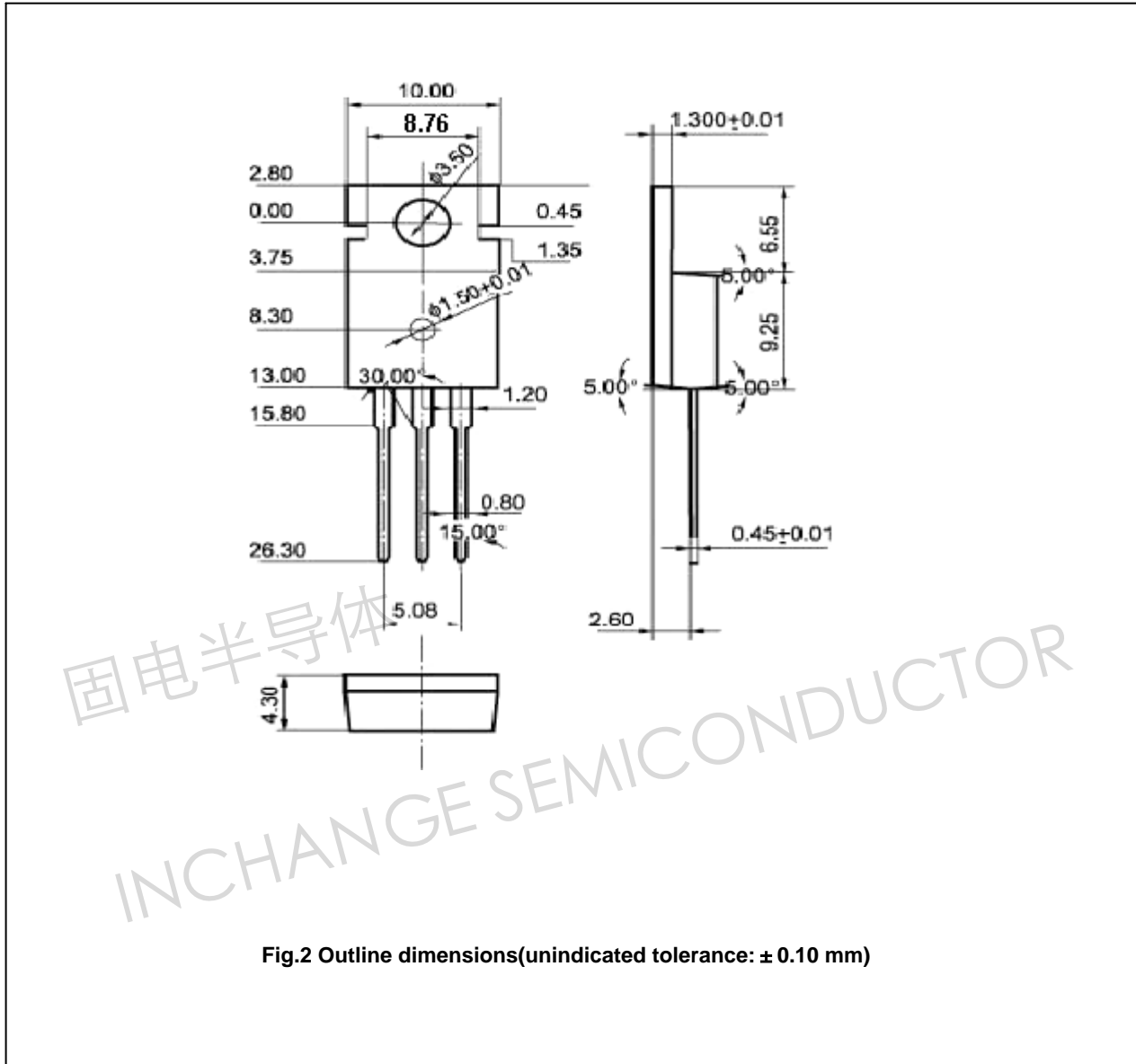


Fig.2 Outline dimensions(unindicated tolerance: ± 0.10 mm)