

**Silicon NPN Power Transistors**

**2SD401A**

**DESCRIPTION**

- With TO-220C package
- Complement to type 2SB546A
- Collector current  $I_C=2A$
- Collector-collector voltage:  $V_{CEO}=150V(\text{Min})$

**APPLICATIONS**

- For use in general purpose power amplifier, vertical output application

**PINNING**

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

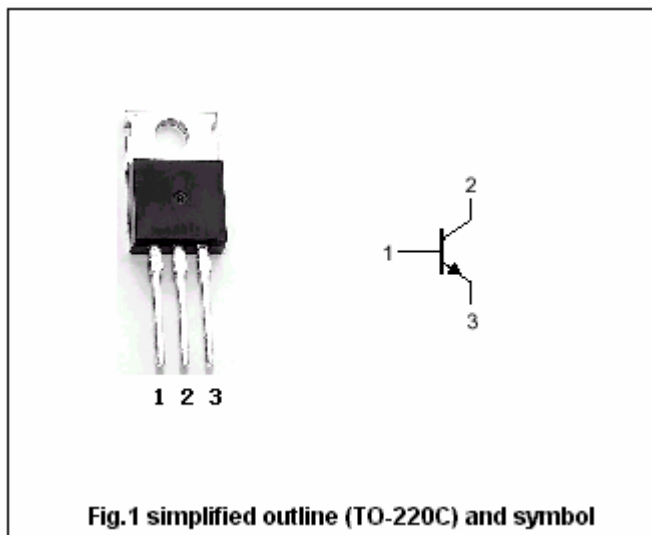


Fig.1 simplified outline (TO-220C) and symbol

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

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	200	V
$V_{CEO}$	Collector-emitter voltage	Open base	150	V
$V_{EBO}$	Emitter-base voltage	Open collector	5	V
$I_C$	Collector current		2	A
$I_{CM}$	Collector current-peak		3	A
$P_D$	Total power dissipation	$T_C=25$	25	W
$T_j$	Junction temperature		150	
$T_{stg}$	Storage temperature		-55~150	

**THERMAL CHARACTERISTICS**

SYMBOL	CHARACTERISTICS	MAX	UNIT
$R_{jc}$	Thermal resistance junction to case	5.0	/W

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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> =10mA; I <sub>B</sub> =0	150			V
V <sub>(BR)CBO</sub>	Collector-base breakdown voltage	I <sub>C</sub> =0.5mA; I <sub>E</sub> =0	200			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =0.5mA; I <sub>B</sub> =0	5			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =500mA; I <sub>B</sub> =50mA			1.0	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =150V; I <sub>E</sub> =0			50	μA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V; I <sub>C</sub> =0			50	μA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =0.4A; V <sub>CE</sub> =10V	40		200	
f <sub>T</sub>	Transition frequency	I <sub>C</sub> =0.4A; V <sub>CE</sub> =10V; f=1MHz		5		MHz

◆ h<sub>FE</sub> classifications

M	L	K
40-80	60-120	100-200

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PACKAGE OUTLINE

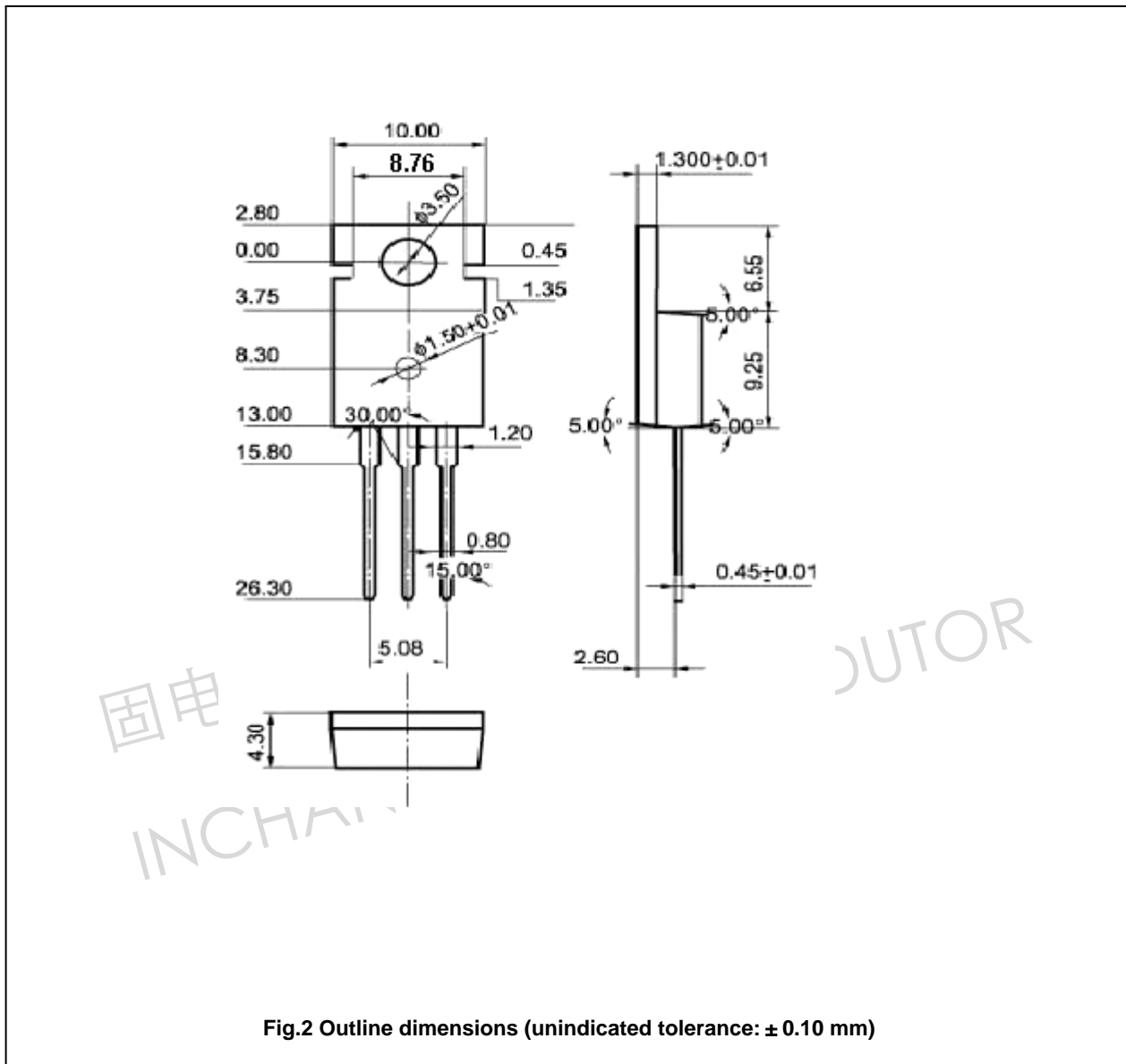


Fig.2 Outline dimensions (unindicated tolerance: ± 0.10 mm)