

**Silicon NPN Power Transistors**

**2SD1435**

**DESCRIPTION**

- With TO-3PN package
- DARLINGTON
- High DC current gain
- Complement to type 2SB1031

**APPLICATIONS**

- For low frequency power amplifier and high current switching applications

**PINNING**

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

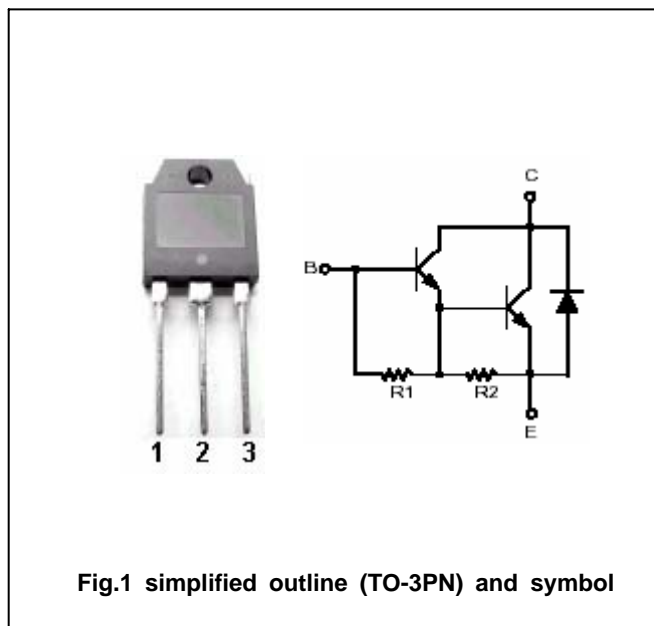


Fig.1 simplified outline (TO-3PN) and symbol

**Absolute maximum ratings(Tc=25°C)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	100	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	100	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	7	V
I <sub>C</sub>	Collector current		15	A
I <sub>CM</sub>	Collector current-Peak		20	A
I <sub>B</sub>	Base current		3	A
P <sub>C</sub>	Collector power dissipation	T <sub>C</sub> =25°C	100	W
T <sub>j</sub>	Junction temperature		150	°C
T <sub>stg</sub>	Storage temperature		-55~150	°C

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEQ(SUS)</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =1mA, R <sub>BE</sub> =∞	100			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> =8A, I <sub>B</sub> =16mA			2.0	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =15A, I <sub>B</sub> =150mA			3.0	V
V <sub>BEsat-1</sub>	Base-emitter saturation voltage	I <sub>C</sub> =8A, I <sub>B</sub> =16mA			2.5	V
V <sub>BEsat-2</sub>	Base-emitter saturation voltage	I <sub>C</sub> =15A, I <sub>B</sub> =150mA			3.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =100V, I <sub>E</sub> =0			100	μ A
I <sub>CEO</sub>	Collector cut-off current	V <sub>CE</sub> =80V, R <sub>BE</sub> =∞			1.0	μ A
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =8A ; V <sub>CE</sub> =3V	1000		20000	

## Switching times

t <sub>on</sub>	Turn-on time	I <sub>C</sub> = 8 A, I <sub>B1</sub> = -I <sub>B2</sub> = 16mA		2.0		μ s
t <sub>off</sub>	Turn-off time			8.0		μ s

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PACKAGE OUTLINE

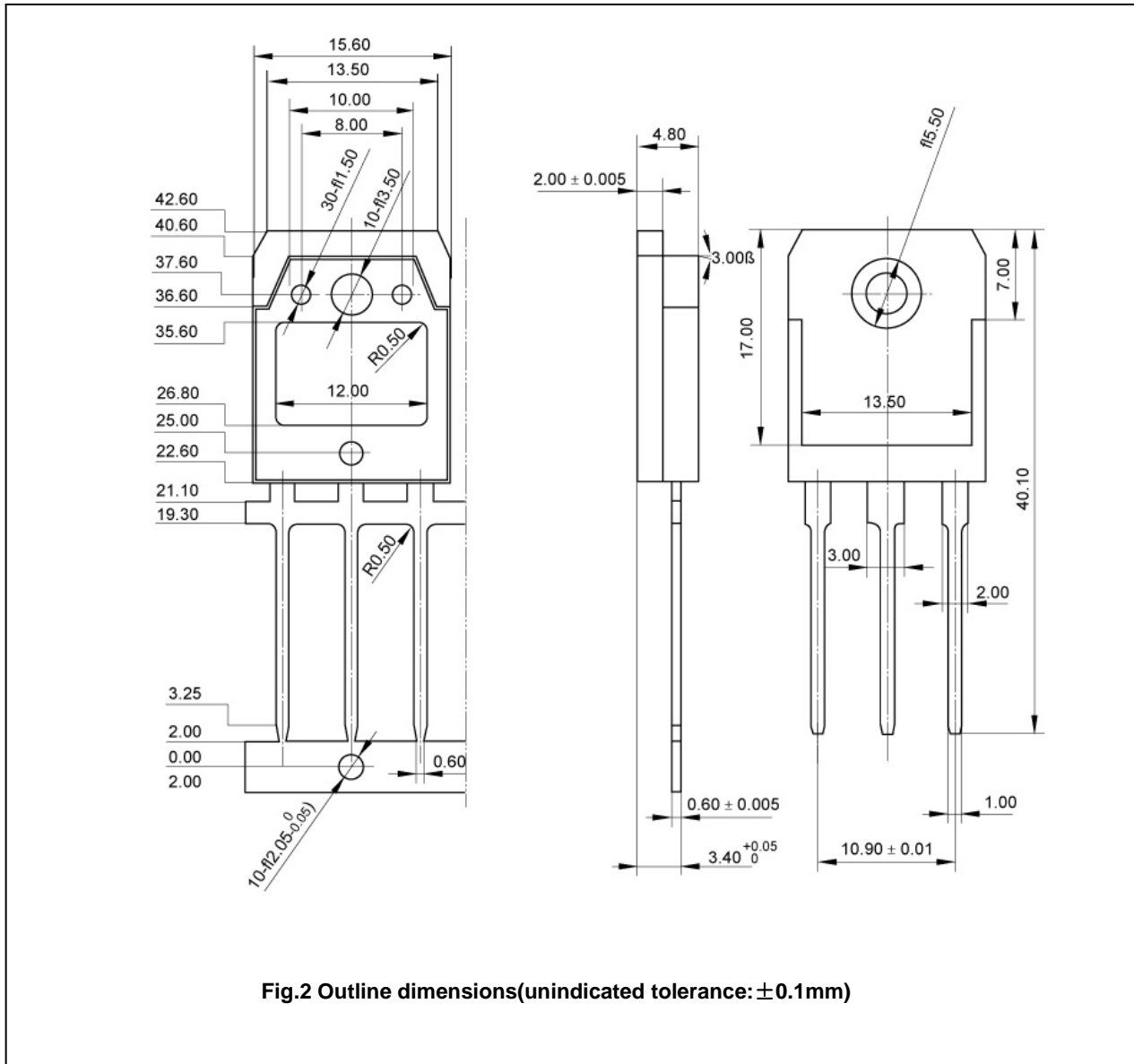


Fig.2 Outline dimensions(unindicated tolerance:  $\pm 0.1\text{mm}$ )