

Silicon NPN Power Transistors

2SD1296

DESCRIPTION

·Wit

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- h TO-3PN package
- High DC current gain
- Low saturation voltage

APPLICATIONS

- For audio frequency power amplifier and low speed high current switching industrial use

PINNING

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

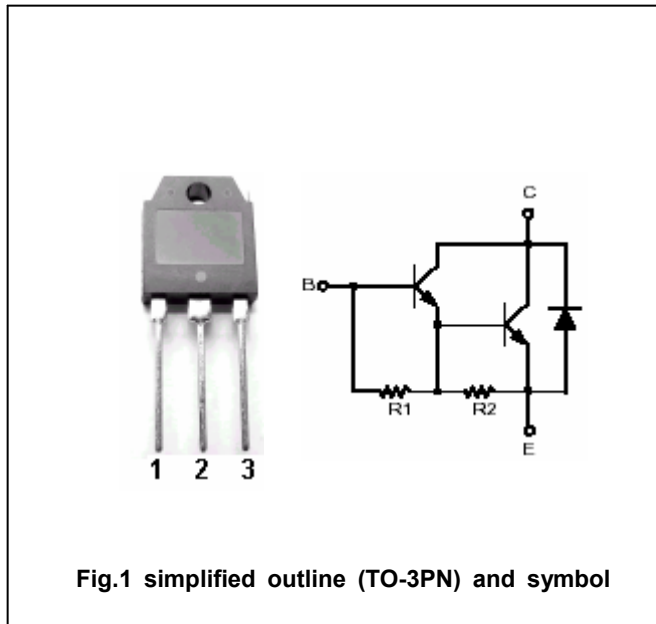


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings (Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	MAX	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	150	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	100	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	8	V
I <sub>C</sub>	Collector current		15	A
I <sub>CM</sub>	Collector current-peak		30	A
P <sub>T</sub>	Total power dissipation	T <sub>C</sub> =25°C	100	W
		T <sub>a</sub> =25°C	3.0	
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

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SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>(BR)CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =30mA ; I <sub>B</sub> =0	100			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =15A ; I <sub>B</sub> =30mA			1.5	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =15A ; I <sub>B</sub> =30mA			2.2	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =100V; I <sub>E</sub> =0			10	μA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V; I <sub>C</sub> =0			5	mA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =15A ; V <sub>CE</sub> =2V	1000		30000	

## Switching times

t <sub>on</sub>	Turn-on time	I <sub>C</sub> =15A; I <sub>B1</sub> =-I <sub>B2</sub> =30mA V <sub>CC</sub> ≈60V; R <sub>L</sub> =4Ω		1.0		μs
t <sub>stg</sub>	Storage time			5.0		μs
t <sub>f</sub>	Fall time			2.0		μs

◆ h<sub>FE</sub> Classifications

M	L	K	J
1000-3000	2000-5000	4000-10000	8000-30000

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PACKAGE OUTLINE

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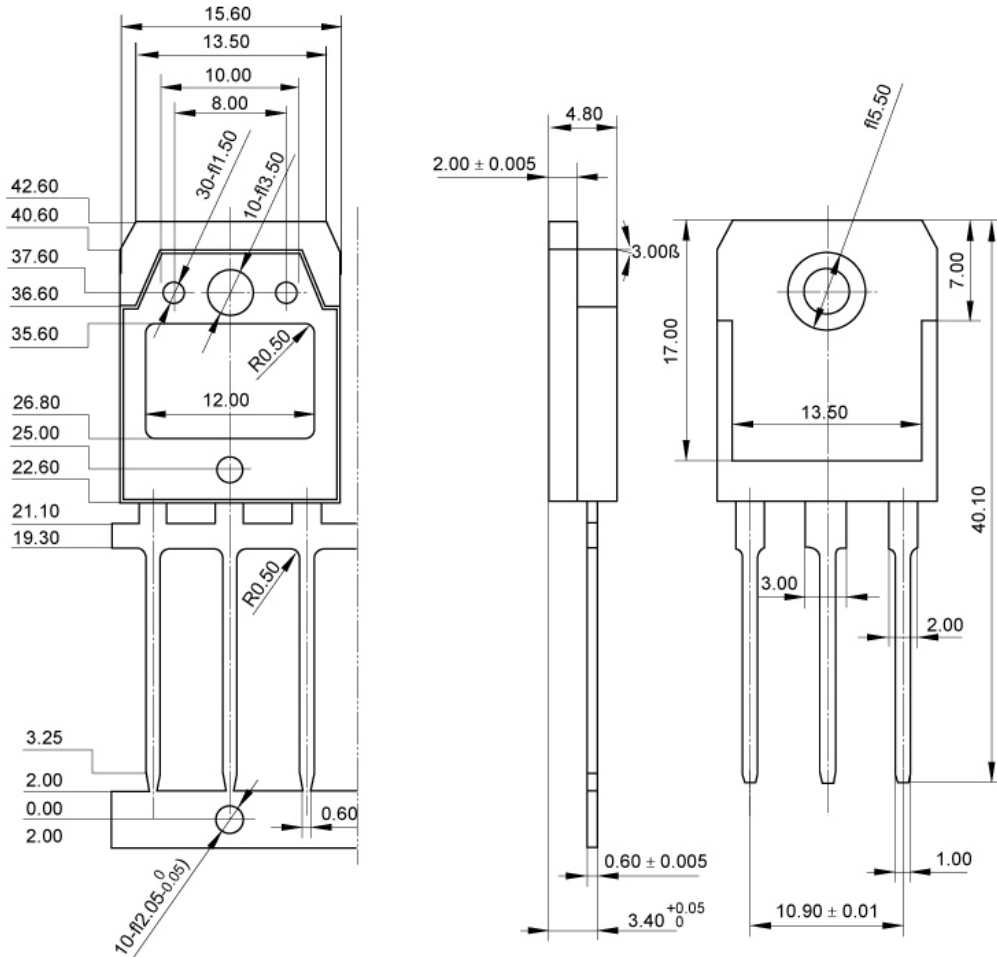


Fig.2 outline dimensions