

Silicon NPN Power Transistors

BUW50

DESCRIPTION

- With TO-3PN package
- High speed switching
- Low saturation voltage

APPLICATIONS

- Designed for use in general purpose power amplifier application

PINNING

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

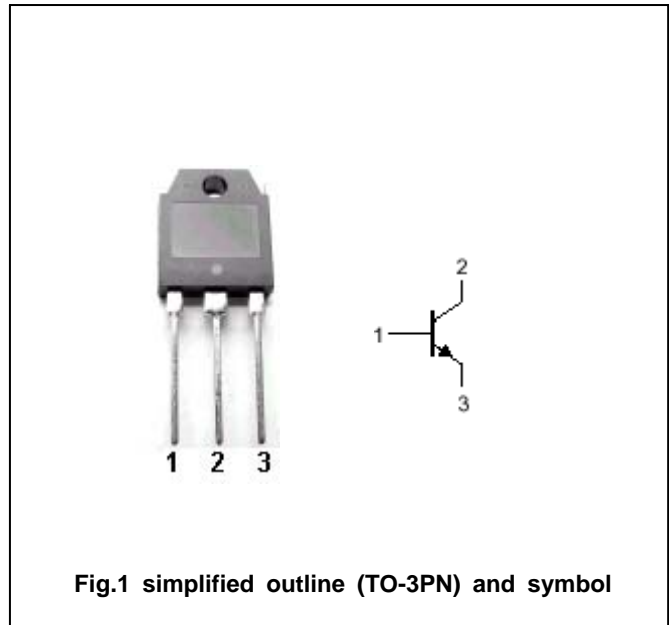


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings (Tc=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	250	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	125	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	7	V
I <sub>C</sub>	Collector current		25	A
I <sub>CM</sub>	Collector current-peak		50	A
P <sub>D</sub>	Totalpower dissipation	T <sub>C</sub> =25°C	150	W
T <sub>j</sub>	Junction temperature		175	°C
T <sub>stg</sub>	Storage temperature		-65~175	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-C</sub>	Thermal resistance junction to case	1.0	°C/W

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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> =0.2A ;L=25mH	125			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =20mA ;I <sub>C</sub> =0	7			V
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =10A; I <sub>B</sub> =0.5A			0.9	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =20A; I <sub>B</sub> =2A			1.0	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =20A; I <sub>B</sub> =2A			1.6	V
I <sub>CEV</sub>	Collector cut-off current	V <sub>CE</sub> =250V;V <sub>BE</sub> =-1.5V			0.1	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V; I <sub>C</sub> =0			1.0	mA

## Switching times

t <sub>on</sub>	Turn-on time	V <sub>CC</sub> =60V;I <sub>C</sub> =10A; I <sub>B1</sub> =1.0A;Pw=20 μ s			1.9	μ s
t <sub>s</sub>	Storage time				1.5	μ s
t <sub>f</sub>	Fall time				0.5	μ s

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PACKAGE OUTLINE

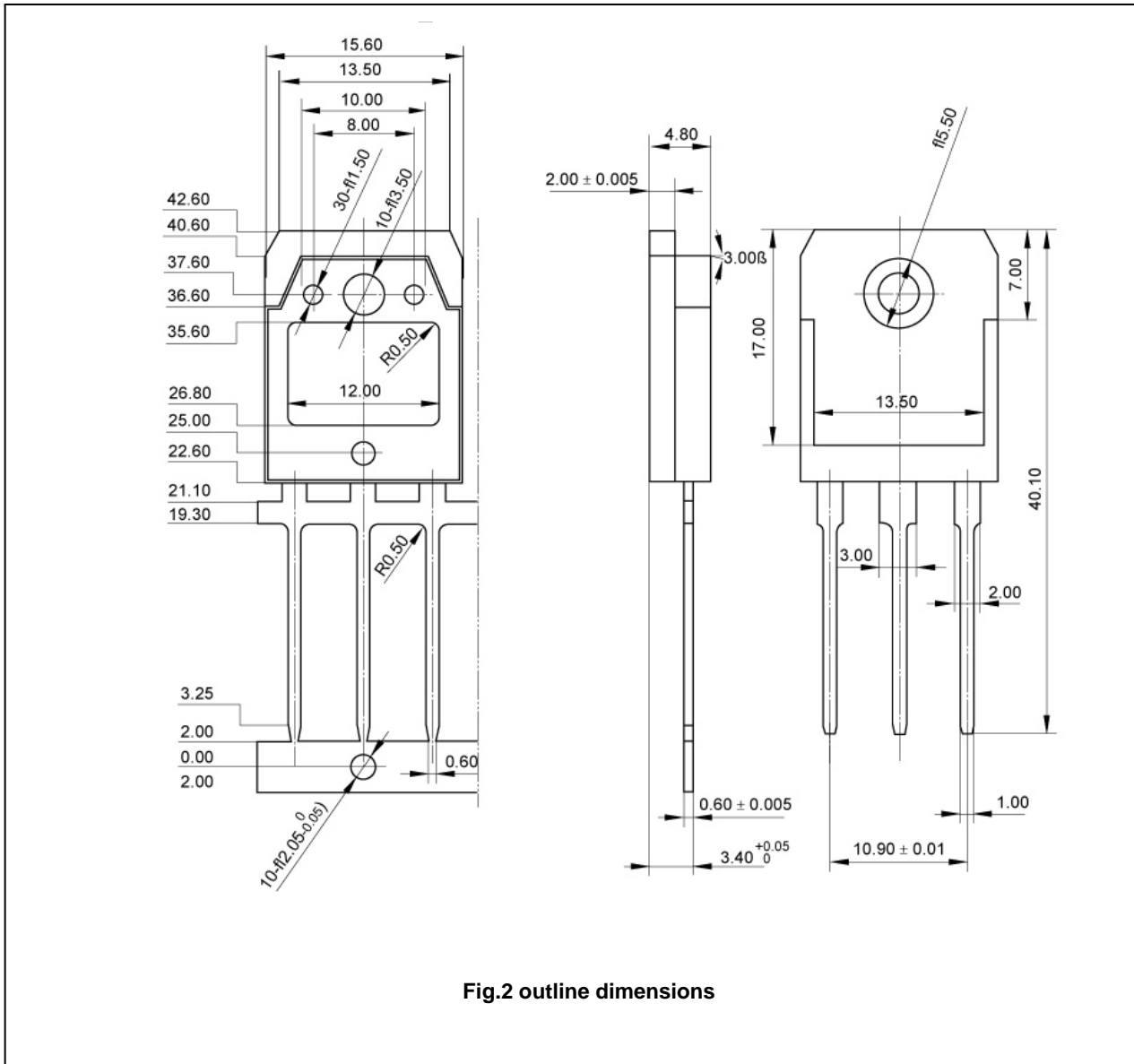


Fig.2 outline dimensions