

Silicon NPN Power Transistors

BUV48B

DESCRIPTION

- With TO-3PN package.
- High voltage.
- Fast switching speed.

APPLICATIONS

- Designed for switching and industrial applications

PINNING

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

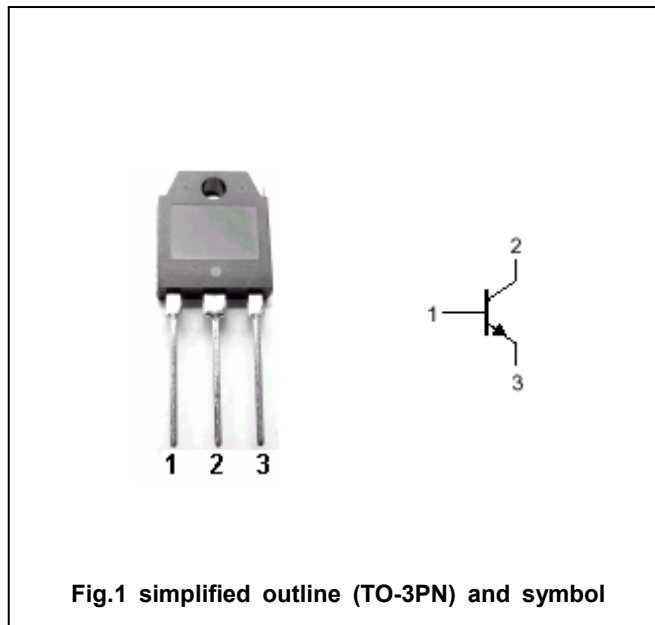


Fig.1 simplified outline (TO-3PN) and symbol

Absolute maximum ratings (Ta=25°C)

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	1200	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	600	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	t <sub>p</sub> <5ms	30	A
I <sub>B</sub>	Base current		4	A
I <sub>BM</sub>	Base current-peak	t <sub>p</sub> <5ms	20	A
P <sub>T</sub>	Total power dissipation	T <sub>C</sub> =25°C	125	W
T <sub>j</sub>	Junction temperature		150	°C
T <sub>stg</sub>	Storage temperature		-65~150	°C

THERMAL CHARACTERISTICS

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-case</sub>	Thermal resistance junction 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>	Emitter-base sustaining voltage	I <sub>C</sub> =100mA; I <sub>B</sub> =0	600			V
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =6A; I <sub>B</sub> =1.5A			1.5	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =10A; I <sub>B</sub> =4A			3	V
V <sub>BEsat-1</sub>	Base-emitter saturation voltage	I <sub>C</sub> =6A; I <sub>B</sub> =1.5A			1.5	V
V <sub>BEsat-2</sub>	Base-emitter saturation voltage	I <sub>C</sub> =10A; I <sub>B</sub> =4A			2	V
I <sub>CES</sub>	Collector cut-off current	V <sub>CE</sub> =1200V; V <sub>BE</sub> =0 T=125°C			0.5 3	mA
I <sub>CEO</sub>	Collector cut-off current	V <sub>CE</sub> =600V; I <sub>C</sub> =0			1	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =6V; I <sub>C</sub> =0			1	mA
h <sub>FE</sub>	DC current gain	I <sub>C</sub> =1A; V <sub>CE</sub> =5V	15		50	

Switching times:

t <sub>on</sub>	Turn-on time	I <sub>C</sub> =6A; I <sub>B1</sub> =- I <sub>B2</sub> =1.5A V <sub>CC</sub> =250V		0.5	1.0	μs
t <sub>s</sub>	Storage time			1.5	3.0	μs
t <sub>f</sub>	Fall time			0.2	0.7	μs

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PACKAGE OUTLINE

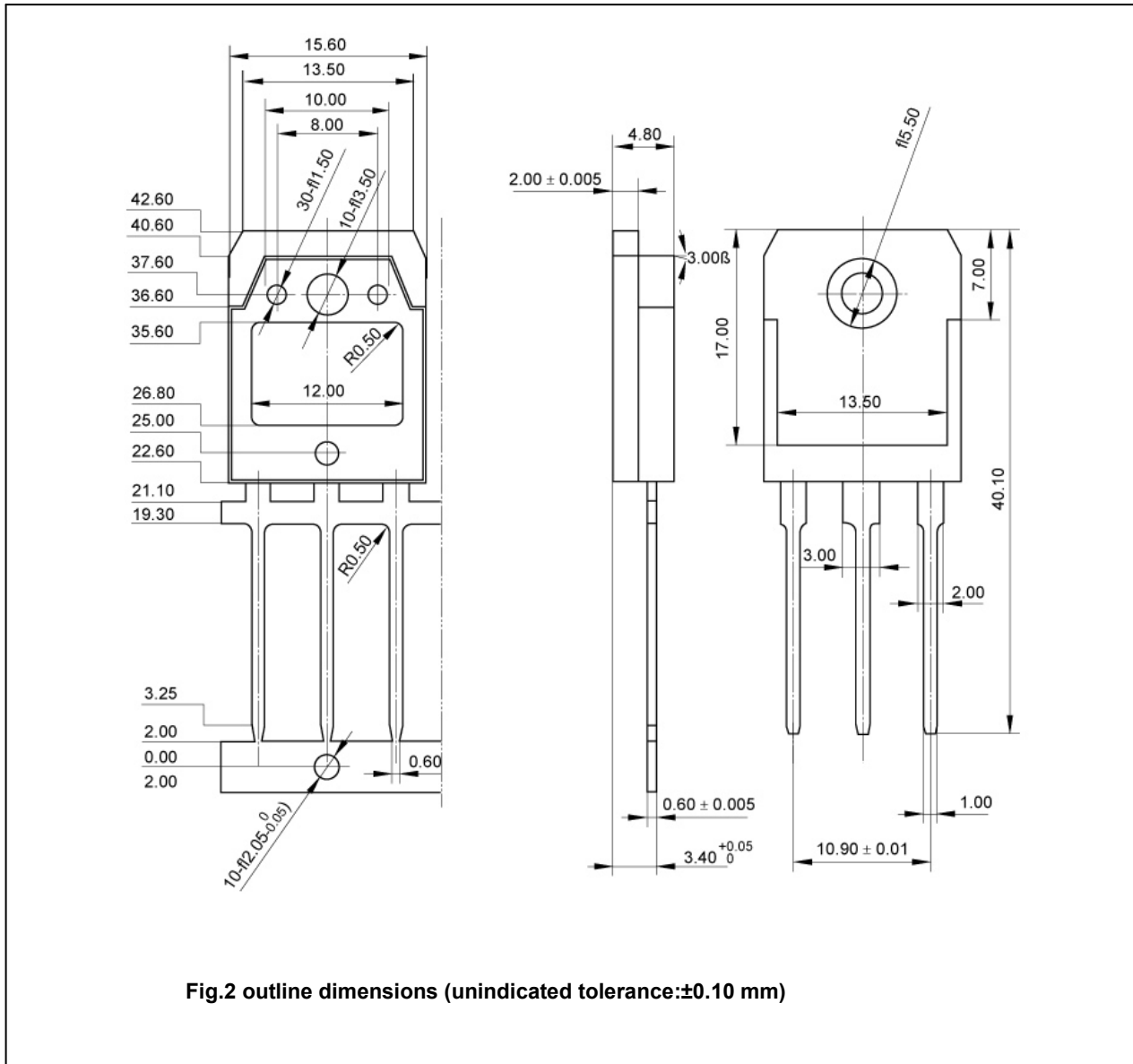


Fig.2 outline dimensions (unindicated tolerance:±0.10 mm)