

**Silicon NPN Power Transistors**

**BUX47A**

**DESCRIPTION**

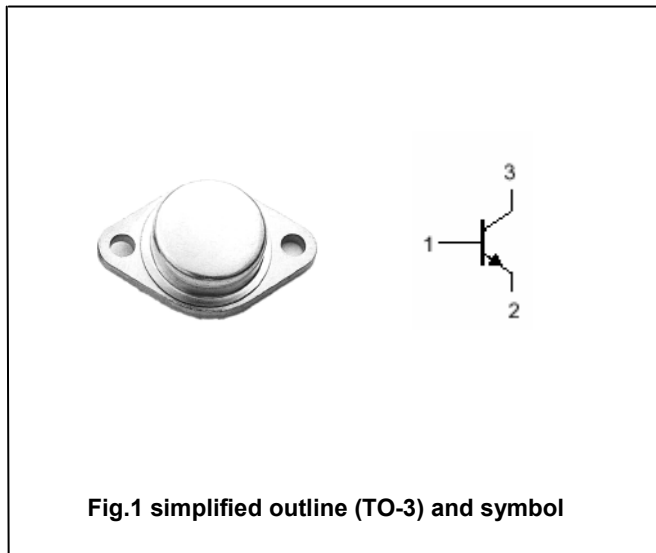
- With TO-3 package
- High voltage,high speed

**APPLICATIONS**

- Intended for high voltage,fast switching applications

**PINNING(see fig.2)**

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector



**Absolute maximum ratings(Ta=□)**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
V <sub>CBO</sub>	Collector-base voltage	Open emitter	1000	V
V <sub>CEO</sub>	Collector-emitter voltage	Open base	450	V
V <sub>EBO</sub>	Emitter-base voltage	Open collector	7	V
I <sub>C</sub>	Collector current		9	A
I <sub>CM</sub>	Collector current-peak		15	A
I <sub>B</sub>	Base current		8	A
I <sub>BM</sub>	Base current-peak		10	A
P <sub>T</sub>	Total power dissipation	T <sub>C</sub> =25□	125	W
T <sub>j</sub>	Junction temperature		175	□
T <sub>stg</sub>	Storage temperature		-65~175	□

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	MAX	UNIT
R <sub>th j-c</sub>	Thermal resistance junction to case	1.2	□/W

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## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO(SUS)</sub>	Collector-emitter sustaining voltage	I <sub>C</sub> =0.2A; I <sub>B</sub> =0;	450			V
V <sub>(BR)EBO</sub>	Emitter-base breakdown voltage	I <sub>E</sub> =50mA; I <sub>C</sub> =0;	7		30	V
V <sub>CEsat-1</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =5A; I <sub>B</sub> =1 A			1.5	V
V <sub>CEsat-2</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =8A; I <sub>B</sub> =2.5A			3	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =5A; I <sub>B</sub> =1 A			1.6	V
I <sub>CEV</sub>	Collector cut-off current	V <sub>CE</sub> =850V; V <sub>BE</sub> =-2.5V T <sub>C</sub> =125 °C			0.15 1.5	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =5V; 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> =5A; I <sub>B1</sub> =-I <sub>B2</sub> =1A; V <sub>CC</sub> =150V			0.7	μs
t <sub>s</sub>	Storage time				3	μs
t <sub>f</sub>	Fall time				0.8	μs

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PACKAGE OUTLINE

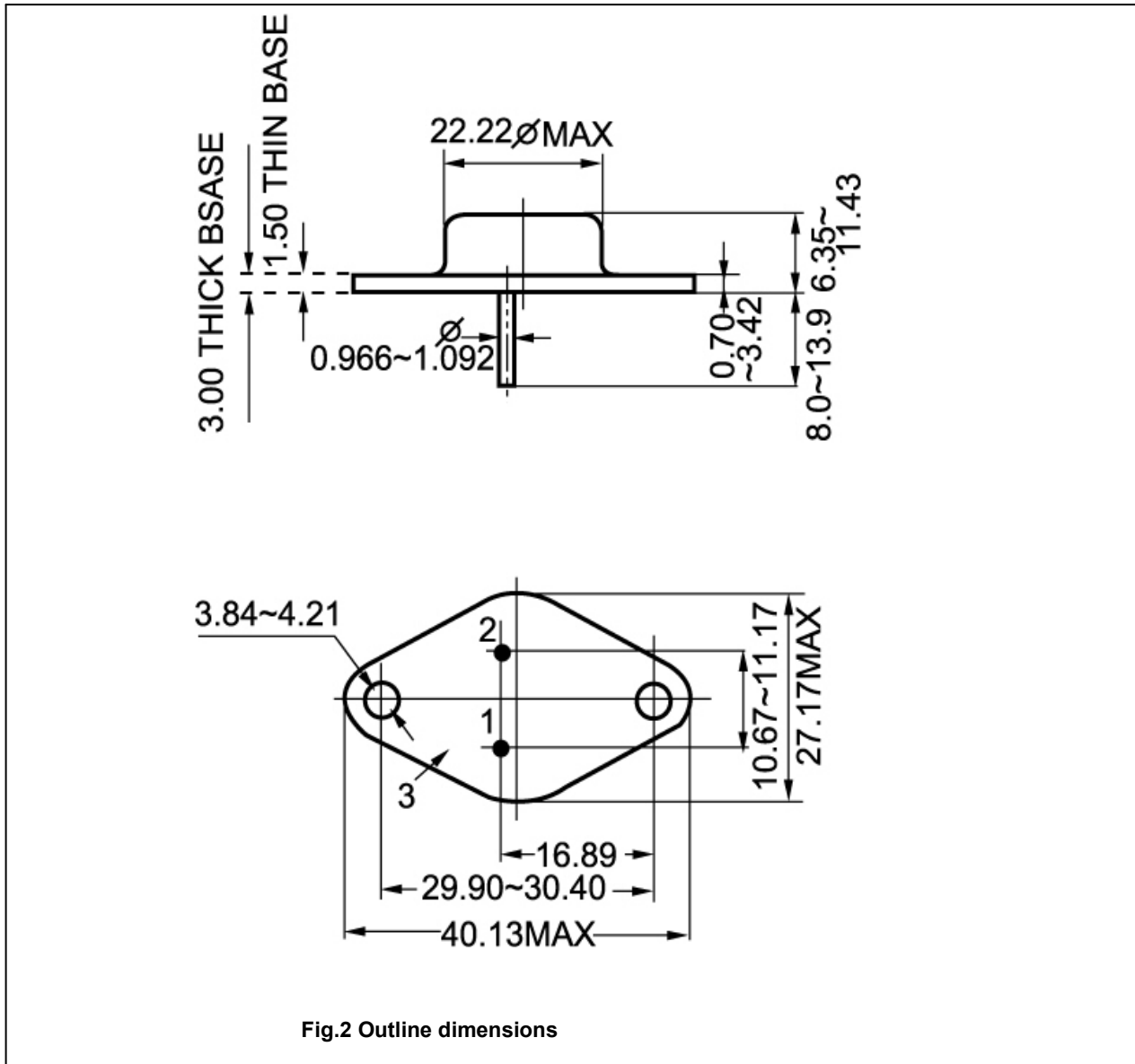


Fig.2 Outline dimensions