

## Silicon NPN Power Transistors

## BUW24

**DESCRIPTION**

- With TO-3 package
- High dielectric strength
- Short switching time

**APPLICATIONS**

- Suitable for use in clocked voltage converters

**PINNING (See Fig.2)**

PIN	DESCRIPTION
1	Base
2	Emitter
3	Collector

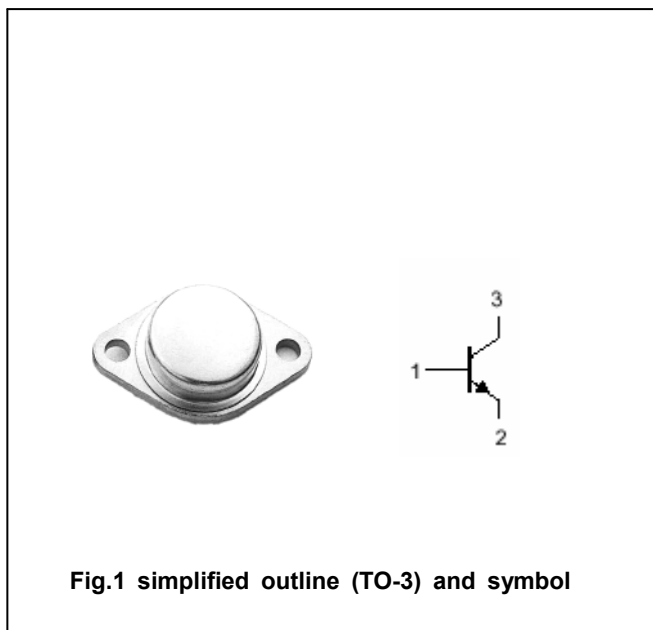


Fig.1 simplified outline (TO-3) and symbol

**MAXIMUM RATINGS**

SYMBOL	PARAMETER	CONDITIONS	VALUE	UNIT
$V_{CBO}$	Collector-base voltage	Open emitter	450	V
$V_{CEO}$	Collector-emitter voltage	Open base	350	V
$V_{EBO}$	Emitter-base voltage	Open collector	7	V
$I_C$	Collector current		10	A
$I_B$	Base current		3	A
$P_T$	Total power dissipation	$T_{mb} \leq 25^\circ C$	100	W
$T_j$	Junction temperature		150	$^\circ C$
$T_{stg}$	Storage temperature		-65~150	$^\circ C$

**THERMAL CHARACTERISTICS**

SYMBOL	PARAMETER	VALUE	UNIT
$R_{th\ j-c}$	Thermal resistance from junction to case	1.25	$^\circ C/W$

## Silicon NPN Power Transistors

## BUW24

## CHARACTERISTICS

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

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
V <sub>CEO</sub>	Collector-emitter breakdown voltage	I <sub>C</sub> =10mA ; I <sub>B</sub> =0	350			V
V <sub>CEsat</sub>	Collector-emitter saturation voltage	I <sub>C</sub> =4A; I <sub>B</sub> =0.8A			0.8	V
V <sub>BEsat</sub>	Base-emitter saturation voltage	I <sub>C</sub> =4A; I <sub>B</sub> =0.8A			1.5	V
I <sub>CBO</sub>	Collector cut-off current	V <sub>CB</sub> =450V; I <sub>E</sub> =0			0.1	mA
I <sub>EBO</sub>	Emitter cut-off current	V <sub>EB</sub> =7V; I <sub>C</sub> =0			0.1	mA
h <sub>FE-1</sub>	DC current gain	I <sub>C</sub> =1A ; V <sub>CE</sub> =5V	10		80	
h <sub>FE-2</sub>	DC current gain	I <sub>C</sub> =4A ; V <sub>CE</sub> =5V	15			

## Switching times

t <sub>on</sub>	Turn-on time	I <sub>C</sub> =5A I <sub>B1</sub> =- I <sub>B2</sub> =0.5A R <sub>L</sub> =10Ω			2.0	μs
t <sub>s</sub>	Storage time				4.0	μs
t <sub>f</sub>	Fall time				1.2	μs

PACKAGE OUTLINE

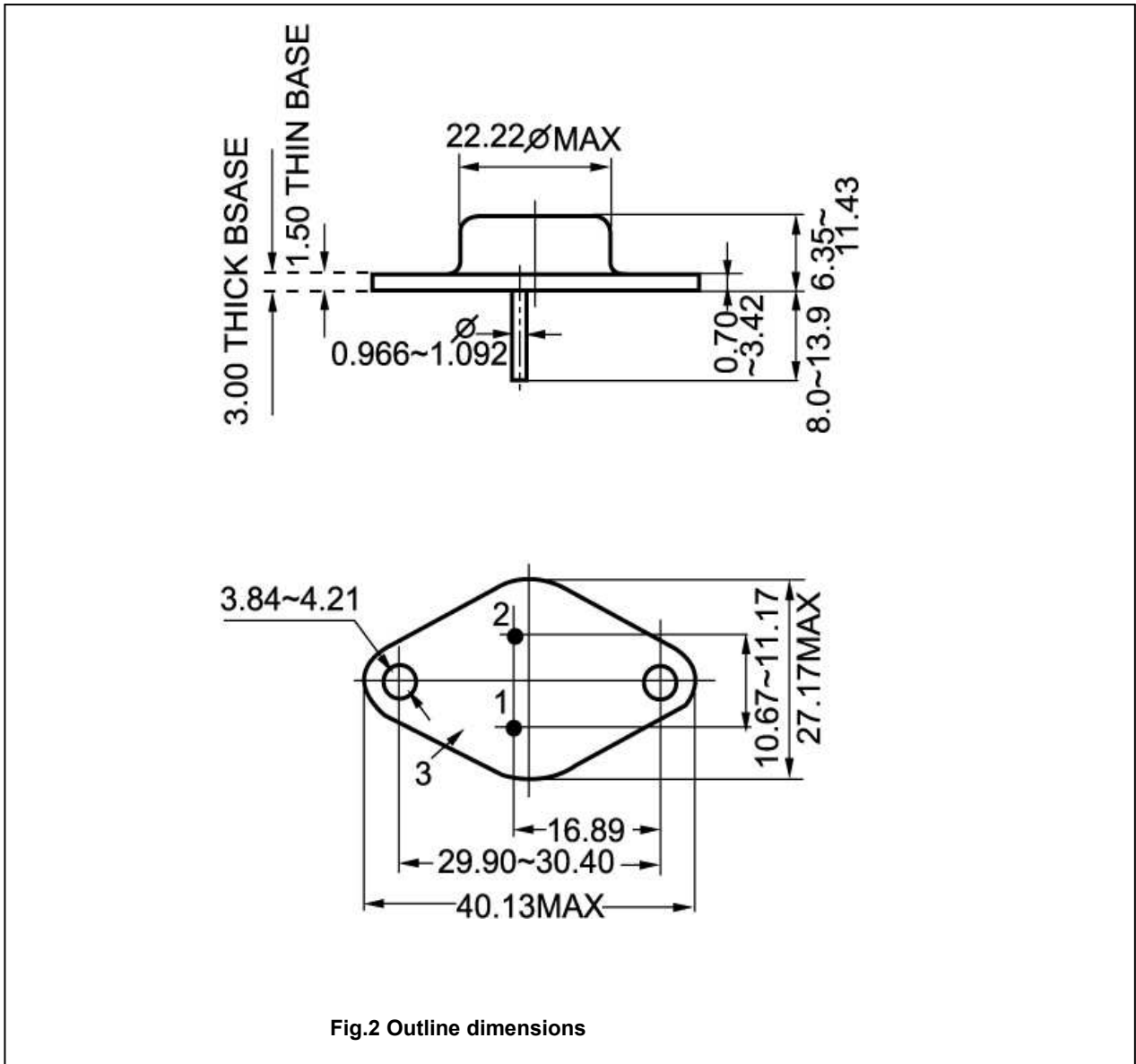


Fig.2 Outline dimensions